

CONTROL4 CORP  
Form 10-K  
February 15, 2018  
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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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FORM 10 K

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(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE  
ACT OF 1934

For the fiscal year ended December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE  
ACT OF 1934

For the transition period from            to            .

Commission file number 001 36017

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Control4 Corporation

(Exact name of registrant as specified in its charter)

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Delaware	42 1583209
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
11734 S. Election Road	
Salt Lake City, Utah	84020
(Address of principal executive offices)	(Zip Code)

(801) 523 3100

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, \$0.0001 par value per share	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:

None

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Indicate by check mark if the registrant is a well known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10 K or any amendment to this Form 10 K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b 2 of the Exchange Act.

Large accelerated filer Accelerated filer Non accelerated filerSmaller reporting company Emerging growth company  
(Do not check if a smaller reporting company)

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b 2 of the Exchange Act). Yes No

The aggregate market value of voting and non voting common equity held by non affiliates of the registrant as of June 30, 2017 was approximately \$484.3 million (based on a closing sale price of \$19.61 per share as reported for the NASDAQ Global Select Market on June 30, 2017). For purposes of this calculation, shares of common stock held by officers, directors and their affiliated holders and shares of common stock held by persons who hold more than 10% of the outstanding common stock of the registrant have been excluded from this calculation because such persons may be deemed to be affiliates. This determination of executive officer or affiliate status is not necessarily a conclusive determination for other purposes.

As of February 9, 2018, 25,833,471 shares of the registrant's Common Stock, \$0.0001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive Proxy Statement relating to its 2018 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10 K where indicated. Such Proxy Statement will be filed with the U.S. Securities and Exchange Commission ("SEC") within 120 days after the end of the fiscal year to which this report relates.

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Control4 Corporation

Form 10-K

For Fiscal Year Ended December 31, 2017

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Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K (“Form 10-K” or “Annual Report”) contains “forward-looking statements” that involve risks and uncertainties, as well as assumptions that, if they never materialize or prove incorrect, could cause our results to differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact contained in this Form 10-K are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Such forward-looking statements include any expectation of earnings, revenues or other financial items including without limitation statements about the accretive effect of any acquisitions; any statements of the plans, strategies and objectives of management for future operations or growth; factors that may affect our operating results; statements related to adding employees; statements related to future capital expenditures; statements related to future economic conditions or performance; statements related to product or service adoption and network expansion; statements as to industry trends or market opportunities and other matters that do not relate strictly to historical facts or statements of assumptions underlying any of the foregoing. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “could,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “intends” or the negative of these terms or other comparable terminology. We caution investors that any forward-looking statements are made as of the date they were first issued and are based on management’s beliefs, expectations, and on assumptions made by, and information currently available to, management. Forward-looking statements are subject to risks, assumptions and uncertainties, many of which involve factors or circumstances that are beyond Control4’s control. Control4’s actual results could differ materially from those stated or implied in forward-looking statements due to a number of factors, including but not limited to, those discussed in the section titled “Risk Factors” included in this Form 10-K, as well as other documents that may be filed by the Company from time to time with the SEC. Control4 urges investors to consider these factors carefully in evaluating the forward-looking statements contained in this Form 10-K and not to give any such forward-looking statement any undue reliance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for management to predict all such risk factors, nor can we assess the impact of all such risk factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. The forward-looking statements included in this Form 10-K represent Control4’s views as of the date of this Form 10-K, and the Company anticipates that subsequent events and developments will cause its views to change. Control4 undertakes no intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.

References in this Form 10-K to the “Company,” “Control4,” “we,” “us,” and “our” refer to Control4 Corporation and, where appropriate, its subsidiaries, unless otherwise stated.

"Control4," "Pakedge," "Triad," and other trademarks of ours appearing in this report are our property. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies' trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.



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PART I.

ITEM 1. Business

Overview

Control4 is a leading provider of smart home and business solutions that are designed to personalize and enhance how consumers engage with an ever-changing connected world. Our entertainment, smart lighting, comfort and convenience, safety and security, and networking solutions unlock the potential of connected devices, making entertainment systems easier to use and more accessible, homes and businesses more comfortable and energy efficient, and individuals more connected and secure. Our premium smart home and small business solutions provide consumers with the ability to integrate audio, video, lighting, temperature, security, communications, network management and other functionalities into a unified automation solution, customized to match their lifestyles and business needs. Our advanced software, delivered through our controller and user-interface products together with various cloud services power this customized experience, enabling cohesive interoperability with thousands of connected Control4 and third-party devices.

Consumer need for simplicity and a personalized experience, combined with advances in technology, are driving rapid growth in the connected home market. As the “Internet of Things” shapes the way we live and work, consumers are looking for affordable ways to extend and enhance the interoperability of connected devices in their homes and businesses, driving growth in the mainstream automation market.

We were founded in 2003 to deliver a premium home automation solution by enabling consumers to unify their connected devices into a personalized system. We strive to create solutions that enable customers to purchase our products at an accessible and affordable entry point, while offering flexibility to expand to include additional devices, services and features optimized for every type of project, from a single-room all the way to a luxurious, fully-integrated whole-home experience. We believe that our solution is a leader in the mainstream home automation market by providing integrated and scalable control of over 11,000 third-party devices and services. These devices and services span a broad range of product categories including audio, video, lighting, temperature, security, communications, network management and cloud services. Our platform capabilities provide consumers with solutions that are comprehensive, personalized, flexible, affordable, and easy to use and manage.

Based on our analysis, we estimate that we have automated more than 329,000 homes and businesses representing cumulative sales of more than 665,000 of our controllers, which include our automation software. We sell and deliver our solutions through our worldwide network of over 5,290 active direct dealers and 50 distributors and have solutions installed in 101 countries. In 2017, our top 100 dealers represented 18% of our total revenue and our top 10 dealers represented 4% of our total revenue.



We generated revenue of \$244.7 million, \$208.8 million and \$163.2 million in 2017, 2016 and 2015, respectively. We had net income of \$16.0 million and \$13.0 million in 2017 and 2016, respectively, and a net loss of \$1.7 million in 2015.

## Our Industry

Within the last decade, the pace of innovation in the electronics industry has accelerated rapidly. Network-aware devices—such as televisions, smartphones, tablets, thermostats, audio systems, lighting, blinds, security systems, cameras, video doorbell stations and other appliances form the basis for the “connected controllable home.” Home automation technology integrates network aware and enabled devices in the connected home, unlocking the collective potential of these devices to work together to improve consumers’ lives, and with proliferation of connectable devices, we believe that the appeal of integrated home automation will continue to expand to a broadening base of consumers.

Whole-home or business automation solutions unify the control of audio, video, lighting, temperature, security, communications and other devices in the connected home or business to provide consumers with improved convenience, comfort, energy efficiency and security. The key functional elements of home or business automation include:

- **Control.** Controlling devices is the most basic capability of home automation solutions. From a single interface, consumers can operate a wide array of devices using wired or wireless connections. With the growth in smartphones and tablets, control functionality is increasingly extended to these mobile devices;

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- Automation. After initial programming, automation enables devices to function without additional human intervention. Automation also enables various devices to work in concert to perform more complex tasks and to take actions based on external conditions;
- Personalization. Personalization enables home automation solutions to be tailored to the unique lifestyle requirements of individual consumers and their families. Personalization unlocks the full potential of home automation to enhance, enrich and simplify the lives of consumers; and
- Connectivity. An advanced networking system with the ability to provide reliable, scalable services for audio and video distribution and cloud-based management services for both the monitoring and repair of wireless and wired automation solutions, provides a foundational layer for home automation.

We believe new technology will continue to enhance the automation experience through artificial intelligence, identity recognition, presence and location awareness and advancements in voice control.

## Our Solution

The Control4 solution, built around our advanced software platform and utilizing our network management devices and cloud services functions as the operating system of the home, integrating audio, video, lighting, temperature, security, communications and other devices into a unified automation solution that enhances our consumers' lives. We unlock the potential of connected devices, making entertainment systems easier to use, homes more comfortable and energy efficient, and families more secure.

The Control4 solution integrates our own devices and thousands of third-party devices and systems into a unified, easy-to-use solution for mainstream consumers. As a result, our solution provides the consumer with the following benefits:

- Easy to Use. Our solution is designed to be simple and intuitive. Through our unified software platform, consumers can easily interact with their entire automated home without needing to learn how to use multiple interfaces or numerous remote controls. We have designed our solution so that anyone, from a young child to a grandparent, can pick up a Control4 remote or other interface device (including a smartphone or tablet with Control4's app), and with a few intuitive clicks, watch a movie;
- Broad Device Interoperability. Our open and flexible platform provides consumers with access to a broad universe of third-party devices that become connected and interoperable through our solution. Our platform is currently interoperable with over 11,000 third-party devices, and we continually add additional integration with new devices in order to ensure that Control4 is able to integrate with the typical home's connectable and controllable devices;

- **Advanced Personalization.** Our adaptable solution enables our consumers to personalize the features and functionality of their Control4 system. Using “When >> Then” automation, consumers can personalize their automation system through homeowner directed programming. Our modular design also enables the smooth integration of new third-party products to meet the evolving needs of our consumers as their lifestyles change;
- **Attractive Entry Point.** In February 2018, we released our new CA-1 controller which is designed for entry-level projects for homeowners interested in lighting, temperature control and security, and retails for \$350 (excluding installation costs). This supplements our Entertainment and Automation series of controllers, or the EA Series, which includes the entry-level EA-1 controller at a reduced price point for entry-level consumers wanting to start with a single room multi-media automation experience of approximately \$500 (excluding installation costs). Projects can then scale in sophistication and scope from a single room to a fully-integrated whole-home experience. We have also introduced entry-level solutions in networking with the release of the WR-1 router, and audio with the introduction of the award-winning Triad One streaming amplifier;
- **Professional Installation and Support.** As the number and types of connected devices continues to grow, the need for local professional consultation, installation and support is essential for a successful home automation experience. We have built a global network of over 5,290 active certified independent dealers. Independent dealers certified on our full range of products receive in-depth training and on-going education and support, enabling them to help consumers develop and install their personalized home automation experiences. To further

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increase consumer satisfaction, we also maintain a small Customer Advocacy & Care Group that works directly with consumers to understand unresolved questions and concerns and coordinate with their dealer to reach a resolution;

- Cloud Services. We have built a secure infrastructure to provide an array of cloud-based services to enhance the homeowner and dealer experience, which include remote customer system access and control, remote dealer management capabilities and voice control; and,
- Scalability. Our solution provides customers with the ability to extend and enhance the automation capabilities of their system as their needs evolve. Customers who initially purchase an entry level, one-room solution could later build a comprehensive home automation system. The extensibility of the system empowers customers to invest in solutions that fit their current needs.

## Our Strategy

Our primary goal is to be the leading provider of comprehensive home automation solutions that provide a premium experience for our customers. We believe we differentiate ourselves through our operating system which orchestrates the thousands of devices consumers choose to install in their homes. The following are key elements of our growth strategy:

- Product Innovation. We strive to continuously develop new innovative hardware and software products for our customers. We believe that our success to-date has been largely driven by our software platform's ability to deliver personalized solutions for the end consumer. In 2017, we released Control4 OS 2.10, featuring expanded music service integrations with iHeartRadio, Sirius XM, and Spotify supported by our EA Controllers. In addition, we released an updated version of 4Sight which includes a new homeowner customization functionality called "When >> Then" automation;
- Channel Expansion. We have developed a global network of over 5,290 active, independent, authorized direct dealers and 50 distributors to sell, install and support our solutions. We intend to continue to expand and optimize our dealer and distributor network to ensure that we have sufficient geographic coverage across both existing and new markets. We will also continue to devote significant resources to increase the productivity and competency of our dealers and distributors by providing them with ongoing training, tools and support. For example, in 2017 we launched the Packedge Certified Network Administrator (PCNA) hands-on and online training program to provide dealers and technicians the networking knowledge they need to design, install, and manage wired and wireless IP networks;
- Enhanced Services. In addition to automating devices within the home, our solution also enables a wide variety of service and application opportunities. We plan to continue to enhance our cloud-based services which provide consumers with remote home monitoring, support and control capabilities from any Internet-connected mobile device or computer. We also recently acquired the intellectual property and key operating assets of ihiji, Inc. ("ihiji"), a leading provider of remote management services for technical integrators servicing connected home customers. By

offering BakPak, Control4's network management solution, and combining it with ihiji's invasion device monitoring and management solution in the future, Control4 can provide robust cloud-based services to our dealers to securely and efficiently monitor end-customer systems, which we intend to continue to develop and integrate. In addition, we recently integrated the latest release of our BakPak management software on the entry-level Pakedge RK-1 Router enabling our independent dealer network to offer more homeowners the benefits of a monitored, intelligent home network;

- **Licensing Opportunities.** We continue to make our technology available to third parties through licensing agreements. We make our device auto-discovery technology, Simple Device Discovery Protocol ("SDDP"), available on a royalty-free basis to third parties to streamline and automate the setup, identification and configuration of their devices into our system. For example, in the past year, both LG and Samsung announced the incorporation of SDDP software in their products to simplify integration with Control4 installations. As of December 31, 2017, 270 third parties had licensed SDDP from us, representing 2,900 SDDP enabled devices. We also plan to expand our licensing activities to leverage third-party distribution channels, grow our partner relationships through our integration certification program for third-party products, simplify the home automation experience for dealers and consumers, and increase interoperability; and

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- **Strategic Acquisitions.** As the operating system of the connected home, we believe we are ideally positioned to identify, acquire and integrate strategic acquisitions that are complementary to our current offerings, strengthen and expand our technology foundation, enhance our market positioning, distribution channels and sales, and are consistent with our overall growth strategy. For example, over the last few years we have acquired companies such as Pakedge Device & Software, Inc. (“Pakedge”), a leading and award winning developer and manufacturer of networking products, power distribution and management solutions, as well as cloud network-managed services for both wireless and wired networking solutions in the connected home and business; and Nexus Technologies Pty, Ltd. (“Nexus”), a leading distributed audio/video provider.

## Our Products and Services

The primary benefits we provide consumers and dealers lie in the value and competitive differentiation of our software platform in our integrated solution. We deliver value and differentiation to consumers and generate revenue by embedding our software into a range of physical products.

## Software Platform

At the center of the Control4 product line is the Control4 Home Operating System, which we refer to as the C4 OS, and the associated application software and software development kits, or SDKs. The high-level software components include:

- **Director.** Director is a real-time, extensible home operating system that runs on our controllers. It is responsible for monitoring and receiving events from numerous devices and services, processing those events according to consumer personalization settings, and then dispatching commands to the appropriate devices to perform predefined actions;
- **User Interface Application.** The user interface for our Control4 Operating System displays intuitive and rich graphical user interfaces on televisions, in-wall and table-top touch panels, smartphones and tablets, as well as list-based devices such as remote controls with LCD text-displays;
- **Composer.** Composer is a software application that enables trained and certified independent Control4 dealers and installers to design, configure and personalize a Control4 home automation system for consumers. Composer “Home Edition” enables consumers to view and configure certain features of their dealer installed and Control4 managed devices;
- **Control4 Drivers.** Control4 creates drivers for all of our internal hardware, and also provides Driverworks SDK (software development kit) to third parties in order to enable dealers, programmers and device manufacturers to

independently develop and test custom two-way interface drivers to support the integration of a new device or device model into our system, or to customize and enhance an existing driver. DriverWorks SDK has enabled 11,000 different products and services to be incorporated into the Control4 ecosystem;

- I/O Servers. We maintain dedicated IP servers, Zigbee servers, and Z-Wave servers allowing connected homes to communicate with devices on various types of wireless standards; and,
- Cloud-Based Services and Tools. 4Sight is our subscription service that enables end customers to remotely access, monitor and adjust settings in their homes (such as lights, temperature settings, door locks, gates and cameras), receive event-based email alerts from their system. 4Sight also enables voice control of the Control4 system through Amazon Alexa and allows consumers to personalize their automation experience through simple homeowner directed programming, referred to as “When >> Then” automation. BakPak is a customer account management system for dealers, enabling rapid remote diagnostics and response to customer connectivity issues, proactive device management, and greater visibility of networks and automation systems within each connected home.

#### Products with Embedded Software

Our products leverage our software platform to provide consumers with a comprehensive and easy-to-use connected home experience. We designed our software platform to be extensible, which has allowed us to improve and augment the functionality of hardware products (both those designed by us and by others) over time. We also design and manufacture our

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products via contract manufacturers as well as certify partner products for sale through our dealers. Our products and services include:

- **Controllers.** Our controllers run our Director software to monitor, process and automate events, statuses and actions for numerous devices and services, creating a comprehensive connected home experience. Currently we offer three Entertainment and Automation series controllers: (1) the EA-1 is designed for a single-room audio/video entertainment automation, such as a family-room, home-theater, a study, or bedroom; (2) the EA-3 is designed to integrate and control automation in small-to-mid-sized homes; and (3) the EA-5 is designed to integrate and control automation in large homes and estates. In addition, we recently released the CA-1 controller designed for entry-level projects for homeowners interested in lighting, temperature control and security. Controllers are the hub of our systems and represented 26% of our total revenue in 2017.
- **Interface Devices.** We offer touch panels, handheld remote controls and keypads as interface devices. We also develop and deliver software applications for Apple iOS and Android smartphones and tablets that enable these personal devices to become control interfaces to Control4 connected homes, both on-premises and remotely.
- **Networking Devices.** We offer advanced networking products with a range of routers, switches, wireless access points, power control, and management solutions for the connected home and business.
- **Audio Solutions.** Our EA series controllers offer high-resolution audio with bit depth up to 24bit and sample rates up to 192kHz. In addition, we offer audio distribution and amplification products that scale from single room systems to whole home distributed audio systems. We offer 4-zone and 8-zone power amplifiers, 4x4 and 8x8 matrix amplifiers, a 16x16 audio matrix switch, and a single-zone wireless amplifier for retrofit installations. In addition, through our Triad brand, Control4 offers a comprehensive range of high-quality, customizable speakers designed for home theaters, family rooms, whole-home or multi-room audio, as well as for outdoor environments. Consumers are able to listen to their personal music library as well as streaming music services via our music streamer, which is built into our controllers. Consumers can also enjoy music available on their smartphone, tablet or computer by wirelessly streaming their selection to their home audio system using AirPlay, DLNA or Bluetooth technologies.
- **Video Solutions.** We offer a broad line of video matrix switches ranging from 6x6 to 10x10, which includes HDMI as well as HDBaseT switches that are capable of distributing HD video images up to 100 meters over cat5/6e cable. This product line also includes a variety of additional extender kits, mounting kits, and various packages for broad flexibility in offering systems that allow customers to watch what they want, when and where they want to watch it.
- **Lighting Products.** We offer a suite of lighting products that provide personalized control and energy management. Our suite of wireless light switches, dimmers and keypads can revitalize an existing home or complement new home construction. We offer innovative in-wall wireless switches and dimmers for 120V, 240V and 277V electrical loads, which meet the requirements of North America, Europe, Asia and many other international markets. We also offer centralized, wired lighting systems, where all of the lighting control can be managed on a remote panel. In addition to providing lighting control, our keypads can be programmed to operate other systems in the home, such as a lighting scene or audio control.



- Comfort Products. Our wireless multi-stage thermostat, jointly developed with climate control specialist Aprilaire, is completely programmable, allowing the homeowner to create schedules that fit their lifestyle, comfort and economical needs. Through the Control4 operating system, we also integrate with third-party comfort products (such as automated blinds and pool controls) that provide additional energy savings, convenience and efficiency.
- Security Products. We offer video doorbell station products that allow our customers to see who is at the door from their network-enabled smartphone, tablet or Control4 interface. In addition, we distribute certified third-party products, including IP cameras, NVRs, deadbolts, motion sensors, garage access systems and water leak detection systems, from our security partners such as Baldwin, Lilin, Nyce, Kwikset and Yale. We also integrate with the top security panel manufacturers such as DSC, Honeywell and Interlogix, including network video recorder products and surveillance cameras sold by five of the top security monitoring manufacturers.

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- Communication Products. We offer full motion video and high-quality audio intercom capability through our in-wall and tabletop touchscreens, as well as our exterior weather-resistant video doorbell stations.

## Our Distribution Network

We offer our products exclusively through a network of independent dealers that professionally install our products. In 2005, we started selling our solutions through a network of around 450 independent dealers. Since that time, our distribution network has grown to over 5,290 active direct dealers and 50 distributors in 101 countries. Our direct independent dealer network is comprised of 4,220 dealers offering our full range of products and 1,070 dealers selling only the Pakedge and Triad line of products. Our distributors are comprised of 33 distributors offering our full range of products and 17 distributors offering only Pakedge and Triad line of products. Dealers range in size from small family businesses to large enterprises.

Our dealers are independent home automation and networking specialists that have significant experience in designing, installing and servicing both low- and high-voltage systems including music, video, security, networking, communications and temperature control. Every authorized dealer of our full line of products has gone through extensive training and has passed the necessary certification tests—either in one of our training facilities located in the United States, the United Kingdom, Germany, Australia, China, or India or in a training facility operated by one of our 33 distributors. In order to become certified to sell and install our full line of solutions, every installer for each dealer must complete course work and pass pre-training examinations, as well as pass rigorous testing at the conclusion of the multi-day formal training.

We sell directly through dealers in the United States, Canada, the United Kingdom, Australia, China, Germany and 50 other countries. We partner with 50 distributors to serve 45 additional countries. Together, our independent dealer network and our distributors allow us to service 101 countries. Our distributors recruit, train and manage dealers within their region and also help dealers find country-specific solutions for unique needs based on the special home automation market characteristics within each country. In recent years, we have moved more toward a dealer-direct model in specific international regions, and we have added, and continue to add, sales and support staff in the United Kingdom, China, India, Australia and Germany.

During the years ended December 31, 2017, 2016 and 2015, respectively, none of our dealers or distributors accounted for more than 5% of our revenue. None of our dealers or distributors have minimum or long-term purchase obligations. Dealer orders are typically placed on a project-by-project basis. As such, our dealers do not typically carry significant levels of inventory. The resulting just-in-time model helps reduce dealer inventory investment. Our dealers around the world are each responsible for local marketing, selling, installing and servicing our solution for the consumer.

## Our Partners

The home automation market is made up of a collection of thousands of electronically controllable products made by hundreds of key manufacturers. We believe that our success has come, in part, due to our ability to establish relationships with many of these manufacturers. As of December 31, 2017, approximately 100 separate manufacturers had formally submitted over 2,300 devices to us for Control4 certification so that our worldwide dealer and distributor network can be assured that these third-party devices work uniformly with our platform.

Third-party manufacturers are currently selling over 1,130 different products representing 33 brands (including brands such as Denon, Sony and Yale) through our online store. Our online store provides manufacturers valuable reach into our trained dealer network, and it helps our dealers gain easy access to products that they know are certified by Control4. We also partner with other companies for purposes of strategic initiatives.

### Our Research and Development

Our flexible research and development model relies upon a combination of in-house staff and offshore design and manufacturing partners to improve and enhance our existing products and services, as well as develop new products, features and functionality in a cost-effective manner. We believe that our software platform is critical to expanding our leadership position within the mainstream home automation market. As a result, we devote much of our research and development resources to software development. We work closely with our dealers and their consumers to understand their current and future needs and have designed a product development process that captures and integrates feedback from our consumers.

As of December 31, 2017, we had 249 employees in our research and development organization, most of whom were located at our headquarters in Salt Lake City, Utah. Our research and development expenses were \$40.6 million in 2017,

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\$36.0 million in 2016, and \$32.4 million in 2015. We intend to continue to invest in research and development to expand our solutions and capabilities in the future.

### Our Manufacturing

We outsource most of the manufacturing of most of our hardware products to contract manufacturers. The majority of our hardware products are manufactured by iLife Technology Co., Ltd (“iLife”), Remote Control Systems, Inc. (“RCS”) and Sanmina Corporation (“Sanmina”) at their facilities located in China and Korea, with additional manufacturing performed by several other contract manufacturers located throughout Asia. Our agreement with iLife automatically renews for a one-year term in February 2018 and will continue to automatically renew for successive one-year periods unless either (i) iLife gives written notice of its intent to terminate the agreement at least 180 days prior to the end of the then current term, or (ii) Control4 gives written notice of its intent to terminate the agreement at least 30 days prior to the intended termination date. Our agreement with RCS automatically renewed for a one-year term in September 2017 and will continue to renew for successive one-year periods unless either party gives written notice of its intent to terminate the agreement at least 120 days prior to the end of the then current term. Our agreement with Sanmina automatically renewed for a one-year term in June 2017, and will continue to automatically renew for successive one-year terms unless either party gives written notice of its intent to terminate the agreement at least 90 days prior to the end of the then current term, or at any other time with at least 120 days’ written notice.

Our manufacturing partners assemble our products using our design specifications, quality assurance programs and standards. These partners procure components and assemble our products based on our demand forecasts. These forecasts represent our estimates of future demand for our products based upon historical trends and analysis from our sales and product management functions. We maintain fulfillment centers in Salt Lake City, Utah; York, England; and Melbourne, Australia.

We have multiple sources for most of our components. However, we depend on single source manufacturers for certain critical components, including processors and touch panels. We can choose to change processor and memory modules for any of our products, but because of high implementation costs and significant lead times, we generally choose to make these changes only upon development of new products. We also rely on certain custom connectors, cables and mechanical enclosures for our hardware products that are single sourced because of the high tooling costs of sourcing the components from multiple suppliers. In each of these cases, we own the drawings and design of these custom components. We also manufacture custom builds for our high-end Triad speakers in our facility in Portland, Oregon.

### Our Sales and Marketing

Our marketing team supports our sales channel with dealer-directed advertising and promotions, lead-generation, social media engagements and training events, as well as the design and production of consumer-facing, customizable collateral, point-of-sale video and showroom signs and advertising. Our website is the anchor of our online and social media strategy, from which we direct leads to our independent dealers. Control4's bi-annual magazine, Home Smart Home, features lifestyle stories of Control4 installations from around the world and is available for download on our website and helps drive demand for our solutions and leads for our dealers.

We continue to focus on lead generation through online marketing and qualifying inbound leads for our dealers. As interested consumers go online to research home automation solutions, we help direct them to dealers in their markets. To better qualify these leads and direct them to interested dealers, we employ a small team of telemarketers. In addition to speaking directly to prospects, these inside representatives work closely with dealers, to assist them in direct customer outreach.

We are active participants at global industry conferences and maintain a significant presence at Custom Electronics Design and Installation Association ("CEDIA") Expo trade shows. Beyond CEDIA Expo in the United States, we exhibit at ISE, the annual industry trade show held in Amsterdam, as well as participate in CEDIA-specific events and tradeshow throughout China to assist in the recruitment and training of new dealers in that region. We are frequently featured in the trade press and maintain strong relationships with the industry's key analysts and associations. We believe that partnering with device manufacturers, leveraging co-marketing partnerships, expanding our sales channels and increasing our brand recognition among consumers are key components of our growth strategy.

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Our Competition

The market for home automation systems is fragmented, highly competitive and continually evolving. Our current competitors fall into several categories:

- providers that focus primarily on the professional installation segment of the home automation market, including Crestron, Elan, Lutron and Savant;
- providers of point products that address a narrow set of networking, entertainment or control capabilities, including Logitech, Luxul, Nest, Ruckus, Ring, Sonance, Sonos and Universal Remote Control;
- providers of managed home control and security services, including ADT, AT&T, Comcast and Vivint (which in turn may utilize third-party software from companies including Alarm.com and iControl);
  - providers of device control platforms such as Apple HomeKit and SmartThings; and
- large technology companies such as Amazon, Apple, Google and Samsung that offer device control capabilities within some of their own products, applications and services, and are engaged in ongoing development efforts to address the broader home automation market.

In the past, companies that provide popular point solutions have eliminated or restricted, and may again eliminate or restrict, our ability to control and integrate with their products.

Given the growth dynamics of this market, there are many new and existing companies targeting portions of the mainstream home automation market. To the extent that consumers adopt products, applications and services from a single large technology company, or if any of these companies broaden their home automation capabilities, we will face increased competition.

The principal competitive factors in our market include the:

- breadth of home automation capabilities provided;

- simplicity of use and installation;
- interoperability with third-party devices;
- price and total cost of ownership;
- sales reach and local installation and support capabilities; and
- brand awareness and reputation.

We believe that our home automation solution competes favorably with respect to these factors. Nevertheless, many of our competitors have substantially greater financial, technical and other resources, greater name recognition, larger sales and marketing budgets, broader distribution channels, and larger and more mature intellectual property portfolios than we do.

#### Our Intellectual Property

Our success and ability to compete effectively depend in part on our ability to protect our proprietary technology and to establish and adequately protect our intellectual property rights. To accomplish these objectives, we rely on a combination of patent, trademark, copyright and trade secret laws in the United States and other jurisdictions, as well as license agreements, confidentiality agreements and other contractual protections.

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As of December 31, 2017, we owned 61 issued U.S. patents (20 of which are design patents) that are scheduled to expire between 2025 and 2034, with respect to utility patents, and between 2020 and 2029, with respect to design patents. We continue to file patent applications in multiple jurisdictions and as of December 31, 2017, we had 10 patent applications published and 7 patent applications pending in the United States. We also had 15 issued patents and 1 pending patent application under foreign jurisdictions and treaties such as Canada, Australia, New Zealand, the United Kingdom, Germany, France and the European Patent Convention.

We also rely on several registered and unregistered trademarks to protect our brand. As of December 31, 2017, we had the following registered trademarks: (a) Control4, Control4 My Home, the Control4 Design, the 4 Design, 4Store, 4Sight, Mockupancy, Pakedge, Pakedge SectorMaxx, Pakedge TruStream, Smartwav, Stealth Ports, Triad, the Triad Design, the Triangle Design, BakPak, and the BakPak and Pakedge Device&Software Inc. Design in the United States, (b) Control4 in Brazil, Canada, China, the European Union, India and Mexico, (c) the Control4 Design in China, and (d) the 4 Design in Brazil, China, the European Union and Mexico. As of December 31, 2017, we also had 12 trademark applications, for various marks, pending in Australia, China, the European Union, India and the United States.

We have filed for U.S. copyright protection for our source code for all major releases of our software. We also license software from third parties for integration into or use with our products, including open-source software and other commercially available software.

In addition, we seek to protect our intellectual property rights by requiring our employees and independent contractors involved in development to enter into agreements acknowledging that all inventions, trade secrets, works of authorship, developments, concepts, processes, improvements and other works generated by them on our behalf are our intellectual property, and assigning to us any rights, including intellectual property rights, that they may claim in those works.

## Employees

As of December 31, 2017, we had 635 full-time employees, including 526 employees in the United States and 109 employees outside the United States. None of our employees are currently represented by a labor union or trade council with respect to his or her employment with us. We have not experienced any work stoppages and we consider our relations with our employees to be good.

## Available Information



Our website is located at [www.Control4.com](http://www.Control4.com), and our investor relations website is located at [www.investor.Control4.com](http://www.investor.Control4.com). Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, and our Proxy Statements are available through our investor relations website, free of charge, after we file them with the Securities and Exchange Commission (“SEC”). You may also visit the SEC's website at [www.sec.gov](http://www.sec.gov) to view all of the reports we file or furnish with the SEC. You may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. You can get information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

We webcast via our investor relations website our earnings calls and certain events we participate in or host with members of the investment community. Our investor relations website also provides notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases, and blogs. Further corporate governance information, including our corporate governance guidelines and board committee charters, is also available on our investor relations website under the heading "Corporate Governance." The content of our websites is not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). We will remain an emerging growth company until the earliest to occur of: the last day of the fiscal year in which we have more than \$1.0 billion in annual revenue; the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates determined as of the last business day of the previous second fiscal quarter; the issuance, in any three-year period, by us of more than \$1.0 billion in non-convertible debt securities; or December 31, 2018, the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

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ITEM 1A. Risk Factors

A description of certain risks and uncertainties associated with our business is set forth below. You should carefully consider such risks and uncertainties, together with the other information contained in this report, and in our other public filings. Factors that could cause our business, financial condition or operating results to differ materially from the plans, projections and other forward-looking statements included in the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this report and in our other public filings include, but are not limited to, the following risks and uncertainties, which could cause substantial harm to our business, financial condition or operating results and the market price of our stock to decline, perhaps significantly.

Risks Related to Our Business and Industry

We have incurred operating losses in the past, may incur operating losses in the future, and may not achieve or maintain profitability.

We began our operations in 2003. For most of our history, we have experienced net losses and negative cash flows from operations. As of December 31, 2017, we had an accumulated deficit of \$67.0 million. We expect our operating expenses to increase in the future as we expand our operations. If our revenue does not grow to offset any increased expenses, we will not be profitable. After achieving profitability in 2013 and 2014 of \$3.5 million and \$8.2 million respectively, we sustained a net loss of \$1.7 million in 2015. Our net income for the years ended December 31, 2016 and 2017 was \$13.0 million and \$16.0 million, respectively, but we may incur significant losses in the future for a number of reasons, including without limitation the other risks and uncertainties described herein. Additionally, we may encounter unforeseen operating or legal expenses, difficulties, complications, delays in manufacturing and selling our products and other unknown factors that may result in losses in future periods. If these losses exceed our expectations or our revenue growth expectations are not met in future periods, our profitability will be harmed and our stock price may fall.

The markets in which we participate are highly competitive and many companies, including large technology companies, retailers, broadband and security service providers, as well as other managed service providers, are actively targeting the home automation market. Our failure to differentiate ourselves and compete successfully against these companies would make it difficult for us to add and retain consumers, and our sales and profitability could be adversely affected.

The market for home automation is fragmented, highly competitive and continually evolving. A number of technology companies, including industry leaders such as Amazon, Apple, Google, Honeywell, Lutron and Samsung, offer device control capabilities in some of their products, applications and services and are engaged in ongoing development efforts to address even broader segments of the home automation market. These large technology companies already have broad consumer awareness and sell a variety of devices for the home, and consumers may choose their offerings instead of ours, even if we offer broader interoperability or superior products and services. Additionally, these and other companies may further expand into our industry by developing additional solutions or by acquiring other providers. Similarly, many managed service providers, such as cable TV, telephone and security companies, are offering services that provide device control capability within the home for an additional monthly service fee. For example, Comcast's Xfinity service offers residential security, energy and automation services, and Vivint has made a significant effort to market its smart home services. These managed service providers have the advantage of leveraging their existing consumer base, network of installation and support technicians and name recognition to gain traction in the home automation market. In addition, consumers may prefer the monthly service fee with little to no upfront cost offered by some of these managed service providers over a larger upfront cost with little to no monthly service fees.

We expect competition from these large technology companies, retailers and managed service providers to increase in the future. This increased competition could result in pricing pressure, reduced sales, lower margins or the failure of our solutions to achieve or maintain broad market acceptance. To remain competitive and to maintain our position as a leading provider of professionally installed automation and control solutions for the connected home, we will need to invest continuously in product development, marketing, dealer and distributor service and support, and product delivery infrastructure. We may not have sufficient resources to continue to make the investments in all of the areas needed to maintain our competitive position. In addition, many of our competitors have longer operating histories, greater name recognition, larger consumer bases and significantly greater financial, technical, sales, marketing and other resources than us, which may provide them with an advantage in developing, marketing or servicing new solutions. Increased competition could reduce our market

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share, revenue and operating margins, increase our operating costs, harm our competitive position or otherwise harm our business and results of operations.

Consumers may choose to adopt point products that provide control of discrete home functionality rather than adopt our unified home automation solution. If we are unable to increase market acceptance of the benefits of our unified solution, our revenue may not continue to grow, or it may decline.

Many vendors have emerged, and may continue to emerge, to provide point products with advanced functionality for use in the home, such as a thermostat, lighting or alarm system that can be controlled by an application on a smartphone. We expect more and more consumer electronic and consumer appliance products to be network-aware and connected—each very likely to have its own smart device (phone or tablet) application. Consumers may be attracted to the relatively low costs of these point products and the ability to expand their home control solution over time with minimal upfront costs, despite the disadvantages of this approach. While we have built our solution to be flexible and support many third-party point products, the adoption of these products may reduce the revenue we receive for each installation. It is therefore important that we provide attractive top-quality products in many areas, such as networking, lighting, audio, video, thermostats and security, and establish broad market awareness and acceptance of these solutions as well as the advantages of integrating them in a unified solution. If a significant number of consumers in our target market choose to rely solely on the functionality included in point products rather than acquiring our unified automation solution, then our business, financial condition and results of operations will be harmed, and we may not be able to achieve sustained growth or our business may decline.

Providers of luxury integrated installations with long operating histories, established markets, broad user bases and proven consumer acceptance, may be successful in expanding their offerings in the mainstream home automation market, or otherwise compete against our solutions, which may reduce our market share and harm our growth and future prospects.

Many companies with which we directly compete have been operating in this industry for many years, and as a result, have established significant name recognition in the home automation industry. For example, Crestron, a provider of luxury integrated installations, has been in business for over 40 years and has become an established presence in the home automation industry. Given the strong growth potential of the market, we expect there to be many new entrants in the future. To the extent these providers are able to develop more affordable or attractive products or otherwise compete with our solutions across any of our target demographics, our growth may be constrained and our business could suffer.

Since we rely on third-party dealers and distributors to sell and install our solutions, we do not have a direct sales pipeline, which makes it difficult for us to accurately forecast future sales and correctly predict manufacturing requirements.

We depend on our independent dealer and distributor network to sell and install our solution. As a result, we do not directly develop or control our sales pipeline, making it difficult for us to accurately predict future sales. In addition, because the production of certain of our products requires long lead times, we enter into agreements for the manufacture and purchase of certain of our products well in advance of the time in which those products will be sold. These contracts are based on our best estimates of our near-term product needs. If we underestimate consumer demand, we may forego revenue opportunities, lose market share and damage our relationships. Conversely, if we overestimate consumer demand, we may purchase more inventory than we are able to sell at any given time, or at all. If we fail to accurately estimate demand for our products, we could have excess or obsolete inventory, resulting in a decline in the value of our inventory, which would increase our costs of revenues and reduce our liquidity. Our failure to accurately manage inventory relative to demand would adversely affect our results of operations.

We have relatively limited visibility regarding the consumers that ultimately purchase our products, and we often rely on information from third-party dealers and distributors to help us manage our business. If we are unable to obtain timely or accurate information, our ability to quickly react to market changes and effectively manage our business may be harmed.

We sell our solutions through independent dealers and distributors. These dealers and distributors work with consumers to design, install, update and maintain their home automation installations. While we are able to track orders from dealers and distributors and have access to certain information about the configurations of the Control4 systems they install that we receive through our controllers, we also rely on these dealers and distributors to provide us with information about consumer behavior, product and system feedback, consumer demographics, buying patterns and information about our competitors. We use this channel sell-through data, along with other metrics, to assess consumer demand for our solutions, develop new products, adjust pricing and make other strategic business decisions. Our channel sell-through data is subject to limitations due to collection methods and the third-party nature of the data and thus may not be complete or accurate. In

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In addition, from time to time we collect information directly from consumers through surveys that we conduct and other methods, but the consumers who chose to participate self-select and vary by geographic region and from period to period, which may impact the usefulness of the results. If we do not receive consumer information on a timely or accurate basis, or if we do not properly interpret this information, our ability to quickly react to market changes and effectively manage our business may be harmed.

Our quarterly results of operations have fluctuated and may continue to fluctuate. As a result, we may fail to meet or exceed the expectations of investors or securities analysts, which could cause our stock price to decline.

Our quarterly revenue and results of operations have fluctuated and may continue to fluctuate as a result of a variety of factors, many of which are outside of our control. In the past when our quarterly revenue or results of operations have fallen below the consensus expectations of securities analysts, the price of our common stock has declined. If our quarterly revenue or results of operations fall below the consensus expectations of investors or securities analysts in the future, the price of our common stock could decline again, perhaps substantially. Fluctuations in our results of operations may be due to a number of factors, including but not limited to:

- Demand for and market acceptance of our solutions;
- Our ability to continue to develop and maintain relationships with productive independent dealers and distributors and incentivize them to continue to market, sell, install and support our solutions;
- The ability of our contract manufacturers to continue to manufacture high-quality products, and to supply sufficient products to meet our demands;
- The timing and success of acquisitions, new product introductions or upgrades by us or by our competitors;
- The strength of regional, national and global economies;
- The strength of the U.S. dollar relative to other currencies and the impact this has on dealer and distributor margins and their ability to competitively sell our products to consumers;
- The impact of harsh seasonal weather, natural disasters or manmade problems such as terrorism;
- Changes in our business and pricing policies, or those of our competitors;

- Competition, including entry into the industry by new competitors and new offerings by existing competitors;
- The impact of seasonality on our business;
- A systemic impairment or failure of one or more of our products that erodes dealer and/or end user confidence;
- Political or regulatory changes in the markets in which we operate;
- The cost and availability of component parts used in our products;
- Aggressive business tactics by our competitors, including: selling at a discount, offering products on a bundled basis at no charge, extensive marketing efforts, and providing financing incentives;
- The amount and timing of expenditures, including those related to expanding our operations, increasing research and development, introducing new solutions or costs related to disputes and litigation; and
- Temporary discounts or permanent changes in the price or payment terms for our solutions.

Due to the foregoing factors and the other risks discussed herein, you should not rely on quarter-to-quarter comparisons of our results of operations as an indication of our future performance, nor should you consider any revenue growth or results of operations in any quarter to be indicative of our future performance.

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If we are unable to develop new solutions, sell our solutions into new markets, or further penetrate our existing markets, our revenue may not grow as expected or it may decline.

Our ability to increase sales will depend in large part on our ability to enhance and improve our solutions, to introduce new solutions in a timely manner, to sell into new markets, and to further penetrate our existing markets. The success of any enhancement or new product or solution depends on several factors, including the timely completion, introduction and market acceptance of enhanced or new solutions, the ability to attract, retain and effectively train product development, sales and marketing personnel (among others), the ability to develop relationships with independent dealers and distributors and the effectiveness of our marketing programs. Any new product or solution we develop or acquire may not be introduced in a timely or cost-effective manner, and may not achieve the broad market acceptance necessary to generate significant revenue. Any new markets into which we attempt to sell our solutions, including new vertical markets and new countries or regions, may not be receptive. Our ability to further penetrate our existing markets depends on the quality of our solutions and our ability to design our solutions to meet consumer demand. Moreover, we are frequently required to enhance and update our solutions as a result of changing standards and technological developments, which makes it difficult to recover the cost of development and forces us to continually qualify new solutions with our consumers. If we are unable to successfully develop or acquire new solutions, enhance our existing solutions to meet consumer requirements in a timely manner, sell solutions into new markets, or sell our solutions to additional consumers in our existing markets, our revenue may not grow as expected or it may decline.

Our success depends, in part, on our ability to develop and expand our global network of independent dealers and distributors.

As of December 31, 2017, we have over 5,290 active direct dealers and 50 distributors authorized to sell, install and support our solutions. We rely on our independent dealers and distributors to provide consumers with a successful Control4 home automation experience. In some cases, dealers may choose not to offer our solution and instead offer a product from one of our competitors or, in other cases, the dealer may simply discontinue its operations. In order to continue our growth and expand our business, it is important that we continue to add new dealers and distributors and ensure that most of our existing relationships remain productive. We must also work to expand our network of dealers and distributors to ensure that we have sufficient geographic coverage and technical expertise to address new markets and technologies. While it is difficult to estimate the total number of available dealers in our markets, there are a finite number of dealers that are able to perform the types of technical installations required for home automation systems. In the event that we saturate the available dealer pool, or if market or other forces cause the available pool of dealers to decline, it may be increasingly difficult to grow our business. As consumers' home automation options grow, it is important that we enhance our dealer footprint by broadening the expertise of our dealers, working with larger and more sophisticated dealers and distributors and expanding our line of mainstream consumer products that our dealers and distributors offer. If we are unable to expand our network of independent dealers and distributors, or maintain the relationships with our existing dealers and distributors, our business could be harmed.



We rely on our independent dealers and distributors to sell our solutions, and if our dealers and distributors fail to perform, our ability to sell and distribute our products and services will be limited, and our results of operations may be harmed.

Substantially all of our revenue is generated through the sales of our solutions by our authorized dealers and distributors. Our dealers and distributors are independent businesses that voluntarily sell our products as well as the products of other companies to consumers. We provide our dealers and distributors with specific training programs to assist them in selling, installing and servicing our products, and we also provide our dealer-network with leads to potential customers which we generate through our internal marketing efforts, but we cannot assure that these steps will be effective. We have observed, and expect to continue to observe, high volatility in the monthly, quarterly and annual sales performance of individual dealers and distributors. Although we can make estimated forecasts of cumulative sales of large numbers of dealers and distributors, we cannot assure their accuracy collectively or individually. Accordingly, we may not be able to reduce or slow our spending quickly enough if our actual sales fall short of our expectations. As a result, we expect that our revenues, results of operations and cash flows may fluctuate significantly on a quarterly basis. We believe that period-to-period comparisons of our revenues, results of operations and cash flows may not be meaningful and should not be relied upon as an indication of future performance.

Our independent dealers and distributors may be unsuccessful in marketing, selling, installing and supporting our products and services. If we are unable to provide high-quality products in a timely manner at competitive prices and to develop and maintain effective sales incentive programs for our dealers and distributors, we may not be able to incentivize them to sell our products to consumers. Our dealers and distributors may also market, sell and support products and services

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that are competitive with ours, and may devote more resources to the marketing, sales, and support of such competitive products. Our dealers and distributors may have incentives to promote our competitors' products to the detriment of our own, or may cease selling our products altogether. Our agreements with our dealers and distributors may generally be terminated for any reason by either party with advance notice. We cannot assure that we will retain these dealers and distributors, or that we will be able to secure additional or replacement dealers and distributors. For example, in September 2017, we announced that we were transitioning from a direct-to-dealer to a single distributor sales model in India. This transition may create disruption in the established channels and our sales and results of operations may be impacted in connection with this or any similar change in our sales process in the future.

In addition, while we take certain steps to protect ourselves from liability for the actions of our dealers and distributors, such as including contractual provisions limiting our liability with both consumers and dealer/distributors, consumers may still seek to recover amounts from us for any damages caused by independent dealers in connection with system installations, or the failure of a system to perform properly due to an incorrect installation by a dealer, and, in the event of litigation with respect to these matters, we cannot guarantee that our contractual protections will be enforced. Furthermore, dealers and distributors may initiate claims against us related to any failure or perceived failure to operate our business in accordance with our contracts and the law. In addition, our independent dealers and distributors may use our name and our brand in ways we do not authorize, and any such improper use may harm our reputation or expose us to liability for their actions.

If we fail to effectively manage our existing sales channels then our results of operations may be harmed.

We have entered into several strategic arrangements and intend to pursue additional strategic opportunities in the future. If the intended benefits from our strategic relationships are not realized, our results of operations may be harmed.

We are in the process of growing our relationships with strategic partners in order to increase awareness of our solutions and to attempt to reach markets that we cannot currently address cost-effectively. If these relationships do not develop in the manner we intend, our future growth could be impacted. Any loss of a major partner or distribution channel or other channel disruption could harm our results of operations and make us more dependent on alternate channels, damage our reputation, increase pricing and promotional pressures from other partners and distribution channels, increase our marketing costs, or harm buying and inventory patterns, payment terms or other contractual terms.

If we do not maintain the compatibility of our solutions with third-party products and applications that our consumers use, demand for our solutions could decline.

Our solutions are designed to interoperate with a wide range of other third-party products, including products in the areas of audio, video, lighting, temperature, and security, and we benefit from our relationships with partners that allow our system to provide integrated and extensible control of over 11,000 third party devices and services. If we do not support the continued integration of our solutions with third-party products and applications, including new and additional products, demand for our solutions could decline and we could lose sales. In addition, companies that provide certain point solutions have eliminated or restricted, and may in the future, eliminate or restrict, our ability to integrate with, control and otherwise be compatible with these products. As a result, we may not be successful in making our solutions compatible with these third-party products and applications or lose functionality in existing systems to the extent that they depend on the ability to integrate with third-party products, which could reduce demand for our solutions. In addition, if prospective consumers require customized features or functions that we do not offer, then the market for our solutions may be harmed.

If we are unable to adapt to technological change and implement technological and aesthetic enhancements to our products, this could impair our ability to remain competitive.

The market for home automation and control solutions is characterized by rapid technological change, frequent introductions of new products and evolving industry standards. However, product development often requires significant lead-time and upfront investment and our ability to attract new consumers and increase revenue from existing consumers will depend in significant part on our ability to accurately anticipate changes in industry standards and to continue to appropriately fund development efforts to enhance existing solutions or introduce new solutions in a timely basis to keep pace with technological developments. This is true of all our products but is particularly important with respect to our user interface and other direct consumer interface products. Similarly, if any of our competitors implement new technologies before we are able to implement them, those competitors may be able to provide more effective products than ours, possibly at lower prices, which

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could impact sales and decrease our market share. Any delay or failure in the introduction of new or enhanced solutions could harm our business, results of operations and financial condition.

We currently rely on contract manufacturers to manufacture our products and on component vendors to supply parts used in our products. The majority of our components are supplied by a single source. Any disruption in our supply chain, or our failure to successfully manage our relationships with our contract manufacturers or component vendors could harm our business.

Our reliance on contract manufacturers reduces our control over the assembly process, exposing us to risks, including reduced control over quality assurance, production costs and product supply. We rely on a limited number of contract manufacturers to manufacture most of our products and components, and in many cases one of these manufacturers is our only source for a particular product or product family. We also do business with a number of component vendors, and the parts they supply may not perform as expected. For the year ended December 31, 2017, three contract manufacturers, iLife, RCS and Sanmina, manufactured approximately 58% of our inventory purchases. Most of our contract manufacturers and component vendors are located outside of the United States, and all of them may be subject to political, economic, social and legal uncertainties that may harm our relationships with them. If we fail to manage our relationships with our contract manufacturers, component vendors or shipping partners effectively, or if our contract manufacturers, component vendors or shipping partners experience delays, disruptions, capacity constraints or quality control problems in their operations, our ability to ship products may be impaired and our competitive position and reputation could be harmed. In addition, any adverse change in our contract manufacturers', component vendors' or shipping partners' financial or business condition could disrupt our ability to supply quality products to our dealers and distributors. If we are required to change contract manufacturers, component vendors, or shipping partners we may lose revenue, incur increased costs or damage our relationships, or we might be unable to find a new contract manufacturer or component vendor on acceptable terms, or at all. In addition, qualifying a new contract manufacturer or component vendor could be an expensive and lengthy process. If we experience increased demand that our contract manufacturers or component vendors are unable to fulfill, or if they are unable to provide us with adequate supplies of high-quality products for any reason, we could experience a delay in our order fulfillment, and our business, results of operations and financial condition would be harmed.

Changes in import/export regulatory regimes and duties could negatively impact our business.

The current presidential administration in the United States has made comments suggesting that it is not supportive of certain existing international trade agreements, and at this time, it remains unclear what this administration may or may not do with respect to these international trade agreements. Additional or increased import taxes or duties in the United States could negatively impact our cost structures. If the United States were to withdraw from or materially modify certain international trade agreements, change tax provisions related to the global manufacturing and sales of our products, or otherwise alter regulations impacting our existing business, our financial condition and results of operations could be adversely affected.

Growth of our business may depend on market awareness and a strong brand, and any failure to develop, broaden, protect and enhance market awareness of our products could hurt our ability to retain or attract consumers.

Because of the competitive nature of the mainstream home automation market, we believe that building and maintaining market awareness, brand recognition and goodwill may be material to our success. This will depend largely on our ability to continue to provide high-quality solutions, and we may not be able to do so effectively. We may choose to engage in a broader marketing campaigns to further promote our brand, but this effort may not be successful. Our efforts in developing our brand may be affected by the marketing efforts of our competitors, negative publicity and social media commentary, and our reliance on our independent dealers, distributors and strategic partners to install our products and promote our brand effectively. If we are unable to cost-effectively maintain and increase positive awareness of our brand, our business, results of operations and financial condition could be harmed.

We operate in the emerging and evolving home automation market, which may develop more slowly or differently than we expect. If the mainstream home automation market does not grow as we expect, or if we cannot expand our solutions to meet the demands of this market, our revenue may decline, fail to grow or fail to grow at an accelerated rate, and we may incur additional operating losses.

The market for home automation and control solutions is evolving, and it is uncertain whether our solutions will achieve and sustain high levels of demand and market acceptance. Some consumers may be reluctant or unwilling to use our solutions for a number of reasons, including satisfaction with other solutions, concerns about cost, and lack of awareness of our

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solutions. Unified home automation solutions such as ours have traditionally been luxury purchases for the high end of the residential market, and while our solutions target the high end of the market, we also have solutions that target middle- and entry-level home owners, including our EA-1 that is designed to control smaller, single room projects with an entertainment component and a new CA-1 controller for smaller projects that only include lighting, comfort, and/or security, which we released in February 2018. Our ability to expand the sales of our solutions to a broader consumer base depends on several factors, including market awareness of our solutions, the timely completion, introduction and market acceptance of our solutions, the ability to attract, retain and effectively train sales and marketing personnel, the effectiveness of our marketing programs, the ability to develop effective relationships with independent dealers and distributors, the cost and functionality of our solutions and the success of our competitors. If we are unsuccessful in developing and marketing our home automation solutions to mainstream consumers, or if these consumers do not perceive or value the benefits of our solutions, the market for our solutions might not continue to develop or might develop more slowly than we expect, either of which would harm our revenue and growth prospects.

Our consumers may experience service failures or interruptions due to defects in the software, infrastructure, third-party components or processes that comprise our solutions, or due to errors in product installation or servicing by our independent dealers, any of which could harm our business.

Our solutions may contain undetected defects in the software, infrastructure, third-party components or processes. If these defects lead to service failures, we could be subject to liability for such failures and we could experience harm to our branded reputation. Such defects could also result in a loss of, or delay in, market acceptance of our solutions, which could harm our business, results of operations and financial condition.

In addition to failures due to product defects, because our solutions are installed by independent dealers, if they do not install or maintain our solutions correctly or if the underlying network or infrastructure in a home or business is not sufficiently robust, our solutions may not function properly. If the improper installation or maintenance of our solutions leads to service failures of a product or solution, we could experience harm to our branded reputation, claims by our consumers, dealers, distributors, strategic partners or developers and we may incur increased expense during the period required to address the cause of the problem, which could harm our business, results of operations and financial condition.

Any defect in, or disruption to, our solutions could cause consumers to remove their products, not to purchase additional products from us, prevent other potential consumers from purchasing our solutions, or harm our reputation. The nature of the solutions we provide, including our interface with home security solutions, may expose us to greater risks of liability for system failure or even installation errors by our independent dealers than may be inherent in other businesses. Substantially all of our dealer agreements contain provisions limiting our liability to dealers and our consumers in an attempt to reduce this risk. However, in the event of litigation with respect to these matters, we cannot be sure that these limitations will be enforced, and defending a lawsuit, regardless of its merit, could be costly, divert management's attention, affect our ability to obtain or maintain liability insurance on acceptable terms and could harm our business. In addition, there can be no assurance that we are adequately insured for these risks. Certain of our insurance policies and the laws of some jurisdictions may limit or prohibit insurance coverage for punitive or certain other types of damages or liability arising from gross negligence. Although we currently maintain some warranty

reserves, we cannot be sure that these warranty reserves will be sufficient to cover future liabilities. Furthermore, we may be required to indemnify our dealers, distributors and other partners against certain liabilities they may incur as a result of defects of our products.

Our networking solutions business may be harmed if users perceive our solution as the cause of a slow or unreliable network connection, or in the event of a high-profile network failure, even though certain technical problems experienced by users may not be caused by our products.

Our networking solutions have been deployed in many different locations and user environments and are capable of providing connectivity to many different types of Wi-Fi-enabled devices operating a variety of applications. The ability of our products to operate effectively can be negatively impacted by many different elements unrelated to our products. For example, a user's experience may suffer from an incorrect setting in a Wi-Fi device. Although certain technical problems experienced by users may not be caused by our products, users often may perceive the underlying cause to be a result of poor performance of the wireless network. This perception, even if incorrect, could harm our business and reputation. Similarly, a high-profile network failure may be caused by improper operation of the network or failure of a network component that we did not supply, but users and other service providers may perceive that our products were implicated, which, even if incorrect, could harm our business, operating results and financial condition.

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Failure to maintain the security of our information and technology networks, including information relating to our dealers, distributors, partners, consumers and employees, could adversely affect our business. Furthermore, without limiting the preceding sentence, if security breaches in connection with the delivery of our products and services allow unauthorized third parties to obtain control of or otherwise access consumers' networks or appliances, our reputation, business, results of operations and financial condition could be harmed.

The legal, regulatory and contractual environment surrounding information security, privacy and fraud is constantly evolving and companies that collect and retain information are under increasing attack by cyber- criminals around the world. We are dependent on information technology networks and systems, including the Internet, to process, transmit and store electronic information and, in the normal course of our business, we collect and retain certain information, including financial information, from and pertaining to our dealers, distributors, partners, consumers and employees. The protection of dealer, distributor, partner, consumer and employee data is important to us, and we devote significant resources to addressing security vulnerabilities in our products and information technology systems, including encrypting some data repositories and engaging security experts to conduct penetration testing to help us uncover vulnerabilities in our systems. However, the policies and security measures that we put in place cannot guarantee security, and our information technology infrastructure may be vulnerable to criminal cyber-attacks or data security incidents due to employee or dealer negligence, error, malfeasance, or other vulnerabilities. Cyber security attacks are increasingly sophisticated, change frequently, and often go undetected until after an attack has been launched. We may fail to identify these new and complex methods of attack, or fail to invest sufficient resources in security measures. We have and will continue to experience cyber-attacks, and we cannot be certain that advances in cyber-capabilities or other developments will not permit compromise or breach the technology protecting the networks that access our products and services and repositories where we store this information.

We have acquired a number of companies over the years and may continue to do so in the future. While we make significant efforts to address any information technology security issues with respect to our acquisitions, we may still inherit such risks when we integrate the acquired products and systems.

In addition, consumers can use our tools to access their automation systems remotely, and certain of our employees and independent dealers can monitor access and update certain of our products and services remotely. Security breaches by third parties or by, or originating from, one or more of our dealers, distributors or employees, that allow unauthorized third parties to obtain control of our consumers' appliances through our products or to obtain, collect, use or disclose any personal data of consumers, could harm our reputation, business, results of operations and financial condition. Furthermore, although we do not recommend or approve of port forwarding for remote access to our solutions, certain of our dealers have in the past and may in the future enable port forwarding, which could create security vulnerabilities in their customers' home networks.

It is difficult to determine what harm may directly result from any specific interruption or security breach. Any failure or perceived failure to maintain performance, reliability, security and availability of systems or the actual or potential theft, loss, fraudulent use or misuse of our products or associated confidential information, including personally identifiable data of a dealer, distributor, partner, consumer, and employee, could result in:



- harm to our reputation or brand, which could lead some consumers to stop using certain of our products or services, reduce or delay future purchases of our products or services, use competing products or services, or materially and adversely affect the overall market perception of the security and reliability of our services and home automation products generally;
- individual and/or class action lawsuits, which could result in financial judgments against us and that would cause us to incur legal fees and costs;
- legal or regulatory enforcement action, which could result in fines and/or penalties and which would cause us to incur legal fees and costs; and/or
- additional costs associated with responding to the interruption or security breach, such as investigative and remediation costs, the costs of providing individuals and/or data owners with notice of the breach, legal fees, the costs of any additional fraud detection activities, or the costs of prolonged system disruptions or shutdowns.

Any of these actions could materially adversely impact our business and results of operations.

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Because we store, process, and use data, some of which contains personal information, we are subject to complex and evolving federal, state, and foreign laws and regulations regarding privacy, data protection, and other matters. Many of these laws and regulations are subject to change and uncertain interpretation, and could result in investigations, claims, changes to our business practices, increased cost of operations, and declines in user growth, retention, or engagement, any of which could seriously harm our business.

We are subject to a variety of laws and regulations that involve matters central to our business, including user privacy, rights of publicity, data protection, content, intellectual property, distribution, electronic contracts and other communications, competition, protection of minors, consumer protection, taxation, and online-payment services. Because we store, process, and use data, some of which contains personal information, we are subject to complex and evolving federal, state, and foreign laws and regulations regarding privacy, data protection, and other matters. These laws can be particularly restrictive in countries outside the United States. Both in the United States and abroad, these laws and regulations constantly evolve and remain subject to significant change. In addition, the application and interpretation of these laws and regulations are often uncertain, particularly in the new and rapidly evolving industry in which we operate. Continually implementing up-to-date data security tools and procedures and maintaining privacy standards that comply with ever-changing privacy regulations in multiple jurisdictions (including but not limited to the General Data Protection Regulation (GDPR) in the European Union, which will go into effect on May 25, 2018) is challenging.

In addition, on July 12, 2016 the European Commission formally adopted the new EU – U.S. Privacy Shield, which provides a safe harbor for the transfer of personal information, by U.S. companies doing business in Europe from the European Economic Area to the United States provided that such U.S. companies self-certify under this framework. Control4 has submitted its self-certification application pursuant to the Privacy Shield, and as part of this self-certification, we have committed to abide by the Privacy Shield principles with respect to any personal information transferred.

We publicly post our privacy policies and practices concerning our processing, use and disclosure of personal information. Our privacy policy and other statements we publish provide promises and assurances about privacy and security that could subject us to potential regulatory action or other liabilities if such statements are found to be deceptive or misrepresentative of our practices or if we fail to take adequate measures to ensure that we adhere to applicable regulations, or if our third-party data processors fail to adequately protect personal information that they process on our behalf.

We encounter seasonality in sales, which could harm the amount, timing and predictability of our revenue and cause our stock price to fluctuate.

We have little recurring revenue or backlog, and our revenue is generated from orders of our solutions from new and existing consumers, each of which may cause our quarterly results to fluctuate. In addition, we may experience seasonality in the sales of our solutions. Historically, our revenue is generally highest in the fourth quarter and lowest

in the first quarter. Seasonal variations in our sales may lead to significant fluctuations in our cash flows and results of operations on a quarterly basis and this may cause our stock price to fluctuate.

We may not generate significant revenue as a result of our current research and development efforts.

We have made and expect to continue to make significant investments in research and development and related product opportunities. For the year ended December 31, 2017, we spent \$40.6 million on research and development expenses. High levels of expenditures for research and development could harm our results of operations, especially if not offset by corresponding future revenue increases. We believe that we must continue to dedicate a significant amount of resources to our research and development efforts to maintain our competitive position. However, it is difficult to estimate when, if ever, we will generate significant revenue as a result of these investments.

Our strategy includes pursuing acquisitions and our potential inability to successfully integrate newly-acquired technologies, assets, businesses, or personnel may harm our financial results.

We believe part of our growth will be driven by acquisitions of other companies or their technologies, assets and businesses. Recent acquisitions include Pakedge in January 2016, Triad in February 2017 and substantially all the assets of ihiji in December 2017. These acquisitions and any future acquisitions we complete will give rise to risks, including:

- Incurring higher than anticipated capital expenditures and operating expenses;

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- Failing to assimilate the operations and personnel, or failing to retain the key personnel of the acquired company or business;
- Failing to integrate the acquired technologies, or incurring significant expense to integrate acquired technologies into our solutions;
- Disrupting our ongoing business;
- Dissipating or diverting our management resources;
- Failing to maintain uniform standards, controls and policies;
- Incurring significant accounting charges;
- Impairing relationships with employees, dealers, distributors, partners or consumers;
- Finding that the acquired technology, assets or business does not further our business strategy, that we overpaid for the technology, assets or business, or that we may be required to write off acquired assets or investments partially or entirely;
- Failing to realize the expected synergies of the transaction;
- Being exposed to unforeseen liabilities and contingencies that were not identified during diligence conducted prior to acquiring the company, including but not limited to the risk that the products or services of the acquired company violate third-party intellectual property rights or regulatory standards or contain other vulnerabilities; and
- Being unable to generate sufficient revenue from acquisitions to offset the associated acquisition costs.

Fully integrating acquired technology, asset, business, or personnel into our operations may take a significant amount of time and resources. We may not be successful in overcoming these risks or any other problems encountered with such acquisitions. To the extent we do not successfully avoid or overcome the risks or problems related to any such acquisitions, our results of operations and financial condition could be harmed. Acquisitions also could impact our financial position and capital needs, or could cause fluctuations in our quarterly and annual results of operations.

Acquisitions could include significant goodwill and intangible assets. The amortization of such intangible assets would reduce our profitability and there may be future impairment charges that would reduce our stated earnings. We

may incur significant costs in our efforts to engage in strategic transactions and these expenditures may not result in successful acquisitions.

Future acquisitions of technologies, assets or businesses, that are paid for partially or entirely through the issuance of stock or stock rights, could dilute the ownership of our existing stockholders.

We expect that the consideration we might pay for any future acquisitions of technologies, assets or businesses could include stock, rights to purchase stock, cash or some combination of the foregoing. If we issue stock or rights to purchase stock in connection with such future acquisitions, net income (loss) per share and then-existing holders of our common stock may experience dilution.

We may pursue business opportunities that diverge from our current business model, which may cause our business to suffer.

We may pursue business opportunities that diverge from our current business model, including expanding our solutions into lines of business with which we have no experience, investing in new and unproven technologies, and expanding our existing sales channels or adding new sales channels, including through acquisitions such as our recent acquisition of Triad and its speaker lines. We can offer no assurance that any such new business opportunities will prove to be successful. Among other negative effects, our pursuit of such business opportunities could reduce operating margins and require more working capital, or materially and adversely affect our business, financial condition, results of operations and cash flows.

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Our gross margins can vary significantly depending on multiple factors, which can result in fluctuations in our results of operations.

Our gross margins are likely to vary due to consumer demand, product mix, new product introductions, unit volumes, commodity and supply chain costs, product delivery costs, geographic sales mix, excess and obsolete inventory and the complexity and functionality of new product innovations. In particular, if we are not able to introduce new solutions in a timely manner at the cost we expect, or if consumer demand for our solutions is less than we anticipate, or if there are product pricing, marketing and other initiatives by our competitors to which we need to react that lower our margins, then our overall gross margin will be less than we project. The impact of these factors on gross margins can create unanticipated fluctuations in our results of operations, which may cause volatility in our stock price.

If we are unable to substantially utilize our net operating loss or tax credit carryforwards, our financial results will be harmed.

As of December 31, 2017, our net operating loss (“NOL”) carryforward amounts for U.S. federal income and state tax purposes were \$66.7 million and \$67.8 million, respectively. In addition to the NOL carryforwards, as of December 31, 2017, we had U.S. federal and state tax credit carryforwards of \$6.6 million and \$2.8 million, respectively. While we have generated profits at times in the past, there is no assurance that we will be able to generate sufficient taxable income to utilize our NOLs or tax credits before they expire. Our NOL carryforwards were fully reserved for as of December 31, 2017.

If we are unable to manage our growth and diverse and complex operations, our reputation in the market and our ability to generate revenue from new or existing consumers may be harmed.

Because our operations are geographically diverse and complex, our personnel resources and infrastructure could become strained and our reputation in the market and our ability to successfully implement our business plan may be harmed. The growth in the size, complexity and diverse nature of our business and the expansion of our product lines and consumer base, including through acquisitions, have placed increased demands on our management and operations, and further growth, if any, may place additional strains on our resources in the future. Our ability to effectively compete and to manage our plan to continue to expand our headcount and operations may depend on, among other things:

- Maintaining institutional knowledge by retaining and expanding the core competencies critical to our operations in our senior management and key personnel;

- Increasing the productivity of our existing employees and attracting new talent;
- Maintaining existing productive relationships and developing new productive relationships with independent contract manufacturers, dealers and distributors;
- Improving our operational, financial and management controls; and
- Improving our information reporting systems and procedures.

If we do not manage the size, complexity and diverse nature of our business effectively, we could experience delayed product releases and longer response times by our dealers in assisting our consumers in implementing our solutions, and could lack adequate resources to support our consumers on an ongoing basis, any of which could harm our reputation in the market, our ability to successfully implement our business plan and our ability to generate revenue from new or existing consumers.

If we fail to retain our key employees and attract talented new personnel as needed, our business would be harmed and we might not be able to implement our business plan successfully.

Given the complex nature of the technology on which our business is based and the speed with which such technology advances, our future success is dependent, in large part, upon our ability to attract and retain highly qualified executive, managerial, engineering, and sales and marketing personnel. Competition for talented personnel is intense, and we cannot be certain that we can retain our executive, managerial, engineering, and sales and marketing personnel, or that we can attract, assimilate or retain such personnel in the future. Our inability to attract and retain such personnel could harm our business, results of operations and financial condition.

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Downturns in general economic and market conditions, including but not limited to downturns in housing markets and reductions in consumer spending, may reduce demand for our solutions, which could harm our revenue, results of operations, financial condition and cash flows.

Our revenue, results of operations and cash flows depend on the overall demand for our solutions, which can be significantly reduced in economic environments characterized by market and interest rate volatility, decreased consumer confidence, high unemployment, declines in residential remodeling and housing starts, fluctuating exchange rates, and diminished growth expectations in the U.S. economy and abroad. During periods of weak or unstable economic and market conditions, providers of products and services that represent discretionary purchases, such as our home automation products, are disproportionately affected. In addition, during these periods, the number of independent dealers and distributors may decline as the prospects for home building and home renovation projects diminish, which may have a corresponding impact on our growth prospects. Furthermore, during challenging economic times consumers may face issues in gaining timely access to sufficient credit, which could impair their ability to make timely payments. There is also an increased risk during these periods that an increased percentage of our dealers will file for bankruptcy protection, which may harm our reputation, revenue, profitability and results of operations. We cannot predict the timing, strength or duration of any economic slowdown, instability or recovery, generally or within any particular geography or industry. Any downturns in the general economic conditions of the geographies and industries in which we operate, or any other factors negatively impacting housing markets or consumer spending, could materially and adversely impact our revenue, results of operations, financial condition and cash flows.

If our estimates or judgments relating to our critical accounting policies are based on assumptions that change or prove to be incorrect, our results of operations could fall below expectations of securities analysts and investors, resulting in a decline in our stock price.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” the results of which form the basis for making judgments about the carrying values of assets, liabilities and equity, and the amount of revenue and expenses that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include, or may in the future include, those related to revenue recognition, allowance for doubtful accounts, inventories, product warranties, income taxes and stock-based compensation expense. Our results of operations may be harmed if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our results of operations to fall below the expectations of securities analysts and investors, resulting in a decline in our stock price.

Changes in existing financial accounting standards or practices, or taxation rules or practices, may harm our results of operations.



Changes in existing accounting or taxation rules or practices, new accounting pronouncements or taxation rules, or varying interpretations of current accounting pronouncements or taxation practice could harm our results of operations or the manner in which we conduct our business. For example, on December 22, 2017, “H.R.1”, f known as the “Tax Cuts and JOBS Act”, (the “Tax Act”) was signed into law, which among other changes reduces the corporate income tax rate to 21%, creates a territorial tax system (with a one-time mandatory tax on previously deferred foreign earnings), and requires companies to pay minimum taxes on foreign earnings and subjects certain payments from U.S. corporations to foreign related parties to additional taxes. While this act will result in a lower domestic income tax rate once we fully utilize our net operating loss and other accumulated tax credits, we will be subject to the one-time mandatory tax on previously deferred foreign earnings. We will continue to monitor the impact of this and further changes to applicable tax laws to our overall business strategy.

Mergers or other strategic transactions involving our competitors could weaken our competitive position, which could harm our results of operations.

Our industry is highly fragmented, and we believe it is likely that some of our existing competitors will consolidate or be acquired. In addition, some of our competitors may enter into new alliances with each other or may establish or strengthen cooperative relationships with systems integrators, third-party consulting firms or other parties. For example, Google Inc. acquired Nest Labs, a manufacturer of thermostats and smoke detectors; Nest Labs acquired Dropcam, a home-monitoring

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camera company; and Samsung Electronics Co., Ltd. acquired SmartThings and Harman International Industries. Transactions such as these, as well as any additional consolidations, acquisitions, alliances or cooperative relationships, or new product introductions by companies in our industry, could lead to pricing pressure, reduce our market share or result in a competitor with greater financial, technical, marketing, service and other resources than ours, all of which could harm our business, results of operations and financial condition.

We are an “emerging growth company,” and any decision on our part to comply with certain reduced disclosure requirements applicable to emerging growth companies could make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies,” including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding an annual non-binding advisory vote on executive compensation and nonbinding stockholder approval of any golden parachute payments not previously approved. If we choose not to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, as we have in the past, our auditors will not be required to opine on the effectiveness of our internal control over financial reporting. As a result, investors may be less comfortable with the effectiveness of our internal controls and the risk that material weaknesses or other deficiencies in our internal controls go undetected may increase. If we choose to provide reduced disclosures in our periodic reports and proxy statements while we are an emerging growth company, as we have in the past, investors will have access to less information and analysis about our executive compensation, which may make it difficult for investors to evaluate our executive compensation practices. We cannot predict if investors find our common stock less attractive because we may rely on these exemptions and provide reduced disclosure. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be harmed. We expect that our “emerging growth company” status will expire on December 31, 2018, the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended (the “Securities Act”), for complying with new or revised accounting standards. In other words, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we have chosen to “opt out” of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

Failure to achieve and maintain effective internal control over financial reporting could result in our failure to accurately report our financial results. Any inability to report and file our financial results accurately and timely could harm our business and adversely impact investor confidence in our company and, as a result, the value of our common stock.

Effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and results of operations could be harmed, investors could lose confidence in our reported financial information, and the trading price of our stock could drop significantly. We are required to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act, or Section 404. This assessment includes disclosure of any material weaknesses identified by our management in our internal control over financial reporting. However, our auditors will not be required to formally opine on the effectiveness of our internal control over financial reporting pursuant to Section 404 until we are no longer an “emerging growth company” as defined in the JOBS Act, and we continue to take advantage of the exemptions available to us through the JOBS Act. We expect that our auditors will be required to formally opine on the effectiveness of our internal controls no later than our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

Our compliance with Section 404 may require us to continue to incur substantial expense and expend significant management efforts. We may not be able to remediate any future material weaknesses, or to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal controls are effective. If we are unable to assert that our internal control over financial reporting is effective, or if our auditors are unable to express an

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opinion on the effectiveness of our internal controls when they are required to issue such opinion, investors could lose confidence in the accuracy and completeness of our financial reports, which could harm our stock price.

Our failure to raise additional capital or generate cash flows necessary to expand our operations, invest in new technologies and otherwise respond to business opportunities or unforeseen circumstances in the future could reduce our ability to compete successfully and harm our results of operations.

While we believe that our existing cash and cash equivalents will be sufficient to meet our anticipated cash requirements for at least the next 12 months, at some point we may need to raise additional funds, and we may not be able to obtain additional debt or equity financing on favorable terms, if at all. If we raise additional equity financing, our security holders may experience significant dilution of their ownership interests and the value of shares of our common stock could decline. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness, force us to maintain specified liquidity or other ratios or restrict our ability to pay dividends or make acquisitions. If we need additional capital and cannot raise it on acceptable terms, if at all, we may not be able to, among other things:

- Develop and enhance our solutions;
- Continue to expand our research and development, sales and marketing organizations;
- Hire, train and retain employees;
  - Respond to competitive pressures or unanticipated working capital requirements; or
- Pursue acquisition opportunities.

Our inability to do any of the foregoing could reduce our ability to compete successfully and harm our results of operations.

We may be subject to additional tax liabilities, which would harm our results of operations.

We are subject to income, sales, use, value added, tariffs and other taxes in the United States and other countries in which we conduct business, which laws and rates vary greatly by jurisdiction. Certain jurisdictions in which we do not

collect sales, use, value added, tariffs or other taxes on our sales may assert that such taxes are applicable, which could result in tax assessments, penalties and interest, and we may be required to collect such taxes in the future. Significant judgment is required in determining our worldwide provision for income taxes and evaluating our uncertain tax positions. These determinations are highly complex and require detailed analysis of the available information and applicable statutes and regulatory materials. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation could be different from our historical tax practices, provisions and accruals. If we receive an adverse ruling as a result of an audit, or we unilaterally determine that we have misinterpreted provisions of the tax regulations to which we are subject, our tax provision, results of operations or cash flows could be harmed. In addition, liabilities associated with taxes are often subject to an extended or indefinite statute of limitations period. Therefore, we may be subject to additional tax liability (including penalties and interest) for any particular year for extended periods of time depending on the specific statute of limitations in the relevant jurisdiction.

Our business is subject to the risks of earthquakes, fire, power outages, floods and other catastrophic events, and to interruption by man-made problems such as terrorism.

A significant natural disaster, such as an earthquake, fire or a flood, or a significant power outage could harm our business, results of operations and financial condition. Natural disasters could affect our manufacturing vendors' or logistics providers' ability to perform services such as manufacturing products or assisting with shipments on a timely basis. Our three largest contract manufacturers, which manufactured 58% of our inventory purchases for the year ended December 31, 2017, have manufacturing facilities located in China and Korea. In the event our manufacturing vendors' information technology systems or manufacturing or logistics abilities are hindered by any of the events discussed above, shipments could be delayed or cancelled, resulting in missing financial targets, such as revenue and shipment targets, for a particular quarter. Further, if a natural disaster occurs in a region from which we derive a significant portion of our revenue, such as metropolitan areas in North America, consumers in those regions may delay or forego purchases of our solutions from dealers and distributors, which

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may harm our results of operations for a particular period. For example, the recent hurricanes in Texas and Florida and the fires in northern California impacted ongoing projects in areas where Control4 has significant sales. In addition, acts of terrorism, including cyber terrorism or crime, could cause disruptions in our business or the business of our manufacturers, logistics providers, dealers, distributors, consumers or the economy as a whole. Given our typical concentration of sales at the end of each month and quarter, any disruption in the business of our manufacturers, logistics providers, dealers, distributors and consumers that impacts sales at the end of our quarter could have a greater impact on our quarterly results. All of the aforementioned risks may be augmented if the disaster recovery plans for us and our suppliers prove to be inadequate. To the extent that any of the above results in delays or cancellations of orders, or delays in, or cancellations of the manufacture, deployment or shipment of our products, our business, financial condition and results of operations would be harmed.

Global or regional economic, political and social conditions could harm our business and results of operations.

External factors such as potential crime, terrorist attacks, acts of war, financial crises, trade friction or geopolitical and social turmoil in those parts of the world that serve as markets for our solutions, such as Europe, Asia or elsewhere, could harm our business and results of operations. These uncertainties may cause our consumers to reduce discretionary spending on their home and make it difficult for us to accurately plan future business activities. More generally, these geopolitical, social and economic conditions could result in increased volatility in worldwide financial markets and economies that could harm our sales. We are not insured for losses or interruptions caused by terrorist acts or acts of war. The occurrence of any of these events or circumstances could harm our business and results of operations.

Failure to comply with laws and regulations could harm our business.

Our business is subject to regulation by various federal, state, local and foreign governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, product safety, environmental laws, consumer privacy and protection laws, anti-bribery laws, import/export controls, federal securities laws and tax laws and regulations. As we continue to develop new products, acquire companies with new product lines and expand our geographical footprint to market and sell products directly in new jurisdictions, we may become subject to additional rules and regulations, and these regulatory requirements may be different from or more stringent than those in the United States and Europe. While we have obtained these certifications for many of our products currently sold in expanded jurisdictions, we continue to work towards full compliance for all of our products sold. Delays in meeting, or failure to meet, these certification standards may cause us to miss market opportunities and may hinder us from entering and selling our products in those markets. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, enjoinders of future shipments, mandatory product recalls, seizures, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties or injunctions. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, results of operations and financial condition could be materially harmed. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees. Enforcement actions and sanctions could further harm our business, results of operations and financial condition.

Governmental regulations affecting the import or export of our products could harm our revenues.

The United States and various foreign governments have imposed controls, export license requirements and restrictions on the import or export of some technologies, especially encryption technology, and may impose additional or broader controls, export license requirements and restrictions on the import or export of some technologies in the future. In addition, from time to time, governmental agencies have proposed additional regulation of encryption technology, such as requiring the escrow and governmental recovery of private encryption keys. Although we do not believe that any of our products currently require an export license, if our products or components of our products become subject to governmental regulation of encryption technology or other governmental regulation of imports or exports, we may be required to obtain import or export approval for such products, which could increase our costs and harm our international and domestic sales and our revenue. In addition, failure to comply with such regulations could result in penalties, costs and restrictions on export privileges, which would harm our results of operations.

Regulations related to “conflict minerals” may force us to incur additional expenses, may result in damage to our business reputation and may adversely impact our ability to conduct our business.

Pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”), we are required to adhere to certain reporting and other requirements regarding the use of certain minerals and derivative metals

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(referred to as “conflict minerals,” regardless of their actual country of origin) in our products. Some of these metals are commonly used in electronic equipment and devices, including our products. These requirements require that we investigate, disclose and report whether or not any such metals in our products originated from the Democratic Republic of Congo or adjoining countries. We do not directly source any of our own raw conflict minerals, rather we have an extremely complex supply chain, with numerous suppliers, many of whom may not be obligated to investigate their own supply chains, for the components and parts used in each of our products. As a result, we may incur significant costs to comply with the diligence and disclosure requirements, including costs related to determining the source of any of the relevant metals used in our products and other potential changes to products or sources of supply as a consequence of such verification activities. Because these regulations are relatively new, we and the companies comprising our supply chain each have a limited history of investigating, disclosing and reporting use of these minerals, and there is a limited history of regulatory guidance regarding compliance with these requirements. In addition, because our supply chain is so complex, we may not be able to sufficiently verify the origin of all relevant metals used in our products through the due diligence procedures that we implement, which may harm our business reputation. We may incur reputational damage if we determine that any of our products contain minerals or derivative metals that are not conflict free or if we are unable to sufficiently verify the source for all conflict minerals used in our products through the procedures we may implement. Furthermore, key components and parts that can be shown to be “conflict free” may not be available to us in sufficient quantity, or at all, or may only be available at significantly higher cost to us. If we are not able to meet customer requirements, customers may choose to disqualify us as a supplier. Any of these outcomes could adversely affect our business, financial condition or operating results.

Health care reform could increase our cost of labor

In March 2010, the Patient Protection and Affordable Care Act (the “ACA”) was signed into U.S. law. The ACA is comprehensive U.S. health care legislation that includes provisions that subject us to potential penalties unless we offer certain employees minimum essential health care coverage that is affordable and provides minimum value. Recent changes, especially the employer mandate and employer penalties that became effective January 1, 2015, may increase our labor costs significantly in future years. In order to comply with the employer mandate provision of the ACA, we offer health care coverage to all applicable employees eligible for coverage under the ACA. Designating employees as eligible is complex, and is subject to challenge by employees and the Internal Revenue Service. While we believe we have properly identified eligible employees, a later determination that we failed to offer the required health coverage to eligible employees could result in penalties that may harm our business or reputation. We cannot be certain that compliant insurance coverage will remain available to us on reasonable terms, and we could face additional risks arising from future changes to the ACA or other legislation or executive orders that repeal and replace in whole or in part the ACA.

We incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, which could harm our results of operations and our ability to attract and retain qualified executives and board members.

As a public company, we have incurred and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company, including costs associated with public company reporting and corporate



governance requirements. These requirements include compliance with Section 404 and other provisions of the Sarbanes-Oxley Act of 2002, the Dodd-Frank Act, as well as rules implemented by the Securities and Exchange Commission (“SEC”), The NASDAQ Stock Market LLC, and other applicable securities or exchange-related rules and regulations. In addition, our management team has also had to adapt to the requirements of being a public company. Complying with these rules and regulations substantially increases our legal and financial compliance costs and makes some activities more difficult, time consuming or costly. These compliance requirements and costs will increase once we are no longer an “emerging growth company,” as defined in the JOBS Act, which will occur December 31, 2018 at the latest.

Government regulations of wireless networking in the United States or internationally may result in unanticipated costs and failure to comply with such laws and regulations could harm our business.

Our wireless communication and networking products operate through the transmission of radio signals and radio emissions are subject to regulation in the United States and in other countries in which we do business. In the United States, various federal agencies, including the Federal Communications Commission (“FCC”), and various state agencies have promulgated regulations that concern the use of radio/electromagnetic emissions standards. Member countries of the European Union have enacted similar standards concerning electrical safety and electromagnetic compatibility and emissions. As these regulations and standards evolve, and if new regulations or standards are implemented, we will be required to modify our products or develop and support new versions of our products, and our compliance with these regulations and standards may

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become more burdensome. The failure of our products to comply, or delays in compliance, with the various existing and evolving industry regulations and standards could prevent or delay introduction of our products, which could harm our business. Our inability to alter our products to address these requirements and any regulatory changes may have a material adverse effect on our business, operating results and financial condition. In addition, dealer and end user uncertainty regarding future policies may also affect demand for wireless networking products, including our products.

## Risks Related to Our International Operations

In recent years, a significant amount of our revenue has come from sales outside of the United States, and we are therefore subject to a number of risks associated with international sales and operations.

We have a limited history of marketing, selling, and supporting our products and services internationally. However, international revenue (excluding Canada) accounted for 22% of our total revenue for the year ended December 31, 2017, and we expect that percentage may grow in the future. As a result, we must hire and train experienced personnel to staff and manage our foreign operations. To the extent that we experience difficulties in recruiting, training, managing, and retaining international dealers, distributors, and international staff, and specifically staff related to sales management and sales personnel, we may experience difficulties in productivity in foreign markets.

If we are not able to increase the sales of our solutions to consumers located outside of North America, our results of operations or revenue growth may be harmed. In addition, in connection with our expansion into foreign markets, we are a receiver of currencies other than the U.S. dollar. Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, will negatively affect our net sales as expressed in U.S. dollars. There is also a risk that we will have to adjust local currency product pricing due to competitive pressures when there has been significant volatility in foreign currency exchange rates.

Conducting and launching operations on an international scale requires close coordination of activities across multiple jurisdictions and time zones and consumes significant management resources. Our limited experience in operating our business in certain countries outside of the United States increases the risk that our current and any future international expansion efforts will not be successful. Conducting international operations subjects us to risks that, generally, we do not face in the United States, including:

- Fluctuations in currency exchange rates;
- Unexpected changes in foreign regulatory requirements;

- Longer accounts receivable payment cycles and difficulties in collecting accounts receivable;
- Difficulties in managing and staffing international operations, including differences in labor laws, which may result in higher personnel-related liabilities and expenses;
- Potentially adverse tax consequences, including the complexities of foreign value added tax systems and restrictions on the repatriation of earnings;
- Localization of our solutions and other materials, including translation into foreign languages and associated expenses;
- Localization of applicable agreements under applicable foreign law and differing legal standards and risks;
- The burdens of complying with a wide variety of foreign laws and different legal standards, including laws and regulations related to import/export, privacy, the transfer of personal information across borders, and data security and limitations on liability;
- Increased financial accounting and reporting burdens and complexities;
- Political, social and economic instability abroad, terrorist attacks and security concerns in general, including crime and cyber security; and

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- Reduced or varied protection for intellectual property rights in some countries.

The impact of any one of these could harm our international business and, consequently, our results of operations generally. Additionally, operating in international markets also requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required in establishing, acquiring or integrating operations and personnel in other countries will produce desired levels of revenue or profitability.

We conduct a significant amount of business in the European Union, including through our office located in England, and our operations may be affected by the results of the recent referendum vote by the United Kingdom to leave the European Union.

On June 23, 2016, the citizens of the United Kingdom approved a referendum to leave the European Union (“Brexit”), which led to significant political, economic and legal uncertainty. In addition, the Brexit vote triggered a devaluing of the pound sterling relative to the euro and the U.S. dollar, and in Europe we generally sell our products and incur expense in local currencies including the pound sterling and the euro, but incur exchange rate gains and losses for U.S. dollar denominated assets and liabilities including intercompany and third-party accounts receivables and payables. The pound has subsequently recovered some of its value against the dollar, and we enter into forward contracts to help offset our exposure to movements in foreign currency exchange rates relative to some of these U.S. dollar denominated balances; however, there is no guarantee that we will correctly anticipate the optimal amounts of such offsets in the future.

On March 29, 2017, the United Kingdom provided its official notice to the European Council that it intends to leave the European Union, triggering the two-year transitional period. The long-term nature of the United Kingdom’s relationship with the European Union after Brexit is completed is still unclear and there is considerable uncertainty when any relationship will be agreed and implemented. During this transitional period, negotiations will take place to unravel all of the existing legal, political and financial frameworks and obligations, and put new structures in place. At this stage, it is uncertain what the final results of these negotiations will be and, given the lack of comparable precedent, it is unclear how Brexit will affect economic conditions in the United Kingdom, the European Union, or globally, and Control4 specifically. Because Control4 has sales throughout the European Union and offices in England and Germany, it is possible that Brexit may require us to restructure some or all of our operations, and depending on what is negotiated, could impair our ability to transact business in other countries in the European Union. In addition, the fluctuation in currencies and market conditions may adversely affect our business, results of operations and financial condition.

Due to the global nature of our business, we could be harmed by violations of the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act or similar anti-corruption laws in other jurisdictions in which we operate, or various international trade and export laws.

The global nature of our business creates various domestic and local regulatory challenges. The U.S. Foreign Corrupt Practices Act (the “FCPA”), the U.K. Bribery Act 2010 (the “U.K. Bribery Act”), and similar anti-corruption laws in other jurisdictions generally prohibit companies and their intermediaries from making improper payments to government officials for the purpose of obtaining or retaining business. In addition, U.S.-based companies are required to maintain records that accurately and fairly represent their transactions and have an adequate system of internal accounting controls. We operate in areas of the world that experience corruption by government officials to some degree and, in certain circumstances, compliance with anti-corruption laws may conflict with local customs and practices. Although we periodically train our employees and agents about these anti-corruption laws, we cannot assure that our training is effective in reducing the risks attendant to such anti-corruption laws. Our global operations require us to import from and export to several countries, which geographically stretches our compliance obligations. In addition, changes in such laws could result in increased regulatory requirements and compliance costs, which could harm our business, financial condition and results of operations. Our employees or other agents may engage in prohibited conduct and render us responsible under the FCPA, the U.K. Bribery Act or similar anti-corruption laws. If we are found to be in violation of the FCPA, the U.K. Bribery Act or other anti-corruption laws (either due to acts or inadvertence of our employees, or due to the acts or inadvertence of other parties), we could suffer criminal or civil penalties or other sanctions, which could harm our business.

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Risks Related to Our Intellectual Property

If we fail to protect our intellectual property and proprietary rights adequately, our business could be harmed.

We believe that proprietary technology is essential to establishing and maintaining our leadership position. We seek to protect our intellectual property through trade secrets, confidentiality, non-compete, non-solicitation and nondisclosure agreements, and by registering numerous patents, trademarks, copyrights, and/or domain names in various jurisdictions, as well as using other measures, some of which afford only limited protection. We also rely on patent, trademark, trade secret and copyright laws to protect our intellectual property. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our technology or to obtain and use information that we regard as proprietary. Our means of protecting our proprietary rights may not be adequate or our competitors may independently develop similar or superior technology, or design around our intellectual property. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as the laws of the United States. Intellectual property protections may also be unavailable, limited or difficult to obtain and enforce in some countries, which could make it easier for competitors to capture market share. Our failure or inability to adequately protect our intellectual property and proprietary rights could harm our business, financial condition and results of operations.

To prevent substantial unauthorized use of our intellectual property rights, it may be necessary to prosecute actions for infringement and/or misappropriation of our proprietary rights against third parties. Any such action could result in significant costs and diversion of our resources and management's attention, and we cannot assure that we will be successful in such action. Furthermore, many of our current and potential competitors have the ability to dedicate substantially greater resources to enforce their intellectual property rights than we do. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property.

An assertion by a third party that we are infringing its intellectual property could subject us to costly and time-consuming litigation and lead to expensive licenses or significant liabilities in the event of an adverse judgment.

The industries in which we compete are characterized by the existence of a large number of patents, copyrights, trademarks and trade secrets, and by frequent litigation based on allegations of infringement or other violations of intellectual property rights. We have been subject to patent litigation in the past and we may be subject to similar litigation in the future. Given that our solution integrates with almost all network aware products, the risk that our solution may be subject to these allegations is exacerbated. As we seek to extend our solutions, we could be constrained by the intellectual property rights of others, including patent holding companies.

We are defendants in legal proceedings related to intellectual property rights from time to time (a summary of current litigation and outstanding claims that if determined adversely to us, we believe would have a material adverse effect

on our business, results of operations, financial condition or cash flows, if any, is set forth in Item 1 of Part II, Legal Proceedings), and in the past, we have entered into settlement agreements relating to contractual claims and alleged patent infringements, which have included future royalty payments on certain products, the payment of a lump sum amount for alleged past damages, and/or the payment of a fixed amount in exchange for a covenant not to sue.

We might not prevail in any current or future intellectual property infringement litigation given the complex technical issues and inherent uncertainties in such litigation. Defending such claims, regardless of their merit, could be time-consuming and distracting to management, result in costly litigation or settlement, cause development delays or require us to enter into royalty or licensing agreements. In addition, we currently have a limited portfolio of issued patents compared to our larger competitors, and therefore may not be able to effectively utilize our intellectual property portfolio to assert defenses or counterclaims, or negotiate cross-licenses in response to patent infringement claims or litigation brought against us by third parties. Further, litigation may involve patent holding companies or other adverse patent owners who have no relevant products or revenues and against which our potential patents provide no deterrence, and many other potential litigants have the capability to dedicate substantially greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. If our solutions exceed the scope of in-bound licenses or violate any third-party proprietary rights, we could be required to withdraw those solutions from the market, re-develop those solutions or seek to obtain licenses from third parties, which might not be available on reasonable terms or at all. Any efforts to re-develop our solutions, obtain licenses from third parties on favorable terms or license a substitute technology might not be successful and, in any case, might substantially increase our costs and harm our business, financial condition and results of operations. If we were compelled to withdraw any of our solutions from the market, our business, financial condition and results of operations could be harmed.

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We are generally obligated to indemnify our independent dealers, distributors and partners for certain expenses and liabilities resulting from intellectual property infringement claims regarding our products, which could force us to incur substantial costs.

We have agreed, and expect to continue to agree, to indemnify our independent dealers, distributors and other partners for certain intellectual property infringement claims regarding our products. As a result, in the case of infringement claims against these dealers, distributors and partners, we could be required to indemnify them for losses resulting from such claims or to refund amounts they have paid to us. We expect that some of our dealers, distributors and partners may seek indemnification from us in connection with infringement claims brought against them. We evaluate each such request on a case-by-case basis and we may not succeed in refuting any such claim we believe to be unjustified. If a dealer, distributor or partner elects to invest resources in enforcing a claim for indemnification against us, we could incur significant costs disputing it. If we do not succeed in disputing it, we could face substantial liability.

The use of open source software in our solutions may expose us to additional risks and harm our intellectual property.

Some of our solutions use or incorporate software that is subject to one or more open source licenses. Open source software is typically freely accessible, usable and modifiable. Certain open source software licenses require a user who intends to distribute the open source software as a component of the user's software to disclose publicly part or all of the source code to the user's software. In addition, certain open source software licenses require the user of such software to make any derivative works of the open source code available to others on potentially unfavorable terms or at no cost.

The terms of many open source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and accordingly there is a risk that those licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to commercialize our solutions. In that event, we could be required to seek licenses from third parties in order to continue offering our solutions, to re-develop our solutions, to discontinue sales of our solutions or to release our proprietary software code under the terms of an open source license, any of which could harm our business. Further, given the nature of open source software, it may be more likely that third parties might assert copyright and other intellectual property infringement claims against us based on our use of these open source software programs. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition, or require us to devote additional research and development resources to change our solutions.

We monitor the use of all open source software in our products, solutions, processes and technology, and seek to ensure that no open source software is used in such a way as to require us to disclose the source code to the related product or solution when we do not wish to do so. Despite these precautions, if a third-party software provider has incorporated certain types of open source software into software we license from such third-party provider for our solutions without our knowledge or if we have otherwise incorporated unfavorable open source software into our solutions, we could, under certain circumstances, be required to disclose the related source code to our solutions. This



could harm our intellectual property position and our business, results of operations and financial condition.

We rely on the availability of third-party licenses. If these licenses are available to us only on less favorable terms or not at all in the future, our business and results of operations may be harmed.

We have incorporated third-party licensed technology into our products. It may be necessary in the future to renew licenses relating to various aspects of these products or to seek additional licenses for existing or new products. The necessary licenses may not be available on acceptable terms, or at all. The inability to obtain certain licenses or other rights, or to obtain those licenses or rights on favorable terms, or the need to engage in litigation regarding these matters, could result in our inability to include certain features in our products or delays in product releases until such time, if ever, as equivalent technology could be identified, licensed or developed and integrated into our products, which may have a material adverse effect on our business, results of operations and financial condition. Moreover, the inclusion in our products of intellectual property licensed from third parties on a nonexclusive basis could limit our ability to protect our proprietary rights in our products.

#### Risks Related to Owning Our Common Stock

Our share price may be volatile, which may result in securities class action litigation against us.

The market price of our common stock has been and again could be subject to wide fluctuations in response to many

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risk factors listed in this section and other factors beyond our control, including but not limited to:

- Actual or anticipated fluctuations in our financial condition and results of operations;
- Overall conditions in our industry and market;
- Addition or loss of independent dealers, distributors or consumers;
- Changes in laws or regulations applicable to our solutions;
- Actual or anticipated changes in our growth rate relative to our competitors;
- Announcements by us, our competitors or strategic buyers of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- Additions or departures of key personnel;
- Competition from existing products or new products that may emerge;
- Issuance of new or updated research or reports by securities analysts, activist investors and those who short our stock;
- Fluctuations in the valuation of companies perceived by investors to be comparable to us;
- Disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain intellectual property protection for our technologies;
- Actual or threatened litigation or adverse regulatory action against us;
- Trading of our common stock by us or our stockholders, or issuance of new shares;
- Share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and

- General economic, geopolitical and market conditions.

Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, geopolitical and market conditions such as recessions, interest rate changes or international currency and capital markets fluctuation, may harm the market price of our common stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could harm our business.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our share price and trading volume could decline.

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about our business. We do not have any control over these analysts, activist investors, or those who short our stock. If one or more of the foregoing analysts who cover us, activist investors, or those who short our stock downgrade our shares, change their opinion of our shares, or publish negative or false reports for their own purposes, our share price will likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish research or reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

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The concentration of ownership of our capital stock limits your ability to influence corporate matters.

As of December 31, 2017, our directors, executive officers and holders of more than 5% of our common stock, together with their affiliates, beneficially own, in the aggregate, 26% of our outstanding common stock. As a result, these stockholders, acting together, may have the ability to significantly influence the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation or sale of all or substantially all of our assets. In addition, these stockholders, acting together, control or significantly influence most matters related to the management and affairs of our company. Accordingly, this concentration of ownership and managerial authority might harm the market price of our common stock by:

- Delaying, deferring or preventing a change in corporate control;
- Impeding a merger, consolidation, takeover or other business combination involving us; or
- Discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult and may prevent attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our amended and restated certificate of incorporation and amended and restated include provisions that:

- Authorize our board of directors to issue, without further action by the stockholders, up to 25,000,000 shares of undesignated preferred stock;
- Require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- Specify that special meetings of our stockholders can be called only by our board of directors, the Chairman of the Board, the Chief Executive Officer or the President;
- Establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our board of directors;

- Provide that directors may be removed only for cause;
- Provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even though less than a quorum;
- Establish that our board of directors is divided into three classes—Class I, Class II and Class III—with each class serving staggered terms; and
- Require a super-majority of votes to amend certain of the above-mentioned provisions.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control. These provisions may also frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

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Any provision of our certificate of incorporation or bylaws or Delaware law that has the effect of delaying or deterring a change of control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

ITEM 1B. Unresolved Staff Comments

None.

ITEM 2. Properties

Our corporate headquarters are located in Salt Lake City, Utah, where we lease approximately 85,000 square feet of commercial space under a lease that expires on June 30, 2018. We are currently in the process of renegotiating this lease. We use this space for sales, research and development, dealer and distributor service and support, and administrative purposes. We also lease approximately 60,000 square feet of warehouse space in Salt Lake City, Utah under a lease that expires on March 31, 2019.

In connection with our sales efforts in the United States and abroad, we lease office space typically on a short-term renewable basis domestically in San Jose, California; Charlotte, North Carolina; Hayward, CA; Orange County, CA; and Chicago, Illinois, and internationally in York, United Kingdom; Shanghai, China; Melbourne, Australia; Frankfurt, Germany; and New Belgrade, Serbia. Furthermore, in connection with the acquisition of Triad Speakers in February 2017, we have added warehouse space in Portland, Oregon, and in connection with the acquisition of ihiji, Inc. in December 2017, we have added office space in Austin, Texas, both under short-term, renewable leases.

We believe that our facilities are suitable to meet our current needs. We intend to expand our existing facilities or add new facilities as we add employees and enter new geographic markets, and we believe that suitable additional or alternative space will be available as needed to accommodate any such growth. However, we expect to incur additional expenses in connection with such new or expanded facilities.

ITEM 3. Legal Proceedings

From time to time, we may become involved in legal proceedings arising in the ordinary course of our business. We are not presently a party to any legal proceeding that, if determined adversely to us, we believe would individually or in the aggregate have a material adverse effect on our business, results of operations, financial condition or cash flows.

ITEM 4. Mine Safety Disclosures

Not applicable.

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PART II.

ITEM 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock has been listed on the NASDAQ Global Select Market under the symbol “CTRL” since August 2, 2013. Prior to that time, there was no public market for our common stock.

Price Range of Common Stock

The price range per share of common stock presented below represents the highest and lowest closing prices for our common stock on the NASDAQ Global Select Market during each quarter since our initial public offering. On February 9, 2018, the last reported sale price for our common stock on the NASDAQ Global Select Market was \$24.12 per share.

2017	High	Low
Fourth Quarter	\$ 35.76	\$ 26.87
Third Quarter	\$ 29.46	\$ 19.27
Second Quarter	\$ 20.88	\$ 14.82
First Quarter	\$ 16.00	\$ 10.58

2016	High	Low
Fourth Quarter	\$ 12.28	\$ 9.98
Third Quarter	\$ 12.28	\$ 8.03
Second Quarter	\$ 8.50	\$ 7.13
First Quarter	\$ 9.07	\$ 5.67

Holder of Record



As of February 9, 2018, there were 17 holders of record of our common stock. The actual number of stockholders is greater than this number of holders of record, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

#### Stock Performance Graph and Cumulative Total Return

Notwithstanding any statement to the contrary in any of our previous or future filings with the SEC, the following information relating to the price performance of our common stock shall not be deemed to be “filed” with the SEC or to be “soliciting material” under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and it shall not be deemed to be incorporated by reference into any of our filings under the Securities Act or the Exchange Act, except to the extent we specifically incorporate it by reference into such filing.

The following graph shows a comparison from August 2, 2013 (the date our common stock commenced trading on the NASDAQ Global Select Market) through December 31, 2017 of the total cumulative return of our common stock with the total cumulative return of the S&P 500 Index and S&P 500 Information Technology Sector Index. The comparisons in this graph below are based on historical data and are not intended to forecast or be indicative of future performance of our common stock.

The comparison assumes that \$100.00 was invested in our common stock, the S&P 500 Index and S&P 500 Information Technology Sector Index, and assumes reinvestment of dividends, if any. The graph assumes the initial value of our common stock on August 2, 2013 was the closing sale price on that day of \$20.05 per share and not the initial offering price to the public of \$16.00 per share. The performance shown on the graph below is based on historical results and is not intended to suggest future performance.

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Dividend Policy

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the operation of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Unregistered Sale of Equity Securities

None.

Issuer Purchases of Equity Securities

In May 2015, our Board of Directors authorized the repurchase of up to \$20 million in Control4 common stock from time to time on the open market. During the fiscal quarter ended December 31, 2017, we did not repurchase any outstanding common stock under the share repurchase program. All shares of common stock held in treasury were retired as of December 31, 2017.

In February 2018, the Company's Board of Directors authorized the expansion of the repurchase program providing approval for the Company to repurchase up to \$20 million in Control4 common stock from time to time on the open market. Any shares repurchased will be in compliance with applicable legal requirements, at prices determined to be attractive and in the best interests of both the company and its stockholders.

Securities Authorized for Issuance under Equity Compensation Plans

See Part III, Item 12 of this Form 10-K for disclosure relating to our equity compensation plans. Such information will be included in our proxy statement relating to our 2018 annual meeting of stockholders, which is incorporated herein by reference.



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## ITEM 6. Selected Financial Data

We have derived the selected consolidated statements of operations data for the years ended December 31, 2017, 2016 and 2015 and the selected consolidated balance sheet data as of December 31, 2017 and 2016 from our audited consolidated financial statements and related notes included elsewhere in this Form 10-K. We have derived the selected consolidated statements of operations data for the years ended December 31, 2014 and 2013 and the selected consolidated balance sheet data as of December 31, 2015, 2014 and 2013 from our audited consolidated financial statements not included in this Form 10-K. The following selected consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this Form 10-K. Our historical results are not necessarily indicative of the results to be expected for any future period and the results for any interim period are not necessarily indicative of the results to be expected in the full year.

	Years Ended December 31,				
	2017	2016	2015	2014	2013
	(In thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue	\$ 244,725	\$ 208,802	\$ 163,179	\$ 148,800	\$ 128,511
Cost of revenue	120,230	105,123	81,645	72,443	64,234
Cost of revenue—inventory purchase commitment	—	—	—	—	(380)
Gross margin	124,495	103,679	81,534	76,357	64,657
Operating expenses:					
Research and development	40,638	35,985	32,385	27,365	24,979
Sales and marketing	47,825	42,198	32,594	25,887	21,975
General and administrative	21,926	20,309	17,355	14,195	12,329
Litigation settlement	—	475	21	47	440
Total operating expenses	110,389	98,967	82,355	67,494	59,723
Income (loss) from operations	14,106	4,712	(821)	8,863	4,934
Interest and other expense, net	331	(542)	(563)	(296)	(1,183)
Income (loss) before income taxes	14,437	4,170	(1,384)	8,567	3,751
Income tax expense (benefit)	(1,542)	(8,784)	268	411	248
Net income (loss)	\$ 15,979	\$ 12,954	\$ (1,652)	\$ 8,156	\$ 3,503
Net income (loss) per common share:					
Basic	\$ 0.64	\$ 0.55	\$ (0.07)	\$ 0.34	\$ 0.33
Diluted	\$ 0.60	\$ 0.53	\$ (0.07)	\$ 0.32	\$ 0.16

## Non-GAAP Financial Measures

In addition to our GAAP operating results, we use certain non-GAAP financial measures to understand and evaluate our operating performance and trends, to prepare and approve our annual budget, and to develop short- and long-term operational plans. These measures, which we refer to as our non-GAAP financial measures, are not prepared in accordance with generally accepted accounting principles in the United States. Non-GAAP gross margin, non-GAAP income from operations, non-GAAP net income, and non-GAAP net income per share exclude non-cash expenses related to stock-based compensation, amortization of intangible assets, acquisition-related costs, as well as gains or losses on inventory purchase commitments. We further exclude expenses related to litigation settlements and executive severance from non-GAAP income from operations and non-GAAP net income as well as expenses related to stock warrants from non-GAAP net income.

Management believes that it is useful to exclude non-cash stock-based compensation expense because the amount of such expense in any specific period may not directly correlate to the underlying performance of our business operations. We believe it is useful to exclude gains or losses on inventory purchase commitments because it is income or expense that arose from our commitment to purchase energy-related products from our contract manufacturing partner that we will not use due to our decision to discontinue our energy product line for utility customers. We have not recognized that type of income or expense in periods other than 2013 and 2012, and we believe that past and future periods are more comparable if we exclude that income or expense.

We exclude the amortization of acquired intangible assets from non-GAAP measures. These amounts are inconsistent in amount and frequency and are significantly impacted by the timing and size of acquisitions. Providing a supplemental

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measure that excludes these charges allows management and investors to evaluate results “as-if” the acquired intangible assets had been developed internally rather than acquired. Although we exclude amortization of acquired intangible assets from non-GAAP measures, we believe that it is important for investors to understand that such intangible assets contribute to revenue generation. Amortization of intangible assets that relate to past acquisitions will recur in future periods until such intangible assets have been fully amortized. Future acquisitions may result in the amortization of additional intangible assets.

We have recently completed acquisitions which resulted in operating expenses that would not have otherwise been incurred. Management has provided supplementary non-GAAP financial measures, which exclude acquisition-related expense items resulting from acquisitions, to allow more accurate comparisons of the financial results to historical operations, forward-looking guidance and the financial results of less acquisitive peer companies. Management considers these types of costs and adjustments, to a great extent, to be unpredictable and dependent on a significant number of factors that are outside of our control. Furthermore, we do not consider these acquisition-related costs and adjustments to be related to the organic continuing operations of the acquired businesses and are generally not relevant to assessing or estimating the long-term performance of the acquired assets. In addition, the size, complexity and/or volume of past acquisitions, which often drives the magnitude of acquisition-related costs, may not be indicative of the size, complexity and/or volume of future acquisitions. By excluding acquisition-related costs and adjustments from our non-GAAP measures, management is better able to evaluate our ability to utilize its existing assets and estimate the long-term value that acquired assets will generate for us. We believe that providing a supplemental non-GAAP measure which excludes these items allows management and investors to consider the ongoing operations of the business both with, and without, such expenses.

These acquisition-related costs are included in the following categories: (i) professional service fees, recorded in operating expenses, which include third party costs related to the acquisition, and legal and other professional service fees associated with diligence, entity formation and corporate structuring, disputes and regulatory matters related to acquired entities, (ii) transition and integration costs, recorded in operating expenses, which include retention payments, transitional employee costs, earn-out payments treated as compensation expense, as well as the costs of integration-related services provided by third parties, and (iii) acquisition-related adjustments which include adjustments to acquisition-related items such as being required to record inventory at its fair value, resulting in a step-up in the inventory value, and having to reverse part of our valuation allowance in order to offset the deferred tax liability that was recorded based on differences between the book and tax basis of assets acquired and liabilities assumed. The step-up in inventory is recorded through cost of goods sold when the inventory is sold, resulting in a negative impact to our gross margin. Although these expenses are not recurring with respect to past acquisitions, we will generally incur these types of expenses in connection with any future acquisitions.

Furthermore, we believe it is useful to exclude expenses related to litigation settlements, stock warrants, and executive severance because of the variable and unpredictable nature of these expenses which are not indicative of past or future operating performance. We believe that past and future periods are more comparable if we exclude those expenses.

Our non-GAAP results also exclude the one-time financial impact of the Tax Act as well as adjustments to deferred tax assets resulting from a non-cash write-off on an intra-entity transfer of intangible assets. This is consistent with our

practice of excluding large, one-time items in non-GAAP results.

We believe these adjustments provide useful comparative information to investors. Non-GAAP results are presented for supplemental informational purposes only for understanding our operating results. The non-GAAP results should not be considered a substitute for financial information presented in accordance with generally accepted accounting principles, and may be different from non-GAAP measures used by other companies. Our non-GAAP financial measures may not provide information that is directly comparable to that provided by other companies in our industry, as other companies in our industry may calculate non-GAAP financial results differently, particularly related to non-recurring, unusual items. We urge our investors to review the reconciliation of our non-GAAP financial measures to the comparable GAAP financial measures included below, and not to rely on any single financial measure to evaluate our business.

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	Years Ended December 31,									
	2017		2016		2015		2014		2013	
	(in thousands, except percentages and per share data)									
Reconciliation of Gross Margin to Non-GAAP Gross Margin:										
Gross margin	\$	124,495	\$	103,679	\$	81,534	\$	76,357	\$	64,657
Stock-based compensation expense in cost of revenue		251		171		174		105		63
Amortization of intangible assets in cost of revenue		3,164		3,052		1,392		491		319
Acquisition-related costs in cost of revenue		228		2,162		294		—		—
Cost of revenue—inventory purchase commitment		—		—		—		—		(380)
Non-GAAP gross margin	\$	128,138	\$	109,064	\$	83,394	\$	76,953	\$	64,659
Revenue	\$	244,725	\$	208,802	\$	163,179	\$	148,800	\$	128,511
Gross margin percentage		50.9 %		49.7 %		50.0 %		51.3 %		50.3 %
Non-GAAP gross margin percentage		52.4 %		52.2 %		51.1 %		51.7 %		50.3 %
Reconciliation of Income (Loss) From Operations to Non-GAAP Income (Loss) From Operations:										
Income (loss) from operations	\$	14,106	\$	4,712	\$	(821)	\$	8,863	\$	4,934
Stock-based compensation expense		12,105		8,370		7,034		5,341		3,760
Amortization of intangible assets		5,212		4,598		1,474		491		319
Acquisition-related costs		535		3,451		1,393		—		—
Cost of revenue—inventory purchase commitment		—		—		—		—		(380)
Litigation settlement		—		475		21		47		440
Executive severance		—		157		—		—		340
Non-GAAP income (loss) from operations	\$	31,958	\$	21,763	\$	9,101	\$	14,742	\$	9,413
Revenue	\$	244,725	\$	208,802	\$	163,179	\$	148,800	\$	128,511
Operating margin percentage		5.8 %		2.3 %		(0.5) %		6.0 %		3.8 %
Non-GAAP operating margin percentage		13.1 %		10.4 %		5.6 %		9.9 %		7.3 %
Reconciliation of Net Income (Loss) to Non-GAAP Net Income (Loss):										
Net income (loss)	\$	15,979	\$	12,954	\$	(1,652)	\$	8,156	\$	3,503
Stock-based compensation expense		12,105		8,370		7,034		5,341		3,760
Amortization of intangible assets		5,212		4,598		1,474		491		319
Acquisition-related costs		(1,722)		(5,911)		1,393		—		—
Cost of revenue—inventory purchase commitment		—		—		—		—		(380)
Litigation settlement		—		475		21		47		440
Convertible preferred stock warrant		—		—		—		—		709
Executive severance		—		157		—		—		340
Impact of the Tax Act		(223)		—		—		—		—



Deferred income tax asset adjustment	767	—	—	—	—
Non-GAAP net income (loss)(1)	\$ 32,118	\$ 20,643	\$ 8,270	\$ 14,035	\$ 8,691
Reconciliation of Net Income (Loss) per Share to Non-GAAP Net Income (Loss) per Share:					
Basic net income (loss) per share	\$ 0.64	\$ 0.55	\$ (0.07)	\$ 0.34	\$ 0.33
Stock-based compensation expense	0.49	0.36	0.29	0.23	0.36
Amortization of intangible assets	0.21	0.20	0.06	0.02	0.03
Acquisition-related costs	(0.07)	(0.25)	0.06	—	—
Cost of revenue—inventory purchase commitment	—	—	—	—	(0.04)
Litigation settlement	—	0.02	—	—	0.04
Convertible preferred stock warrant	—	—	—	—	0.07
Executive severance	—	—	—	—	0.03
Impact of the Tax Act	(0.01)	—	—	—	—
Deferred income tax asset adjustment	0.03	—	—	—	—
Non-GAAP basic net income (loss) per share(1)	\$ 1.29	\$ 0.88	\$ 0.34	\$ 0.59	\$ 0.82
Diluted net income (loss) per share	\$ 0.60	\$ 0.53	\$ (0.07)	\$ 0.32	\$ 0.16
Stock-based compensation expense	0.45	0.35	0.28	0.21	0.17
Amortization of intangible assets	0.19	0.19	0.06	0.02	0.01
Acquisition-related costs	(0.06)	(0.24)	0.06	—	—
Cost of revenue—inventory purchase commitment	—	—	—	—	(0.02)
Litigation settlement	—	0.02	—	—	0.02
Convertible preferred stock warrant	—	—	—	—	0.03
Executive severance	—	—	—	—	0.02
Impact of the Tax Act	(0.01)	—	—	—	—
Deferred income tax asset adjustment	0.03	—	—	—	—
Non-GAAP diluted net income (loss) per share(1)	\$ 1.20	\$ 0.85	\$ 0.33	\$ 0.55	\$ 0.39
Weighted-average number of shares:					
Basic	24,803	23,402	24,121	23,685	10,609
Diluted	26,775	24,360	25,041	25,646	22,263

(1) Excludes the calculated effect of non-GAAP adjustments on income tax expense of \$1.4 million for the year ended December 31, 2017.

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## Consolidated Balance Sheet Data

The following table sets forth our selected consolidated balance sheet data as of the dates presented:

	December 31,				
	2017	2016	2015	2014	2013
	(In thousands)				
Consolidated Balance Sheet Data:					
Cash and cash equivalents	\$ 29,761	\$ 34,813	\$ 29,530	\$ 29,187	\$ 84,546
Investments, net(1)	56,254	27,128	51,477	68,032	—
Property and equipment, net	7,337	6,463	6,584	5,089	3,943
Working capital, excluding deferred revenue	109,067	86,728	88,411	98,782	95,422
Total assets	214,455	165,058	141,863	142,030	122,686
Long-term debt, including current portion	—	—	913	1,828	2,966
Total stockholders' equity	174,773	136,882	115,445	118,302	98,474

(1) Includes accrued investment balances not included in the investments line items on the consolidated balance sheet.

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ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the various sections in our Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) in conjunction with our consolidated financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. The following discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in the "Cautionary Note Regarding Forward-Looking Statements" and the "Risk Factors" section.

Our MD&A is provided in addition to the accompanying consolidated financial statements and notes to assist readers in understanding our operations, financial condition and cash flows. MD&A is organized as follows:

- Overview. Discussion of our business and overall analysis of financial and other highlights affecting our business in order to provide context for the remainder of MD&A.
- Factors and Trends Affecting our Performance. A summary of certain market factors and trends that we believe are important to our business which we must successfully address in order to continue to grow our business.
- Key Operating and Financial Metrics. Key operating and financial metrics that we use to evaluate and manage our business.
- Results of Operations. An analysis of our financial results comparing 2017 to 2016 and comparing 2016 to 2015.
- Quarterly Results of Operations and Other Data. An analysis of our quarterly results of operations for each of the quarters in the two-year period ended December 31, 2017.
- Liquidity and Capital Resources. An analysis of changes in our balance sheets and cash flows, and discussion of our financial condition and potential sources of liquidity.
- Contractual Obligations and Off-Balance Sheet Arrangements. Overview of contractual obligations, contingent liabilities, commitments and off-balance sheet arrangements outstanding as of December 31, 2017, including expected payment schedule.
- Critical Accounting Estimates. Accounting estimates that we believe are most important to understanding the assumptions and judgments incorporated in our reported financial results and forecasts.

## Overview

Control4 is a leading provider of smart home and business solutions that are designed to personalize and enhance how consumers engage with an ever-changing connected world. Our entertainment, smart lighting, comfort and convenience, safety and security, and networking solutions unlock the potential of connected devices, making entertainment systems easier to use and more accessible, homes and businesses more comfortable and energy efficient, and individuals more secure. Our premium smart home and small business solutions provide consumers with the ability to integrate audio, video, lighting, temperature, security, communications, network management and other functionalities into a unified automation solution, customized to match their lifestyles and business needs. Our advanced software, delivered through our controller products, cloud services and user-interface products, power this customized experience, enabling cohesive interoperability with thousands of connected Control4 and third-party devices.

Consumers purchase our smart solutions from our worldwide network of certified independent dealers, regional and national retailers and distributors. These dealers, retailers and distributors design and install customized solutions to fit the specific needs of each consumer, whether it is a one-room home theater set-up or a whole-home automation system that features the integration of audio, video, lighting, temperature, security, network management and communications devices. Our products are installed in both new and existing residences, multi-dwelling units and small commercial facilities. We refer to revenue from sales of our products through these dealers, retailers and distributors as our Core revenue (“Core revenue”). In addition, a portion of our revenue is attributable to sales in the hospitality industry, primarily related to products installed in hotels, which is excluded from our calculation of Core revenue as well as certain specialty display products and associated installation sales in Australia. Our revenue from sales to hotels is generally project-based and has been significant in some

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periods and insignificant in other periods. In the future, we expect revenue from hospitality to continue to be project-based and uneven from period to period. During the year ended December 31, 2017, over 4,220 active direct dealers were authorized to sell and install the full Control4 line of products in the United States, Canada, the United Kingdom, Australia, China, Germany and 50 other countries, and 33 distributors were authorized to cover an additional 45 countries where we do not have direct dealer relationships. These distributors sell our solutions through dealers and provide warehousing, training, technical support, and billing for dealers in each of those countries. We have an additional 1,070 active dealers and 17 distributors that are currently authorized to sell only our Pakedge and Triad line of products.

We derive the majority of our revenue from the sale of products that contain our proprietary software, which functions as the operating system of the home. We also generate revenue from the sale of annual subscriptions to our 4Sight subscription service, which allows consumers to personalize their automation system through simple homeowner directed programming, referred to as “When >> Then” automation; remotely access, backup, and control their smart home solutions from their mobile devices; receive e-mail and “push notification” alerts regarding activities in their home; and enable Amazon Alexa voice services.

We were founded in 2003 and began shipping our products and generating revenue in 2005. Our revenue growth rates for the last five complete calendar years are shown in the following table (dollars in millions):

	For the Years Ended December 31,									
	2017		2016		2015		2014		2013	
Core revenue	\$ 239.3		\$ 203.9		\$ 160.7		\$ 144.7		\$ 126.4	
Core revenue growth over prior year	17	%	27	%	11	%	14	%	20	%
Other revenue	\$ 5.4		\$ 4.9		\$ 2.5		\$ 4.1		\$ 2.1	
Other revenue changes over prior year	10	%	96	%	-39	%	95	%	-46	%
Total revenue	\$ 244.7		\$ 208.8		\$ 163.2		\$ 148.8		\$ 128.5	
Total revenue growth over prior year	17	%	28	%	10	%	16	%	17	%

Over the past five years, we have experienced double-digit annual growth in Core revenue. Our Core revenue growth during that period has been the result of a combination of the net addition of new independent dealers and distributors to our sales channels, an increase in revenue from our existing network of independent dealers and distributors, and the addition of new products developed internally and acquired through business combinations. We believe our ability to grow our core sales channel has been enhanced through product innovation, expansion of our product offerings and helping our independent dealers and distributors grow their business.

## Recent Developments

Some recent developments that we believe may enhance our offerings and help drive growth include, but are not limited to, the following:

Introduced our new CA-1 controller, an entry level controller for projects that only need lighting, temperature control, and security integration, and do not require additional entertainment features found in our EA series of controllers.

- Launched an extensive line of Triad high-resolution multi-room audio products featuring a single-zone streaming amplifier, a power amplifier, and two audio matrix switches, designed to deliver high-resolution audio in every corner of the home, from the source to the listener's ears;
- Released OS 2.10, featuring expanded music service integrations with iHeartRadio, Sirius XM, and Spotify supported by our EA Controllers;
- Released an updated version of 4Sight which includes a new homeowner customization functionality called "When >> Then" automation;
- Launched the Pakedge WR-1 wireless router with BakPak Lite, a high-performance integrated network router and wireless access point with built-in cloud-based network management. Designed for small homes and simpler smart home installations, this wireless router provides reliable, affordable wired and wireless networking;

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- Launched the Pakedge Certified Network Administrator (“PCNA”) program. PCNA is a training experience that employs a unique blend of comprehensive online coursework with hands-on practical learning using Pakedge networking gear to provide dealers and technicians the networking knowledge they need to design, install, and manage wired and wireless IP networks;
  - Launched the new Triad Garden Array outdoor speakers, a family of all-weather, landscape speakers that include a premium satellite speaker and subwoofer designed to be placed throughout flower beds or around the yard to blanket outdoor spaces with rich, beautiful audio;
  - Launched the new Pakedge PowerPak family of power control devices that provide centralized power control and management with surge protection for all equipment in a connected home. Dealers can use the BakPak enabled PowerPak power distribution units (“PDU”) to monitor and manage their entire customer base in a single interface; and,
  - Integrated the latest release of our BakPak management software on the Pakedge RK-1 Router enabling our independent dealer network to offer more homeowners the benefits of a monitored, intelligent home network.
- While our historical revenue growth has been primarily organic, we have completed several recent acquisitions that we believe enhance our product offerings and position us for continued growth in the future. Recent acquisitions of technology and distribution-related business are as follows:

- In December 2017, we acquired the intellectual property and key operating assets of ihiji, a leading provider of remote management services for technical integrators servicing connected home customers. By combining two industry-leading network and device management solutions, BakPak from Control4 and invision from ihiji, into one unified service platform, Control4 will provide thousands of professional integrators with powerful device monitoring and management capability to efficiently and proactively support their connected-home customers.
- In February 2017, we acquired Triad, a leader in advanced audio technology with best-in-class, customizable speaker solutions. Entertainment is integral to the connected home and the acquisition of Triad brings premium-acoustics experience and innovation to Control4, enhancing our entertainment offering and enabling the future development of new integrated-audio experiences;
- In April 2016, we transitioned from a two-tier distribution model to direct-to-dealer in Australia, and as part of this process, acquired customer lists and inventory of the former distributor; and
- In January 2016, we acquired Pakedge, a developer and manufacturer of networking products, power distribution and management solutions, as well as cloud network-managed services for both wireless and wired networking solutions in the connected home and business. The Pakedge acquisition contributed a deep networking expertise, innovative technologies, and a sophisticated suite of networking products and rich software capability to our business.

Adoption by the Control4 dealer network of Triad products continues to steadily expand with 2,027 dealers, or 38% of our active dealers, ordering Triad during 2017.

We continue to invest in and grow the Pakedge networking product category. A total of 3,215 dealers, or 61% of our active dealers, have purchased Pakedge networking products during 2017. As mentioned above, adding to our industry leading networking product lineup, we recently announced our new WR-1 wireless router with an MSRP of \$300, which broadens the selling opportunity for our dealers. We have successfully integrated each of our recent acquisitions and our channel is actively selling these new products, which enhance our core solution categories and help sustain our target organic growth rate.

Historically, we have experienced seasonal variations in our revenue as a result of holiday-related factors that are common in our industry. Our revenue is generally highest in the fourth quarter due to consumers’ desires to complete

their home installations prior to the holiday season. We generally see decreased sales in the first quarter due to seasonal purchase tendencies of consumers as well as the impact of winter weather on new construction and travel in certain geographies. In addition, our year-over-year revenue growth on a quarterly basis is not always linear for a variety of reasons including: the timing of new product releases, the use of marketing programs to accelerate intra-quarter sales of certain products or product families, the impact of foreign currency fluctuations, and the impact of general regional economic conditions on consumer



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buying decisions and harsh weather that delayed or canceled building projects. We generally expect these seasonal and other trends to continue in the future, which may cause quarterly fluctuations in our results of operations and certain financial metrics.

### Factors and Trends Affecting Our Performance

A number of industry trends have facilitated our growth over the past several years, including the proliferation of connected devices and the constant growth of network-enabled homes and businesses. From smartphones to smart watches to smart cars, technology is transforming nearly every aspect of our lives, streamlining daily routines and providing quick, easy access to the capabilities and content we want most. Not only are new technologies providing convenience on-the-go, but they are becoming increasingly accessible. Voice services are a recent example of an emerging technology in our connected world, and our integration with Amazon Alexa helps keep us at the forefront of our industry in our adoption of voice activated solutions. We remain committed to embracing emerging technologies through our open platform and broad ecosystem.

Our open platform makes it easy for a broad community of original equipment manufacturer partners to participate in our smart home ecosystem, which includes over 11,000 drivers and more than 2,900 SDDP-enabled products. For example, LG recently announced that its new lines of OLED and Super UHD TVs would feature SDDP, and Samsung announced the incorporation of SDDP software into its new 4K television line-up and Blu-ray Player products. We believe that these and other companies are increasingly recognizing the value of including SDDP with their new releases to simplify integration of their products into Control4 installations. Our broad ecosystem, which includes audio, video, lighting, temperature, network, security and communication device categories, gives consumers flexibility to integrate nearly any connectable device into their smart home. In addition, our partners are constantly contributing new device integrations. As such, our dynamic ecosystem remains current with the latest product innovations and allows our smart home platform to grow alongside emerging technologies to meet our consumers' changing needs and preferences. We believe that our open platform and the resulting ecosystem is a key competitive advantage that will continue to facilitate our growth.

Our products leverage both wired and wireless technologies and are designed to be installed in both new construction and existing homes. We expect that future increases in both new home construction and existing home renovations will have a positive impact on our revenue. In new home construction, we continue to engage builders to introduce entry- to mid-level Control4 systems as a standard feature in new home projects, and we believe that the release of our new CA-1 controller at the lowest price point of any Control4 controller will help with adoption of control in these types of projects. We further believe home automation is increasingly becoming a higher priority for home buyers, and this is one of the reasons for our investment in national and regional builder programs.

We believe that the growth of our business and our future success are dependent upon many factors, including the rates at which consumers adopt our products and services, our commitment to growing the awareness of our brands, our ability to optimize and expand our dealer and distributor network, our ability to expand internationally, our ability

to meet competitive challenges, and our ability to respond to worldwide economic events. While each of these areas presents significant opportunities for us, they also pose important challenges that we must successfully address to sustain or expand the growth of our business and improve our results of operations. These challenges include:

- Increasing Adoption Rates of Our Products and Services. We are focused on increasing adoption rates of our products and services through enhancements to our software platform and product offerings. We intend to accomplish these enhancements through both continued investments in research and development activities and acquisitions of complementary businesses and technologies.
  - Growing Our Leadership Position in the Industry. We are committed to growing awareness of the Control4, Pakedge, and Triad brands among our dealers, distributors and partners. We believe that our investments in creating brand awareness in the industry have contributed to dealer recruitment, product adoption, and revenue growth. We are proud of the many awards we received from various industry groups and dealer consortiums, formally recognizing our commitment to excellence. Our recent awards include:
    - o Three Techhome Mark of Excellence Awards at the Consumer Electronics Show in January 2018: 1) Best Audio Amplification Product of the Year for Control4's new Triad One Streaming Amplifier, 2) Best Automation Device of the Year for Control4's new OS 2.10 with "When >> Then" Then Personalization, and 3) Best Education or Support Program of the Year of Control4's new Pakedge Certified Network Administrator Online Training Curriculum;

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- o Two “Best of Show” Awards at the CEDIA Expo tradeshow in 2017 for Control4 “When >> Then” automation and the Pakedge WR-1 Wireless Router + BakPak Lite;
- o An EXC!TE Award at the CEDIA Expo tradeshow in 2017 for our Triad Designer Series Speakers and our Pakedge PowerPak PDU;
- o A BEST Award from CE Pro, a leading trade magazine for technology professionals, at CEDIA 2017 for our Triad Designer Series Speakers.;
- o Top Whole-Home Automation brand for Control4 and top networking brand for Pakedge by the “2017 CE Pro 100 Brand Analysis” report. This is the third year in a row that Control4 was recognized as the top Whole-Home Automation brand and the fifth year in a row that Pakedge has been named the top brand for home networking.
- o 2017 Custom Integration Vendor of the Year by ProSource Buying Group for the third consecutive year.
- Accelerating and Enhancing Consumer Lead Generation. We determined that there is an opportunity for us to play a more active role in generating and following up on leads received from our marketing efforts. Therefore, we are continuing to invest in inside sales representatives to qualify inbound inquiries and direct them to qualified independent dealers. Our enhanced lead generation strategies have increased consultations, bids and project installations. Through the continual optimization of our marketing efforts, coupled with our new inside resources to qualify inbound leads, we believe we can improve lead conversion rates and increase the amount of revenue per lead.
  
- Optimizing and Expanding Our North America Dealer Network. We intend to continue to optimize the performance of and expand our network of dealers in North America to ensure that we have geographic coverage and technical expertise to address our existing markets and new markets into which we plan to expand. We continue to work with all appropriately qualified dealers to explore home control, networking products, and speaker lines, and we continue to cross-train and cross-certify dealers in accordance with our existing standards of technical proficiency and business practices.
  
- Expanding our International Dealer and Distributor Network. We believe that our future growth will depend in part on our ability to expand our dealer and distributor network outside of North America, to adapt our products and services to foreign markets, and to increase awareness of our brands internationally. We continue to add field sales and service personnel to assist in the optimization of our international channels. We have transitioned to a direct-to-dealer model in specific international regions, namely in the United Kingdom, China, Germany and Australia, and we will continue to evaluate opportunities in other countries. Furthermore, we recently opened international training centers in Germany and Australia to help support the transition to a direct-to-dealer model.
  
- Managing Competition. The market for home automation is fragmented, highly competitive and continually evolving. In addition to competing with traditional players in the luxury segment of the home automation market, including Crestron, Elan, and Savant, a number of large technology companies such as Amazon, Apple, Google, and Samsung offer device control capabilities within some of their own products, applications and services, and are engaged in ongoing efforts to address the broader home automation market. In addition, managed service companies such as ADT, Alarm.com, Comcast, and Vivint, have broadened their service offerings to include control of devices such as door locks, lights, and cameras. Our ability to compete in the growing home automation market over the next several years will be a key factor in our ability to continue to grow our business and meet or exceed our future expectations.



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## Key Operating and Financial Metrics

We use the following key operating and financial metrics to evaluate and manage our business.

## North America Direct Dealers(1)

	Years Ended		
	December 31,		
	2017	2016	2015
Authorized dealers at the beginning of the period	2,994	2,787	2,676
Additions	308	371	350
Terminations	(128)	(164)	(239)
Authorized dealers at the end of the period	3,174	2,994	2,787
Number of active dealers(2)	3,057	2,913	2,748
Active dealers as a % of authorized dealers(2)	96 %	97 %	99 %

## International Direct Dealers(1)

	Years Ended		
	December 31,		
	2017	2016	2015
Authorized dealers at the beginning of the period	1,147	901	787
Additions(3)	235	319	227
Terminations	(67)	(73)	(113)
Authorized dealers at the end of the period	1,315	1,147	901
Number of active dealers(2)	1,169	1,050	816
Active dealers as a % of authorized dealers(2)	89 %	92 %	91 %

	Years Ended		
	December 31,		
	2017	2016	2015
Number of controllers sold	104,320	104,225	73,207

Core revenue growth	17	%	27	%	11	%
International Core revenue as a percentage of total revenue	21	%	20	%	23	%

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- (1) These dealer figures only include dealers authorized to sell and install the full Control4 line of products and exclude the 1,070 dealers that are currently authorized to sell only the Pakedge and Triad line of products.
- (2) An “active dealer” is an authorized dealer that has placed an order with us in the trailing 12-month period.
- (3) The figures for year ended December 31, 2017, include 100 dealers that were acquired as part of the direct-to-dealer transition in Australia.

#### Number of North America and Direct International Dealers

Because our dealers promote, sell, install and support our products, a broader dealer network allows us to reach more potential consumers across more geographic regions. We expect our dealer network to continue to grow, both in North America and internationally. While we have historically focused on dealers affiliated with CEDIA, we believe there is an opportunity to establish relationships with dealers outside of CEDIA, including non-traditional A/V dealers, electrical contractors, and security system installers.

Strengthening our worldwide dealer channel through business and installation tools, education programs, and new dealer recruitment remains an ongoing priority. Much of our focus in 2017 has been on the successful introduction of new products to our channel, including both the Triad and Pakedge brands. Our sales team will focus over the next few quarters on adding more new dealers, both traditional A/V dealers as well as dealers who historically have focused on IT, security, electrical, or HVAC offerings. Our goal is to continuously increase our dealers’ productivity and growth. Enabling our dealers to increase productivity will ultimately drive our revenue growth.

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In conjunction with the broad availability of our newest generation products and software, we intend to more comprehensively review each of our current dealers with regard to their ability to successfully market, sell and install our current solutions. Part of developing a productive, capable dealer network, requires us to regularly review individual dealer performance and as necessary, terminate dealer licenses where volume, technical training and performance requirements are not fulfilled. We view this as a healthy part of growing our dealer channel worldwide.

As a result of our traditional efforts to expand our channel, the number of active international dealers increased 11% and 29% for the years ended December 31, 2017 and 2016, respectively, compared to an increase of 5% and 6% respectively, in the number of active North American direct dealers during the same periods. Generally, the growth percentage internationally is higher because our presence in these markets is less mature and our base of dealers is much lower than the North American market. Much of this growth in our international dealer network is attributed to new dealer additions in China, Germany and Australia. We plan to continue to monitor markets that are currently served by a single distributor and, when business conditions are favorable, we may decide to establish direct relationships with selected dealers in these regions, which we expect would further increase our number of direct international dealers.

While we believe that we will continue to have significant international opportunities, it is difficult to anticipate the exact timing and amount of growth, particularly in new and emerging markets. Such challenges may cause our growth rate to be slower than anticipated, offsetting our efforts to expand into these emerging geographies. Examples of challenges we must address in order to continue our international expansion include divergent regional and local economic and political trends in Latin America, particularly relating to new home construction and strengthening of the U.S. dollar versus certain local currencies, and the June 2016 vote in the UK to exit the European Union. In response to a weakening Canadian dollar, starting in February 2016, we announced to our dealer network in Canada that we now offer the ability to order and pay for products in Canadian dollars versus U.S. dollars. We believe this offering will help to strengthen our long-term results in Canada while eliminating the margin and quoting uncertainty associated with volatility in foreign exchange rates for our dealers. We experienced a recovery in Canada which contributed to an increase in Canadian revenue of 29% and 13% in 2017 and 2016, respectively.

### Number of Controllers Sold

Our controllers contain our proprietary software and provide consumers with the essential technology to enable home control, automation and personalization. The number of controllers we sell in a given period provides us with an indication of consumer adoption of our technology, though a variety of other factors may also impact controller sales variability from period to period. Our sales of controllers also create significant opportunity to sell our other products and services. Once a consumer has deployed our controller, we believe that the consumer is more likely to remain committed to our technology platform and purchase more of our products, applications and services in the future.

In January 2016, we introduced a new line of entertainment and automation controllers, the EA Series. With three separate models, our EA Series is designed and priced for projects ranging from a single-room to an entire home or estate. As a result of the launch, we saw a significant increase in controller sales. Although end customer adoption, sell-through, and overall revenue growth for the new controllers continues to be strong, the increase in 2016 was due

in part to initial purchases by dealers for their showrooms.

During the year ended December 31, 2017, we sold 104,320 controllers, compared to 104,225 and 73,207 controllers sold in the same periods in 2016 and 2015, respectively. Controller sales remained flat for the year ended December 31, 2017 compared to 2016. This compares to our overall growth in revenue of 17% during the same period. We believe severe weather during the second half of 2017 in Florida, Texas and portions of the Central United States, delayed many projects, which in turn temporarily impacted controller order rates in those regions. Additionally, we launched our EA-Series Controllers in February of 2016, and 2016 likely benefited from one-time, discounted dealer showroom demo sales typical of new product introductions, creating a difficult year-over-year comparison for unit sales in the year ended December 31, 2017.

### Core Revenue Growth

The majority of our revenue comes from sales of our products through our distribution channels comprised of independent dealers in the United States and Canada, and independent dealers and distributors located throughout the rest of the world. We refer to revenue attributable to sales through dealers located in the United States and Canada as “North America Core revenue”, and revenue attributable to sales through dealers and distributors located throughout the rest of the world as “International Core revenue.” Core revenue does not include revenue from sales to hotels or certain specialty display products



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and associated installation sales in Australia.

## International Revenue as a Percentage of Total Revenue

We believe that the international market represents a large and underpenetrated opportunity for us. We have established or acquired sales support offices in the United Kingdom, Australia, Germany, China, and India. We have formed relationships with independent international dealers and distributors, and we have expanded foreign language support for our solutions. We track international revenue as a percentage of total revenue as a key measure of our success in expanding our business internationally.

## Results of Operations

## Revenue

The following is a breakdown of our revenue between North America and International Core revenue and other revenue:

	Years Ended					
	December 31,					
	2017	2016	2015			
	(in thousands)					
North America Core Revenue	\$ 187,283	\$ 162,037	\$ 123,431			
International Core Revenue	52,034	41,890	37,275			
Other Revenue	5,408	4,875	2,473			
Total Revenue	\$ 244,725	\$ 208,802	\$ 163,179			
North America Core Revenue as a % of Total Revenue	77	%	78	%	76	%
International Core Revenue as a % of Total Revenue	21	%	20	%	23	%

2017 Compared to 2016. North America Core revenue increased \$25.2 million, or 16%, in 2017 compared to 2016. International Core revenue increased \$10.1 million, or 24%, in 2017.

Revenue growth in both North America and International Core revenue was driven by a variety of factors including contributions from each of our product brands, channel expansion from acquired products (Pakedge and Triad) sold to

existing dealers and distributors, and growth in the majority of our global sales territories. Revenue from Triad was \$12.6 million for the period from the February 28, 2017 acquisition date to December 31, 2017. Our total revenue without Triad was \$232.1 million for the year ended December 31, 2017, representing organic year-over-year growth of 11%.

Our international sales model includes both direct-to-dealer and distribution models. In targeted international regions and countries, we generally invest in some combination of local technical support, training personnel and facilities, warehousing and fulfillment, and sales support personnel. We have made these types of investments in the regions serviced by our offices in the United Kingdom, Germany, Australia, China, and India and these are markets where we see our greatest opportunity for international growth and expansion.

The following table further breaks out our International Core revenue and illustrates the relative revenue growth we are experiencing in the regions serviced by our offices in the United Kingdom, Germany, Australia, China, and India compared to other international regions.

	Years Ended December 31,		
	2017	2016	2015
	(in thousands)		
Targeted International Regions (1)	41,575	32,783	26,726
Other International Regions	10,459	9,107	10,549
Total International Core Revenue	\$ 52,034	\$ 41,890	37,275

(1) Serviced by our offices in the United Kingdom, Germany, Australia, China, and India.

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International Core revenue in the regions serviced by our offices in the United Kingdom, Germany, Australia, China and India grew 27% in 2017 compared to 2016, while International Core revenue in the other international regions increased 15% during the same period. Improvements in general economic conditions in many of our other international markets has contributed to improvements in our growth rates compared to 2016.

We continue to make investments internationally to improve our dealers' ability to sell and install our products and believe that these investments will enable us to grow our key international markets. Notwithstanding the foregoing, we sell broadly throughout the world and we believe that regional, adverse international economic conditions may create challenges and slow growth in certain geographies.

2016 Compared to 2015. North America Core revenue increased \$38.6 million, or 31%, in 2016 compared to 2015. International Core revenue increased \$4.6 million, or 12%, in 2016.

The acquisition of Pakedge on January 29, 2016 partially contributed to this growth. We also experienced an increase in the number of dealers and distributors selling our products and services, resulting in an increase in the number of system sales, as well as revenue growth from the release of several new products including our EA Series controllers.

Other revenue increased \$2.4 million, or 97%, in 2016 compared to 2015, primarily related to sales in the hospitality industry, which is project-based and has been, and will continue to be, uneven from period to period.

Gross Margin

As a percentage of revenue, our gross margin has been, and will continue to be, affected by a variety of factors. Our gross margin is relatively consistent across our products. Our gross margin on third-party products that we sell through our online distribution platform is higher than our gross margin on our other product sales because we only recognize our net profit on these sales as revenue. While software licensing and subscription revenue is not material for all periods presented, our gross margin is higher on software licensing and subscription revenue than it is on product sales. Our gross margin is also higher on our sales made directly through dealers than it is on our sales made through distributors. Gross margin may be negatively affected by price competition in our target markets and associated promotional or volume incentive rebates offered to our independent dealers and distributors.

In addition, in conjunction with our acquisitions of Triad, Pakedge and Nexus, we were required to record acquired inventory at fair value, as determined under ASC 805, Business Combinations, resulting in a step-up in the inventory

value. Such step-up is recorded through cost of goods sold when the specific inventory is sold, resulting in a negative impact to our gross margin. Also, cost of goods sold includes ongoing, periodic amortization of the acquired technology.

Gross margin for the years ended December 31, 2017, 2016, and 2015 was as follows (in thousands, except percentages):

	Years Ended December 31,					
	2017	2016	2015			
Gross margin	\$ 124,495	\$ 103,679	\$ 81,534			
Percentage of revenue	50.9 %	49.7 %	50.0 %			

2017 Compared to 2016. As a percentage of revenue, our gross margin was 50.9% in 2017 compared to 49.7% in 2016. The increase in gross margin was due primarily to the amount of step-up in Pakedge inventory that was recorded in 2016 compared to 2017. Other factors include manufacturing rebates received in 2017 as well as reductions in volume incentive rebates and discounts.

The negative effect on gross margin percentage resulting from the step-up in purchased inventory carrying value impacted our results of operations for 2017, as it relates to Pakedge and Triad, and our results for 2016 as it relates to Pakedge.

The introduction of new products generally has a negative impact on gross margins as we offer discounted pricing to our dealers for demo units placed in their showrooms.

Our sales in Europe, Australia and Canada are generally priced in the pound sterling or the euro, the Australian dollar

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and the Canadian dollar, respectively, while our cost of goods sold is denominated in the U.S. dollar. The changing value of the pound sterling, the euro, and the Australian and Canadian dollars relative to the U.S. dollar will continue to contribute to variability in our gross margin for sales in Europe, Australia and Canada.

The impact of distribution and other overhead expenses as a percentage of revenue on our gross margin percentage varies depending on total revenue and overhead spending in a given period.

We anticipate making incremental investments in our global fulfillment centers in 2018 to accommodate growth and improve delivery times to our dealers, which will moderate our gross margin improvements during 2018, but should enable us to continue to scale and improve gross margins in future years.

2016 Compared to 2015. As a percentage of revenue, our gross margin was relatively flat in 2016 compared to 2015. The gross margin in 2016 was negatively impacted by the amortization of the technology acquired from Pakedge and Nexus, the step-up in basis recorded as we sold the purchased inventory in conjunction with our acquisition of Pakedge as well as the direct-to-dealer transition in Australia, and decreases in the selling price of our products in certain foreign markets due to the strengthening of the U.S. dollar relative to certain international currencies. These factors were offset by the expiration of certain royalty payments, component and other product cost reductions as well as product mix and associated pricing.

Research and Development Expenses

Research and development expenses consist primarily of compensation for our engineers and product managers, including non-cash stock compensation expense. Research and development expenses also include prototyping and field-testing expenses incurred in the development of our products. We also include fees paid to agencies to obtain regulatory certifications. Finally, research and development expenses include ongoing, periodic amortization of acquired intangible assets.

Research and development expenses for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

	Years Ended December 31,		
	2017	2016	2015
Research and development	\$ 40,638	\$ 35,985	\$ 32,385

Percentage of revenue            17        %        17        %        20        %

2017 Compared to 2016. Research and development expenses increased by \$4.7 million, or 13%, in 2017 compared to 2016. The increase in absolute dollars primarily relates to personnel costs, including non-cash stock compensation expense and increased headcount, which can be partially attributed to the employees added from the Triad acquisition.

Our research and development expenses both as a percentage of revenue and in absolute dollars fluctuate depending on our investments in the development of new solutions. For example, the timing of new hardware releases and the expense associated with prototyping, beta testing and compliance and regulatory fees can have an impact on total research and development expenses from period to period.

For 2018, we expect research and development expenses to increase in absolute dollars, as we continue to invest in new product development to drive future revenue growth, but to remain flat or decrease slightly as a percentage of revenue.

2016 Compared to 2015. Research and development expenses increased by \$3.6 million, or 11%, in 2016 compared to 2015. The increase in 2016 included approximately \$4.0 million in expenses associated with our new networking products, offset by lower overall spending for our ongoing product development activities.

### Sales and Marketing Expenses

Sales and marketing expenses consist primarily of compensation and related travel expenses for our sales and marketing personnel, including non-cash stock compensation expense. Sales and marketing expenses also include expenses associated with trade shows, marketing events, advertising and other marketing-related programs. We also include the amortization of certain intangible assets such as those related to our dealer network as well as those related to trademarks/trade names.

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Sales and marketing expenses for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

	Years Ended December 31,					
	2017		2016		2015	
Sales and marketing	\$ 47,825		\$ 42,198		\$ 32,594	
Percentage of revenue	20	%	20	%	20	%

2017 Compared to 2016. Sales and marketing expenses increased by \$5.6 million, or 13%, in 2017 compared to 2016. The increase in absolute dollars primarily relates to personnel costs, including non-cash stock compensation expense and increased headcount primarily associated with recent business acquisitions and increased year-over-year sales.

We intend to continue to supplement our more traditional marketing programs with lead generation programs, including social media and pay-per-click advertising. For 2018, we expect sales and marketing expenses to increase in absolute dollars as we work to grow our global sales channels but to remain flat or decrease slightly as a percentage of revenue.

2016 Compared to 2015. Sales and marketing expenses increased by \$9.6 million, or 29%, in 2016 compared to 2015. The increase in absolute dollars for sales and marketing expenses in 2016 included \$4.1 million in expenses associated with our new networking products as well as amortization of intangible assets related to the Pakedge acquisition. In addition, we increased our general marketing expenses to increase lead generation, transition to a direct-to-dealer model in Australia and Germany, grow our dealer and distributor networks throughout the world and deliver tools to the sales channel to support local marketing and sales lead generation. Furthermore, personnel costs increased primarily due to increased sales as well as non-recurring acquisition related restructuring charges.

#### General and Administrative Expenses

General and administrative expenses consist primarily of compensation for our employees in our executive administration, finance, information systems, human resource and legal departments, including non-cash stock-based compensation expense. Also included in general and administrative expenses are outside legal fees, audit fees, facilities expenses and insurance costs. Finally, during a period with an acquisition, we also include acquisition-related costs in general and administrative expenses.

General and administrative expenses for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

	Years Ended December 31,					
	2017		2016		2015	
General and administrative	\$	21,926	\$	20,309	\$	17,355
Percentage of revenue		9	%	10	%	11
						%

2017 Compared to 2016. General and administrative expenses increased by \$1.6 million, or 8%, in 2017 compared to 2016. The increase in absolute dollars primarily relates to personnel costs, including non-cash stock compensation expense, as well as facilities costs associated with our leased office, training, and warehousing space.

We expect our general and administrative expenses to increase in absolute dollars and as a percentage of revenue in 2018 as a result of growth in the business, including higher market rates on certain facilities lease renewals and additional regulatory compliance due to the expiration of exemptions available to us through the JOBS Act. We also expect our general and administrative expenses to fluctuate as a percentage of our revenue in future periods based on fluctuations in our revenue and the timing of those expenses.

2016 Compared to 2015. General and administrative expenses increased by \$3.0 million, or 17%, in 2016 compared to 2015. The increase in absolute dollars is primarily due to increased personnel costs and other administrative costs associated with running our business, including \$0.9 million in non-recurring transition costs associated with the Pakedge integration in 2016.



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## Litigation Settlement Expenses

Litigation settlement expenses for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

	Years Ended December 31,					
	2017		2016		2015	
Litigation settlement	\$	-	\$	475	\$	21
Percentage of revenue	0	%	0	%	0	%

2017 Compared to 2016. During 2017, we did not incur any material expenses related to litigation settlement.

2016 Compared to 2015. During 2016, we expensed \$0.5 million in connection with certain legal matters.

## Stock-based Compensation Expenses

Stock-based compensation expenses increased to \$12.1 million for the year ended December 31, 2017 compared to \$8.4 million and \$7.0 million for the years ended December 31, 2016 and 2015, respectively. This increase is the result of the achievement of certain performance metrics included in the terms of our compensation structure approved by our Board of Directors that better aligns senior management and executive compensation with the performance of the company.

## Other Income (Expense)

Other income (expense) consists primarily of foreign currency transaction gains (losses) and net interest income (expense). Other income (expense) for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

Years Ended

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	December 31,					
	2017		2016		2015	
Other income (expense)	\$ 331		\$ (542)		\$ (563)	
Percentage of revenue	0	%	0	%	0	%

We had other income of \$0.3 million in 2017 compared to other expense of \$0.5 million in 2016 while other expense remained relatively flat in 2016 compared to 2015. Other income (expense) varies primarily as a result of net foreign currency gains (losses) generated on our U.S. dollar obligations that are carried in local currency by our foreign subsidiaries. This is due to the U.S. dollar fluctuating in value against the pound sterling, euro, and Australian dollar during the periods, causing those U.S. dollar obligations, primarily intercompany payable to the U.S. entity, to decrease or increase in local currency resulting in increased other income (expense).

Beginning in the second quarter of 2015, we began entering into forward contracts to help offset the exposure to movements in foreign currency exchange rates in relation to certain U.S. dollar denominated balance sheet accounts of our subsidiaries in the United Kingdom and Australia. We settle our foreign exchange contracts on the last day of every month and enter into a new forward contract effective on the first day of the next month. Changes in the fair value (i.e. gains or losses) of these derivative instruments are recorded as other income (expense), net.

#### Income Tax Expense (Benefit)

Income tax expense (benefit) for the years ended December 31, 2017, 2016, and 2015 were as follows (in thousands, except percentages):

	Years Ended					
	December 31,					
	2017		2016		2015	
Income tax expense (benefit)	\$ (1,542)		\$ (8,784)		\$ 268	
Percentage of revenue	-1	%	-4	%	0	%

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Income tax benefit was approximately 11% and 211% of income before income taxes for the years ended December 31, 2017 and 2016, respectively, and income tax expense was approximately 19% of income before income taxes for the year ended December 31, 2015. The effective tax rate differs from the U.S. federal statutory rate of 34% primarily due to the domestic valuation allowance offsetting most of the statutory rate, partial reversal of the valuation allowance due to the deferred tax liabilities that were recorded as part of the Triad and Pakedge acquisitions in 2017 and 2016, respectively, state income taxes, foreign income taxes, U.S. federal alternative minimum tax and excess tax deductions in 2017 resulting from share-based compensation and related accounting changes due to the adoption of ASU 2016-09 during the year. Cash payments for taxes of \$1.3 million in 2017 are primarily related to provisional tax payments paid in Australia and federal alternative minimum tax and state taxes paid in the United States.

Significant judgment is required in determining our provision for income taxes and evaluating our uncertain tax positions. In evaluating our ability to recover our deferred tax assets, in full or in part, we consider all available positive and negative evidence, including our past operating results, our forecast of future market growth, forecasted earnings, future taxable income and prudent and feasible tax planning strategies. Due to historical net losses incurred and the uncertainty of realizing the deferred tax assets, for all the periods presented, we have a full valuation allowance against our domestic deferred tax assets. To the extent that we generate positive domestic income and expect, with reasonable certainty, to continue to generate positive income, we may release our valuation allowance in a future period. This release would result in the recognition of certain deferred tax assets and a decrease to income tax expense for the period such release is made.

On December 22, 2017, the United States enacted the Tax Act. The Tax Act makes broad and complex changes to the U.S. tax code, including a one-time mandatory transition tax on accumulated foreign earnings and a reduction of the corporate income tax rate to 21% effective January 1, 2018, among others. We are required to recognize the effect of the tax law changes in the period of enactment, such as determining the transition tax and remeasuring our U.S. deferred tax assets and liabilities. In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (“SAB 118”), which allows us to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. Where we have been able to make reasonable estimates of the effects of the Tax Act for which our analysis is not yet complete, we have recorded provisional amounts in accordance with SAB 118. Where we have not yet been able to make reasonable estimates of the impact of certain elements of the Tax Act, we have not recorded any amounts related to those elements and we have continued accounting for them in accordance with the tax laws in effect immediately prior to the enactment of the Tax Act.

Although our accounting for the Tax Act is incomplete, we were able to make reasonable estimates of certain effects of the Tax Act and record provisional amounts. The Tax Act reduces the U.S. federal corporate tax rate from 34% to 21% for tax years beginning after December 31, 2017. We have evaluated the decrease in the tax rate and have recorded a provisional, one-time tax expense of approximately \$9.0 million. This expense was offset by an equal change in our valuation allowance, resulting in a net tax expense or benefit of \$0. We have also recorded a one-time tax benefit and corresponding reduction to our valuation allowance of \$0.4 million related to Alternative Minimum Tax credit carryforwards that are expected to be refundable; the Tax Act contributed to \$0.2 million of this tax benefit. We are still completing our evaluation of the impact of these changes in accordance with SAB 118.

Our financial statements for the year ended December 31, 2017, do not reflect the impact of certain aspects of the Tax Act as we did not have the necessary information available, prepared, or analyzed in sufficient detail to determine an actual or provisional amount for the tax effects of the Tax Act. The tax on unrepatriated foreign earnings is a tax on previously untaxed accumulated and current earnings and profits of our foreign subsidiaries. We are not able to complete the accounting for federal and state income tax items related to the one-time deemed repatriation transition tax on unrepatriated foreign earnings and the associated unrecognized deferred tax liability for foreign earnings that will remain indefinitely reinvested. As a result, no provisional amounts have been recorded and we continue to account for unrepatriated earnings of foreign subsidiaries under the laws existing prior to the enactment date of the Tax Act. We anticipate being able to offset the additional tax expense associated with the one-time tax with available net operating loss carryovers and/or foreign tax credits. Additionally, we are still evaluating the unrecognized deferred tax liability related to investment in foreign subsidiaries and joint ventures that will remain indefinitely reinvested subsequent to the one-time transition tax. We anticipate that this will not impact tax expense, as we intend to continue indefinitely reinvesting our unremitted foreign earnings in Australia and the U.K.

The Tax Act also creates a new requirement on global intangible low-taxed income (“GILTI”) earned by foreign subsidiaries. The GILTI provisions require foreign subsidiary earnings in excess of an allowable return on the foreign subsidiary’s assets to be included in our U.S. income tax return. Due to the complexity of the new GILTI tax rules, we are continuing to evaluate this provision of the Tax Act. Under U.S. GAAP, we are permitted to make an accounting policy

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election to either treat taxes due on future inclusions in U.S. taxable income related to GILTI as a current-period expense when incurred or to factor such amounts into the measurement of our deferred taxes. We have not yet completed our analysis of the GILTI tax rules and are not yet able to reasonably estimate the effect of this provision of the Tax Act or make an accounting policy election for the treatment of the GILTI tax. Therefore, we have not recorded any amounts related to potential GILTI tax in our financial statements and have not yet made a policy decision regarding whether to record deferred taxes on GILTI.

## Quarterly Results of Operations and Other Data

The following table presents our quarterly consolidated results of operations and other data for each of the quarters presented, both in absolute dollars and as a percentage of revenue. This quarterly consolidated information has been prepared on the same basis as our audited consolidated financial statements and, in the opinion of management, the statement of operations data includes all adjustments, consisting of normal recurring adjustments, necessary for the fair presentation of the results of operations for these periods. You should read this table in conjunction with our audited consolidated financial statements and related notes located elsewhere in this Annual Report on Form 10-K. The results of operations for any quarter are not necessarily indicative of the results of operations for a full year or any future periods.

	Three Months Ended							
	Dec 31, 2017	Sept 30, 2017	June 30, 2017	Mar 31, 2017	Dec 31, 2016	Sept 30, 2016	June 30, 2016	Mar 31, 2016
	(In thousands)							
Revenue	\$ 68,339	\$ 64,742	\$ 61,409	\$ 50,235	\$ 57,367	\$ 55,185	\$ 53,215	\$ 43,035
Gross margin	34,681	33,222	31,416	25,176	29,547	27,619	26,027	20,486
Gross margin percentage	50.7 %	51.3 %	51.2 %	50.1 %	51.5 %	50.0 %	48.9 %	47.6
Total operating expenses	27,648	28,148	27,585	27,008	24,479	25,449	25,212	23,827
Income (loss) from operations	7,033	5,074	3,831	(1,832)	5,068	2,170	815	(3,341)
Net income (loss)	\$ 6,058	\$ 5,185	\$ 3,893	\$ 843	\$ 4,014	\$ 1,777	\$ 524	\$ 6,639
Net income (loss) per common share:								
Basic	\$ 0.24	\$ 0.21	\$ 0.16	\$ 0.04	\$ 0.17	\$ 0.08	\$ 0.02	\$ 0.28
Diluted	\$ 0.22	\$ 0.19	\$ 0.15	\$ 0.03	\$ 0.16	\$ 0.07	\$ 0.02	\$ 0.28

Historically, we have experienced seasonal variations in our revenue as a result of holiday-related factors that are common in our industry. Our revenue is generally highest in the fourth quarter due to consumers' desires to complete their home installations prior to the holiday season. We generally see decreased sales in the first quarter due to seasonal purchase tendencies of consumers as well as the impact of winter weather on new construction and travel in certain geographies.

Our gross margin percentage will continue to be impacted by a variety of general and in some cases specific factors including the following:

- Negotiated decreases in the price of components purchased from our contract manufacturers resulting in lower product costs.
- Licensing and royalties paid for third-party technologies embedded in our products.
- The mix of customer type and products sold, including increased or decreased sales of third-party products sold through our online distribution platform where revenue is recognized on a net basis.
- Price competition resulting in promotional discounts or volume incentive rebates.
- Achieving leverage in our fixed manufacturing overhead expense as a percent of revenue.
- Amortization of acquired technology amortized over the expected life.
- In periods of an acquisition, non-recurring acquisition-related costs associated with the integration and transition of the acquired company.

We anticipate making incremental investments in our global fulfillment centers in 2018, to accommodate growth and improve delivery times to our dealers, which will moderate our gross margin improvements during 2018, but should enable us to continue to scale and improve gross margins in future years. Notwithstanding, we continue to work with our contract

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manufacturers and component vendors to reduce the cost of components we purchase, engineer product design and cost improvements, manage our supply chain and realize economies of scale as we grow our business. From time to time, however, we may experience fluctuations in our gross margin as a result of the factors discussed in the preceding paragraph.

Our operating expenses fluctuate from quarter to quarter based on changes in the number of our employees and associated expenses, the timing and magnitude of product development, the timing of marketing and sales expenditures, the acquisition of certain intangible assets amortized of the expected life, the timing of non-recurring acquisition-related costs and large or infrequent transactions such as litigation settlement expenses. Our quarterly operating expenses have generally increased in 2017 compared to 2016 to support the growth in our business.

Sales and marketing expenses are typically higher in the first and third quarters of each year due to the timing of our primary trade shows.

## Liquidity and Capital Resources

### Primary Sources of Liquidity

As of December 31, 2017, we had \$86.0 million in unrestricted cash and cash equivalents and net marketable securities, an increase of \$24.1 million from December 31, 2016. The overall increase in cash and cash equivalents and net marketable securities was impacted by the following:

- We generated \$27.5 million in cash flows from operations.
- We received \$17.0 million in proceeds from the exercise of options for common stock.
- We acquired Triad for approximately \$9.2 million in cash, less cash acquired of approximately \$0.3 million and a Holdback of approximately \$1.1 million, resulting in net cash paid of approximately \$7.9 million. The \$1.1 million Holdback will be held for up to 18 months from the acquisition date to cover any of the sellers' post-closing obligations, including without limitation any indemnification obligations that may arise.
- We made \$5.5 million in payments for taxes related to the net share settlement of restricted stock units that lapsed during the period.

- We purchased capital equipment for an aggregate of \$4.0 million.
- In May 2015, our Board of Directors authorized the repurchase of up to \$20 million in Control4 common stock from time to time on the open market. During 2017, we repurchased 119,007 shares for \$1.8 million.

As of December 31, 2016, we had \$61.9 million in unrestricted cash and cash equivalents and net marketable securities, a decrease of \$19.1 million from December 31, 2015. The overall decrease was impacted by the following:

- We recorded net income of \$13.0 million in addition to non-cash expenses of \$7.5 million.
- We acquired Pakedge for \$33.0 million in cash, net of cash acquired of \$0.8 million, resulting in net cash paid of \$32.2 million.
- In May 2015, our Board of Directors authorized the repurchase of up to \$20 million in Control4 common stock from time to time on the open market. During 2016, we repurchased 427,646 shares for \$3.2 million. This was offset by proceeds of \$3.4 million from the exercise of options to acquire common stock.
- Our inventory balance increased by \$6.4 million as of December 31, 2016 compared to December 31, 2015, including a \$3.2 million increase in networking product line inventory due to the acquisition of Pakedge. In addition, we invested an additional \$2.0 million in inventory to support other growth initiatives including the rollout of our new EA series controllers and the transition to direct-to-dealer fulfillment in Australia.
- We paid off approximately \$0.9 million of term loans during 2016.



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As of December 31, 2015, we had \$81.0 million in unrestricted cash and cash equivalents and net marketable securities, a decrease of \$12.7 million from December 31, 2014. The overall decrease was impacted by the purchase of Nexus for \$8.5 million in cash, net of cash acquired of \$0.1 million, resulting in net cash paid of \$8.4 million and the repurchase of 1,154,480 shares for \$9.0 million.

We typically invest in highly-rated securities, and our investment policy generally limits the amount of credit exposure to any one issuer. Our investment policy requires investments generally to be investment grade, with the primary objective of minimizing the potential risk of principal loss. The maturities of our long-term investments range from one to two years, with the average maturity of our investment portfolio less than one year. Cash equivalents and marketable securities are comprised of money market and other funds, highly liquid debt instruments of the U.S. government and its agencies, debt instruments issued by municipalities in the U.S., corporate securities, and asset-backed securities.

The following table shows selected financial information and statistics as of December 31, 2017, 2016 and 2015 (in thousands):

	December 31,		
	2017	2016	2015
Cash and cash equivalents	\$ 29,761	\$ 34,813	\$ 29,530
Investments, net(1)	56,254	27,128	51,477
Accounts receivable, net	29,925	24,727	21,322
Inventories	37,171	26,231	19,855
Working capital	106,756	85,175	87,312

(1) Includes accrued investment balances not included in the investments line items on the condensed consolidated balance sheet.

We closely monitor accounts receivable and inventory because of their significant impact on cash and working capital. Our accounts receivable balance at December 31, 2017 increased by \$5.2 million, or 21%, since December 31, 2016. This increase is in line with revenue growth, and we have not seen any deterioration in our long-term collection trends. Furthermore, inventory increased by \$10.9 million from December 31, 2016 to December 31, 2017. The increase in inventory was due primarily to the acquisition of Triad and normal inventory buildup associated with revenue growth and the introduction of new products.

Subsequent to year-end, we renewed and expanded our revolving credit facility increasing our borrowing limit to \$40 million and at December 31, 2017, there were no outstanding borrowings.

We believe that our existing cash and cash equivalents, as well as our borrowing capacity on our amended revolving credit facility from Silicon Valley Bank, will be sufficient to fund our operations for at least the next 12 months. From time to time, we may explore additional financing sources to develop or enhance our product solutions, to fund expansion of our business, to respond to competitive pressures, or to acquire or invest in complementary products, businesses or technologies. We cannot give assurance that any additional financing will be available to us on acceptable terms, if at all. If we raise additional funds through the issuance of equity or convertible debt or other equity-linked securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges senior to those of holders of our common stock.

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## Cash Flow Analysis

A summary of our cash flows for the years ended December 31, 2017, 2016 and 2015 is set forth below (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Cash and cash equivalents at the beginning of the period	\$ 34,813	\$ 29,530	\$ 29,187
Net cash provided by operating activities	27,490	17,955	4,414
Net cash provided by (used in) investing activities	(42,271)	(11,697)	4,389
Net cash provided by (used in) financing activities	9,604	(807)	(8,575)
Effect of exchange rate changes on cash and cash equivalents	125	(168)	115
Net change in cash and cash equivalents	(5,052)	5,283	343
Cash and cash equivalents at the end of the period	\$ 29,761	\$ 34,813	\$ 29,530

## Operating Activities

Cash provided by operating activities is net income adjusted for certain non-cash items and changes in certain assets and liabilities.

The increase in cash provided by operating activities of \$9.5 million during the year ended December 31, 2017 compared to the same period in 2016 is due to increased net income, adjusted for non-cash items including depreciation and amortization, stock-based compensation and tax benefits from business acquisitions, as well as the differences in working capital account changes such as accounts receivable, inventory, accounts payable, and accrued liabilities.

The increase in cash provided by operating activities of \$13.5 million during the year ended December 31, 2016 compared to the same period in 2015 is due primarily to net income, as adjusted for certain non-cash operating expenses for the period, and offset by changes in working capital which included an increase in inventory as described above.

## Investing Activities

Cash used in investing activities primarily consist of purchases, maturities, and sales of marketable securities, business acquisitions, net of cash acquired, and purchases of property and equipment.

Cash used in investing activities increased \$30.6 million in 2017 compared to the same period in 2016. The year-over-year change is primarily due to the difference in available-for-sale investment activity, from the purchase of additional investments that were funded by cash provided by operating activities, offset by the difference in cash used for business acquisitions and capital purchases.

Our capital expenditures during 2017 and 2016 were \$4.0 million and \$2.7 million, respectively.

Cash used in investing activities increased to \$11.7 million in 2016 compared to cash provided by investing activities of \$4.4 million in 2015. The year-over-year change was primarily due to the difference in cash used for business acquisitions, offset by the difference in available-for-sale investment activity. The change in the investment activity was a direct result of the Pakedge acquisition as we primarily used the proceeds from the maturity of available-for-sale investments toward the purchase price, rather than reinvesting those funds.

#### Financing Activities

Financing cash flows consist primarily of tax payments related to the net share settlement of restricted stock units, the repurchase of Control4 stock in the open market and proceeds from the exercise of options to acquire common stock.

During the years ended December 31, 2017 and 2016, we received proceeds of \$17.0 million and \$3.4 million, respectively, from the exercise of options to purchase common stock.

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During the year ended December 31, 2017, we made tax payments of \$5.5 million related to the net share settlement of restricted stock units that lapsed during the period.

During the year ended December 31, 2017, we repurchased 119,007 shares of our stock in the open market for \$1.8 million compared to 427,646 shares for \$3.2 million in the same period in 2016.

## Off-Balance Sheet Arrangements

We have no material off-balance sheet arrangements as defined in SEC Regulation S-K- 303(a)(4)(ii).

## Contractual Obligations

We enter into long-term contractual obligations in the normal course of business, primarily debt obligations and non-cancellable operating leases.

Our contractual cash obligations at December 31, 2017 are as follows:

	Total	Less than 1 year	1 - 3 years	3 - 5 years
	(in thousands)			
Operating lease obligations	4,408	2,632	1,745	31
Purchase commitments	52,391	52,391	—	—
Total contractual obligations	\$ 56,799	\$ 55,023	\$ 1,745	\$ 31

## Critical Accounting Estimates and Policies

Our consolidated financial statements are prepared in accordance with GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, expenses and related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates.

We believe that the assumptions and estimates associated with our revenue recognition, inventory valuation reserves, product warranty liability, income taxes and stock-based compensation have the greatest potential impact on our consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates. For further information on all of our significant accounting policies, please see Note 1 of the accompanying notes to our consolidated financial statements. We discuss, where appropriate, sensitivity to change based on other outcomes reasonably likely to occur.

We have chosen to “opt out” of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards and, as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

#### Revenue Recognition

We sell our products through a network of independent dealers and distributors and not directly to consumers. These dealers and distributors generally sell our products to the consumer as part of a bundled sale, which typically includes other third-party products and related services, project design and installation services and ongoing support.

We record estimated reductions to revenue for dealer, retailer and distributor incentives, primarily comprised of volume rebates, at the time of the initial sale. The estimated reductions to revenue for rebates are based on the sales terms and our historical experience and trend analysis. The most common incentive relates to amounts paid or credited to dealers and distributors for achieving defined volume levels or growth objectives.

Our controllers include embedded software that is essential to the functionality of the controller. Accordingly, the hardware and embedded software components are sold together as one product. When a software license and controller are sold

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together, a multiple element arrangement exists and revenue is allocated to each deliverable based on relative selling prices. Typically, delivery of both the product and the software license occurs at the same time. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is probable. Product or licensed software is considered delivered once it has been shipped and title and risk of loss have been transferred. For most of our product sales, these criteria are met at the time the product is shipped.

We offer a subscription service that allows consumers to control and monitor their homes remotely and allows our dealers to perform remote diagnostic services. Subscription revenue is deferred at the time of payment and recognized on a straight-line basis over the period the service is provided.

We recognize revenue net of cost of revenue for third-party products sold through our online ordering system. While we assume credit risk on sales to our dealers and distributors, we do not determine the product selling price, do not retain associated inventory risks and are not the primary obligor to the dealer or distributor.

Our agreements with dealers and distributors generally do not include rights of return or acceptance provisions. Even though contractual agreements do not provide return privileges, there are circumstances in which we will accept returns. In addition, agreements with certain retail distributors contain price protection and limited rights of return. We maintain a reserve for such returns based on our historical return experience.

Shipping charges billed to dealers and distributors are included in product revenue and related shipping costs are included in cost of revenue.

## Inventory Valuation

Inventories consist of hardware and related component parts and are stated at the lower of cost or net realizable value using the first-in, first-out method. We periodically assess the recoverability of our inventory and reduce the carrying value of the inventory when items are determined to be obsolete, defective or in excess of forecasted sales requirements. Carrying value adjustments are based on expected demand and market conditions. For example, we may incur inventory write-offs during the introduction of new products that replace existing ones. We make estimates regarding transition inventory and if our estimates of demand for the “end-of-life” products differ substantially, we may be required to record additional inventory carrying value adjustments.

Inventory write-downs for excess, defective and obsolete inventory are recorded as cost of revenue and totaled \$4.1 million, \$3.1 million and \$2.3 million, and in 2017, 2016 and 2015, respectively.

### Limited Product Warranties

We provide our customers a limited product warranty of two, three or ten years depending on product type and brand. The limited product warranties require us, at our option, to repair or replace defective products during the warranty period at no cost to the customer or refund the purchase price. We estimate the costs that may be incurred to replace, repair or issue a refund for defective products and record a reserve at the time revenue is recognized. Factors that affect our warranty liability include the cost of the products sold, our historical experience, and management's judgment regarding anticipated rates of product warranty returns, net of refurbished products. We assess the adequacy of our recorded warranty liability each period and make adjustments to the liability as necessary. Our warranty liability was \$2.0 million and \$1.9 million at December 31, 2017 and 2016, respectively.

### Income Taxes

We recognize deferred tax assets and liabilities for the future tax consequences attributable to the differences between the financial statement carrying value of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the fiscal year in which those temporary differences are expected to be recovered or settled. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized. In evaluating our ability to recover our deferred tax assets, in full or in part, we consider all available positive and negative evidence, including our past operating results, our forecast of future market growth, forecasted earnings, future taxable income, and prudent and feasible tax planning strategies. The assumptions utilized in determining future taxable income require significant judgment and are consistent with the plans and estimates we are using to manage the underlying



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businesses. Due to the net losses incurred and the uncertainty of realizing the deferred tax assets, for all the periods presented, we have a full valuation allowance against the deferred tax assets of our domestic and U.K. operations.

We operate in various tax jurisdictions and are subject to audit by various tax authorities. We provide for tax contingencies whenever it is deemed probable that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Tax contingencies are based upon their technical merits, relative tax law and the specific facts and circumstances as of each reporting period. Changes in facts and circumstances could result in material changes to the amounts recorded for such tax contingencies.

We recognize uncertain income tax positions taken on income tax returns at the largest amount that is more likely than not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained.

Our policy for recording interest and penalties associated with uncertain tax positions is to record such items as a component of our income tax provision. During the years ended December 31, 2017, 2016 and 2015, we did not record any material interest income, interest expense or penalties related to uncertain tax positions or the settlement of audits for prior periods.

Business Combinations and Impairment of Long-lived and Intangible Assets, Including Goodwill

When we acquire businesses, we allocate the fair value of the consideration transferred to tangible assets and liabilities and identifiable intangible assets acquired. Any residual consideration is recorded as goodwill. The allocation of the consideration transferred requires management to make significant estimates in determining the fair values of assets acquired and liabilities assumed, especially with respect to intangible assets. These estimates are based on the application of valuation models using historical experience and information obtained from the management of the acquired company and our understanding of the future projections. These estimates can include, but are not limited to, the cash flows that an asset is expected to generate in the future, the appropriate weighted-average cost of capital, and the cost savings expected to be derived from acquiring an asset. These estimates are inherently uncertain, unpredictable, and subject to refinement. In addition, unanticipated events and circumstances may occur which may affect the accuracy or validity of such estimates.

Periodically we assess potential impairment of our long-lived assets, which include property, equipment, and acquired intangible assets. We perform an impairment review whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include, but are not limited to, significant under-performance relative to historical or projected future operating results, significant changes in the manner of our use of the acquired assets or our overall business strategy, and significant industry or economic trends. When we determine that the carrying value of a long-lived asset may not be

recoverable based upon the existence of one or more of the above indicators, we determine the recoverability by comparing the carrying amount of the asset to net future undiscounted cash flows that the asset is expected to generate. We recognize an impairment charge equal to the amount by which the carrying amount exceeds the fair market value of the asset. We amortize intangible assets on a straight-line basis over their estimated useful lives, or if appropriate, using a method that better represents the pattern of usage.

We test goodwill for impairment on an annual basis as of October 1, and in the interim by reporting unit if events and circumstances indicate that goodwill may be impaired. We initially assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, we determine it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then we compare the reporting unit's carrying amount to its fair value. If the reporting unit's carrying amount exceeds its fair value, we record an impairment charge based on that difference. No impairment of long-lived and intangible assets or goodwill was recorded during the years ended December 31, 2017, 2016, and 2015, respectively.

#### Stock-Based Compensation

Stock-based compensation is measured at the grant date based on the fair value of the award and is recognized as expense, net of estimated forfeitures, over the requisite service period, which is the vesting period of the respective award.

The fair value of each restricted stock unit award is based on the number of shares granted and the closing price of our common stock as reported on the NASDAQ Global Select Market.

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Determining the fair value of stock options at the grant date requires judgment. We use the Black-Scholes option-pricing model to determine the fair value of stock options. The determination of the grant date fair value of options using an option-pricing model is affected by our estimated common stock fair value as well as assumptions regarding a number of other complex and subjective variables. These variables include the fair value of our common stock, our expected stock price volatility over the expected term of the options, stock option exercise and cancellation behaviors, risk-free interest rates and expected dividends, which are estimated as follows:

- **Fair Value of Our Common Stock.** Prior to August 2, 2013, the date our common stock began trading on the NASDAQ Global Select Market, the fair value of common stock was determined by our board of directors, which intended all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the date of grant. The valuations of our common stock were determined in accordance with the guidelines outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. The assumptions we use in the valuation model were based on future expectations combined with management judgment. In the absence of a public trading market, our board of directors, with input from management, exercised significant judgment and considered numerous objective and subjective factors to determine the fair value of our common stock as of the date of each option grant. Since our IPO, we determine the fair value of our common stock based on the closing price as quoted on the NASDAQ Global Select Market of our common stock.
- **Expected Volatility.** As we do not have an adequate trading history for our common stock, the expected stock price volatility for our common stock was estimated by taking the average of the historical volatilities of an index fund and industry peers based on daily price observations over a period equivalent to the expected term of the stock option grants. We did not rely on implied volatilities of traded options in our industry peers' common stock because the volume of activity was relatively low. We intend to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own common stock share price becomes available.
- **Risk-Free Interest Rate.** The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of the grant for zero-coupon U.S. Treasury notes with remaining terms similar to the expected term of the options.
- **Expected Dividend Yield.** We have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.
- **Expected Term.** As we do not have an adequate trading history for our common stock, the expected term represents the period that the stock-based awards are expected to be outstanding. For our option grants, we used the simplified method to determine the expected term as provided by the SEC. The simplified method calculates the expected term as the average of the time-to-vesting and the contractual life of the options. We used the simplified method to determine our expected term because of our limited history of stock option exercise activity.

Under the provisions of ASU 2016-09, we have elected to recognize forfeitures as they occur to determine the amount of compensation cost to be recognized in each period.

We will continue to use judgment in evaluating the expected volatility and expected terms utilized for our stock-based compensation calculations on a prospective basis. As we continue to accumulate additional data related to our common stock, we may have refinements to the estimates of our expected volatility and expected terms, which could materially impact our future stock-based compensation expense. If any of the assumptions used in the Black-Scholes model changes significantly, stock-based compensation for future awards may differ materially compared with the awards granted previously.

We did not grant any stock options during 2017. The following table presents the weighted-average assumptions used to estimate the fair value of options granted in 2016 and 2015:

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	December 31,	
	2016	2015
Expected volatility	62 %	51 - 55 %
Expected dividends	0 %	0 %
Expected terms (in years)	6.1	5.3 - 6.1
Risk-free rate	1.1 %	1.3 - 1.8 %

## Recently Issued and Adopted Accounting Pronouncements

For information with respect to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note 1 “Description of Business and Summary of Significant Accounting Policies—Recent Accounting Pronouncements” in the notes to consolidated financial statements. Based on our continuing review of the recent accounting pronouncements, nothing has been identified to cause us to believe that our future trends, financial condition, or results of operations will be impacted.

## ITEM 7A. Qualitative and Quantitative Disclosures about Market Risk

We are exposed to market risk in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes.

## Interest Rate Risk

Changes in U.S. interest rates could affect the interest earned on our cash, cash equivalents and investments as well as the fair value of our investments. Our investment policy and strategy are focused on preservation of capital and supporting our liquidity requirements. A portion of our cash is managed by external managers within the guidelines of our investment policy.

Our exposure to changes in interest rates relates primarily to our investment portfolio. We typically invest in highly-rated securities, and our investment policy generally limits the amount of credit exposure to any one issuer.

The policy requires investments generally to be investment grade, with the primary objective of minimizing the potential risk of principal loss.

We performed a sensitivity analysis on the value of our investment portfolio assuming a hypothetical change in rates of 100 basis points. Based on investment positions as of December 31, 2017, a hypothetical 100 basis point increase in interest rates across all maturities would result in a \$0.3 million incremental decline in the fair market value of the portfolio. Such losses would only be realized if we sold the investments prior to maturity.

#### Foreign Currency Exchange Risk

Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Canadian dollar, the euro, the pound sterling and the Australian dollar. The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. We believe that our operating activities act as a natural hedge for a substantial portion of our foreign currency exposure because we typically collect revenue and incur costs in the currency in the location in which we provide our solutions. Although we have experienced, and will continue to experience, fluctuations in our net income (loss) as a result of transaction gains (losses) related to transactions denominated in currencies other than the U.S. dollar, we believe that a 10% change in foreign exchange rates would not have a material impact on our financial condition or results of operations. However, we have entered into forward contracts to help offset the exposure to movements in foreign currency exchange rates in relation to certain U.S. dollar denominated balance sheet accounts of our subsidiaries in the United Kingdom and Australia. The foreign currency derivatives are not designated as accounting hedges. We recognize these derivative instruments as either assets or liabilities in the accompanying Consolidated Balance Sheets at fair value. We record changes in the fair value (i.e. gains or losses) of these derivative instruments in the accompanying Consolidated Statements of Operations as Other income (expense), net.

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ITEM 8. Financial Statements and Supplementary Data

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of

Control4 Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Control4 Corporation (and subsidiaries) (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of the Company at December 31, 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2003.



Salt Lake City, Utah  
February 15, 2018

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## CONTROL4 CORPORATION

## CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)

	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	\$ 29,761	\$ 34,813
Restricted cash	273	247
Short-term investments	44,057	22,970
Accounts receivable, net	29,925	24,727
Inventories	37,171	26,231
Prepaid expenses and other current assets	4,369	3,662
Total current assets	145,556	112,650
Property and equipment, net	7,337	6,463
Long-term investments	12,038	4,008
Intangible assets, net	26,081	23,120
Goodwill	21,867	16,809
Other assets	1,576	2,008
Total assets	\$ 214,455	\$ 165,058
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 25,654	\$ 17,010
Accrued liabilities	10,835	8,912
Current portion of deferred revenue	2,311	1,553
Total current liabilities	38,800	27,475
Other long-term liabilities	882	701
Total liabilities	39,682	28,176
Commitments and contingencies (Note 10)	—	—
Stockholders' equity:		
Common stock, \$0.0001 par value; 500,000,000 shares authorized; 25,832,895 and 23,729,780 shares issued and outstanding at December 31, 2017 and December 31, 2016, respectively	3	2
Additional paid-in capital	242,281	220,370
Accumulated deficit	(66,980)	(82,626)
Accumulated other comprehensive loss	(531)	(864)
Total stockholders' equity	174,773	136,882
Total liabilities and stockholders' equity	\$ 214,455	\$ 165,058

See accompanying notes to consolidated financial statements.



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## CONTROL4 CORPORATION

## CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Years Ended December 31,		
	2017	2016	2015
Revenue	\$ 244,725	\$ 208,802	\$ 163,179
Cost of revenue	120,230	105,123	81,645
Gross margin	124,495	103,679	81,534
Operating expenses:			
Research and development	40,638	35,985	32,385
Sales and marketing	47,825	42,198	32,594
General and administrative	21,926	20,309	17,355
Litigation settlement	—	475	21
Total operating expenses	110,389	98,967	82,355
Income (loss) from operations	14,106	4,712	(821)
Other income (expense), net:			
Interest, net	409	45	202
Other income (expense), net	(78)	(587)	(765)
Total other income (expense), net	331	(542)	(563)
Income (loss) before income taxes	14,437	4,170	(1,384)
Income tax expense (benefit)	(1,542)	(8,784)	268
Net income (loss)	\$ 15,979	\$ 12,954	\$ (1,652)
Net income (loss) per common share:			
Basic	\$ 0.64	\$ 0.55	\$ (0.07)
Diluted	\$ 0.60	\$ 0.53	\$ (0.07)
Weighted-average number of shares:			
Basic	24,803	23,402	24,121
Diluted	26,775	24,360	24,121

See accompanying notes to consolidated financial statements.

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## CONTROL4 CORPORATION

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(in thousands)

	Years Ended December 31,		
	2017	2016	2015
Net income (loss)	\$ 15,979	\$ 12,954	\$ (1,652)
Other comprehensive income (loss):			
Foreign currency translation adjustment, net of tax	380	(171)	(565)
Net unrealized gains (losses) on available-for-sale investments, net of tax	(47)	46	(14)
Total other comprehensive income (loss)	333	(125)	(579)
Comprehensive income (loss)	\$ 16,312	\$ 12,829	\$ (2,231)

See accompanying notes to consolidated financial statements.

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## CONTROL4 CORPORATION

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except share data)

	Stockholders' Equity				Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
	Common Stock Number of Shares	Amount	Treasury Stock Number of Shares	Amount				
Balance at December 31, 2014	24,305,381	\$ 2	—	\$ —	\$ 212,388	\$ (93,928)	\$ (160)	\$ 118,300
Net loss	—	—	—	—	—	(1,652)	—	(1,652)
Other comprehensive loss	—	—	—	—	—	—	(579)	(579)
Stock-based compensation	—	—	—	—	7,034	—	—	7,034
Issuance of common stock upon exercise of stock options	285,387	—	—	—	1,360	—	—	1,360
Repurchase of common stock for treasury	(1,154,480)	—	1,154,480	(9,020)	—	—	—	(9,020)
Balance at December 31, 2015	23,436,288	2	1,154,480	(9,020)	220,782	(95,580)	(739)	115,445
Net income	—	—	—	—	—	12,954	—	12,954
Other comprehensive loss	—	—	—	—	—	—	(125)	(125)
Excess tax benefit from exercise of options for common stock	—	—	—	—	89	—	—	89
Stock-based compensation	—	—	—	—	8,324	—	—	8,324
Issuance of common stock upon exercise of stock options and vesting of	721,138	—	—	—	3,437	—	—	3,437

restricted stock									
Repurchase of common stock for treasury	(427,646)	—	427,646	(3,242)	—	—	—	—	(3,242)
Retirement of treasury stock	—	—	(1,582,126)	12,262	(12,262)	—	—	—	—
Balance at December 31, 2016	23,729,780	2	—	—	220,370	(82,626)	(864)	—	136,880
Net income	—	—	—	—	—	15,979	—	—	15,979
Other comprehensive loss	—	—	—	—	—	—	333	—	333
Cumulative effect of accounting change	—	—	—	—	333	(333)	—	—	—
Stock-based compensation	65,171	—	—	—	11,975	—	—	—	11,975
Issuance of common stock upon exercise of stock options and vesting of restricted stock	2,156,951	1	—	—	11,424	—	—	—	11,425
Repurchase of common stock for treasury	(119,007)	—	119,007	(1,821)	—	—	—	—	(1,821)
Retirement of treasury stock	—	—	(119,007)	1,821	(1,821)	—	—	—	—
Balance at December 31, 2017	25,832,895	\$ 3	—	\$ —	\$ 242,281	\$ (66,980)	\$ (531)	—	\$ 174,770

See accompanying notes to consolidated financial statements.

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## CONTROL4 CORPORATION

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Years Ended December 31,		
	2017	2016	2015
Operating activities			
Net income (loss)	\$ 15,979	\$ 12,954	\$ (1,652)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation expense	3,686	3,318	2,926
Amortization of intangible assets	5,212	4,598	1,474
Loss on disposal of fixed assets	1	13	—
Provision for doubtful accounts	815	345	345
Investment discount and premium amortization	(109)	339	—
Stock-based compensation	12,105	8,370	7,034
Tax benefit from business acquisition	(2,257)	(9,402)	—
Deferred tax asset adjustment	767	—	—
Changes in assets and liabilities:			
Accounts receivable, net	(5,116)	(3,765)	(1,127)
Inventories	(9,324)	(1,589)	(3,488)
Restricted cash	(3)	—	—
Prepaid expenses and other current assets	(593)	1,184	(1,443)
Other assets	(178)	(295)	(264)
Accounts payable	6,370	(32)	615
Accrued liabilities	(441)	1,999	248
Deferred revenue	747	471	258
Other long-term liabilities	(171)	(553)	(512)
Net cash provided by operating activities	27,490	17,955	4,414
Investing activities			
Purchases of available-for-sale investments	(76,796)	(19,227)	(50,619)
Proceeds from sales of available-for-sale investments	3,955	900	2,018
Proceeds from maturities of available-for-sale investments	43,780	42,203	65,142
Purchases of property and equipment	(3,952)	(2,682)	(3,772)
Business acquisitions, net of cash acquired	(9,258)	(32,891)	(8,380)
Net cash provided by (used in) investing activities	(42,271)	(11,697)	4,389
Financing activities			
Proceeds from exercise of options for common stock	16,959	3,437	1,360
Payments for taxes related to net share settlement of equity awards	(5,534)	—	—
Repurchase of common stock	(1,821)	(3,242)	(9,020)
Repayment of notes payable	—	(913)	(915)
Proceeds from revolving credit facility	—	5,000	—
Repayment of revolving credit facility	—	(5,000)	—
Payment of debt issuance costs	—	(89)	—



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Net cash provided by (used in) financing activities	9,604	(807)	(8,575)
Effect of exchange rate changes on cash and cash equivalents	125	(168)	115
Net change in cash and cash equivalents	(5,052)	5,283	343
Cash and cash equivalents at beginning of period	34,813	29,530	29,187
Cash and cash equivalents at end of period	\$ 29,761	\$ 34,813	\$ 29,530
Supplemental disclosure of cash flow information			
Cash paid for interest	\$ 57	\$ 204	\$ 101
Cash paid for taxes	\$ 1,292	\$ 1,115	\$ 831
Supplemental schedule of non-cash investing and financing activities			
Landlord paid tenant improvements	\$ —	\$ 39	\$ —
Business acquisitions holdback liability	\$ 1,414	\$ —	\$ —
Purchases of property and equipment financed by accounts payable	\$ 351	\$ 135	\$ —
Net unrealized gains (losses) on available-for-sale investments	\$ (47)	\$ 46	\$ (14)

See accompanying notes to consolidated financial statements.

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Control4 Corporation

Notes to Consolidated Financial Statements

1. Description of Business and Summary of Significant Accounting Policies

Control4 Corporation (“Control4” or the “Company”) is a leading provider of personalized, smart home and business solutions that are designed to enhance the daily lives of its customers. The Company’s solutions unlock the potential of connected devices throughout a home or business, making entertainment systems easier to use and more accessible, spaces more comfortable and energy efficient, and individuals more secure. The Company was incorporated in the state of Delaware on March 27, 2003.

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in the consolidated financial statements.

Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker, the Chief Executive Officer, in making decisions regarding resource allocation and assessing performance. To date, the Company has viewed its operations and manages its business as one operating segment.

Concentrations of Risk

The Company’s accounts receivable is derived from revenue earned from its worldwide network of independent dealers and distributors. The Company’s sales to dealers and distributors located outside the United States are generally denominated in U.S. dollars, except for sales to dealers and distributors located in the United Kingdom, Canada, Australia, and the European Union, which are generally denominated in pounds sterling, Canadian dollars, Australian dollars, and the euro, respectively. There were no individual account balances greater than 10% of total accounts receivable as of December 31, 2017 and 2016.

No dealer or distributor accounted for more than 10% of total revenue for the years ended December 31, 2017, 2016 and 2015.

The Company relies on a limited number of suppliers for its contract manufacturing. A significant disruption in the operations of certain of these manufacturers would impact the production of the Company’s products for a substantial period of time, which could have a material adverse effect on the Company’s business, financial condition and results of operations.

## Geographic Information

The Company's revenue includes amounts earned through sales to dealers and distributors located outside of the United States. There was no single foreign country that accounted for more than 10% of total revenue for the three years ended December 31, 2017, 2016 and 2015. The following table sets forth revenue from the United States, Canadian and all other international dealers and distributors combined (in thousands):

	Years Ended					
	December 31,					
	2017	2016	2015			
Revenue-United States	\$ 169,930	\$ 148,803	\$ 109,435			
Revenue-Canada	20,812	16,084	14,285			
Revenue-all other international sources	53,983	43,915	39,459			
Total revenue	\$ 244,725	\$ 208,802	\$ 163,179			
International revenue (excluding Canada) as a percent of total revenue	22	%	21	%	24	%

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Control4 Corporation

Notes to Consolidated Financial Statements (Continued)

## Use of Accounting Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, the Company evaluates its estimates, including those related to revenue recognition, sales returns, provisions for doubtful accounts, product warranty, inventory obsolescence, litigation, determination of fair value of stock options, deferred tax asset valuation allowances and income taxes. Actual results may differ from those estimates.

## Limited Product Warranties

The Company provides its customers a limited product warranty of two, three, or ten years depending on product type and brand. The limited product warranties require the Company, at its option, to repair or replace defective products during the warranty period at no cost to the customer or refund the purchase price. The Company estimates the costs that may be incurred to replace, repair or issue a refund for defective products and records a reserve at the time revenue is recognized. Factors that affect the Company's warranty liability include the cost of the products sold, the Company's historical experience, and management's judgment regarding anticipated rates of product warranty returns, net of refurbished products. The Company assesses the adequacy of its recorded warranty liability each period and makes adjustments to the liability as necessary. Warranty costs accrued include amounts accrued for products at the time of shipment, adjustments for changes in estimated costs for warranties on products shipped in the period, and changes in estimated costs for warranties on products shipped in prior periods. It is not practicable for the Company to determine the amounts applicable to each of these components.

The following table presents the changes in the product warranty liability (in thousands):

	Years Ended		
	December 31,		
	2017	2016	2015
Balance at the beginning of the period	\$ 1,945	\$ 1,415	\$ 1,191
Warranty costs accrued	3,147	2,458	2,068
Warranty claims	(3,060)	(1,928)	(1,844)
Balance at the end of the period	\$ 2,032	\$ 1,945	\$ 1,415

Net Income (Loss) Per Share

Basic net income (loss) per share is computed using the weighted-average number of common shares outstanding during the period. Diluted net income (loss) per share is computed using the weighted-average number of common shares outstanding and potentially dilutive common shares outstanding during the period that have a dilutive effect on net income per share. Potentially dilutive common shares result from the assumed exercise of outstanding stock options and settlement of restricted stock units.

The following table presents the reconciliation of the numerator and denominator used in the calculation of basic and diluted net income (loss) per share (in thousands):

	Years Ended		
	December 31,		
	2017	2016	2015
Numerator:			
Net income (loss)	\$ 15,979	\$ 12,954	\$ (1,652)
Denominator:			
Weighted average common stock outstanding for basic net income per common share	24,803	23,402	24,121
Effect of dilutive securities—stock options and restricted stock units	1,972	958	—
Weighted average common shares and dilutive securities outstanding	26,775	24,360	24,121

In a net loss position, diluted net loss per share is computed using only the weighted-average number of common shares outstanding during the period, as any additional common shares would be anti-dilutive as they would decrease the loss

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Control4 Corporation

Notes to Consolidated Financial Statements (Continued)

per share. Potentially dilutive securities, including common equivalent shares, in which the assumed proceeds exceed the average market price of common stock for the applicable period, were not included in the calculation of diluted net income per share as their impact would be anti-dilutive. The following weighted-average common stock equivalents were anti-dilutive and therefore were excluded from the calculation of diluted net income (loss) per share (in thousands):

	Years Ended		
	December 31,		
	2017	2016	2015
Options to purchase common stock	660	2,328	4,756
Restricted stock units	5	17	162
Total	665	2,345	4,918

## Revenue Recognition

The Company sells its products through a network of independent dealers, regional and national retailers and distributors. These dealers, retailers and distributors generally sell the Company's products to the end consumer as part of a bundled sale, which typically includes other third party products and related services, project design and installation services and on going support.

The Company records estimated reductions to revenue for dealer, retailer and distributor incentives at the time of the initial sale. The estimated reductions to revenue are based on the sales terms and the Company's historical experience and trend analysis. The most common incentive relates to amounts paid or credited to dealers and distributors for achieving defined volume levels or growth objectives.

The Company's products include embedded software that is essential to the functionality of the hardware. Accordingly, the hardware and embedded software are accounted for as a single deliverable. When a software license and controller are sold together, a multiple element arrangement exists and revenue is allocated to each deliverable based on relative selling prices. Typically, delivery of both the product and the software license occurs at the same time. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, and collection is reasonably assured. Product or licensed software is considered delivered once it has been shipped and title and risk of loss have been transferred. For most of the Company's product sales, these criteria are met at the time the product is shipped.

The Company offers a subscription service that allows consumers to control and monitor their homes remotely and allows the Company's dealers to perform remote diagnostic services. Subscription revenue is deferred at the time of payment and recognized on a straight line basis over the period the service is provided.

Total revenue for subscription services represents less than 10% of total revenue for all periods presented.

The Company recognizes revenue net of cost of revenue for third party products sold through the Company's online ordering system. While the Company assumes credit risk on sales to its dealers and distributors for third party products, the Company does not determine the product selling price, does not retain associated inventory risks and is not the primary obligor to the end consumer.

The Company's agreements with dealers and distributors generally do not include rights of return or acceptance provisions. Even though contractual agreements do not provide return privileges, there are circumstances in which the Company will accept returns. In addition, agreements with certain retail distributors contain price protection and limited rights of return. The Company maintains a reserve for such returns based on the Company's historical return experience.

Shipping charges billed to dealers and distributors are included in revenue and related shipping costs are included in cost of revenue.

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## Control4 Corporation

## Notes to Consolidated Financial Statements (Continued)

## Cost of Revenue

Cost of revenue includes the following: the cost of inventory sold during the period, inventory write down costs, payroll, purchasing costs, royalty obligations, shipping expenses to dealers and distributors and warehousing costs, which include inbound freight costs from manufacturers, rent, payroll and benefit costs, acquisition-related costs, amortization of intangible assets and depreciation.

## Cash and Cash Equivalents

The Company considers all highly liquid short term investments with original maturities of three months or less at the time of purchase to be cash equivalents. Cash equivalents consist primarily of money market funds.

## Restricted Cash

Restricted cash as of December 31, 2017 and 2016, is composed of a guarantee made by the Company's subsidiary in the United Kingdom to HM Revenue & Customs related to a customs duty deferment account.

## Allowance for Doubtful Accounts

The Company extends credit to the majority of its dealers and distributors, which consist primarily of small, local businesses. Issuance of credit is based on ongoing credit evaluations by the Company of dealers' and distributors' financial condition and generally requires no collateral. Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The Company maintains an allowance for doubtful accounts to reserve for potential uncollectible receivables. The allowance is based upon the creditworthiness of the Company's dealers and distributors, the dealers' and distributors' historical payment experience, the age of the receivables and current market and economic conditions. Provisions for potentially uncollectible accounts are recorded in sales and marketing expenses. The Company writes off accounts receivable balances to the allowance for doubtful accounts when it becomes likely that they will not be collected.

The following table presents the changes in the allowance for doubtful accounts (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Balance at beginning of period	\$ 981	\$ 824	\$ 705
Provision	815	345	345
Deductions	(649)	(188)	(226)
Balance at end of period	\$ 1,147	\$ 981	\$ 824



## Inventories

Inventories consist primarily of hardware and related component parts and are stated at the lower of cost or net realizable value using the first in, first out method. The Company periodically assesses the recoverability of its inventory and reduces the carrying value of the inventory when items are determined to be obsolete, defective or in excess of forecasted sales requirements. Inventory write downs for excess, defective and obsolete inventory are recorded as a cost of revenue and totaled \$4.1 million, \$3.1 million, and \$2.3 million, for the years ended December 31, 2017, 2016 and 2015, respectively.

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Control4 Corporation

Notes to Consolidated Financial Statements (Continued)

Property and Equipment

Property and equipment are recorded at historical cost, less accumulated depreciation. Depreciation is computed using the straight line method over the following estimated useful lives:

Computer equipment and software	3 - 4 years
Manufacturing tooling and test equipment	2 - 4 years
Lab and warehouse equipment	2 - 4 years
Furniture and fixtures	2 - 5 years
Other	2 - 4 years

Maintenance and repairs that do not extend the life of or improve the asset are expensed in the year incurred. Leasehold improvements are depreciated over the estimated useful life (usually 3 - 8 years) or the life of the associated lease, whichever is less.

Intangible Assets

Intangible assets primarily consist of acquired technology, customer relationships and trademarks/trade names. The Company amortizes, to cost of revenue and operating expenses, definite lived intangible assets on a straight line basis over the life of the asset.

Impairment of Long Lived Assets and Goodwill

The carrying value of long lived assets is reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. An impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition. The amount of the impairment loss to be recorded is calculated by the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis.

The Company tests goodwill for impairment annually as of October 1, or whenever events or changes in circumstances indicate that goodwill may be impaired. The Company initially assesses qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, the Company determines it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then the Company compares the reporting unit's carrying amount to its fair value. If the reporting unit's carrying amount exceeds its fair value, an impairment charge is recorded based on that difference.

There was no impairment of long-lived assets or goodwill during the years ended December 31, 2017, 2016 and 2015.

Foreign Currency Translation

The functional currency of the Company's subsidiaries in the United Kingdom, Germany, Australia, China, and India are the pound sterling, the euro, the Australian dollar, the Chinese yuan, and the Indian rupee, respectively. The subsidiary's assets and liabilities have been translated to U.S. dollars using the exchange rates in effect at the balance sheet dates. Statements of operations amounts have been translated using the monthly average exchange rate for each year. Resulting gains or losses from translating foreign currency financial statements are recorded as other comprehensive income (loss).

Foreign currency transaction gains and losses resulting from exchange rate fluctuations on transactions denominated in a currency other than the local currency are primarily included in other income (expense). The Company enters into forward contracts to help offset the exposure to movements in foreign currency exchange rates in relation to certain U.S. dollar denominated balance sheet accounts of its subsidiaries in the United Kingdom and Australia. The foreign currency derivatives

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Control4 Corporation

Notes to Consolidated Financial Statements (Continued)

are not designated as accounting hedges. The Company recognized a foreign exchange loss, net of the foreign currency derivatives, of \$0.1 million, \$0.6 million and \$0.8 million for the years ended December 31, 2017, 2016 and 2015, respectively.

Stock Based Compensation

The Company recognizes compensation expense for all stock based awards issued to employees and directors based on estimated grant date fair values. The Company selected the Black Scholes option pricing model to determine the estimated fair value at the date of grant for stock options.

The Black Scholes option pricing model requires management assumptions regarding various factors that require extensive use of accounting judgment and financial estimates. The Company estimates the expected term for options using the simplified method, which utilizes the weighted average expected life of each tranche of the stock option, determined based on the sum of each tranche's vesting period plus one half of the period from the vesting date of each tranche to the stock option's expiration, because the Company's options are considered "plain vanilla." The Company computed the expected volatility using multiple peer companies for a period approximating the expected term. The risk free interest rate was determined using the implied yield on U.S. Treasury issues with a remaining term within the expected life of the award.

The fair value of each restricted stock unit award is based on the number of shares granted and the closing price of the Company's common stock as reported on the NASDAQ Global Select Market. The Company elected to amortize compensation expense using the straight line attribution method, under which stock based compensation expense is recognized on a straight line basis over the period the employee performs the related services, generally the vesting period, net of estimated forfeitures. The Company has elected to recognize forfeitures as they occur.

Income Taxes

The Company recognizes deferred tax assets and liabilities for the future tax consequences attributable to the differences between the financial statement carrying value of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the fiscal year in which those temporary differences are expected to be recovered or settled. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

The Company operates in various tax jurisdictions and is subject to audit by various tax authorities. The Company provides for tax contingencies whenever it is deemed probable that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Tax contingencies are based upon their technical merits, relative tax law and the specific facts and circumstances as of each reporting period. Changes in facts and circumstances could result in material changes to the amounts recorded for such tax contingencies.

The Company recognizes uncertain income tax positions taken on income tax returns at the largest amount that is more likely than not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained.

The Company's policy for recording interest and penalties associated with uncertain tax positions is to record such items as a component of its income tax provision. During the years ended December 31, 2017, 2016 and 2015, the Company did not record any material interest income, interest expense or penalties related to uncertain tax positions or the settlement of audits for prior periods.

#### Presentation of Certain Taxes

The Company collects various taxes from dealers and distributors and remits these amounts to the applicable taxing authorities. The Company's accounting policy is to exclude these taxes from revenue and cost of revenue.

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Control4 Corporation

Notes to Consolidated Financial Statements (Continued)

Research and Development

Research and development expenses consist primarily of personnel costs, including incentive compensation, depreciation associated with research and development equipment, contract labor and consulting services, facilities related costs, and travel related costs. Research and development costs are expensed as incurred.

Sales and Marketing

Sales and marketing expenses consist primarily of personnel costs and related travel expenses for sales and marketing personnel, including non-cash stock compensation expense. Sales and marketing expenses also include expenses associated with trade shows, marketing events, advertising, training and other marketing-related programs. Advertising and other promotional costs are expensed as incurred and were \$1.3 million, \$1.2 million, and \$2.4 million, for the years ended December 31, 2017, 2016, and 2015, respectively.

Recent Accounting Pronouncements

In January 2017, the FASB issued ASU 2017-04, “Intangibles—Goodwill and Other (Topic 350), Simplifying the Test for Goodwill Impairment”. The amendments in this update simplify how an entity is required to test goodwill for impairment by eliminating Step 2 from the goodwill impairment test. This update is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 31, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing after January 1, 2017. The Company early adopted this standard for the October 1, 2017 goodwill impairment test. The adoption of this standard did not impact the consolidated financial statements.

In January 2017, the FASB issued ASU 2017-01, “Business Combinations (Topic 805): Clarifying the Definition of a Business,” which narrows the definition of a business. This update is effective for annual periods beginning after December 15, 2017, including interim periods within those years. Early adoption is permitted. The guidance will impact the Company’s acquisitions beginning January 1, 2018 and could cause fewer acquired sets of assets to be identified as a business.

In November 2016, the FASB issued ASU 2016-18, “Statement of Cash Flows (Topic 230): Restricted Cash,” which provides amendments to current guidance to address the classifications and presentation of changes in restricted cash in the statement of cash flows. The effective date for the standard is for fiscal years beginning after December 15, 2017. Early adoption is permitted. Upon the adoption of this standard, the Company will combine restricted cash with unrestricted cash and cash and cash equivalents in the statement of cash flows.

In October 2016, the FASB issued ASU 2016-16, “Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory” requiring an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs, rather than when the asset has been sold to an outside party. The amendments in this ASU are applied using a modified retrospective basis through a cumulative-effect adjustment directly to retained earnings in the period of adoption. The adoption of this standard on January 1, 2018 will not have a material impact on the Company’s consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, “Financial Instruments – Credit Losses (Topic 326)” which introduces new guidance for the accounting for credit losses on instruments within its scope. The new guidance introduces an approach based on expected losses to estimate credit losses on certain types of financial instruments. For trade receivables, the Company will be required to use a forward-looking expected loss model rather than the incurred loss model for recognizing credit losses which reflects losses that are probable. Credit losses relating to available-for-sale debt securities will also be recorded through an allowance for credit losses rather than as a reduction in the amortized cost basis of the securities. The guidance is effective for fiscal years beginning after December 31, 2019, including interim periods within those years. Early application of the guidance is permitted for all entities for fiscal years beginning after December 15, 2018, including the interim periods within those fiscal years. Application of the amendments is through a cumulative-effect adjustment to retained earnings as of the effective date. The Company is currently evaluating the impact of this update on the consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, “Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting.” The amendments in this update simplify several aspects of the accounting for

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Notes to Consolidated Financial Statements (Continued)

employee share-based payment transactions, including the accounting for income taxes, forfeitures and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company adopted the new guidance on January 1, 2017. The primary impact of adoption was the recognition of excess tax benefits in the provision for income taxes rather than paid-in capital. Adoption of the new standard resulted in the recognition of excess tax benefits in the provision for income taxes rather than paid-in capital of \$7.3 million for the year ended December 31, 2017. However, as the Company has a full valuation allowance against its domestic net deferred tax asset, a corresponding adjustment was recorded to increase the valuation allowance by \$7.3 million.

As of December 31, 2016, the Company had \$20.6 million and \$17.6 million of gross federal and state net operating losses (“NOLs”), respectively, attributable to excess windfall benefits from share-based compensation. As a result of the adoption of this new standard, on January 1, 2017, the Company increased its net deferred tax asset for NOL carryforwards, with an offsetting cumulative effect of adoption adjustment to accumulated deficit, in the amount of \$7.7 million. A corresponding adjustment was recorded to increase the valuation allowance by \$7.7 million with an offsetting adjustment to accumulated deficit, resulting in no net impact to the financial statements. In addition, the Company has elected to apply the presentation requirements for cash flows related to excess tax benefits retrospectively which resulted in increase in both net cash provided by operating activities and net cash used in financing activities of \$0.1 million for the year ended December 31, 2016. Further, under the provisions of ASU 2016-09, the Company has elected to recognize forfeitures as they occur to determine the amount of compensation cost to be recognized in each period. This resulted in an increase of \$0.3 million to accumulated deficit with a corresponding increase to additional paid-in capital on January 1, 2017. The amendment related to the accounting for minimum statutory withholding requirements had no impact on retained earnings as of January 1, 2017.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842),” which supersedes the guidance in ASC 840, “Leases.” The purpose of the new standard is to improve transparency and comparability related to the accounting and reporting of leasing arrangements. The guidance will require balance sheet recognition for assets and liabilities associated with rights and obligations created by leases with terms greater than twelve months. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those years. Modified retrospective application is required. Early adoption is permitted. The Company expects the standard will have a material impact on the Company’s consolidated balance sheets but will not have a material impact on the consolidated statements of operations. The most significant impact will be the recognition of right of use assets and lease liabilities for operating leases. The Company is in the process of calculating the right of use assets and lease liabilities and implementing internal controls to enable the preparation of financial statements upon adoption of this standard.

In May 2014, the FASB issued ASU 2014-09, “Revenue from Contracts with Customers (Topic 606),” which amends the guidance in ASC 605, “Revenue Recognition.” The core principle of the guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services.



The guidance permits two methods of adoption: retrospectively to each prior reporting period presented (full retrospective method), or retrospectively with the cumulative effect of initially applying the guidance recognized at the date of initial application (modified retrospective method). The Company will adopt this standard on January 1, 2018 using the full retrospective method restating each prior reporting period presented in future filings. The Company has substantially completed its analysis of the impact of adoption and has concluded the adoption of ASC 606 will not have a significant impact on the Company's financial statements.

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Notes to Consolidated Financial Statements (Continued)

## 2. Balance Sheet Components

Inventories consisted of the following (in thousands):

	December 31, 2017	December 31, 2016
Finished goods	\$ 33,050	\$ 24,138
Component parts	4,025	1,880
Work-in-process	96	213
	\$ 37,171	\$ 26,231

Property and equipment, net consisted of the following (in thousands):

	December 31, 2017	December 31, 2016
Computer equipment and software	\$ 5,030	\$ 3,855
Manufacturing tooling and test equipment	4,894	4,216
Lab and warehouse equipment	4,869	3,649
Leasehold improvements	3,960	3,438
Furniture and fixtures	3,698	3,254
Other	1,086	753
	23,537	19,165
Less: accumulated depreciation	(16,200)	(12,702)
	\$ 7,337	\$ 6,463

Accrued liabilities consisted of the following (in thousands):

	December 31, 2017	December 31, 2016
Sales returns and current portion of warranty accruals	\$ 2,872	\$ 2,892
Compensation accruals	5,241	4,445
Other accrued liabilities	2,722	1,575
	\$ 10,835	\$ 8,912

### 3. Fair Value Measurements

#### Assets Measured and Recorded at Fair Value on a Recurring Basis

The Company's financial assets that are measured at fair value on a recurring basis consist of money market funds and available-for-sale investments. The following three levels of inputs are used to measure the fair value of financial instruments:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Unobservable inputs are used when little or no market data is available.

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The fair values for substantially all of the Company's financial assets are based on quoted prices in active markets or observable inputs. For Level 2 securities, the Company uses a third-party pricing service which provides documentation on an ongoing basis that includes, among other things, pricing information with respect to reference data, methodology, inputs summarized by asset class, pricing application and corroborative information.

The Company determines realized gains or losses on the sale of marketable securities on a specific identification method. During the years ended December 31, 2017 and 2016, the Company did not record significant realized gains or losses on the sales of available-for-sale investments. The following tables show the Company's cash and available-for-sale investments' adjusted cost, gross unrealized gains, gross unrealized losses and fair value by significant investment category recorded as cash and cash equivalents or short- or long-term investments as of December 31, 2017 and December 31, 2016 (in thousands):

	December 31, 2017						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-term Investments	Long-term Investments
Cash	\$ 24,367	\$ —	\$ —	\$ 24,367	\$ 24,367	\$ —	\$ —
Level 1:							
Money market funds	5,394	—	—	5,394	5,394	—	—
U.S. government notes	9,060	—	(13)	9,047	—	4,098	4,949
Subtotal	14,454	—	(13)	14,441	5,394	4,098	4,949
Level 2:							
Corporate bonds	24,943	—	(49)	24,894	—	17,805	7,089
Commercial paper	22,154	—	—	22,154	—	22,154	—
Subtotal	47,097	—	(49)	47,048	—	39,959	7,089
Total	\$ 85,918	\$ —	\$ (62)	\$ 85,856	\$ 29,761	\$ 44,057	\$ 12,038

	December 31, 2016						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-term Investments	Long-term Investments
Cash	\$ 24,708	\$ —	\$ —	\$ 24,708	\$ 24,708	\$ —	\$ —
Level 1:							
Money market funds	10,105	—	—	10,105	10,105	—	—
U.S. government notes	2,001	—	(1)	2,000	—	2,000	—
Subtotal	12,106	—	(1)	12,105	10,105	2,000	—
Level 2:							
Asset-backed securities	4,008	—	—	4,008	—	—	4,008
Corporate bonds	13,902	—	(14)	13,888	—	13,888	—
Commercial paper	7,082	—	—	7,082	—	7,082	—
Subtotal	24,992	—	(14)	24,978	—	20,970	4,008
Total	\$ 61,806	\$ —	\$ (15)	\$ 61,791	\$ 34,813	\$ 22,970	\$ 4,008

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Notes to Consolidated Financial Statements (Continued)

As of December 31, 2017, the Company considers the declines in market value of its investment portfolio to be temporary in nature and does not consider any of its investments other-than-temporarily impaired. The Company typically invests in highly-rated securities, and its investment policy generally limits the amount of credit exposure to any one issuer. The policy requires investments generally to be investment grade, with the primary objective of minimizing the potential risk of principal loss. Fair values were determined for each individual security in the investment portfolio. The maturities of the Company's long-term investments range from one to two years. When evaluating an investment for other-than-temporary impairment the Company reviews factors such as the length of time and extent to which fair value has been below its cost basis, the financial condition of the issuer and any changes thereto, changes in market interest rates, and the Company's intent to sell, as well as the fact it is not more likely than not that the Company will be required to sell the investment before recovery of the investment's cost basis, which may be maturity. During the years ended December 31, 2017 and 2016, the Company did not recognize any significant impairment charges.

Fair Value of Other Financial Instruments

The carrying amounts reported in the accompanying consolidated financial statements for cash and cash equivalents, restricted cash, accounts payable and accrued liabilities approximate their fair value because of the short term nature of the accounts.

Derivative Financial Instruments

The Company has foreign currency exposure related to the operations in the United Kingdom, Canada, Australia, as well as other foreign locations. The Company enters into forward contracts to help offset the exposure to movements in foreign currency exchange rates in relation to certain U.S. dollar denominated balance sheet accounts of its subsidiaries in the United Kingdom and Australia. The foreign currency derivatives are not designated as accounting hedges. The Company recognizes these derivative instruments as either assets or liabilities in the accompanying Consolidated Balance Sheets at fair value. The Company records changes in the fair value (i.e. gains or losses) of these derivative instruments in the accompanying Condensed Consolidated Statements of Operations as Other income (expense), net. The settlements of these transactions are included in net income (loss) in the accompanying Consolidated Statements of Cash Flow.

The Company settles its foreign exchange contracts on the last day of every month. As a result, there are no assets or liabilities recorded in the accompanying Consolidated Balance Sheets related to derivative instruments as of

December 31, 2017 and 2016.

The following table shows the pre-tax gains (losses) of the Company's derivative instruments not designated as hedging instruments (in thousands):