Vuzix Corp
Form 10-K
March 31, 2010

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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, 2009

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

Commission file number: 000-53846

Vuzix Corporation
(Exact name of registrant as specified in its charter)

Delaware	04-3392453
(State of incorporation)	(I.R.S. employer identification no.)
75 Town Centre Drive	14623
Rochester, New York	(Zip code)
(Address of principal executive office)	

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

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

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

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. ¨

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):

Large accelerated filer ¨	Accelerated filer ¨	Non-accelerated filer ¨ (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 ¨ No þ

There was no active trading market for the registrant's common stock or warrants as of June 30, 2009. As of January 5, 2010 (the date that the registrant's common stock and warrants began trading on the TSX Venture Exchange), the aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates was approximately Cdn$31,600,000 (based on the closing price of the common stock of Cdn$0.175 per share on that date, as reported on the TSX Venture Exchange 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 5% or more of the outstanding common stock are not affiliates).

As of March 30, 2010, there were 263,600,274 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of this Form 10-K incorporates by reference to portions of the registrant's proxy statement for its 2010 annual meeting of stockholders.

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PART I

Item 1. Business

FORWARD-LOOKING STATEMENTS

This annual report includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the "Exchange Act"). 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.

The outcome of the events described in these forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. These important factors include our financial performance and the other important factors we discuss in greater detail in "Risk Factors." You should read these factors and the other cautionary statements made in this annual report as applying to all related forward-looking statements wherever they appear in this annual report. Given these factors, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date on which the statements are made. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information,

future events or otherwise, except as required by law. You should read this annual report and the documents that we reference in and have filed as exhibits to this annual report completely and with the understanding that our actual future results may be materially different from what we currently expect.

Company Overview

We are engaged in the design, manufacture, marketing and sale of 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 products (known commercially as Video Eyewear but also commonly referred to as virtual displays, wearable displays, personal viewers, head mounted displays, or near-to-eye displays) are used to view high-resolution video and digital information from mobile electronic devices, such as cell phones, portable media players, gaming systems and laptop computers. Our products provide the user with a viewing experience that simulates viewing a large screen television or a desktop computer monitor that can be viewed practically anywhere, anytime.

Our Video Eyewear products feature high performance miniature display modules, low power electronics and related optical systems. We produce both monocular and binocular Video Eyewear devices that we believe are excellent solutions for uses including many mobile computer, mobile internet devices (MID) or video viewing requirements, including general entertainment applications. We focus on two markets: the consumer markets for gaming and mobile video and rugged mobile displays for defense and industrial applications. We also offer low-vision assist Video Eyewear products that are designed to assist and improve the remaining vision of many people suffering from macular degeneration.

Owners of mobile display devices increasingly want to use them to view high-resolution, full color content. The displays currently used in these mobile devices do not work well for this purpose because they are either too small, which makes it extremely difficult for the human eye to view the detail of the images that they display, or they are too large, making the device heavier, larger and difficult to carry. Today, many mobile devices, like the iPhone, have employed a touch screen with software capable of magnifying or zooming in on a small portion of the image. We believe that many consumers consider this solution unsatisfactory because it is not like their desktop computer viewing experience and they find it difficult to navigate touch screens and to find information on the portion of the image being viewed.

In contrast, our Video Eyewear products enable users of many mobile devices to effectively view the entire screen on a small, eyeglass-like device. They can be used as a wearable replacement for any television or desktop computer monitor in almost any environment. Our products employ microdisplays that are smaller than one-inch diagonally, with some as small as one-quarter of an inch. They can display an entire, detailed image with resolution of up to 1280×1080 pixels (High Definition or HD). The images on the microdisplay are viewed through proprietary magnifying optics that are usually designed by us and incorporated into our Video Eyewear products. Using these optics and displays, our Video Eyewear products provide a virtual image that appears to be similar to the image on a full size computer screen from a normal desktop working distance or the image on a large flat panel television from normal home TV viewing distance. For example, when magnified through our optics, a high-resolution 0.44-inch diagonal microdisplay can provide a viewing experience comparable to that on a 62-inch diagonal television screen viewed at nine feet.

Overall Strategy

Our goal is to establish and maintain a leadership position as a worldwide supplier of Video Eyewear and virtual imaging technology solutions. We intend to offer our technologies across major markets, platforms and applications. We will strive to be an innovator in designing virtual display devices that enable new mobile video viewing and general entertainment applications.

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

- improve brand name recognition;
- provide excellent products and service;
- develop products for large markets;
- broaden and develop strategic relationships and partnerships;
- promote and enhance development of third party software that can take advantage of our products;
- expand market awareness for Video Eyewear, including use for Virtual Reality and Augmented Reality;

- obtain and maintain market leadership and expand customer base;
- Reduce production costs and exploit our technologies cost advantages;
- extend our proprietary technology leadership;
- enhance and protect our intellectual property portfolio;
- establish multiple revenue sources;
- continue to invest in highly qualified personnel;

- build and maintain strong design capabilities; and
- leverage our outsourcing model.

The Market

We believe that there is growing demand for mobile access to high-resolution content in several major markets. Our business focuses on the consumer mobile entertainment and gaming markets and the industrial and defense markets. The demand for personal displays in these markets is being driven by such factors as:

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

•Increased spending by consumers on mobile entertainment devices such as iPods and smart cellular telephones with video capabilities. Our Video Eyewear products can provide viewable high-resolution mobile displays for users of these devices, with better viewing capability and higher detailed resolution than the small screens on existing mobile devices.

•Industrial, defense and security sectors are employing mobile communications, sensors and surveillance devices that are light, durable and easy to use but require displaying their high-resolution content on an external device and often in a hands-free way. Our wearable Video Eyewear products can be ideal for this and will allow a user their physical mobility.

•Video gaming on PCs and consoles continues to grow in North America and around the world. We believe that our Virtual Display technologies will significantly increase user satisfaction with gaming applications by engaging the user through the use of stereoscopic imagery and interactive head tracking. Our Virtual Reality and Augmented Reality Video Eyewear are designed to provide this capability.

•The widening distribution of new three dimensional (3D) movies and other 3D content in North America is creating a need for a method to play this content outside movie theaters. We believe that Video Eyewear, with its inherent dual display design, is well suited for the playback of 3D content. Stereoscopic 3D video playback on Video Eyewear also avoids many of the negative issues commonly encountered by shutter, polarized or color anaglyph glasses used in competing technologies and allows the user to view 3D content without purchasing new computer or television equipment.

•People with low-vision problems require devices to magnify and capture images that they wish to see and to display them in a manner that they can view with their remaining vision. Our Video Eyewear, with the addition of a camera and digital signal processing in a single device, can provide this capability to many people suffering from certain types of vision problems.

Target Markets

Our target markets and applications by major sector are:

Consumer

Entertainment and Internet. 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 a mobile environment.

Gaming. We believe that there is a need for high-resolution, interactive, stereoscopic 3D display devices for use with desktop computers, consoles and other gaming products. We believe that gaming on modern mobile devices with small, direct view screen is not a satisfactory experience for many consumers. Our Video Eyewear products are designed to significantly enhance a consumer's experience by providing larger, 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 Virtual Reality (VR) (which 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 Augmented Reality (AR) (which combines real-world and computer-generated data in real time) will become increasingly popular entertainment applications. Both VR and AR are difficult to implement using traditional desktop computer monitors and televisions.

Industrial and Defense

The US government requires display devices for mobile and hands-free viewing of computer and mapping information, remote viewing of sensor data, and remote viewing of transmissions from targeting systems. These applications currently include:

- Night vision and thermal sighting systems;
- Unmanned vehicle and robotic systems; and
- Training and simulation systems, including AR Video Eyewear.

These systems typically are required to provide detailed, high-resolution images, with limited power consumption and low external light emission, and to be durable.

Our Video Eyewear products are also used for a number of industrial applications, including as remote camera displays and wearable computer displays, for viewing of industrial thermal signature systems and for providing hands-free access to manuals and other required information in remote and in-field maintenance servicing.

Low-vision Assist

We believe that our Video Eyewear products may provide solutions for patients suffering from certain types of visual handicaps. Our low-vision assist products are designed to assist patients suffering from macular degeneration by signal processing and re-focusing an integrated camera image into the areas of the retina that are not affected by the patient’s macular degeneration.

Products

We believe we provide the broadest range of consumer Video Eyewear product offerings available in the market and that our products contain the most advanced electronics and optics for their target markets and uses. Our products include:

Binocular Video Eyewear Products

The features of our binocular Video Eyewear products, including their resolution and apparent display size, microphones, tracking devices and support of three-dimensional viewing are designed to suit consumer applications. 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. Headphones are built into the temples so that users can listen to accompanying audio in full stereo. They can be employed as mobile high-resolution displays with products such as portable DVD players, laptop computers, MIDs, cellular phones with video output capability, and personal digital media/video players (video iPods).

For the consumer markets, we currently produce four binocular Video Eyewear products, all of which support 3D applications. Each has a different apparent display size and native resolution. They are:

- Wrap 230 — QVGA (320x240 three-color pixels) resolution and simulating a 44-inch screen at nine feet.

•Wrap 310 widescreen — WQVGA (420x240 three-color pixels) resolution and simulating a 52-inch screen at nine feet.

- Wrap 920 — VGA (640x480 three-color pixels) resolution and simulating a 62-inch screen at nine feet.

- VR920 — VGA (640x480 three-color pixels) resolution, simulating a 62-inch screen at nine feet, designed to plug into a computer's USB and video ports, and containing our proprietary three degrees of freedom head tracking technology, which enables the user to look around the environment being displayed by simply moving his or her head. A microphone allows the user to communicate with others. We expect those features to be of particular interest to users playing games using the VR920, but they also can be used in commercial 3D applications and for exploring Internet virtual worlds like Second Life. The VR920 is currently compatible with over 80 titles that work with it out of the box, including popular games such as Microsoft's Flight Simulator X and World of Warcraft. We currently have over 1700 software developers' kits being used in applications from college research programs to commercial developers to develop additional titles for the VR920. With the addition of a clip-on camera which we are currently tooling the VR920 can also used in AR applications.

We sell our current binocular products into the consumer marketplace under the brands iWear® and Wrap tm. The iWear brand was introduced in 2007 and the Wrap brand in fall 2009. We also anticipate that by summer 2010 we will be offering our six degrees of freedom tracking technology and Wrap products with dual camera heads for viewing the outside world. That technology is being designed to both accurately track an object's and the user's position in 3D virtual space and to combine that tracking capability with translational information about the three rotational axes (roll, yaw, pitch). The addition of this translational information will allow the device to report information about its X, Y and Z position as it moves. This along with stereo cameras will expand the realism and accuracy for users interacting in a VR or AR environment.

We anticipate that future generations of our Video Eyewear products will have form factors that should be even more appealing to consumers, with appearances and sizes that are more like ordinary sunglasses, and be more ergonomic and fashionable. Additionally our plans include the introduction of products with see-through optics that will both allow the user to see through to the real world when the display is off or be just partially transparent when the display is on. This capability will provide better support for AR applications along with higher display native resolution that will accept HD inputs. We intend to sell our binocular products into the defense markets and have developed and delivered prototypes of a rugged version for marine applications. We also intend to sell our binocular products for industrial applications from training and tools for maintenance and repair to interactive product design and development.

Monocular Video Eyewear Products

Our Tac-Eye® monocular (single eye) high-resolution Video Eyewear models are designed to clip onto a pair of ballistic sunglasses, a head set or conventional safety goggles. They can be used with the large installed base of rugged laptops, security and night vision cameras and thermal night vision sights, including those systems that we currently act as a sub-contractor of display drive electronics to the US defense department. Tac-Eye® enables users to have wearable, private and hands-free access to high-resolution content or information. They enable the viewing of material that is difficult or impossible to accurately view on the lower-resolution direct view screens that are standard on many of these devices without extensive zooming in or panning across the screen.

Most of our Tac-Eye® products have an SVGA display and afford a 28 degree field of view, the equivalent of a 20-inch computer screen at three feet. They are also designed to be durable and suitable for defense field use and industrial applications.

Defense Sub-Assembly and Custom Solutions

We are involved in two programs as part of contracting teams that produce display drive electronic subassemblies for light, medium, and heavy weight thermal weapon systems for US and other defense forces. We produce the display drive electronics as part of these night-vision systems and since 2005 we have delivered approximately 123,000 systems. These products accounted for over 50% of our sales in 2008 and 2009.

We also have provided full optics systems, including head mounted devices, wrist worn displays, human computer interface devices, and wearable computers as prototypes under several armed services test programs. These are being tested in applications such as the remote control of unmanned vehicles. When possible, we obtain a first right of refusal to be the volume manufacturer of our proprietary display subassemblies as part of our contracting process for the custom design of products.

Low-vision Assist Products

We offer two Video Eyewear products specifically for low-vision assist applications. The first is a bundle of our AV920 Video Eyewear with an external handheld camera that magnifies written information to help a user to read small print. The second consists of binocular Video Eyewear that incorporates a camera and digital signal processor that uses our proprietary digital signal processing algorithms to increase contrast, magnification, color correction, edge detection, histogram flattening, and using other video processing techniques. The image received by the camera is processed, enhanced and transmitted to the displays within the Video Eyewear to be viewed by a user suffering from macular degeneration. These devices are designed to permit many users suffering from macular degeneration to perform a number of normal daily functions, such as reading or signing a check, that they could not perform unaided.

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. Near-to-eye virtual displays and their components use relatively new technologies. We believe that it is technologically feasible to improve the weight, ergonomics, optical performance, luminance, power efficiency, design compactness, field of view and resolution of the current generation of virtual displays and display components. 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 for the US Government. During 2009, 2008 and 2007, we spent $2,217,627, $3,366,518 and $2,365,412, respectively, on research and development activities. We expect to continue to increase our research and development expenditures in the future. We have also acquired 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 include motion tracking systems; stereoscopic display assemblies; optic systems; display backlights; mobile and wearable computing devices and user interface technology; low-power electronics; software drivers; and soft