Vuzix Corp
Form 10-K
April 09, 2014

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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FORM 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2013

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

Commission file number: 001-35955

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Vuzix Corporation

(*Exact name of registrant as specified in its charter*)

Delaware
(*State of incorporation*)   **04-3392453**
2166 Brighton Henrietta Townline Road (*I.R.S. employer identification no.*)
                                           14623
Rochester, New York   (*Zip code*)
(*Address of principal executive office*)

(585) 359-5900
(*Registrant's telephone number including area code*)

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Securities registered pursuant to Section 12(b) of the Act: none

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

common stock, par value $0.001 per share

warrants to purchase common stock

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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 o No þ

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

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 þ No o

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þNoo

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K 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 into Part III of this Form 10-K or any amendment to this Form 10-K. o

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

Non-accelerated filer o

Large accelerated filer o Accelerated filer o (Do not check if a smaller reporting company)

Smaller reporting company þ

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

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates as of June 30, 2013 was approximately $14,378,000 (based on the closing price of the common stock of $5.93 per share on that date, as reported on the OTCQB and, for purposes of this computation only, the assumption that all of the registrant's directors and executive officers are affiliates and that beneficial holders of 10% or more of the outstanding common stock are affiliates).

As of April 9, 2014, there were 10,243,641 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Form 10-K incorporates by reference portions of the registrant's proxy statement for its 2014 annual meeting of stockholders.

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FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements. These statements are based on our management's beliefs and assumptions and on information currently available to our management. The forward-looking statements are contained principally under the headings "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," and "Business." Forward-looking statements include statements concerning:

•our possible or assumed future results of operations;

•our business strategies;

•our ability to attract and retain customers;

•our ability to sell additional products and services to customers;

•our cash needs and financing plans;

•our competitive position;

•our industry environment;

•our potential growth opportunities;

•expected technological advances by us or by third parties and our ability to leverage them;

•the effects of future regulation; and

•the effects of competition.

All statements in this annual report that are not historical facts are forward-looking statements. We may, in some cases, use terms such as "anticipates," "believes," "could," "estimates," "expects," "intends," "may," "plans," "potential," "pre "projects," "should," "will," "would" or similar expressions that convey uncertainty of future events or outcomes to identify forward-looking statements.

Forward-looking statements are made based on management's beliefs, estimates and opinions on the date the statements are made and we undertake no obligation to update forward-looking statements if these beliefs, estimates and opinions or other circumstances should change, except as may be required by applicable law. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to actual results.

PART I

Item 1. *Business*

Company Overview

We are engaged in the design, manufacture, marketing and sale of wearable display devices that are worn like eyeglasses and feature built-in video screens that enable the user to view video and digital content, such as movies, computer data, the Internet or video games. Our wearable display products, known commercially as Video Eyewear (also referred to as head mounted displays (or HMDs), Smart Glasses, wearable displays, video glasses, personal viewers, near-eye virtual displays, and near-eye displays or NEDs) contain micro video displays that offer users a portable high-quality viewing experience. Our Video Eyewear products provide virtual large high-resolution screens, fit in a user's pocket or purse and can be viewed practically anywhere, anytime. They can also be used for virtual and augmented reality applications, in which the wearer is either immersed in a computer generated world or has their real world view augmented with computer generated information or graphics. In the 4th quarter of 2013, we started selling Smart Glasses, a new category of Video Eyewear that includes a wearable computer and has much of the capabilities of a smartphone including wireless internet access but that is worn like glasses. We produce both monocular and binocular Video Eyewear devices. Video Eyewear are designed to work with mobile electronic devices, such as cell phones, laptop computers, tablets, portable media players and gaming systems.

Historically, we have focused on two markets: the consumer markets for gaming, entertainment and mobile video and the market for rugged mobile displays for defense, commercial and industrial markets. In June 2012, we sold the assets that comprised our Tactical Defense Group, which sold and licensed products and provided services, directly and indirectly, to military organizations and defense organizations to TDG Acquisition Company, LLC (the purchaser of our TDG Assets, now operating as Six15 Technologies). Accordingly, we now focus primarily on the consumer, commercial and entertainment markets.

Users of mobile display devices, like tablets and smartphones, are increasingly using such devices to replace their personal computer or console game systems. We believe the displays currently used in these mobile devices do not work ideally for this purpose because they are either too small, which makes it difficult to view the detail of the images that they display, or too large, making them heavy and difficult to carry. In contrast, our Video Eyewear products enable users of many mobile devices to effectively view the entire screen on a small, eyeglass-like device. Our new Smart Glasses, although designed to work as a peripheral to the smartphone, have much of the same capabilities of the smartphone itself, allowing them to be used as a hands free wearable computer. Our products can be used as a wearable substitute for large-screen televisions or desktop computer monitors and with the Smart Glasses, allow users to utilize many smartphone applications while keeping their smartphones in a pocket or purse.

Our Video Eyewear products all employ microdisplays that are smaller than one-inch diagonally, with some as small as one-quarter of an inch. They currently can display an image with a resolution of up to 1280×720 pixels (High Definition or HD). Users then view the display through our proprietary optics. Using these optics and displays, our Video Eyewear provides a virtual image that appears similar to the image on a full size computer screen in an office desktop environment or the image on a large flat panel television viewed from normal home TV viewing distances. For example, when viewed through our optics, a high-resolution 0.35-inch diagonal microdisplay can provide a viewing experience comparable to that on a 75-inch diagonal television screen viewed at ten feet.

We believe one of the most promising future uses of wearable displays like our Video Eyewear is in applications where virtual 3D information enhances real world environments. This is often referred to as Augmented Reality or AR. To obtain an enhanced view of the real environment, users wear see-through Video Eyewear that allow them to see 3D computer-generated objects superimposed on their real-world views. This see-through capability is accomplished using a see-through optic, such as our waveguides or by the use of cameras.

In the past, see-through HMDs displayed the real world using semi-transparent mirrors placed in front of the user's eyes. These HMDs were large and bulky and so they had little mass market appeal. We have developed thin optics, called waveguides that enable miniature display engines to be mounted in the temples of the HMD, which allows the form factor of the HMD to be comparable to conventional eyeglasses.

We believe that with a hands free wearable computer like our M100 Smart Glasses, that have the capability to merge virtual information with the real world, we have the potential to penetrate many markets from the consumer to

industry. An example of AR is the yellow "first down" line seen in television broadcasts of American football games, in which the line the offensive team must cross to receive a first down is superimposed on the field itself. The real-world elements are the football field and players; the virtual element is the yellow line. We believe see-through Video Eyewear will enable this kind of experience on smartphones and other viewing devices virtually anywhere and anytime. Our new Smart Glasses product line runs these kinds of applications natively as they have much of the capabilities of a smartphone built into them; including running full operating systems like Google, Inc.'s Android.

Overall Strategy

Our goal is to establish and maintain a leadership position as a worldwide supplier of Video Eyewear and Smart Glasses solutions. We intend to offer our technologies across major markets, platforms and applications. We will strive to be an innovator in designing near-eye wearable display devices that can enable new mobile video viewing and general entertainment, VR and AR applications.

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To maintain and enhance our position as a leading provider of near-eye virtual display solutions, we intend to:

- improve brand name recognition;
- provide excellent products and service;
- develop products based on our unique technology for both specialized and large consumer markets;
- broaden and develop strategic relationships and partnerships;
- offer to sell our products or license our technology to third party companies that would incorporate and sell as a new product with their own brand name (OEM partners);
- promote and enhance development of third party software that can take advantage of our products;
- expand market awareness for Video Eyewear, including applications for mobility (with our Smart Glasses) and Virtual Reality (VR) and Augmented Reality (AR) for which Video Eyewear is well suited. (VR allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world and AR combines real-world and computer-generated data in real time to augment the real world view);
- obtain and maintain market leadership and expand our customer base;
- reduce production costs while moving to higher margin product offerings;
- extend our proprietary technology leadership;
- enhance and protect our intellectual property portfolio;
- establish multiple revenue sources;
- invest in highly qualified personnel;
- build and maintain strong product design capabilities; and
- leverage further outsourcing as our manufacturing volumes increase to reduce costs.

The Market

Current mobile display technology is almost universally based on direct view screens. These displays are designed to be small and make portability easy. At the same time, it is difficult for these displays to produce human readable high resolution content without magnification or large character fonts due to their small size. Our products are aimed at solving these problems by creating large screens that fit in tiny packages (eyeglasses).

The wireless and entertainment industry has evolved considerably, and continues to do so. The mobile phone, once simply a means to communicate by voice while "on-the-go," has evolved into a ubiquitous, location-aware, smart mobile computing device. Mobile products such as smartphones and pad/tablet computers are becoming the leading computing platforms with an installed base surpassing that of PCs. Mobile technology is redefining the way people interact with their world and has become an essential lifestyle management and entertainment tool personalized to users' unique needs. We believe mobile devices and mobile internet access will have a more profound impact than the Wired Internet and that interactive AR content is expected to significantly change the way mobile products are used. As a result, we believe that there is growing demand for mobile access to high-resolution content in several major markets and that demand will grow for Smart Glasses that have smartphone capabilities in most markets in which smartphones are currently used. We believe wearable near-eye displays that can provide the equivalent of a high resolution wired internet at home or office experience will be a key component in advanced wearable wireless devices

as these systems move to providing high resolution images without compromising the portability of the product.

Our business focuses on the mobile consumer entertainment and gaming markets and the mobile commercial and industrial markets. The demand for wearable displays in these markets is being driven by such factors as:

· Increasing use of the Internet in many aspects of society and business, which is increasing demand for Internet access "anywhere, anytime".

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· An increasing number of hands-free industrial and commercial applications, such as on-site training and display of information on the factory floor or retail store, for which our products are well suited.

· Video gaming around the world continues to grow even as more users migrate a greater portion of their game time to mobile devices. We believe that our high resolution Virtual Display technologies will significantly increase user satisfaction with gaming applications by engaging the user with a large high resolution mobile screen that also enables stereoscopic imagery and interactive head tracking. Our Virtual Reality and Augmented Reality Video Eyewear provide this capability.

· We believe the growing use of augmented reality applications on smartphones will drive the need for a wearable display solution to replace the need to hold up the smartphones to use the application.

· The new user friendly 3D connectivity standards like HDMI 1.4a, 3D console gaming and other 3D content is creating a need for methods to play this content. We believe that Video Eyewear, with its dual display design, is well suited for the playback of 3D content and avoids many of the drawbacks such as flicker, image cross talk and color separation, commonly encountered by shutter or color anaglyph glasses.

· Many 3D viewing solutions require the user to purchase new computer or television equipment. Video Eyewear users do not need a separate display or shutter glasses to view 3D content.   Video Eyewear can also be used to view 3D through mobile devices allowing 3D content to be delivered any time anywhere.

Target Markets

Our target markets and applications by major sector are:

Commercial and Industrial

Our Smart Glasses products are currently focused on the enterprise, industrial and medical markets. They are being used for field service to warehouse pick and pack applications. The smart glasses run native Android applications within the glasses that allow them to stream video in realtime which is very useful for many applications. Within the short period of time we have been selling M100 it is being used for many applications including remote camera viewfinder displays and wearable computer displays, viewing of wireless sensor data , providing hands-free access to manuals and other information and for on-site, in-the-field maintenance, servicing, training and education.

Consumer

Media and Entertainment.   We believe that there is an increasing demand for convenient, high-resolution, 3D displays to view content such as movies, entertainment and the Internet in mobile environments and as a secondary display in the home.

Gaming.   We believe that there is a need for high-resolution, interactive, stereoscopic 3D display devices for use with desktop computers, consoles, tablets and other gaming products. We believe that gaming on mobile devices that have graphics and processing capabilities closely equivalent to laptop computers and consoles but with small, direct view screens is not a satisfactory experience for many consumers. Our Video Eyewear products are designed to significantly enhance a consumer's experience by providing larger-appearing, high-resolution images with stereoscopic 3D capabilities. We believe that there is also a demand for display devices that enable the user to simulate and experience movement within a three-dimensional environment when using either gaming consoles or mobile devices. We anticipate that VR and AR will become increasingly popular entertainment applications. Both VR and AR are difficult to implement using traditional desktop computer monitors and televisions but can be successfully implemented with Video Eyewear. Our technologies and products enable a user to use those applications.

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Augmented Reality for all Markets

We offer smart wearable display products that enable development and deployment of AR applications. AR Smart Glasses enable its wearer to see computer-generated information, graphics or images projected into the real world environment or upon an object that the user is observing. Thus, whether in the warehouse, on the factory floor, or in-the-field, users may access a manual, tutorial, or image that will assist them in completing a task or locating an item, while also viewing their current surroundings and nearby objects.

We anticipate applications will include the following areas:

· Field service, warehousing, and maintenance;
· Task support for industrial, manufacturing and medical applications;
· Navigation;
· Sightseeing;
· Social networking
· Location and scene based entertainment and education applications;
· Mobile commerce and visual search applications; and
· Real time language translation.

Additional possible applications of AR-enabled M100 Smart Glasses include hands free alerts, messaging, location and context sensitive information and social interaction.

Products

We produce and sell three main types of wearable display products: Video Eyewear (for on-the-go users as remote displays for mobile and hands-free use); Virtual Reality (or VR) Video Eyewear (for stepping into virtual worlds, simulations & gaming); and Augmented Reality (AR) Video Eyewear (for overlaying virtual information from the cloud onto the real world). Our products are available with varying features and include either monocular or binocular display systems. Starting in the fourth quarter of 2013, we began to commercially produce the Smart Glasses versions of our Video Eyewear that have many of the capabilities of a smartphone to allow applications to be run directly in the Video Eyewear glasses enabling cloud connected applications through a wireless link directly with the glasses. We believe we provide the broadest range of consumer Video Eyewear product offerings available in the market and that our products contain some of the most advanced electronics and optics for their target markets and uses. Our products include:

Binocular Video Eyewear Products

We have won Consumer Electronics Show (or CES) awards for innovation for the past 9 consecutive years (2005 to 2014) for our series of Binocular Video Eyewear. Our Video Eyewear products have included several models with differing native resolutions and virtual screen sizes. Our binocular Video Eyewear products contain two microdisplays (a separate display for each eye), typically mounted in a frame attached to eyeglass-style temples. These products enable mobile and hands-free private viewing of video content on screens that simulate home theater-sized screens, all of which support 3D applications. Headphones are built into the temples so that users can listen to accompanying audio in full stereo. These products can be employed as mobile high-resolution displays with products such as smartphones with video output capability, laptop computers, tablet computers, portable DVD players, and personal digital media/video players (such as video iPods).

The Wrap series of Video Eyewear, introduced in the fall of 2009, is the fourth generation of Video Eyewear products that we have produced since 2005.

We are in the process of phasing out the last of our low resolution Wrap series products and now only offer the Wrap 1200 DX, which has WVGA (852x480 three-color pixels) resolution that simulates a 75-inch screen viewed at 10 feet. The Wrap 1200DX connects to 2D and 3D HDMI video sources. This standard has become the most common video connection in consumer electronics equipment and smartphones, and is also the standard for 3D Blue-ray discs.

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At the January 2014 CES show we introduced a new Video Eyewear concept, "video headphones" that won two awards in the wearable technology categories. Video headphones are effectively noise canceling audio headphones with an HD video visor that slides down in front of the user's eyes to create a wearable home theater experience. These first video headphones model V720 are for the mobile video and VR gaming markets. This model will include 720p HD displays, HDMI 1.4a 3D video support. Future versions may also include our Smart Glasses technology that allows them to run the Android OS and support wireless connections to the user's HD video source.

We are developing a line of advanced Smart Glasses Video Eyewear products. We began selling the first of these products to customers late in the 4th quarter of 2013. Ultimately Smart Glass models will be available in both monocular and binocular versions and will have resolutions up to full HD with wireless connectivity, ideal as a smartphone mobile display accessory and for cloud computing. This advanced line of products will utilize extremely thin and light weight optics employed in fashion wear eyeglass frames.

Monocular Video Eyewear Products

From 2003 to 2009, we sold a line of monocular (single eye) Video Eyewear Products called the M920, which were discontinued in 2009 and replaced with a monocular high-resolution Video Eyewear model called Tac-Eye. This product is ruggedized and designed to clip onto a pair of ballistic sunglasses, helmets or conventional safety goggles. The Tac-Eye product line was sold as part of the TDG Asset sale in June 2012.

Monocular products, due to their single eye display are best used for "information snacking" and are not designed for extended user viewing without training. Other monocular eyewear issues can include possible visual rivalry problems for eye dominance and focus for the user wearing them. Typically monocular products have smaller fields of view that result in less information display capability and no stereoscopic 3D or depth information. Binocular Video Eyewear products overcome these issues and are the best choice in most applications. For the industrial sector in the 4th quarter of 2013 we began selling our first waveguide based HMD that is fully enabled for AR use. The M2000AR has tracking sensors, hi-resolution camera, HDMI interface, and see through waveguide based optics that can be mounted to hardhats or goggles. Applications will include training, manufacturing, maintenance and other hands-free operations.

In the 4th quarter of 2013 we began selling our first monocular pair of Smart Glasses the M100. Designed for the industrial and commercial markets, our initial focus has been on the developer community in enterprise and the medical markets. We have been attempting to create an eco-system around the M100 developer community. Major corporate partners like SAP, AT&T, NTT Docomo and others have been particularly active. We are also creating an M100 app store with a growing list of applications and tools to enable application development. Vuzix is also building partnerships with the major suppliers of augmented reality software like wikitude and Metaio, each of which have developed custom versions of their software that support our M100 smart glasses.

Virtual Reality Products

Virtual Reality (VR) Video Eyewear products provide a user with 3D computer simulated environments that can simulate the real or an imaginary world. By definition, VR Products are binocular so they can provide an immersive 3D world view for the user. Our current VR product is the Wrap 1200DX VR, the fourth generation of our VR Video Eyewear. These Virtual Reality products contain "three degrees of freedom" head tracking technology, which enables the user to look around the environment being viewed by moving his or her head. Today VR is primarily used for game playing, training and simulations. We anticipate that the V720 video headphones will also have tracking capabilities and hence will support VR.

Augmented Reality Products

Augmented Reality Products provide a user a live, direct or indirect, view of a physical, real-world environment whose elements are augmented by computer generated sensory input such as sound, video, graphics or GPS data. Our current AR products include the Wrap 920AR and STAR 1200.

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The Wrap 1200DX-AR enabled Video Eyewear with WVGA resolution has stereo cameras enabling viewing of the real world in 3D. It is designed to plug into a computer's USB and HDMI video port. It also contains head tracking technology, which enables the user to look around the environment being viewed by moving his or her head which in turn sends that information back to the computer which then adjusts the computer generated AR image accordingly.

The STAR 1200DX is our second AR Video Eyewear product with see-through technology that enables the user to see the real world directly through and around its transparent WVGA widescreen video displays. With the built in sensors and a high performance HD camera, computer content, such as text, images and video can be overlaid and connected to the real world with the see through displays in full color 2D or 3D. This product is primarily used by individual researchers and AR software developers.

We launched a new line of Video Eyewear augmented reality Smart Glasses in the 4th quarter of 2013. Our M100 Smart Glasses, designed to be a smartphone accessory at first, are an intelligent wearable computing systems specifically designed to enable both Cloud Computing and augmented reality. We received an Innovations Design and Engineering Award for the M100 Smart Glasses at the January 2013 Consumer Electronics Show. The M100 is a wearable "hands free display" much like today's hands-free audio systems commonly used with cellphones for voice calls. The M100 Smart Glasses include a small display, camera, compass, motion-tracker and audio system for wirelessly connecting via Bluetooth or Wi-Fi with the cellphone and displaying or mirroring information such as texts (SMS), email, mapping GPS, and video data. The embedded camera in the Smart Glasses will be usable for recording and/or seeing the real world and therefor will usable for a variety of AR applications. Input and control of the M100 consists of using the wirelessly connected smartphone or speech recognition voice control. Being a monocular device and therefore not designed for full-time viewing by the user, the M100 is designed for information "snacking" or content viewing limited to short sessions. Finally, as the M100 runs the standard Android OS, Ice Cream Sandwich version, it is compatible with thousands of existing titles "out of the box" and it allows for fast and easy third party applications to be developed, sold and downloaded to run directly in the M100 Smart Glasses. We are building an eco-system of developers around these smart glasses and anticipate that most of the software being developed can be used on future generations of our smart glasses.

At the January 2013 Consumer Electronics trade show, we also won an innovation award for the prototype of our binocular Smart Glasses technology. This new technology, based on our proprietary see-through waveguide optics and HD display technology, is designed to fit into the frames of designer-styled glasses. We intend to introduce binocular Smart Glasses within the next 12 months using this technology. These new smart glasses will allow users to see and augment the real world as if looking through a conventional pair of fashionable eyeglasses. Again, because this product will run the Android operating system and is built upon the eco-system we are building for the M100, a significant base of applications should already exist for them when we launch and newly developed applications will be easily enabled using these advanced AR functions.

We believe cloud or internet-connected Smart Glasses applications will be created for manufacturing, medical, field maintenance and repair, training, gaming and social media uses for both our monocular and binocular smart glasses product lines.

Custom Solutions and Engineering Solutions

We have in the past provided full optics systems, including head mounted displays, human computer interface devices, and wearable computers to commercial, industrial and defense customers. As a result of the sale of the TDG Assets in June 2012, we will no longer be pursuing general engineering services work with defense or security organizations. Any future Defense R&D programs we participate in will be limited to the advancement of our waveguide technology and require the consent of TDG Acquisition Company, LLC (the purchaser of our TDG Assets, now operating as Six15 Technologies), whose consent is not to be unreasonably withheld. We currently are fulfilling U.S. Navy Research labs waveguide engineering contract. In addition, we are also applying for additional follow-on DOD funding, in partnership with Six-15, to help accelerate the development of our waveguide optics. Any ultimate waveguide based products we create for defense or security markets will be exclusively marketed for us by Six 15.

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Technology

We believe that it is important to make substantial investments in research and development to maintain our competitive advantage. The development and procurement of intellectual property rights relating to our technologies is a key aspect of our business strategy. We believe that it is now technologically feasible to improve upon the weight, ergonomics, optical performance, see-through capabilities, luminance, power efficiency, compactness, field of view and resolution of the current generation of virtual displays and display components. "Early technology adopters" have been the majority of the purchasers of our consumer Video Eyewear products to date. However, our near-to-eye virtual display technology has been gradually improving in performance and we believe will soon meet the high expectations of the consumer mass markets with respect to screen resolution, image size and ergonomics. We expect to continue to improve our products through our ongoing research and development and advancements made by our third party suppliers of key components.

We also develop intellectual property through our ongoing performance under engineering service contracts. We intend to continue to pursue development contracts for applications that enhance our waveguide optics technology. Our policy is to retain our proprietary rights with respect to the principal commercial applications of our technology under any engineering services work we perform, whenever possible. To the extent new technology development has been funded by a U.S. federal agency, under applicable U.S. federal laws, the agency has the right to obtain a non-exclusive, non-transferable, irrevocable, fully paid license to practice or have practiced this technology for governmental use.

During 2013 and 2012, we spent $1,751,397 and $1,153,403, respectively, on research and development activities. We expect to increase our research and development expenditures in the future as our revenues grow. We have also acquired and licensed technologies developed by third parties and we may do so in the future.

We believe that the range of our proprietary technologies gives us a significant competitive advantage. Our technologies relate to advanced optics systems including passive and active see-through imaging waveguides; micro-projection display engines; high resolution scanning displays; motion tracking systems; and specialized software drivers and applications for video eyewear displays. We also have a portfolio of trade secrets and expertise in nano-imprinting using quartz mold substrates, Nano structure UV (ultra violet) embossing, and engineering tool sets for the design and manufacturing of diffractive waveguide optics.

We believe once commercialized, our low-power HD scanning engine and waveguide technologies will allow us to produce ultra-thin high-resolution eyeglass styled display systems at a low cost. We will then have fuller vertical integration of our supply chain which we believe will help us obtain us a strong competitive advantage. We estimate that commercialization of our low-power HD scanning engine and waveguide technologies will in total require approximately $3 to $5 million in funding and we are looking for outside funding sources to help fund this work. The commercialization of the waveguide technologies for our first product the M2000 was completed in 2013. We are now

focusing our efforts on the next generation waveguides and display engines that will shrink the entire assembly to a module that will fit in typical off-the-shelf sports sunglasses.

In December 2005, we entered into a technology acquisition agreement with New Light Industries, Ltd., covering an extremely compact head-mounted virtual display. In August 2011, we entered into a technology license agreement with Nokia Corporation for their Exit Pupil Expanding (EPE) optics technology, also known as waveguides. Under the agreement, we are performing on-going research and development on the EPE optics and are expected to manufacture and bring to market components and products containing the licensed technology. In addition, we will provide Nokia with the ability to purchase products and components which incorporate the licensed technology. The combination of Vuzix and Nokia technology is expected to accelerate the development and introduction of new wearable display products in an eyeglass form factor to the market.

Our technologies enable us to provide low-cost, small form factor, high-resolution Video Eyewear products. To protect our technologies, we have developed a patent portfolio which currently consists of 36 issued U.S. and foreign patents and 12 pending U.S. and foreign patent applications. We also have several new invention disclosures, covering additional aspects of our waveguide technology and our smart glasses virtual display technology that are currently being prepared for purposes of submitting design and utility patent applications. Our U.S. patents expire on various dates from December 30, 2014 until November 13, 2029. Our international patents expire on various dates from May 12, 2018 until October 4, 2027. In addition, in connection with our sale of the TDG Assets, we received a worldwide, royalty free, assignable grant-back license to all the patents and other intellectual property sold for use in the manufacture and sale of products in the consumer markets.

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Major technologies that we employ in our products include:

Hardware Technology

Virtual Display Technology (including Lens Technology and Optics Assemblies)

Microdisplay optics represent a significant cost of goods for both us and our competitors. This cost is a function of the physical size of the microdisplay and the cost of the supporting optics. Smaller microdisplays are less expensive to produce but they require larger and more sophisticated optics to make near-eye systems that have no user adjustments, large fields of view and very low distortion specifications. Larger displays require less magnification and less complex optics, but the optics become very bulky and the displays are significantly more expensive to manufacture. To improve our Video Eyewear's fashion and ergonomics, we are developing thin and lightweight optics that can be integrated with very small microdisplays that we expect will match conventional eyewear frames in size and weight. These new optics and displays provide what we believe are significantly improved ergonomics compared to competing wearable virtual displays.

See-Through Waveguides: We are developing both passive and dynamic waveguide optics that are the basis for our future slim wearable Video Eyewear displays. Our dynamic waveguides use index modulated liquid crystal material to switch beam steering gratings built in a thin glass window to scan an image into the user's eye. We are also developing passive optical display engine that uses a 1.4 mm thick see-through blade of glass or plastic with an ultra-compact micro display engine to magnify and focus the light from a display into a user's eye. We have proven this technology to perform to HD standards and are currently in production with our M2000AR industrial grade wearable display products using it. We are now on a path to improve the waveguide's performance to provide larger fields of view and better optical efficiency. Wearable Video Eyewear incorporating these engines will appear to others as practically indistinguishable from today's conventional sunglasses by most every measure comfort, size, weight and ergonomics. We have filed patent applications with respect to this technology. We have also entered into a technology license agreement with Nokia Corporation for their Exit Pupil Expanding (EPE) optics technology.

LED Scanning Display Engine: We have patents and patents pending on a LED Scanning Display Engine (SDE). The SDE will incorporate both the display subsystem and a waveguide optic in a single monolithic design that we believe will enable us to produce low cost, HD resolution displays in a form factor that will be integrated into frames similar in size to ordinary sunglasses. We have successfully prototyped both monochrome and color versions of the SDE in our design labs. If our continued research is successful we believe we will be able to produce a low cost, high-resolution display that will be superior to existing microdisplay technology with respect to price, resolution, weight, form-factor and power consumption.

Nanoimprinting: We continue to develop a portfolio of trade secrets and expertise in nanoimprinting. From quartz substrate molds with unique nano-structured grating surfaces built into them to UV (ultra violet) embossing, and engineering tool sets for the design of diffractive waveguide optics. These trade secrets deal with the manufacture of molds through to volume production UV embossing. We believe these technologies are essential to the production of our 1.4 mm thick see through lenses which we believe are the cornerstone to making fashionable eyeglass styled Smart Glasses.

Patents and other Intellectual Property

We have an intellectual property policy which has as its objectives: (i) the development of new intellectual property to further our intellectual property position in relation to personal display technology; and (ii) the maintenance and protection of our valuable trade secrets and know-how. We seek to further achieve these objectives through the education and training of our engineering staff and the adoption of appropriate systems, policies and procedures for the creation, identification and protection of intellectual property.

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Our general practice is to file patent applications for our technology in the United States, Europe and Japan, while inventions which are considered to have the greatest potential are further protected by the filing of patent applications in additional countries, including Canada, Russia and China. We file and prosecute our patent applications in pursuit of the most extensive fields of protection possible including, where appropriate, the application of the relevant technology to the broader display industry.

We believe that our intellectual property portfolio, coupled with our key supplier relationships and accumulated experience in the personal display field, gives us an advantage over potential competitors. We also believe our copyrights, trademarks, and patents are critical to our success, and we intend to maintain and protect these. We also rely on proprietary technology, trade secrets, and know-how, which are not patented. To protect our rights in these areas, we require all employees and, where appropriate, contractors, consultants, advisors and collaborators, to enter into confidentiality, invention assignment and non-competition agreements.

In addition to our various patents, we have 11 registered U.S. trademarks and 38 trademark registrations worldwide and 4 pending international trademark applications.

Competitors and Competitive Advantage

The personal display industry in which we operate is highly competitive. We compete against both direct view display technology and near-eye display technology. We believe that the principal competitive factors in the personal display industry include image size, image quality, image resolution, power efficiency, manufacturing cost, weight and dimension, feature implementation, ergonomics and, finally, the interactive capabilities of the overall display system.

Most of our competitors' products for mobile use are based on direct view display systems in which the user views the display device, or screen, directly without magnification. These products have several disadvantages compared to near-eye virtual displays and our wearable Video Eyewear products. If the screens are large enough to read a full conventional internet page or HD video without external magnification or image zooming, the products must be large and bulky, such as laptops, tablets, personal computers. If the displays are small, such as those incorporated in smartphones and smart watches, the screens can be difficult to read when displaying higher resolution content. Despite the limitations of direct view personal displays, advanced multi-media enabled smartphones and now smart watches are being produced in ever increasing volumes by a number of manufacturers, including Motorola, Inc., Nokia Corporation, Sony Ericsson Mobile Communications AB, Blackberry, Samsung Electronics Co., Ltd., LG Electronics and Apple Inc. (Apple), Google, Pebble, Qualcomm and others. We expect that these large and well-funded companies, as well as newer entrants into the marketplace, will make products that are competitive with ours based on improvements to their existing direct view display technologies or on new technologies. Examples of new display technology include foldable displays, e-ink and Qualcomm's mirasol reflective technology called IMOD. The "retinal" displays on the latest Apple iPads and iPhones provide very high resolution and are proving effective as mobile direct view personal displays for a variety of applications, including many that were once considered

applications where Video Eyewear was superior.

Aside from direct view displays, we also have competitors who produce near eye personal displays, or Video Eyewear. For the past decade most of such products were mainly low-resolution, bulky in size, poor ergonomically, costly, and heavy in their power requirements. We believe that most of our competitors' near eye products have had inferior optics, marginal electronics and poor industrial design and that, as a result, our Video Eyewear products are superior to many of our competitors' in both visual performance and ergonomics.

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Competition — Binocular Video Eyewear Products

Today, there are few companies that compete with Vuzix in the binocular Video Eyewear space; they include Carl Zeiss, Seiko Epson, Sony, and Acupix. Carl Zeiss introduced its first model called the Cinemizer several years ago and has updated to Oled displays but has restricted its sales primarily to Germany thus far. Epson and Sony are both selling products that look like the larger head mounted displays from 10 to 15 years ago. Epson ships their "Moverio" HMD and Sony introduced their "HMZ" HMD late in 2011 for home or fixed location use. Sony recently announced a third version of their HMZ with several claimed improvements designed to solve some of its many user comfort problems. We believe neither of these competitive products have been received well in the market place due to their bulky and non-user-friendly designs. Brother International also began marketing a see-through HMD on a limited basis in Japan in late 2011. In the fall of 2012, Acupix of Korea introduced a WVGA video eyewear model with HDMI inputs, but it lacks support for legacy video devices and user optical adjustments. In early January 2013, TDG Acquisition Company, LLC (the purchaser of our TDG Assets, now operating as Six15 Technologies) announced its new Tac-Eye AR line of see-through AR products for its target marketplaces. A new entity, Oculus has been shipping developer kits for its large field of view VR goggle HMD called the Oculus Rift and has announced that a new model will be available in 2014. We believe the unit is very bulky relative to the wearer's head and offers only limited resolution to each eye. We expect that, as the market grows and matures and as the technology becomes more refined, more companies may compete with us.

There are a number of smaller companies that have products that compete with our Video Eyewear products. They generally use binocular display module (BDM) produced by Kopin Corporation. Kopin offers binocular display modules of varying resolutions to original equipment manufacturers (or OEMs). Those modules are designed for easy customization by OEMs and include microdisplays, backlights, optics and optional drive electronics. The availability of those BDMs has greatly reduced the investment required for new competitors to enter the business. Currently, Kopin BDMs are primarily used by Asian-based Video Eyewear manufacturers. There are also several Chinese companies offering what we believe are inferior solutions in this market, but we believe their distribution in North America and Europe is limited. Other microdisplay manufacturers may also introduce BDM modules built around their products. We believe that the products produced by those manufacturers have one or more of the deficiencies described above. Kopin does not currently compete with Vuzix at the retail level. Kopin is also our primary supplier of microdisplays.

In 2010, our largest competitor, MyVu, ceased operations. Its intellectual property assets were sold to unnamed parties in Asia. Other companies that have stated their intention to enter this market when their product development is complete are Lumus and Microvision Corporation. At the last 3 CES tradeshows, Lumus demonstrated a see-through HD optics engine in a pair of Video Eyewear. They have not yet announced a product that is production ready. Microvision has also announced that they are currently focused on the Pico projection markets, as described below, and that they are not planning to introduce a wearable display solution.

Another product incorporating recently developed technology is a handheld projector that utilizes micro-displays and optics to project digital images onto any nearby viewing surface, such as a wall. These devices are referred to as

pocket projectors or pico projectors and are designed to overcome the limitations of the native small screen on smartphones and other mobile devices. Pico projectors use either liquid crystal on silicon displays (LCOS) or color lasers to create their image. We believe pico projectors have had higher unit sales to date than Video Eyewear primarily because of their cost advantage and higher resolutions.

In the VR and AR markets, there are few competitor in the consumer space with effectively no competition in all but the very high-end researcher market. Oculus is now selling a developers kit VR head mounted display and both Cinemizer and Sony have announced their intent to offer upgrades to their new products for virtual reality applications. Seiko Epson is selling a see through HMD that they have announced would be improved to include a camera for AR purposes. Today's VR applications are primarily PC based entertainment applications, a market we believe Sony is not about to focus on against its PS4gaming console.

Further, industry bloggers have speculated that companies such as Apple and Microsoft may offer or support AR Video Eyewear products in the near future.

Competition — Monocular Video Eyewear Products

Although several companies produce monocular Video Eyewear, we believe that sales of their products to date have been limited. To date, the market opportunity for monocular products other than night vision products has been limited primarily to trial tests rather than commercial volume purchases for industrial applications. Current competitors in these markets are Liteye Systems, Inc., Lumus, Shimadzu Corporation, Kopin, Creative Display Systems, Google, LLC, BAE Systems, Six-15 Technologies, LLC (the purchaser of our TDG Assets) , Rockwell Collins, Inc. and its subsidiary Kaiser. Kopin has begun to aggressively promote its upcoming Golden-i that combines a speech recognition controlled head mounted computer with a monocular near-eye display and recently demonstrated several new monocular reference designs that they claim they are only licensing to OEM customers. The Motorola Solutions group introduced Golden-i in late 2012. Google has developed a wearable display device named Google Glass which is a headset product with similar form and function to our M100 Smart Glasses. Currently they are only shipping to the developer community and by invitation only. It is currently expected that they may start shipping to consumers by late 2014. The Google Project Glass will result in a new consumer oriented monocular display system. We expect that we will encounter competition in the future from major consumer electronics' product companies and suppliers of imaging and information products for defense applications.

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There is competition in all classes of products manufactured by us, including from divisions of large companies and many small companies. Our sales do not represent a significant share of the market for any class of products. The principal points of competition for these products include, among other factors: price, product performance, the availability of supporting applications, the experience and brand name of the particular company and history of its dealings in such products. We believe that most of the monocular Video Eyewear products currently offered by our competitors are inferior to ours because they are bulky, have smaller image sizes with lesser performing optics and/or are currently priced higher than our products.

Sales and Marketing

Sales

We believe we have two distinct strategies for the sales of our products.

In the smart glasses and AR markets we are initially focused on the enterprise space and as such are building strategic marketing relationships with companies like SAP. In the case of SAP we are working with their internal development teams who are deploying pilot test programs in the field service and warehousing areas with their customers. We will be using the SAP sales and support team to address these customers. We are in parallel developing a value added reseller network with leading companies in separate markets from warehousing to field service to medical. As these VARs finish their value added software we expect them to roll out their finished solutions to their customer base. We are also supporting direct sales with select larger key accounts. For our smart glasses we are also developing a rich eco system with application developers from around the world. To support this effort we recently opened an internet based developer center and are working on an application store that we anticipate will open in the first half of 2014. We are also hosting many developer hackathon events with partners companies like NTT docomo and AT&T.

On the consumer side, our products are targeted at applications including video viewing, remote monitors and Virtual Reality. In 2005, as our products and technology evolved, we began to sell standard Video Eyewear products for the consumer markets and have since built a multi-national sales channel with offices out of the UK and Japan. In 2007, we introduced Virtual Reality products and in 2010 we introduced our first Augmented Reality products. In June 2012, we sold the TDG Assets of our Tactical Display Group, which sold and licensed products and provided services, directly and indirectly, to military organizations and defense and security organizations.

As we broaden our markets we will continue to expand on these strategies for each of our target application areas and markets. Finally, we regularly attend industry trade shows in our application markets.

Marketing

Our marketing group is responsible for product management, planning, advertising, marketing communications, and public relations. We have an internal public relations effort in the U.S. and have at times retained external public relations firms for the U.S. market. In the UK we employ a public relations firm part-time. We also employ a marketing firm to help prepare brochures, packaging, tradeshow messaging and advertising campaigns. Our consumer products are currently mainly sold under the Vuzix Wrap brands. We intend to become known as the premier supplier of Video Eyewear products for video viewing and Virtual and Augmented Reality enabled Smart Glasses. We plan to undertake specific marketing activities as needed, including, but not limited to:

·product reviews, case studies and promotions in trade publications;

·enhancement and maintenance of our Website, Web Store and Social Media sites;

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· internet and web page advertising and targeted emails;

· public relations;

· print advertising, catalogs and point of purchase displays

· trade shows and event sponsorships; and

Engineering Services

We primarily solicit sales of our engineering services programs directly. We believe we have established a solid reputation for quality, performance and innovation for near-eye virtual display systems that will be attractive to many types of commercial users that want to leverage our services and products within their businesses. Attendance at industry trade shows, conferences and application white papers are tools we use to generate customer interest. In regard to defense and security markets, due to the sale of our TDG Assets in June 2012, we only work with select defense sections within the U.S. government with respect to our waveguide technology.

Consumer

We engage in a variety of marketing efforts that are intended to drive customers to our products and to grow awareness of our AR Smart Glasses, VR products and Video Eyewear in general. Public relations are an important aspect of our marketing and we intend to continue to distribute samples of our products to key industry participants. We intend to focus our consumer marketing efforts for the next 12 months on:

· distinguishing our Video Eyewear product category from current competitors and by offering products with performance such as our Smart Glasses technology that is superior to that of our competitors;

· creating awareness with the press and general public about the AR and VR applications that are now possible with our Video Eyewear, with particular emphasis on our Smart Glasses products;

· attempting to create and build further consumer acceptance and momentum around the Video Eyewear category as compared to existing alternative technologies; and

·creating brand awareness of the Vuzix brands.

Our Video Eyewear and VR Video Eyewear products are currently sold directly to consumers through select specialty retailers, through catalogue offerings and through third party North American distributors including D&H. Our products over the last 18 months have been sold by the following U.S. based resellers and distributors: Hammacher Schlemmer, Macy's and Amazon, D&H and directly from us through our website. Our latest Wrap 1200DX AR Video Eyewear models are not currently offered through third party resellers in North America, and must be purchased directly from Vuzix. Our website, www.vuzix.com is an important part of our direct sales efforts. For resellers with physical retail locations in the United States, we have in the past offered point of purchase systems that include a video frame running a slide show presentation about the products and an integrated fully functional Video Eyewear product that allows potential customers to use our products.

We currently sell our products internationally through distributors, resellers, and various Vuzix operated web stores in Europe and Japan. Our international focus is currently on Japan and the EU. In Japan, we have a branch sales and service office in Tokyo, and a small warehouse outside of Tokyo. We employ two full-time staff in Japan. In spring 2008, we created a wholly owned subsidiary, Vuzix (Europe) Limited, through which to conduct our business in the EU and Middle Eastern markets. Resellers in 50 countries placed orders with us during 2013. We maintain a small European sales office in Oxford, England. We have also retained a sales consultant (who acts as our European Director of Operations), a UK public relations firm and a mobile applications consultant to provide us with advice regarding the European market. For customer support and warehousing, we have contracted with a third-party end user technical support firm and fulfillment center to service our customers in the EU.

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Manufacturing

Currently, we purchase product components from our suppliers, engage third party contract manufacturing firms to perform electronic circuit board and cable assemblies, and perform the final assembly of our products ourselves in our Rochester, New York facility. We are experienced in the successful production of our products in moderate volumes. We expect to continue to perform final assembly of our Video Eyewear products ourselves over the short term. However, as our volume increases and cost effective third party sourcing becomes feasible, we are already planning to outsource more of our final assembly, with the possible exception of certain critical optical and display components.

We currently purchase almost all of the microdisplays used in our products from Kopin. Our relationsh