

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

FORM 10-K

(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, 2024

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: 001-33852



VirnetX Holding Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

77-0390628
(I.R.S. Employer Identification No.)

308 Dorla Court, Suite 206
Zephyr Cove, Nevada
(Address of principal executive offices)

89448
(Zip Code)

Registrant's telephone number, including area code: 775-548-1785
Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.0001 per share	VHC	NYSE

Securities registered pursuant to section 12(g) of the Act:
None

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, every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ☐
Emerging growth company ☐

Accelerated filer ☐
Smaller reporting company ☒

Non-accelerated filer ☒

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 the voting and non-voting common equity held by non-affiliates of the registrant as of June 28, 2024, was \$21,989,863 based upon the closing price of the common shares of the registrant on June 28, 2024. This calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

4,238,581 shares of the registrant's Common Stock were outstanding as of March 7, 2025.

DOCUMENTS INCORPORATED BY REFERENCE

The information required by Part III of this Annual Report on Form 10-K, to the extent not set forth herein, is incorporated by reference from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission not later than 120 days after December 31, 2024 relating to the registrant's 2025 Annual Meeting of Stockholders.

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SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

We have included or incorporated by reference in this Annual Report on Form 10-K (this “Report”), and from time to time we may make statements that may constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). These forward-looking statements are based upon our current expectations, estimates, assumptions, and beliefs concerning future events and conditions and may discuss, among other things, anticipated future performance (including sales and earnings), products, expected growth, future business plans and costs (including investments, partnerships and collaborations, marketing and business development, staffing strategies and entering into another sector), the impact of potential litigation, the expectation of future stockholder distributions, statements regarding our efforts and ability to maintain compliance with the New York Stock Exchange (“NYSE”) continued listing standard, our beliefs and statements regarding general industry and market conditions and growth rates, as well as general domestic and international economic conditions. Any statement that is not historical in nature is a forward-looking statement and may be identified by the use of words and phrases such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “plans,” “predicts,” “projects,” “will be,” “will continue,” “will likely result in,” and similar expressions. Readers are cautioned not to place undue reliance on forward-looking statements. Forward-looking statements are necessarily subject to risks, uncertainties, and other factors, many of which are outside our control, which could cause actual results to differ materially from such statements and from our historical results and experience. These risks, uncertainties and other factors include, but are not limited to those described in Item 1A – Risk Factors of this Report and elsewhere in this Report and those described from time to time in our reports filed with the Securities and Exchange Commission (the “SEC”). Readers are cautioned that it is not possible to predict or identify all the risks, uncertainties and other factors that may affect future results and that the risks described herein should not be considered a complete list. Any forward-looking statement speaks only as of the date on which such statement is made, and we undertake no obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

Among others, the forward-looking statements appearing in this Report that may not occur include statements that pertain to the activities we have undertaken to commercialize our products and patent portfolio in and outside of the United States including VirnetX One™, War Room™, VirnetX Matrix™ and our Secured Domain Name Registry and Technology. These statements may imply that the worldwide market for our commercialized products is large and will result in significant future revenue for us. However, commercialization of products such as ours is subject to significant obstacles and risks that may delay or prevent future revenues for us.

EXCEPT AS REQUIRED BY LAW, WE UNDERTAKE NO OBLIGATION TO UPDATE OR REVISE ANY FORWARD- LOOKING STATEMENT AS A RESULT OF NEW INFORMATION, FUTURE EVENTS OR OTHERWISE.

PART I

Item 1. Business

The Company

We are an Internet security software and technology company with patented technology for Zero Trust Network Access (“ZTNA”) based secure network communications. VirnetX’s software and technology solutions, including its Secure Domain Name Registry and Technology, VirnetX One™, War Room™, and VirnetX Matrix™ are designed to be device and location-independent, and enable a secure real-time communication environment for all types of enterprise applications, services, and critical infrastructures. Our technology generates secure connections on a “single-click” basis, significantly simplifying the deployment of secure real-time communication solutions by eliminating the need for end-users to enter any encryption information.

Our product portfolio includes sophisticated technologies, products and services that are available for sale worldwide. Our next-generation, VirnetX One™ platform builds upon our patented Secure Domain Name Registry and Technology to further enhance the security and efficiency of our patented secure communication links. VirnetX One™ is a security-as-a-service platform that protects enterprise applications, services, and infrastructure from cyber-attacks. Our platform allows government organizations, businesses, and other enterprises of all sizes to add a “security umbrella” as an added layer on top of their existing infrastructure to further reduce risk and bolster security against ever-growing cyberthreats to data, operating systems, other infrastructure products and gateway security controllers.

Our War Room™ software product provides safe and secure video conferencing meeting environment where sensitive communications and data is invisible to those not authorized to view it. War Room™ validates permissions of all the users, and devices requesting access to any secure meeting room prior to granting access. We believe our War Room™ will be an attractive solution for government and law enforcement agencies as well as all professional sectors such as legal, financial, and medical where limiting access to confidential data is a critical requirement.

Our VirnetX Matrix™ product provides superior security for internet-enabled enterprise applications and their connected devices, and for control systems currently deployed by those enterprises (e.g., file servers, data back-up systems, VPN/firewalls). VirnetX Matrix™ provides a true “zero-trust” access protection, “single-click” ease of use, and is a highly-effective added layer of protection that is deployed simply, without the need for changes to an enterprise’s existing, in-place infrastructure. We believe VirnetX Matrix™ is an attractive solution for all businesses, cloud and on-premise application service providers, and original equipment manufacturers (“OEMs”), looking to improve visibility and management of their networks to mitigate morphing attacks on their networks and for real time access and control of their users.

We continue to augment our product strategy to provide secure AI to the marketplace. In addition to our investments with L2 Holdings, LLC (“OmniTeq”), an artificial intelligence and machine learning (AI/ML) solutions provider and OP Media, Inc, a dynamic software platform provider, we participated in a Cooperative Research and Development Agreement (CRADA) with the Air Force (AF) Research Laboratory Intelligence Systems Directorate (AFRL/RI) to facilitate collaboration on cybersecurity and Zero Trust technologies to support integrated surveillance and reconnaissance operations as well as AF and joint targeting processes. This CRADA continues through 2030 and allows VirnetX to apply for security clearances for its employees. We are also beginning to integrate AI/ML capabilities into VirnetX Matrix™ to enhance its zero-trust security, threat detection, and network resilience by enabling autonomous threat response, adaptive access control, and self-healing network architectures.

We have undertaken activities to commercialize our products and intellectual property in and outside the United States including VirnetX One™, War Room™, VirnetX Matrix™ and our Secured Domain Name Registry and Technology. We believe our product portfolio to secure devices and systems are suitable in areas such as national defense, local, state, Federal and foreign governments, critical infrastructure, law enforcement, healthcare, finance, legal, oil and gas, medical, and related support industries. We continue to actively pursue new sales opportunities in and outside of the United States.

Our employees include the core development team behind our inventions, technology, and software. Some members of this team have worked together for over twenty years and were on the same team that invented and developed this technology while working at Leidos, Inc., or Leidos, (f/k/a Science Applications International Corporation, or SAIC). The team has continued its research and development work to refine our unique network security technology and make it more secure and easy to deploy.

Our portfolio of intellectual property is the foundation of our business model. We currently own U.S. and foreign patents/validations/pending applications. Our patent portfolio is primarily focused on securing real-time communications over the Internet, and related services, and is used in all our technology and products, some of which were acquired by our principal operating subsidiary, VirnetX, Inc., from Leidos in 2006.

Industry Overview & Trends

We have seen an exponential increase in dynamic and persistent cyber threats to the U.S. national security operational framework, and critical infrastructure from state-sponsored adversaries, organized cybercriminal groups, and rogue actors employing advanced cyber capabilities. These threats include denial-of-service (DoS), signal jamming, data spoofing, malware injection, and direct attacks on ground and satellite-based communication networks infrastructure. In the commercial sector, satellite networks that provide communication, navigation, and imagery services are vulnerable to exploitation, posing risks to critical infrastructure and civilian services. For government systems, adversaries have been targeting vulnerabilities in proliferated constellations, mission-critical data streams, and multi-domain integration efforts. We believe that our proven proactive, integrated approach to cybersecurity ensures the resilience of defense architectures across the entire conflict continuum.

The shift to remote work and expansion of the enterprise network perimeter has driven the growth of ZTNA solutions. The Zero Trust concept treats all networks like the Internet, where all users and devices are untrusted by default. Their location within the network is not a factor for deciding trust. Each user and device on the network requires authentication and authorization, based on policy, prior to accessing any applications or resources on the network. ZTNA facilitates security around remote work, because Zero Trust policies enable granular access control, end-to-end encryption of network communications and remove application visibility from the public Internet which reduces the potential attack surface.

Cloud computing growth has rapidly expanded as enterprises continue to move applications and services to the cloud. The cloud offers scalability, operations and development efficiency and remote access benefits for their workforce. The cloud technology adoption is expected to continue to increase quite significantly in industries where the work-from-home initiative is helping to sustain enterprise business functions. However, shifting critical data to the cloud has resulted in security concerns and the need for enterprises to control access and gain visibility into how information is being used, who is accessing it and where it is going. We believe our scalable technology allows enterprises to secure applications and services regardless of whether hosting is on-premise or in the cloud.

As billions of connected Internet of Things (“IoT”) devices come online in support of enterprise operations, products, and industrial controls they will need to be secured and integrated into the enterprise. Facilitated by advancements in 4G/Advanced LTE and high-speed 5G networks, IoT devices will be able to operate from any network, transmit higher volumes of data including video streaming and sensor data collection and require real-time decisions based on that data. Without next generation security, these IoT devices represent a large attack surface that manages and controls critical enterprise infrastructure. These IoT devices can operate from anywhere and will need to be secured with the same level of network security and ZTNA solutions enterprises are already deploying for their remote workforce. We believe that the market opportunity for our software and technology solutions is large and expanding as secure domain names are now an integral part of securing the next generation 5G and 4G/LTE Advanced wireless networks and IoT communications.

Our Approach & Strategy

We believe that VirnetX One™ software products are positioned to help enterprises adapt to the rapidly evolving threat landscape in work environments and the growing need to secure communications regardless of a user’s location, network, or device.

VirnetX One™ products deliver ZTNA, allowing enterprises to secure their information, control access and gain visibility into how information is being used, who is accessing it and where it is going. Our patented technology allows enterprises to license our technology for integration into their products and services, easily deploy our technology through our VirnetX One™ family of products for endpoint security or securing their communications with our mobile and desktop applications.

Our strategy is to become the market leader in securing real-time communications over the Internet and to establish our VirnetX One™ as the industry standard security platforms. Key elements of our strategy are to:

- Direct sales efforts with larger users, particularly those engaged in defense and other governmental or national initiatives.
- Actively recruit partners in various vertical markets, including critical infrastructure, intelligence, defense, healthcare, finance, legal, government to help us expand our enterprise customer base.
- Promote our next-generation VirnetX One™ platform as a solution for delivering ZTNA, and securing enterprise applications, services, and infrastructure.
- Combine with VirnetX One™ platform with technologies from the companies we have invested in, namely OmniTeq and OPMedia, to enhance their offerings and provide supplemental sales channels for VirnetX One™
- Continue to grow our technology licensing program to commercialize our intellectual property.
- Grow registration of VirnetX Secure Domain Names as the network segmentation component of our ZTNA solution. Establish VirnetX as the exclusive, universal registry of secure domain names and enable our customers to act as registrars for their users and broker secure communication between devices.
- Promote War Room™ video conferencing product in the general market for sale to end-user enterprises, directly and with partners, with targeted promotions and other marketing programs to assist remote workers and offer an industry leading secure meeting solution.
- Promote VirnetX Matrix™ applications, services, and infrastructure.
- Integrate advanced AI/ML algorithms and models into the VirnetX One™ platform for enhancements.
- Explore quantum cryptographic solutions and blockchain applications to improve zero-trust security, to future-proof our software.

Competitive Strengths

We believe the following competitive strengths will enable our success in the marketplace:

- **Unique patented technology.** We are focused on developing innovative technology for securing real-time communications over the Internet and establishing the exclusive secure domain name registry in the United States and other key markets around the world. Our unique solutions combine industry standard encryption methods and communication protocols with our patented techniques for automated DNS lookup mechanisms. Our technology and patented approach enable users to create a secure communication link by generating secure domain names. We currently own U.S. and foreign patents/validations/pending applications. Our portfolio includes patents and pending patent applications in the United States and other key markets that support our secure domain name registry service for the Internet.
- **Scalable licensing business model.** We are actively engaged in pursuing additional licensing agreements with industry participants OEMs, service providers and system integrators within the IP-telephony, mobility, mobile-to-mobile communications, fixed-mobile convergence, and unified communications end-markets.
- **Highly experienced research and development team.** Our research and development team is comprised of nationally recognized network security and encryption technology scientists and experts that have worked together as a team for over ten years. During their careers, this team has developed several cutting-edge technologies for U.S. national defense, intelligence, and civilian agencies, many of which remain critical to our national security today. Prior to joining VirnetX, our team worked for Leidos, during which time they invented the core technology that is the foundation of our current technology and software. Based on the collective knowledge and experience of our development team, we believe that we have one of the most experienced and sophisticated groups of security experts researching vulnerability and threats to real-time communication over the Internet and developing solutions to mitigate these problems.

License and Service Offerings

We offer a diversified portfolio of licenses, software and service offerings focused on securing real-time communications over the Internet. We believe software products will allow enterprises to seamlessly integrate ZTNA protection into their networks to secure their applications, services, virtualized resources, and data as it moves into the cloud. Enterprises can quickly deploy VirnetX One software products to protect legacy applications, secure new cloud-based services and remove application visibility from the public Internet. Enterprises can move towards more granular network access control to protect their network at the edge and away from legacy VPN technologies. VirnetX One family of software products enables remote employees to securely interact with on-premise and cloud-based applications, regardless of their location. Enterprises can use VirnetX One platform to secure open-source applications powering communications, data and analytics, infrastructure, and business services with a focus on making those applications easier to secure, access and manage.

We believe our software products and technologies provide the foundation for securing real-time communications and collaboration applications for the enterprise remote workforce. We are exploring creating a marketplace of applications secured by our VirnetX One platform. This approach will allow us to offer a portfolio of certified applications that can be deployed by the enterprise customers in their business networks with confidence in keeping their confidential data and communications secure. This marketplace strategy will allow us to offer more flexible licensing options to solve specific customer use-cases, align with partner product offerings and create upsell opportunities for our products.

Customers and Market Development

We have undertaken activities to commercialize our products and intellectual property in and outside the United States including VirnetX One™, War Room™, VirnetX Matrix™, and our Secured Domain Name Registry and Technology. We believe our product portfolio to secure devices and systems are stable in areas such as City, County and State Governments, Healthcare, Finance, Legal, Oil and Gas, Medical, Law Enforcement, National Defense and related support industries. We continue to actively pursue new opportunities in and one of United States.

During 2024, due to exponential increase in dynamic and persistent cyber threats to the U.S. national security operational framework, we decided to increase our focus on offering our VirnetX One™ platform and its family of products and solutions to the Department of Defense for addressing these challenges using our proven proactive, integrated approach to cybersecurity that ensures the resilience of defense architectures across the entire conflict continuum. As a part of this effort, we engaged in several significant actions:

- We established an advisory board comprised of four retired senior U.S. Air Force leaders to assist and advise on business development and operational direction of VirnetX's Zero Trust Network Access security technology as a necessary layer of security for defense communications and data management to Department of Defense government officials and commercial contractors.
- We participated in the U.S. Navy Expeditionary Combat Command (NECC) sponsored technology demonstrations during the Rim of the Pacific (RIMPAC) 2024, a large-scale international maritime exercise at Ford Island, Oahu, Hawaii, and successfully demonstrated our VirnetX One Matrix and VirnetX's War Room secure video conferencing from ship to shore environments. We believe our technology and solutions can fill defense needs for security, stealth, and flexibility in myriad day-to-day static situations to the most challenging operations in conflict or humanitarian assistance.
- We participated in a Cooperative Research and Development Agreement (CRADA) with the Air Force (AF) Research Laboratory Intelligence Systems Directorate (AFRL/RI) to facilitate collaboration on cybersecurity and Zero Trust technologies to support integrated surveillance and reconnaissance operations as well as AF and joint targeting processes. The work conducted under this CRADA is expected to provide the avenue to secure and obfuscate AF targeting, processing, dissemination, and intelligence technology, enabling AF to take advantage of the latest research and developments in commercially available cybersecurity technology and reduce its IT attack surface in a joint, all-domain environment.
- We hired Dr. John Anthony Jamison as new VirnetX Chief Technical Officer (CTO). Dr. Jamison brings a wealth of technology experience in the intelligence community and will be instrumental as expand our participation in national defense projects and initiatives.
- We successfully conducted a rigorous functional and penetration testing of our VirnetX One Matrix solution by Pacific Northwest National Laboratory (PNNL) with support from Johns Hopkins University Applied Physics Laboratory (JHU-APL) at the request of The United States Space Force (USSF).

Throughout 2024, we continued to actively engage in discussions with certain third-parties to pitch the capabilities of VirnetX One™. We have continued our engagement with Solution Synergy, WeSecure, Samsung, Every Data Corporation, and Object Security and are working on a number of projects to deploy our VirnetX Matrix™ product. Although there can be no assurance in this regard, we believe that there are opportunities for Company products' sales directly to, resale arrangements with and/or adoption as vendor standards by, one or more of these third parties.

We have Patent License Agreements with Aastra USA, Inc. Avaya, Inc., Microsoft Corporation, Mitel Networks Corporation, NEC Corporation and NEC Corporation of America, Siemens Enterprise Communications GmbH & Co. KG, and Siemens Enterprise Communications Inc. to license certain of our patents, for a one-time payment and an ongoing royalty for all future sales through the expiration of the licensed patents with respect to certain current and future IP-encrypted products.

We are seeking further licensing of our technology, to developers and original equipment manufacturers, or OEMs, of chips, servers, Desktop, mobile devices such as smart phones, tablets, laptops, net books, and other devices, within the IP-telephony, mobility, fixed- mobile convergence, and unified communications markets including 5G and 4G/LTE. We have published our royalty rates and guidelines on our website. All forward moving licenses have adhered to these guidelines and have met or exceeded these rates and we will use these rates and guidelines in all future license negotiations.

Marketing and Sales

We employ a leveraged, partner-oriented marketing and sales strategy for software product and services offerings. We have successfully signed several Resellers & Managed Service Provider Agreements in various market segments, including healthcare, finance, legal, government, etc., to assist us in selling our software products to their customers. We plan to directly market our software products, domain name registry services to large enterprises and government organizations along with our service provider and system integrator customers.

We believe significant opportunities exist for our VirnetX One™, War Room™, VirnetX Matrix™ products and services in areas such as Local and State Governments, Power and Energy generation, Healthcare, Finance, Legal, Oil and Gas, Medical, Law Enforcement, National Defense and related support industries. We are actively pursuing a number of sales opportunities, in and outside the United States, for as we seek to extend out our customer base globally. We expect to leverage our relationship with OmniTeq and Op Media to extend our offering to departments and agencies within the federal government.

We have signed a non-exclusive Distribution and Service Agreement with IP Dream, a Japanese based strategic technology developer and service provider, to sell our software products as well as VirnetX's Secure Domain Name technology to its clients in Japan and greater Asia. Jointly with IP Dream, we are currently pursuing several OEM opportunities with some of the largest services providers in Japan. Along with our efforts with IP Dream, we continue to explore alternative strategies to pursue opportunities to work with other third parties in Japan, and elsewhere, using an approach that will seek to capitalize on these opportunities in part by placing more emphasis on the use of our own employees.

We intend to continue to license our patent portfolio, technology, and software, including our secure domain name registry service, to domain infrastructure providers, communication service providers as well as to system integrators. We intend to seek further license of our technology and software products, to enterprise customers, developers and original equipment manufacturers, or OEMs, of chips, servers, Desktop, mobile devices such as smart phones, tablets, laptops, net books, and other devices, within the IP-telephony, mobility, fixed- mobile convergence, and unified communications markets including 5G and 4G/LTE.

Intellectual Property and Patent Rights

Our intellectual property is primarily comprised of trade secrets, patented know-how, issued and pending patents, copyrights and technological innovation.

We currently own U.S. and foreign patents/validations/pending applications. Our portfolio includes many patents that describe unique systems and methods for securing real- time communications over the Internet, as well as related services such as the establishment and maintenance of a secure domain name registry. Our software and technology solutions also may have additional applications relating to operating systems and network security. A complete list of our U.S. licensees is available on our website located at <http://www.virnetx.com>. Each patent is publicly accessible on U.S. Patent and Trademark Office website at <http://www.uspto.gov>. Some of our issued U.S. and foreign patents expire at various times during the period from 2024 to 2034.

Notwithstanding anything to the contrary set forth in any of our filings under the Securities Act or the Exchange Act that might incorporate future filings, the information set forth on the United States Patent and Trademark Office (the “USPTO”) website, shall not be deemed to be a part of or incorporated by reference into any such filings. We do not warrant the accuracy, completeness or adequacy of the USPTO website, and expressly disclaim liability for errors or omissions on such website.

Assignment of Patents

Some of our issued patents and pending patent applications were acquired by our principal operating subsidiary, VirnetX, Inc., from Leidos, pursuant to an Assignment Agreement dated December 21, 2006, and a Patent License and Assignment Agreement dated August 12, 2005, as amended on November 2, 2006, including documents prepared pursuant to the November amendment, and as further amended on March 12, 2008. We recorded the assignment from Leidos, with the U.S. Patent Office on December 21, 2006.

Key terms of these agreements are as follows:

- **Patent Assignment.** Leidos, unconditionally and irrevocably conveyed, transferred, assigned, and quitclaimed all its right, title, and interest in and to the patents and patent applications, as specifically set forth in the assignment document recorded with the U.S. Patent Office, including, without limitation, the right to sue for past infringement.
- **License to Leidos, Outside the Field of Use.** Effective March 12, 2008, we granted to Leidos, a non-exclusive, royalty free, fully paid, perpetual, worldwide, irrevocable, sub licensable and transferable right and license permitting Leidos, and its assignees to make, have made, import, use, offer for sale, and sell products and services covered by, and to make improvements to, the patents and patent applications we acquired from Leidos, solely outside our field of use.
- **Compensation Obligations.** As consideration for the assignment of the patents and for the rights we obtained from Leidos, as amended, we are required to make payments to Leidos, based on cash or certain other values generated from those patents. The amount of such payments depends upon the type of value generated, and certain categories are subject to maximums and other limitations. In 2010, we met our maximum royalty payment requirement; however, Leidos is also entitled under certain circumstances to receive a portion of the proceeds paid to us for certain acquisitions of VirnetX and the settlement of certain patent infringement claims of ours.

Government Regulation

We are subject to various federal, state, local, and foreign laws and regulations, including those relating to privacy, data protection and security, intellectual property, employment and labor, workplace safety, consumer protection, anti-bribery, import and export controls, immigration, federal securities, and tax. Additional laws and regulations relating to these areas likely will be passed in the future, and these or existing laws and regulations may be interpreted or enforced in new or expanded manners, each of which could result in significant limitations on how we operate our business.

In particular, the laws governing online secure communications remain unsettled in various respects, even in areas where there has been legislative action. Uncertainty regarding the interpretation and enforcement of laws governing matters such as intellectual property, privacy, data protection and libel in the context of online communications and media is likely to remain. New and existing legislation, or changes in its interpretation and enforcement, may interfere with the growth in use of online secure communications and decrease the acceptance of online secure communications as a viable solution, which could adversely affect our business.

Due to the Internet’s increasing and evolving use, new laws regulating secure communications may be adopted. These laws and regulations may cover, among other things, issues relating to privacy, data protection, cybersecurity, pricing, taxation, telecommunications over the Internet, content, copyrights, distribution and quality of products and services. We intend to work to comply with all new applicable laws and regulations as they are adopted and put in force. New and evolving laws and regulations, and changes in their enforcement and interpretation, may have material impacts upon our development and commercialization plans or business practices, and may significantly increase our compliance costs and otherwise adversely affect our business, financial condition, and results of operations.

The U.S. government has controlled the authoritative domain name system, or DNS, root server since the inception of the Internet. On July 1, 1997, the President of the United States directed the U.S. Secretary of Commerce to privatize the management of the domain name system in a manner that increases competition and facilitates international participation in its management.

On September 29, 2006, the U.S. Department of Commerce extended its delegation of authority by entering into a new agreement with the Internet Corporation for Assigned Names and Numbers, or ICANN, a California non-profit corporation headquartered in Marina Del Rey, California. ICANN is responsible for managing the accreditation of registry providers and registrars that manage the assignment of top- level domain names associated with the authoritative DNS root directory. Although it is possible to create and manage other DNS root directories privately without accreditation from ICANN, the possibility of conflicting name and number assignments makes it less likely that users would widely adopt a top-level domain name associated with an alternative DNS root directory provided by a non-ICANN- accredited registry service.

Employees and Human Capital

As of December 31, 2024, we had 23 full and part time employees, most of whom work remotely. We have had a work-from-home workforce since our inception. The emphasis of our employees is on our technology research and product development with 15 employees focused on this effort. Our team has been working on enhancing our products and adding new functionality. We also continue building our sales and marketing teams to expand our product-lines and customer base.

In addition to our regular employees, we also engage with consultants on a regular basis. These consultants can be involved in our product development, customer relations, legal, and/or regulatory compliance and reporting. We have experienced low employee turnover rates over the years with both employees and consultants participating in our equity incentive plan.

Available Information

We file or furnish various reports, such as registration statements, periodic and current reports, proxy statements and other materials with the SEC. Our website address is <http://www.virnetx.com>. You may obtain, free of charge on our website, copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The information we post is intended for reference purposes only; none of the information posted on our website is part of this report or incorporated by reference herein.

The SEC also maintains website at <http://www.sec.gov> that contains reports, proxy and other information statements, and other information regarding issuers, including us, that file electronically with the SEC.

Item 1A. Risk Factors

Our operations and financial results are subject to various risks and uncertainties, including those described below, which could adversely affect our business, financial condition, results of operations, cash flows, and the trading price of our common and capital stock. You should carefully consider the risks and uncertainties described below in addition to the other information set forth in this Report, including in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes, before making any investment in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. If any of these risk factors occur, you could lose substantial value or your entire investment in our shares.

Risks Related to Our Business and Our Financial Reporting

Our operating results may not be consistent and may be difficult to predict and we may not be able to achieve or sustain profitability in the future.

We had a net loss of \$6.2 million for the quarter ended December 31, 2024. We had a net loss of \$18.2 million for the year ended December 31, 2024. As of December 31, 2024, we had an accumulated deficit of \$204.7 million. Our operating results have fluctuated in the past due to several factors and may fluctuate in the future due to the same or similar factors, which include but are not limited to the following:

- Time and resources required to accelerate transition to new product development and sales strategies targeting large enterprises, government customers, service provider partnerships and grant funding;
- Our success depends in part on establishing and maintaining relationships with third parties to integrate our family of cybersecurity products and services into their operations and develop solutions key to the defense market, critical infrastructure and threat intelligence service;
- Customer adoption of our VirnetX One™ platform and software products and services;
- The number of product license sales of VirnetX War Room™, VirnetX Matrix™ and associated services;
- Adoption of VirnetX One™ platform by third party application providers of secure communications;
- Intensely competitive market with established companies that have larger customer bases, and greater resources than we do;
- Prolonged economic uncertainties or downturns, globally or in certain regions or industries, could materially adversely affect our business; and
- Government export and import control regulations on selling products with encryption technology in certain international markets.

These fluctuations may make our business particularly difficult to manage, adversely affect our business and operating results, make our operating results difficult for investors to predict and, further, cause our results to fall below investor’s expectations and adversely affect the market price of our common stock. If we fail to increase our revenue to offset any increases in our operating expenses, we may not achieve or sustain profitability in the future.

Our success depends in part on establishing and maintaining relationships with third parties to incorporate our products and services into their operations.

Part of our business strategy is to enter into partnerships, strategic investments, and other cooperative arrangements with other companies and government agencies. We have invested in and we continue to seek to invest in or acquire businesses, technologies, or other assets that we believe could complement or expand our business. In addition, we are regularly involved in cooperative efforts with respect to the incorporation of our products into products of others and vice versa, collaborative research and development efforts with government and university laboratories, distributor and reseller arrangements and service provider partnerships. These relationships are generally non-exclusive, and some of our partners also have cooperative relationships with certain of our competitors or offer some products and services that are competitive with ours. If we lose third-party relationships, if these relationships are not commercially successful, or if we are unable to enter into third-party relationships on commercially reasonable terms in the future, our business could be negatively impacted.

We expect that we will experience long and unpredictable sales cycles, which may impact our operating results.

The sales cycle between initial customer contact and execution of a contract or license agreement with a customer or purchaser of our products can vary widely. We expect that our sales cycles will be long and unpredictable due to several factors, including but not limited to:

- The need to educate potential customers about our product and service capabilities;
- Our customers' budgetary constraints and timing of their budget cycles;
- Delays caused by time-consuming internal review processes customary with potential customers including large governments agencies and institutions in the space and defense industries; and
- Long sales cycles may increase the risk that our financial resources are exhausted before we are able to generate significant revenue.

In addition, potential customers of our products include local, state, federal and foreign government agencies, as well as institutions in the space and defense industries. Sales processes to government authorities can be extensive and unpredictable. Government authorities generally have complex budgeting, purchasing, and regulatory processes that govern their capital spending, and their spending is likely to be adversely impacted by economic conditions. In addition, in many instances, sales to government authorities may require field trials and may be delayed by the time it takes for government officials to evaluate multiple competing bids, negotiate terms, and award contracts.

For these reasons, the sales cycle associated with our products is subject to a number of significant risks that are beyond our control. Consequently, if customer orders are delayed or not realized, our revenues and results of operations could be materially and adversely affected.

We have limited technical resources and are at an early stage in commercialization of our VirnetX One™ platform and software products.

Part of our business includes the internal development of commercial products we seek to monetize. This aspect of our business may require significant capital, time and resources and we cannot guarantee that it will be successful or meet our expectations. Based on the scale of our technical resources, our limited historical financial data upon which to base our projected revenue or planned operating expenses related to our software products and services, we may not be able to effectively:

- Implement an effective marketing strategy to promote awareness of our products;
- Attract and retain customers for our products;
- Generate revenues or profit from product sales;
- Provide appropriate levels of customer training and technical support for our products;
- Rapidly anticipate and adapt to changes in the market and evolving customer requirements;
- Protect our products from any system failures or other breaches.

In addition, a high percentage of our expenses are and will continue to be fixed. Accordingly, if we do not generate revenue as and when anticipated, our losses may be greater than expected and our operating results will suffer.

The market in which we participate is intensely competitive, and if we do not compete effectively, our operating results could be harmed.

The market for ZTNA security solutions is rapidly evolving and highly competitive as new entrants and traditional network solutions companies offer cloud-based cybersecurity solutions. Many of our competitors and potential competitors have established brand recognition, larger customer bases, and greater resources than we do. Our primary competitors in the ZTNA market include Appgate, Cloudflare, and Illumio. In the enterprise market, our primary competitors include Zscaler (ZPA), Palo Alto Networks (Prisma Access), Cisco (Umbrella), Citrix (Secure Private Access), Netskope (Private Access for ZTNA) and Cato Networks. As we expand our product offerings and use cases, we will begin to compete with companies that offer bundled security-as-a-service solutions that include Secure Access Service Edge (SASE) and Security Service Edge (SSE). With the introduction of new technologies and market entrants, we expect competition to intensify in the future. For example, disruptive technologies such as generative AI has and may continue to fundamentally alter the market for our services in unpredictable ways and

reduce customer demand. If we fail to compete effectively, our business will be harmed. Some of our competitors offer their products or services at lower prices or for free as part of a broader bundled product sale or enterprise license arrangement, which has placed pricing pressure on our business. If we are unable to achieve our target pricing levels, our operating results will be negatively impacted. For us to compete effectively, we need to introduce new products and services in a timely and cost-effective manner, meet customer expectations and needs at prices that customers are willing to pay, and continue to enhance the features and functionalities of our cloud content management platform. In addition, pricing pressures and increased competition could result in reduced sales, lower margins, losses or the failure of our services to achieve or maintain widespread market acceptance, any of which could harm our business.

Many of our competitors are able to devote greater resources to the development, promotion and sale of their products or services. In addition, many of our competitors have established marketing relationships and major distribution agreements with government agencies, channel partners, consultants, system integrators and resellers. Competitors may offer products or services at lower prices or with greater depth than our services. Our competitors may be able to respond more quickly and effectively to new or changing opportunities, technologies, standards or customer requirements. Furthermore, some potential customers, particularly large enterprises, may elect to develop their own internal solutions. For any of these reasons, we may not be able to compete successfully against our competitors.

Our products are highly technical and may contain undetected errors, which could cause harm to our reputation and adversely affect our business.

Our products are highly technical and complex and, when deployed, may contain errors or defects. Despite testing, some errors in our products may only be discovered after a product has been installed and used by customers. Any errors or defects discovered in our products after commercial release could result in failure to achieve market acceptance, loss of revenue or delay in revenue recognition, loss of customers and increased service and warranty cost, any of which could adversely affect our business, operating results, and financial condition. In addition, we could face claims for product liability, tort, or breach of warranty, including claims relating to changes to our products made by our channel partners. The performance of our products could have unforeseen or unknown adverse effects on the networks over which they are delivered as well as on third-party applications and services that utilize our services, which could result in legal claims against us, harming our business. Furthermore, we expect to provide implementation, consulting, and other technical services in connection with the implementation and ongoing maintenance of our products, which typically involves working with sophisticated software, computing, and communications systems. We expect that our contracts with customers will contain provisions relating to warranty disclaimers and liability limitations, which may not be upheld. Defending a lawsuit, regardless of its merit, is costly and may divert management's attention and adversely affect the market's perception of us and our products. In addition, if our business liability insurance coverage proves inadequate or future coverage is unavailable on acceptable terms or at all, our business, operating results, and financial condition could be adversely impacted.

Malfunctions of third-party communications infrastructure, hardware and software expose us to a variety of risks that we cannot control.

Our business will depend upon, among other things, the capacity, reliability, security, and unimpeded access of the infrastructure owned by third parties that we will use to deploy our offerings. We have no control over the operation, quality, or maintenance of a significant portion of that infrastructure or whether those third parties will upgrade or improve their equipment. We depend on these companies to maintain the operational integrity of our connections. If one or more of these companies is unable or unwilling to supply or expand their levels of service to us in the future, our operations could be severely interrupted. Also, to the extent that the number of users of networks utilizing our current or future products suddenly increases, the technology platform and secure hosting services which will be required to accommodate a higher volume of traffic may result in slower response times or service interruptions. System interruptions or increases in response time could result in a loss of potential or existing users and, if sustained or repeated, could reduce the appeal of the networks to users. In addition, users depend on real-time communications; outages caused by increased traffic could result in delays and system failures. These types of occurrences could cause users to perceive that our solution does not function properly and could therefore adversely affect our ability to attract and retain licensees, strategic partners, and customers.

System failure or interruption or our failure to meet increasing demands on our systems could harm our business.

The success of our license and service offerings will depend on the uninterrupted operation of various systems, secure data centers and other computer and communication networks that we establish. To the extent, the number of users

of networks utilizing our future products suddenly increases, the technology platform and hosting services which will be required to accommodate a higher volume of traffic may result in slower response times, service interruptions or delays or system failures. Our systems and operations will also be vulnerable to damage or interruption from, among other things:

- Power loss, transmission cable cuts and other telecommunications failures;
- Damage or interruption caused by fire, earthquake, and other natural disasters;
- Computer viruses, electronic break-ins, sabotage, vandalism or software defects; and
- Physical or electronic break-ins, sabotage, intentional acts of vandalism, terrorist attacks and other events beyond our control.

System interruptions or failures and increases or delays in response time could result in a loss of potential or existing users and, if sustained or repeated, could reduce the appeal of the networks to users. These types of occurrences could cause users to perceive that our solution does not function properly and could therefore adversely affect our ability to attract and retain licensees, strategic partners, and customers, and result in lost revenue, customer dissatisfaction, or lawsuits against us.

If we are not able to adequately protect our patent rights and trade secrets, our business would be negatively impacted.

We believe our patents are valid, enforceable, and valuable. Notwithstanding this belief, third parties may make claims of infringement with respect to our products or services or invalidity claims with respect to our patents or become aware of our trade secrets by way of leaks from bad actors within or outside of our employee base or otherwise, and such claims could give rise to material cost for defense or settlement or both, and such claims or leaks could jeopardize or substantially delay a successful outcome of litigation we are or may become involved in, divert resources away from our other activities, limit or cease our related revenues, or otherwise materially and adversely affect our business. Even if we are successful in protecting our intellectual property rights, they may not ultimately provide us with any competitive advantages and may be less valuable than we currently expect. These risks may be heightened in countries other than the United States where laws regarding patent protection are less developed and may be negatively affected by the fact that legal standards in the United States and elsewhere for protection of intellectual property rights in Internet-related businesses are uncertain and still evolving. In addition, there are a significant number of United States and foreign patents and patent applications in our areas of interest, and we expect that significant litigation in these areas will continue and will add uncertainty to the value of certain patents and other intellectual property rights in our areas of interest. If we are unable to protect our intellectual property rights or otherwise realize value from them, our business would be negatively affected.

If we experience security breaches or incidents, we could be exposed to liability and our reputation and business could suffer.

We expect to retain certain confidential and proprietary customer information in our secure data centers and secure domain name registry, as well as personal data and other confidential and proprietary information relating to our business. It will be critical to our business strategy that our facilities and infrastructure, including our secure domain name servers, remain secure and are perceived by the marketplace to be secure. Our secure domain name registry operations will also depend on our ability to maintain our computer and telecommunications equipment in effective working order and to reasonably protect our systems against interruption, and potentially depend on protection by other registrars in the shared registration system.. Additionally, we maintain confidential and proprietary business information, including trade secrets. We expect to have to expend significant time and money to maintain or increase the security of our products, facilities, and infrastructure. Security technologies are constantly being tested by computer professionals, academics and “hackers.” Advances in computer capabilities and the techniques for attacking security solutions, new discoveries in the field of cryptography or other events or developments could result in compromises or breaches of our security measures and could make some or all our products obsolete or unmarketable. Likewise, we may need to dedicate engineering and other resources to mitigate or eliminate security vulnerabilities and may find it necessary or appropriate to repair or replace products already sold or licensed to our customers. Despite the security measures that we and our service providers utilize, our infrastructure and that of our service providers may be vulnerable to physical break-ins, ransomware, computer viruses, other malicious code attacks by hackers, phishing attacks, social engineering, or similar disruptive problems. There can be no assurances

our security measures or those of our service providers will prevent security breaches or incidents. Any disruption or security breach or incident that we or our service providers suffer or are perceived to suffer, including any such disruption, breach or incident resulting in a loss of, or damage to, data or systems, or inappropriate disclosure, access, loss, or other processing of confidential, financial, proprietary or personal information, including data related to our personnel, could result in loss, disclosure or other unauthorized processing of such data, could delay our research and development or commercialization efforts, could compel us to comply with breach notification laws and regulations, subject us to mandatory corrective action, and otherwise subject us to liability under laws and regulations that protect the privacy and security of personal information. It is possible that we may have to expend additional financial and other resources to address such problems. Remote work by our personnel and those of third parties has resulted in increased vulnerability to cyber-attacks. Additionally, geopolitical tensions and conflicts may create increased risks of cyber-attacks. As a provider of Internet security software and technology, we may be the target of dedicated efforts by hackers and other third parties to overcome or defeat our security measures. Any physical or electronic break-in or other security breach or incident or compromise impacting our products, or any information stored at our secure data centers and domain name registration systems, including any compromise due to human error or employee or contractor malfeasance, may jeopardize the security of information stored on our premises or in the computer systems and networks of our customers. Additionally, any such data security incident, or the perception that one has occurred could also result in adverse publicity, harm to our reputation and competitive position, and therefore adversely affect the market's perception of the security of electronic commerce and communications over IP networks as well as the security or reliability of our services, which could have a material adverse impact on our business, financial condition, and results of operations.

A security breach or other security incident, or the perception any such event has occurred, could require a substantial level of financial resources to address and otherwise respond to, may be difficult to identify or address in a timely manner, and could result in claims, investigations, inquiries, and other proceedings or actions by private parties or governmental entities that may divert management's attention and require the expenditure of significant time and resources, and which may cause us to incur substantial fines, penalties, or other liability and related legal and other costs. Cybersecurity risks pose a particularly significant risk to our business given our focus on providing internet security software and secure communications technology. Any actual or perceived security breach or other security incident may also harm our reputation, result in a loss of customers, and make it more difficult or impossible for us to successfully market to others. Any of the foregoing matters could harm our business, operating results and financial condition.

Our products are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets.

Because we incorporate encryption technology into our products, certain of our products are subject to U.S. export controls and may be exported outside the U.S. only with the required export license or through an export license exception. If we were to fail to comply with U.S. export licensing requirements, U.S. customs regulations, U.S. economic sanctions, or other laws, we could be subject to substantial civil and criminal penalties, including fines, incarceration for responsible employees and managers, and the possible loss of export or import privileges. Obtaining the necessary export license for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities. Furthermore, U.S. export control laws and economic sanctions prohibit the shipment of certain products to U.S. embargoed or sanctioned countries, governments, and persons. Even though we take precautions to ensure that we comply with all relevant regulations, any failure by us or any partners to comply with such regulations could have negative consequences for us, including reputational harm, government investigations, and penalties.

In addition, various countries regulate the import of certain encryption technology, including through import permit and license requirements, and have enacted laws that could limit our ability to distribute our products or could limit our end-customers' ability to implement our products in those countries. Changes in our products or changes in export and import regulations may create delays in the introduction of our products into international markets, prevent our end-customers with international operations from deploying our products globally or, in some cases, prevent or delay the export or import of our products to certain countries, governments, or persons altogether. Any change in export or import regulations, economic sanctions, or related legislation, shift in the enforcement, or scope of existing regulations, or change in the countries, governments, persons, or technologies targeted by such regulations, could

result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential end-customers with international operations. Any decreased use of our products or limitation on our ability to export to or sell our products in international markets would likely adversely affect our business, financial condition, and results of operations.

Privacy and data security concerns, data collection and transfer restrictions and related domestic or foreign regulations may limit the use and adoption of our solutions and adversely affect our business.

Personal privacy, information security, and data protection are significant issues in the United States, Europe, and many other jurisdictions where we have operations or offer our products. The regulatory framework governing the collection, processing, storage and use of confidential and proprietary business information and personal data is rapidly evolving. The United States federal, various state and foreign governments have adopted or proposed requirements regarding the collection, distribution, use, security, storage, and other processing of personal information and other data relating to individuals, and federal and state consumer protection laws are being applied to enforce regulations related to the online collection, use and dissemination of data.

Further, many foreign countries and governmental bodies, including the European Union (“EU”), where we conduct business, have laws and regulations concerning the collection and use of personal data obtained from their residents or by businesses operating within their jurisdiction. These laws and regulations often are more restrictive than those in the United States. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure, and security of data that identifies or may be used to identify or locate an individual.

We also expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the EU, and other jurisdictions. For example, the European Commission maintains a General Data Protection Regulation (the “GDPR”) that imposes stringent data protection requirements and provides for substantial penalties for noncompliance. The United Kingdom has enacted a Data Protection Act and legislation referred to as the UK GDPR that substantially implements the GDPR and provides for a penalty regime similar to the GDPR. We may be required to incur substantial expense in order to make significant changes to our products and operations to address compliance with the GDPR and similar legislation, such as the UK GDPR and UK Data Protection Act, all of which may adversely affect our revenue and product sales. California has enacted legislation, the California Consumer Privacy Act (the “CCPA”) that, among other things, requires covered companies to provide disclosures to California consumers, and afford such consumers abilities to opt-out of certain sales of personal information. The CCPA was modified and expanded by the California Privacy Rights Act (the “CPRA”), which was approved by California voters in the November 2020 election. Additionally, other U.S. states continue to propose, and in certain cases adopt, privacy-focused legislation. For example, Connecticut, Virginia, Utah and Colorado enacted legislation similar to the CCPA and CPRA that took effect in 2023; Florida, Montana, Oregon, and Texas have enacted similar legislation that has become effective in 2024; Delaware, Nebraska, Maryland, New Hampshire, New Jersey, Minnesota, Tennessee, and Iowa have enacted similar legislation that has or will become effective in 2025; and Indiana, Kentucky, and Rhode Island have enacted similar legislation that will become effective in 2026. We cannot yet fully determine the impact these or future laws, regulations and standards may have on our business, but they may require us to modify our data processing practices and policies and to incur substantial costs and expenses in efforts to comply. Privacy, data protection and information security laws and regulations are often subject to differing interpretations, may be inconsistent among jurisdictions, and may be alleged to be inconsistent with our current or future practices. Additionally, we may be bound by contractual requirements applicable to our collection, use, processing, and disclosure of various types of data, including personal data, and may be bound by, or voluntarily comply with, self-regulatory or other industry standards relating to these matters. These and other requirements could reduce demand for our products, increase our costs, impair our ability to grow our business, or restrict our ability to store and process data or, in some cases, impact our ability to offer our service in some locations and may subject us to liability. Any failure or perceived failure to comply with applicable laws, regulations, industry standards, and contractual obligations may adversely affect our business. Further, in view of new or modified federal, state, or foreign laws and regulations, industry standards, contractual obligations and other legal obligations, or any changes in their interpretation, we may find it necessary or desirable to fundamentally change our business activities and practices or to expend significant resources to modify our product and otherwise adapt to these changes. We may be unable to make such changes and modifications in a commercially reasonable manner or at all, and our ability to develop new products and features could be limited.

The costs of compliance with and other burdens imposed by laws, regulations and standards may limit the use and adoption of our service and reduce overall demand for it, or lead to significant fines, penalties, or liabilities for any

noncompliance. Privacy, information security, and data protection concerns, whether valid or not valid, may inhibit market adoption of our platform, particularly in certain industries and foreign countries.

Our business has been, and may continue to be, negatively affected by activist shareholders.

Responding to actions and communications by activist shareholders is costly and time-consuming, has diverted the attention of management, our Board of Directors and our employees, and may be disruptive to our operations. Additionally, perceived uncertainties as to our future direction as a result of shareholder activism may lead to the perception of a change in the direction of our business or other instability, which may be exploited by our competitors, cause concern to our current or potential customers, and make it more difficult to attract and retain qualified personnel. Furthermore, if customers choose to delay, defer or reduce transactions with us or do business with our competitors instead of us, then our business, financial condition and operating results would be adversely affected. In addition, our share price could experience periods of increased volatility as a result of shareholder activism.

Risks Related to Ownership of Our Common Stock

We do not regularly pay dividends on our common stock and thus stockholders must look to appreciation of our common stock to realize a gain on their investments.

Our dividend policy is within the discretion of our Board of Directors and will depend upon various factors, including our business, financial condition, results of operations, capital requirements, and investment opportunities. We therefore cannot make assurances that our Board of Directors will determine to pay regular or special dividends in the future. Accordingly, unless our Board of Directors determines to pay dividends, stockholders will be required to look to appreciation of our common stock to realize a gain on their investment, which may not occur.

The exercise of our outstanding stock options and warrants, and the issuance of RSUs and restricted stock would result in a dilution of our current stockholders' voting power and an increase in the number of shares eligible for future resale in the public market which may negatively impact the market price of our stock.

The exercise of our outstanding vested stock options and warrants, and the vesting of RSUs and restricted stock dilutes the ownership interests of our existing stockholders. As of December 31, 2024, we had outstanding options, warrants and RSUs to purchase an aggregate of 265,040 shares of common stock representing approximately 6.25% of our total shares outstanding of which 242,352 were vested. To the extent outstanding stock options or warrants are exercised and RSUs vest, additional shares of common stock will be issued, existing stockholders' percentage voting interests will decline and the number of shares eligible for resale in the public market will increase. Such increase may have a negative effect on the value or market trading price of our common stock.

Investors may have limited influence because ownership of our common stock is limited.

As of December 31, 2024, our executive officers and directors beneficially owned approximately 18% of our outstanding common stock. Because of their beneficial ownership interest, our officers and directors could significantly influence stockholder actions of which you disapprove or that are contrary to your interests. This ability to exercise significant influence could prevent or significantly delay another company from acquiring or merging with us.

Our protective provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it difficult for a third party to successfully acquire us even if you would like to sell your stock to them.

We have protective provisions in our amended and restated certificate of incorporation ("Restated Charter") and amended and restated bylaws ("Restated Bylaws") that could delay, discourage, or prevent a third party from acquiring control of us without the approval of our Board of Directors. These protective provisions include:

- A staggered Board of Directors: Only one or two of five directors will be up for election at any given annual meeting, delaying the ability of stockholders to affect a change in control of us because it would take two annual meetings to effectively replace a majority of the Board of Directors.
- Blank check preferred stock: Our Board of Directors has the authority to establish the rights, preferences, and privileges of our 10,000,000 authorized, but unissued, shares of preferred stock. Therefore, this stock

may be issued at the discretion of our Board of Directors with preferences over your shares of our common stock in a manner that is materially dilutive to you. In addition, blank check preferred stock can be used to create a “poison pill” which is designed to deter a hostile bidder from buying a controlling interest in our stock without the approval of our Board of Directors. We have not adopted such a “poison pill;” but our Board of Directors can do so in the future, very rapidly and without stockholder approval.

- Advance notice requirements for director nominations and for business to be brought before stockholder meetings: Stockholders wishing to submit director nominations or raise matters to a vote of the stockholders must provide notice to us within very specific date windows and in very specific form to have the matter voted on at a stockholder meeting. This gives our Board of Directors and management more time to react to stockholder proposals generally and could also permit us to disregard a stockholder proposal to the extent such proposal is not submitted in accordance with the Restated Bylaws.
- No stockholder actions by written consent: No stockholder or group of stockholders may take action by written consent. Along with the advance notice requirements described above, this provision also gives our Board of Directors and management more time to react to proposed stockholder actions.
- Super majority requirement for stockholder amendments to the Restated Bylaws: Stockholder proposals to alter or amend our Restated Bylaws or to adopt new bylaws can only be approved by the affirmative vote of at least 66 2/3% of the outstanding shares of our common stock.
- No ability of stockholders to call a special meeting of the stockholders: A special meeting of the stockholders, other than as required by statute, may be called at any time by the Board of Directors, the chairman of the Board of Directors, or the president, and any power of stockholders to call a special meeting of stockholders is specifically denied. Accordingly, stockholders, even those who represent a significant percentage of our shares of common stock, may need to wait for the annual meeting before nominating directors or raising other business proposals to be voted on by the stockholders.

In addition, the provisions of Section 203 of the Delaware General Corporation Law govern us. These provisions may prohibit large stockholders, particularly those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time.

These and other provisions in our Restated Charter, our Restated Bylaws and under Delaware law could discourage potential takeover attempts, reduce the price that investors might be willing to pay for shares of our common stock in the future and result in the market price being lower than it would be without these provisions.

Our Restated Bylaws designate a state or federal court located within the State of Delaware as the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders’ ability to choose the judicial forum for disputes with us or our directors, officers, or employees.

Our Restated Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, stockholders, officers, or other employees to us or our stockholders, (3) any action arising pursuant to any provision of the Delaware General Corporation Law, or our Restated Charter or Restated Bylaws or (4) any other action asserting a claim that is governed by the internal affairs doctrine shall be the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another State court in Delaware or the federal district court for the District of Delaware), in all cases subject to the court having jurisdiction over indispensable parties named as defendants.

However, notwithstanding the exclusive forum provisions, our Restated Bylaws explicitly state that they would not preclude the filing of claims brought to enforce any liability or duty created under federal securities laws, including the Securities Act or the Exchange Act.

Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to this provision. This exclusive-forum provision may limit a stockholder’s ability to bring a claim in a judicial forum of its choosing for disputes with us or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers, and other employees. If a court were to find this exclusive-forum provision in our Restated Bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could harm our results of operations.

General Risk Factors

Failure to meet the NYSE's continued listing requirements could result in the suspension of trading of our common stock and a subsequent delisting of our common stock.

On August 28, 2024, we received a written notification from the NYSE that as of August 27, 2024, we were not in compliance with the continued listing standards set forth in Section 802.01B of the NYSE Listed Company Manual because the average global market capitalization over a consecutive 30 trading-day period and stockholders' equity were both less than \$50 million. In accordance with applicable NYSE procedures, we submitted a plan to the NYSE on October 11, 2024, and provide quarterly updates advising it of the definitive actions we have taken, are taking and plan to take that would bring us into conformity with the standard set forth in Section 801.01B within 18 months of receipt of the written notification. The written notification has no immediate impact on our ongoing business operations, reporting requirements with the SEC or the listing of our common stock on the NYSE at this time, subject to the Company's continued compliance with the plan and NYSE's other continued listing standards. We are considering all available options to regain compliance with NYSE's continued listing standards but can provide no assurances that we will be able to satisfy the requirements of the NYSE.

Our common stock could also be delisted if our average global market capitalization over a consecutive 30 trading-day period is less than \$15 million. Our average global market capitalization over a consecutive 30 trading-day period may fall below \$15 million based on continued volatility and fluctuations in the market price of our common stock. In the event that our stock price does not meet the global market capitalization requirement, the NYSE will promptly suspend our common stock from trading on the NYSE and will simultaneously begin the process to delist our common stock, subject to our right to appeal under NYSE rules. While we may appeal this decision, there is no assurance that any appeal we undertake will be successful.

If shares of our common stock are delisted from the NYSE, there may be no public market for our common stock. Any over-the-counter or other market that does develop would likely be characterized by decreased liquidity and greater volatility, which may materially and adversely affect the value of our common stock. A delisting of our common stock could negatively impact the Company and holders of our common stock, including by reducing the willingness of investors to hold our common stock because of the resulting decreased price, liquidity and trading of our common stock, limited availability of price quotations, and reduced news and analyst coverage. These developments may also require brokers trading in our common stock to adhere to more stringent rules and may limit our ability to raise capital by issuing additional shares of common stock in the future. Delisting may adversely impact the perception of our financial condition, cause reputational harm with investors, our employees and parties conducting business with us, and limit our access to debt and equity financing. The perceived decrease in value of employee equity incentive awards may reduce their effectiveness in encouraging performance and retention.

We may need to raise additional capital to support our business growth, and this capital may be dilutive, may cause our stock price to drop or may not be available on acceptable terms, if at all.

We may need to raise additional capital, which may not be available to us when needed or may not be available on terms acceptable to us, to support our business growth or to respond to business opportunities, challenges, or unforeseen circumstances, including sales under our past and any future shelf registration statements. Our ability to obtain additional capital, if and when required, will depend on our business plans, investor demand, our operating performance, the condition of the capital markets, the terms of our current contractual obligations and other factors.

If we raise additional funds through the issuance of equity, equity-linked or debt securities, including those under our past and any future shelf registration statements, those securities may have rights, preferences, or privileges senior to the rights of our common stock, and our existing stockholders may experience dilution. Additionally, we are unable to predict the future success of any future offerings. Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales or other financings might occur, could depress the market price of our common stock, and could also impair our ability to raise capital through the sale of additional equity securities. If we issue debt securities or incur indebtedness, we could experience increased future payment obligations and a need to comply with restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we are unable to obtain additional capital or are unable to obtain additional capital on satisfactory terms, our ability to continue to support our business growth or to respond to business opportunities, challenges, or other circumstances could be adversely affected, and our business may be harmed.

The departure of Kendall Larsen, our Chief Executive Officer and President, and/or other key personnel could compromise our ability to execute our strategic plan and materially harm our business.

Our success depends on the skills, experience, and performance of our key personnel. Due to the specialized nature of our business and limited staff, we are particularly dependent on Kendall Larsen, our Chief Executive Officer and President. We have no employment agreements with any of our key executives that prevent them from leaving us at any time. In addition, we do not maintain key person life insurance for any of our officers or key employees. The loss of Mr. Larsen, or our failure to retain other key personnel or plan for the succession of key personnel, would jeopardize our ability to execute our strategic plan and materially harm our business.

We will need to recruit and retain additional qualified personnel to successfully grow our business.

Our future success will depend, in part, on our ability to attract and retain qualified engineering, operations, marketing, sales and executive personnel. Inability to attract and retain such personnel could adversely affect our business. Competition for engineering, operations, marketing, sales, and executive personnel is intense, particularly in the technology and Internet sectors and in the regions where we conduct our business. We may need to invest significant amounts of cash and equity to attract and retain employees and expend significant time and resources to identify, recruit, train and integrate such employees, and we may never realize returns on these investments. Additionally, we can provide no assurance that we will attract or retain such personnel.

War, terrorism, other acts of violence, or natural or manmade disasters as well as macroeconomic conditions may affect the markets in which we operate, our clients and our service delivery.

Our business may be adversely affected by instability, disruption, or destruction in a geographic region in which we operate, regardless of cause, including war, terrorism, riot, civil insurrection, or social unrest, and natural or manmade disasters, including famine, flood, fire, earthquake, storm, or pandemic events and spread of disease. Our business may also be adversely affected by further downturn in macroeconomic conditions, including inflation and rising interest rates, tariffs, trade wars, global political and economic uncertainty and tensions, such as the ongoing Russia-Ukraine and Israel-Hamas conflicts, as well as any related political or economic response, counter responses or otherwise, financial services sector instability, a reduction in business confidence and activity, financial market volatility, unexpected changes in tax law or policy, and other factors. Such events can adversely affect our operations or the economy as a whole and may cause our customers to delay their decisions on spending for the services we provide and perpetuate significant changes in regional and global economic conditions and cycles. These events may also pose risks to our personnel and to physical facilities and operations, which could adversely affect our financial results.

Trading in our common stock is limited and the price of our common shares may be subject to volatility.

Our common stock is currently listed on the NYSE and was previously listed on the NYSE American LLC (formerly the NYSE MKT LLC). Over the past years, the market price of our common stock has experienced significant fluctuations. Between January 1, 2024, and December 31, 2024, the adjusted closing price on the NYSE for our common stock ranged between \$3.62 and \$9.22. The price of our common stock may continue to be volatile as a result of several factors, some of which are beyond our control. These factors include, but are not limited to, the following:

- Annual variations, actual or anticipated, in our operating results;
- Significant changes in our management;
- Large purchases or sales of common stock or derivative transactions related to our stock;
- Actual or anticipated announcements of new products or services by us or competitors;
- General conditions in the markets in which we compete; and
- General social, political, economic, and financial conditions, including significant volatility in the global financial markets.

In addition, we believe there has been and may continue to be substantial trading in derivatives of our stock, including short selling activity or related similar activities, which are beyond our control, and which may be beyond the full control of the SEC and Financial Institutions Regulatory Authority (“FINRA”). While the SEC and FINRA rules

prohibit some forms of short selling and other activities that may result in stock price manipulation, such activity may nonetheless occur without detection or enforcement. We have held conversations with regulators concerning trading activity in our stock; however, there can be no assurance that should there be any illegal manipulation in the trading of our stock, it will be detected, prosecuted, or successfully eradicated. Significant short selling market manipulation could cause our stock trading price to decline, to become more volatile, or both. For more information regarding trading in our common stock and listing on the NYSE, see additional risk factors included elsewhere in this Annual Report on Form 10-K.

We have broad discretion in how we apply our funds, and we may not use these funds effectively, which could affect our results of operations and cause our stock price to decline.

Our management has broad discretion in the application of our existing cash, cash equivalents and investments and could spend these funds in ways that do not improve our results of operations or enhance the value of our common stock. Pending their use, we may invest our available funds in a manner that does not produce income or that loses value. The failure by our management to apply our available funds effectively could result in financial losses that could cause the price of our common stock to decline and delay the development of our products.

In addition, an entity that, among other things, is or holds itself out as being engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, owning, trading, or holding certain types of securities would be deemed an Investment Company under the Investment Company Act of 1940 (the “1940 Act”). If we do not manage our investments and business in a manner that meets the requirements for an exemption under the 1940 Act, we may be deemed to be an investment company under the 1940 Act and subject to additional limitations on operating our business including limitations on the issuance of securities, which may make it difficult for us to raise capital.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cybercriminals, hackers, and threat-actors are becoming more sophisticated and effective every day. To mitigate threats to our business, we take a comprehensive approach to cybersecurity risk management and make securing the data that our customers and other stakeholders entrust to us a top priority. We are committed to safeguarding the confidentiality, integrity, and availability of all physical and electronic information assets to ensure that regulatory, operational, and contractual requirements are fulfilled. Our Board of Directors and our management are actively involved in the oversight of our risk management program, of which cybersecurity represents an important component. As described in more detail below, we have established policies, processes and practices for assessing, identifying, and managing material risks from cybersecurity threats. We have devoted significant resources to implement and maintain security measures to meet regulatory requirements and customer expectations, and we intend to continue to make significant investments to maintain the security of our data and cybersecurity infrastructure. Notwithstanding the extensive approach we take to cybersecurity, we may not be successful in preventing or mitigating a cybersecurity incident that could have a material adverse effect on us. While we have technology and processes in place to detect and respond to cybersecurity threats, we are continually at risk from the evolving cybersecurity threat landscape. We have not previously experienced a cybersecurity event that was determined to be material, and our business strategy, results of operations and financial condition have not been materially affected by risks from cybersecurity threats. For additional information regarding risks from cybersecurity threats, please refer to Item 1A, “Risk Factors,” in this Annual Report on Form 10-K.

Risk Management and Strategy

We have developed detailed policies, processes and practices for assessing, identifying, and managing material risks from cybersecurity threats as a part of our overall risk management program and are based on frameworks established by the National Institute of Standards and Technology (“NIST”), and other applicable industry standards. This does not imply that we meet any particular technical standards, specifications or requirements, however, we do use these frameworks as a guide to help us identify, assess, and manage cybersecurity risks relevant to our business. Our cybersecurity program in particular focuses on the following key areas:

Collaboration

Our cybersecurity risks are identified and addressed through a comprehensive, cross-functional approach. Key security, risk, and compliance stakeholders meet regularly to develop strategies for preserving the confidentiality,

integrity and availability of our own and our customer's information, identifying, preventing and mitigating cybersecurity threats, and effectively responding to cybersecurity incidents. We maintain controls and procedures that are designed to ensure prompt escalation of certain cybersecurity incidents so that decisions regarding such incidents can be made by management, the Board of Directors, and legal counsel in a timely manner.

Risk Assessment

We conduct cybersecurity risk assessments annually, quarterly and upon certain triggering events. Such risk assessments take into account information from internal stakeholders, known information security vulnerabilities, and information from external sources (e.g., security incidents that have impacted other companies, industry trends, and recommendations from our IT vendors). The results of the assessment are used to drive alignment on, and prioritization of, initiatives to enhance our security controls, make recommendations to improve processes, and inform a broader enterprise-level risk assessment that is presented to our Board of Directors and members of senior management.

Technical Safeguards

We regularly assess and deploy technical safeguards designed to protect our information systems and infrastructure from cybersecurity threats. Such safeguards are regularly evaluated and improved based on vulnerability assessments, cybersecurity threat intelligence and incident response experience.

Incident Response and Recovery Planning

We have established comprehensive incident response and management plans and continue to regularly test and evaluate the effectiveness of those plans. Our incident response and management plans address — and guide our employees, management, and Board of Directors on — our response to a cybersecurity incident. In the event of an incident, we intend to follow our incident response playbook, which outlines the steps to be followed from incident detection to mitigation, recovery and notification, including notifying functional areas (e.g., legal), as well as the Board of Directors and senior management, as appropriate.

Third-Party Risk Management

We have implemented controls designed to identify and mitigate cybersecurity threats associated with our use of third-party service providers. Such providers are subject to security risk assessments at the time of onboarding, contract renewal, and upon detection of an increase in risk profile. We use a variety of inputs in such risk assessments, including information supplied by providers and third parties. In addition, we encourage our providers to meet appropriate security procedures, controls and responsibilities and investigate security incidents that have impacted our third-party providers, as appropriate.

Education and Awareness

Our policies require each of our employees to contribute to our cybersecurity efforts. We regularly remind employees of the importance of handling and protecting customer and employee data, including through privacy and security trainings to enhance employee awareness of how to detect and report cybersecurity threats and cybersecurity incidents.

Governance

Board Oversight

The Nominating and Corporate Governance Committee (the "Committee") and senior management oversee our cybersecurity risk processes and policies. The Committee receives regular reports from senior management about the prevention, detection, mitigation, and remediation of cybersecurity incidents, including security risks and information security vulnerabilities. The Committee also ensures that procedures for safeguarding the Company's information technology ("IT") systems are documented and implemented, monitors the effectiveness of the Company's cybersecurity program for protecting against internal and external threats as well as disaster recovery and disruption mitigation, and addresses deficiencies as the threat and business landscape continues to evolve. The Board of Directors receives regular updates from the Committee based on such oversight and communications with senior management regarding cybersecurity risk resulting from risk and control maturity assessments, progress of risk reduction initiatives, external auditor feedback and relevant internal and industry cybersecurity incidents.

Our Board of Directors has technical and industry expertise in risk management, computer security and information technology matters. Specifically, the chairperson of the Committee has 40 years of experience in the cybersecurity field, was a former sub-chairman of the NIST Board of Assessment for Programs/National Research Council and holds CISSP, CRISC and CDPSE certifications.

Management's Role

Our Chief Technology Officer (“CTO”), Director of IT (Information Technology), and Vice President of Platform Engineering (collectively, the “Security Team”) have primary responsibility for assessing and managing cybersecurity risks. The Security Team reviews security performance metrics, identifies security risks, and assesses the status of approved security enhancements. The Security Team also considers and makes recommendations on security policies and procedures, security service requirements, and risk mitigation strategies.

Our CTO, holding a Doctorate in Strategic Intelligence, has served in various roles in technology research and military intelligence for 27 years. Our Director of IT, holding a degree in Computer Technology, has served in various roles in information technology for 30 years. Our Vice President of Platform Engineering has served in various roles in information technology and information security for over 33 years.

Item 2. Properties

Our principal executive offices are located at 308 Dorla Court, Suite 206, Zephyr Cove, Nevada, 89448. We lease this property, which comprises approximately 2,090 square feet of office space, from a third party for a term that ends in October 2026. Additionally, we lease a facility in Farmington, Utah. The space includes 28,970 square feet to be used for technical integration and training. The lease continues through April 2029. We believe that our office and facility leases are suitable and appropriately support our current business needs.

Item 3. Legal Proceedings

See Note 12 in the notes to our consolidated financial statements.

Item 4. Mine Safety Disclosure

Not applicable.

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock currently trades under the symbol "VHC" on the NYSE.

Holders of Record

As of December 31, 2024, we had 48 stockholders of record. Because many of our shares of common stock are held of record by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of beneficial stockholders represented by such record holders.

Dividend Policy

See Note 8 in the notes to our consolidated financial statements and our risk factor titled "*We do not regularly pay dividends on our common stock and thus stockholders must look to appreciation of our common stock to realize a gain on their investments.*"

Since our founding as a public company in 2007, each time we have been successful in generating cash relating to the successful outcome of litigation, we have made a special distribution to common shareholders. In 2010, a distribution of \$10 per common share closely followed a litigation outcome that resulted in our receipt of \$200 million. In 2020, a distribution of \$20 per share closely followed a litigation outcome that resulted in our receipt of \$454 million. In 2023, we paid a one-time capital dividend of \$20 per share of common stock, to shareholders. Over the course of VirnetX's history as a public company, VirnetX has distributed over \$165.9 million in cash to shareholders.

Securities Authorized for Issuance under Equity Compensation Plan

See Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters for information regarding securities authorized for issuance.

Recent Sales of Unregistered Securities

None.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
(Dollar amounts in this section are in thousand)

The Company

We are an Internet security software and technology company with patented technology for Zero Trust Network Access ("ZTNA") based secure network communications. VirnetX's software and technology solutions, including its Secure Domain Name Registry and Technology, VirnetX One™, War Room™, and VirnetX Matrix™ are designed to be device and location-independent, and enable a secure real-time communication environment for all types of enterprise applications, services, and critical infrastructures. Our technology generates secure connections on a "single-click" basis, significantly simplifying the deployment of secure real-time communication solutions by eliminating the need for end-users to enter any encryption information.

Our product portfolio includes sophisticated technologies, products and services that are available for sale worldwide. Our next-generation, VirnetX One™ platform builds upon our patented Secure Domain Name Registry and Technology to further enhance the security and efficiency of our patented secure communication links. VirnetX One™ is a security-as-a-service platform that protects enterprise applications, services, and infrastructure from cyber-attacks. Our platform allows government organizations, businesses, and other enterprises of all sizes to add a "security umbrella" as an added layer on top of their existing infrastructure to further reduce risk and bolster security against ever-growing cyberthreats to data, operating systems, other infrastructure products and gateway security controllers.

Our War Room™ software product provides safe and secure video conferencing meeting environment where sensitive communications and data is invisible to those not authorized to view it. War Room™ validates permissions of all the users, and devices requesting access to any secure meeting room prior to granting access. We believe our War Room™ will be an attractive solution for government and law enforcement agencies as well as all professional sectors such as legal, financial, and medical where limiting access to confidential data is a critical requirement.

Our VirnetX Matrix™ product provides superior security for internet-enabled enterprise applications and their connected devices, and for control systems currently deployed by those enterprises (e.g., file servers, data back-up systems, VPN/firewalls). VirnetX Matrix™ provides a true "zero-trust" access protection, "single-click" ease of use, and is a highly-effective added layer of protection that is deployed simply, without the need for changes to an enterprise's existing, in-place infrastructure. We believe VirnetX Matrix™ is an attractive solution for all businesses, cloud and on-premise application service providers, and original equipment manufacturers ("OEMs"), looking to improve visibility and management of their networks to mitigate morphing attacks on their networks and for real time access and control of their users.

We continue to augment our product strategy to provide secure AI to the marketplace. In addition to our investments with L2 Holdings, LLC ("OmniTeq"), an artificial intelligence and machine learning (AI/ML) solutions provider and OP Media, Inc, a dynamic software platform provider, we participated in a Cooperative Research and Development Agreement (CRADA) with the Air Force (AF) Research Laboratory Intelligence Systems Directorate (AFRL/RI) to facilitate collaboration on cybersecurity and Zero Trust technologies to support integrated surveillance and reconnaissance operations as well as AF and joint targeting processes. This CRADA continues through 2030 and allows VirnetX to apply for security clearances for its employees. We are also beginning to integrate AI/ML capabilities into VirnetX Matrix™ to enhance its zero-trust security, threat detection, and network resilience by enabling autonomous threat response, adaptive access control, and self-healing network architectures.

We have undertaken activities to commercialize our products and intellectual property in and outside the United States including VirnetX One™, War Room™, VirnetX Matrix™ and our Secured Domain Name Registry and Technology. We believe our product portfolio to secure devices and systems are suitable in areas such as national defense, local, state, Federal and foreign governments, critical infrastructure, law enforcement, healthcare, finance, legal, oil and gas, medical, and related support industries. We continue to actively pursue new sales opportunities in and outside of the United States.

Our employees include the core development team behind our inventions, technology, and software. Some members of this team have worked together for over twenty years and were on the same team that invented and developed this technology while working at Leidos, Inc., or Leidos, (f/k/a Science Applications International Corporation, or SAIC). The team has continued its research and development work to refine our unique network security technology and make it more secure and easy to deploy.

Our portfolio of intellectual property is the foundation of our business model. We currently own U.S. and foreign patents/validations/pending applications. Our patent portfolio is primarily focused on securing real-time communications over the Internet, and related services, and is used in all our technology and products, some of which were acquired by our principal operating subsidiary, VirnetX, Inc., from Leidos in 2006.

Litigation

We are subject to various legal proceedings, the outcomes of which are inherently uncertain. We record any potential gains related to legal proceedings only after cash is collected. We record a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. Resolution of legal matters in a manner inconsistent with management's expectations could have a material impact on our financial condition and operating results. See Note 12 in the notes to our consolidated financial statements for more information.

Commitments and Related Party Transactions

We lease our offices in Nevada under an operating lease with a third party expiring in October 2025. We recognize rent expense on a straight-line basis over the term of the lease.

We have a facility lease in Utah to be used for technical integration and as a training facility. This lease requires monthly payments and expires in April 2029.

We have a non-exclusive service agreement for the use of an aircraft from K2 Investment Fund LLC ("LLC") for business travel for our employees. Our Chief Executive Officer and Chief Administrative Officer are the managing partners of the LLC and control the equity interests of the LLC. We pay for the Company's business usage of the aircraft at a rate of \$9.8 per flight hour.

We have a facility lease in California, used for corporate, promotional and marketing purposes. The lease expires in 2035.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. The critical accounting policies we employ in the preparation of our consolidated financial statements are those which involve income taxes, fair value of financial instruments and stock-based compensation.

Use of Estimates

We prepare our consolidated financial statements in accordance with U.S. GAAP. In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, and expenses, as well as related disclosure of contingent assets and liabilities. In some cases, we could reasonably have used different accounting policies and estimates. In some cases, changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ materially from our estimates. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations will be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below. We have reviewed our critical accounting policies and estimates with the Audit Committee of our Board of Directors.

Investments

Investments classified as available-for-sale are recorded at fair market value. Unrealized gains and losses are reported as other comprehensive income. Realized gains and losses are recorded in income in the period they are realized using specific identification of each security's cost basis. We invest our excess cash primarily in highly liquid debt instruments including corporate, government and federal agency securities, with contractual maturities less than two years. By policy, we limit the amount of credit exposure to any one issuer.

We have elected the investment measurement alternative for other investments without readily determinable fair values. During 2023, we invested \$2,000 in L2 Holdings LLC and \$500 in OP Media Inc. These investments are

carried at our initial cost less any impairment because we do not have the ability to exercise significant influence over operating and financial matters. For these investments, we adjust the carrying value for any purchases or sales of our ownership interests. Periodically, we evaluate these investments for impairment. If we identify an impairment, we reduce the carrying value for the impairment loss with a charge to earnings. We have not identified any impairment as of December 31, 2024.

Income Taxes

We account for income taxes using the asset and liability method. The asset and liability method requires the recognition of deferred tax assets and liabilities for expected future tax consequences of temporary differences that currently exist between the tax basis and financial reporting basis of our assets and liabilities. We calculate current and deferred tax provisions based on estimates and assumptions that could differ from actual results reflected on the income tax returns filed during the following years. Adjustments based on filed returns are recorded when identified in the subsequent years. The effect on deferred taxes for a change in tax rates is recognized in income in the period that the tax rate change is enacted. In assessing our deferred tax assets, we consider whether it is more likely than not that all or some portion of the deferred tax assets will not be realized.

A valuation allowance is provided for deferred income tax assets when, in our judgment, based upon currently available information and other factors, it is more likely than not that all or a portion of such deferred income tax assets will not be realized. The determination of the need for a valuation allowance is based on an on-going evaluation of current information including, among other things, historical operating results, estimates of future earnings in different taxing jurisdictions and the expected timing of the reversals of temporary differences. We believe the determination to record a valuation allowance to reduce a deferred income tax asset is a significant accounting estimate because it is based, among other things, on an estimate of future taxable income in the United States and certain other jurisdictions, which is susceptible to change and may or may not occur, and because the impact of adjusting a valuation allowance may be material. In determining when to release the valuation allowance established against our net deferred income tax assets, we consider all available evidence, both positive and negative. We continually assess our ability to generate sufficient taxable income during future periods in which our deferred tax assets may be realized. If and when we believe it is more likely than not that we will recover our deferred tax assets, we will reverse the valuation allowance if any, as an income tax benefit in our statements of operations.

We account for our uncertain tax positions in accordance with U.S. GAAP. The U.S. GAAP method of accounting for uncertain tax positions utilizes a two-step approach to evaluate tax positions. Step one, recognition, requires evaluation of the tax position to determine if based solely on technical merits it is more likely than not to be sustained upon examination. Step two, measurement, is addressed only if a position is more likely than not to be sustained. In step two, the tax benefit is measured as the largest amount of benefit, determined on a cumulative probability basis, which is more likely than not to be realized upon ultimate settlement with tax authorities. If a position does not meet the more likely than not threshold for recognition in step one, no benefit is recorded until the first subsequent period in which the more likely than not standard is met, the issue is resolved with the taxing authority, or the statute of limitations expires. Positions previously recognized are derecognized when we subsequently determine the position no longer is more likely than not to be sustained. Evaluation of tax positions, their technical merits, and measurements using cumulative probability are highly subjective management estimates. Actual results could differ materially from these estimates.

Fair Value

Fair value is the price that would result from an orderly transaction between market participants at the measurement date. A fair value hierarchy prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). Level 2 measurements utilize either directly or indirectly observable inputs in markets other than quoted prices in active markets.

Our financial instruments are stated at amounts that equal, or approximate, fair value. When we estimate fair value, we utilize market data or assumptions that we believe market participants would use in pricing the financial instrument, including assumptions about risk and inputs to the valuation technique. We use valuation techniques, primarily the income and market approach, which maximizes the use of observable inputs and minimize the use of unobservable inputs for recurring fair value measurements.

Stock-based Compensation

We account for stock-based compensation using the fair value recognition method in accordance with U.S. GAAP. We recognize these compensation costs on a straight-line basis over the requisite service period of the award, which is generally a vesting term of 4 years. We recognize forfeitures, if any, when they occur. In addition, we record stock-based compensation expense for awards granted to non-employees at fair value of the consideration received or the fair value of the equity instruments issued, as they vest, over the performance period. See Note 6 in the notes to our consolidated financial statements for more information.

Results of Operations

Revenue

	<u>2024</u>	<u>2023</u>
Revenue.	\$5	\$7

Revenue generated in 2024 was \$5, compared to \$7 in 2023.

Research and Development Expenses

	<u>2024</u>	<u>2023</u>
Research and Development	\$6,038	\$9,713

Research and development costs include expenses paid to outside development consultants and compensation-related expenses for our engineering staff. Research and development costs are expensed as incurred. Our research and development expenses in 2024 were \$6,038 compared to \$9,713 in 2023. The decrease in 2024 was primarily due to a reduction in engineering compensation costs.

Selling, General and Administrative Expenses

	<u>2024</u>	<u>2023</u>
Selling, General and Administrative.	\$14,364	\$21,739

Selling, general and administrative expenses include compensation costs for management and administrative personnel, as well as expenses for outside legal, accounting, and consulting services. Our selling, general and administrative expenses in 2024 were \$14,364 compared to \$21,739 in 2023. The decrease in 2024 was primarily due to a reduction in legal and outside services as well as reduced compensation costs.

Interest and Other Income, net

	<u>2024</u>	<u>2023</u>
Interest and Other Income	\$2,225	\$3,495

Interest and other income in 2024 was \$2,225 compared to \$3,495 in 2023, due to decrease in investments.

Effective Income Tax Rate

A reconciliation of the United States federal statutory income tax rate to our effective income tax rate is as follows:

	<u>2024</u>	<u>2023</u>
United States federal statutory rate	21.00%	21.00%
State taxes, net of federal benefit.	(0.01)%	(0.01)%
Valuation allowance	(20.50)%	(20.31)%
Stock based compensation	(0.62)%	(0.58)%
R&D Credit.	1.55%	2.20%
Other	<u>(1.41)%</u>	<u>(2.02)%</u>
Effective income tax rate	<u>0.01%</u>	<u>0.28%</u>

The Company's effective tax rate for 2024 and 2023 was substantially lower than the statutory Federal income tax rate primarily due to our valuation allowance.

Liquidity and Capital Resources

As of December 31, 2024, our cash and cash equivalents totaled \$23,296 and our short-term investments totaled \$14,786 compared to \$26,289 and \$27,258, respectively, as of December 31, 2023. We expect that our cash and cash equivalents and short-term investments as of December 31, 2024, will be sufficient to fund our current level of selling, general and administration costs and provide related working capital for the foreseeable future. Over the longer term, we expect to derive the majority of our future revenue from license fees and royalties associated with our patent portfolio, technology, software and secure domain name registry and product sales.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Consistent with the rules applicable to "smaller reporting companies," we have omitted the information required by Item 7A.

Item 8. Financial Statements and Supplementary Data

Set forth below, are the audited consolidated financial statements for our company accompanied by all reports thereon of Farber Hass Hurley LLP (PCAOB No. 223).

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of VirnetX Holding Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of VirnetX Holding Corporation (the “Company”) as of December 31, 2024 and 2023, and the related consolidated statements of operations, comprehensive loss, stockholders’ equity, and cash flows for each of the years in the two-year period ended December 31, 2024, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Description of the Matter

Other Investments

As discussed in Note 2 to the financial statements, in 2023 the Company purchased equity interests in two private entities. Given that the entities do not have a readily determinable fair market value, the investments in the entities are measured at cost minus impairment, plus or minus adjustments resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer minus impairment, if any in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 321: Investments - Equity Securities. Management must consider various factors, including the Company’s ability to apply significant influence to the overall operations of the entities and also evaluate the investments as of each reporting period to determine if there are any factors that would impact the recorded value of Other Investments reflected on the consolidated balance sheet.

Our determination that the classification and the valuation of Other Investments is a critical audit matter results from the significant judgment by management when assessing the recognition method, the limited availability of public information related to the entities, and the subjectivity of the qualitative factors involved in the assessment. This in turn led to a high degree of auditor judgment, subjectivity, and effort in performing procedures relating to management's assessment of the recognition method and valuation of Other Investments.

Audit Procedures

Our principal audit procedures related to the Company's Other Investments included the following:

- We evaluated management's analysis regarding their ability to apply significant influence in the operations of the entities by obtaining information of the ownership percentage of the entities, composition of the respective boards, and any other relevant factors in determining their recognition method being recognized as cost in accordance with Accounting Standards Codification 321.
- We also evaluated management's assessment of impairment factors or any observable transactions of the entities through the year to determine whether an adjustment in the recognized value was necessary. This includes testing management's internal analysis as well as reviewing for any publicly available data regarding any factors or events that could impact the entities' values.

/s/ Farber Hass Hurley LLP

We have served as the Company's auditor since 2008.

Chatsworth, California

March 17, 2025

VIRNETX HOLDING CORPORATION
CONSOLIDATED BALANCE SHEETS
(in thousands, except share amounts)

	As of December 31, 2024	As of December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 23,296	\$ 26,289
Investments available for sale	14,786	27,258
Accounts receivables	—	2
Prepaid expenses and other current assets	122	282
Total current assets	<u>38,204</u>	<u>53,831</u>
Prepaid expenses and other assets	8,838	4,014
Property and equipment, net	67	67
Other investments	2,500	2,500
Total assets	<u>\$ 49,609</u>	<u>\$ 60,412</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 336	\$ 440
Accrued payroll and related expenses	257	316
Other liabilities, current	6,602	498
Total current liabilities	<u>7,195</u>	<u>1,254</u>
Other liabilities	2,791	3,145
Total liabilities	<u>9,986</u>	<u>4,399</u>
Commitments and contingencies (Note 4)		
Stockholders' equity:		
Preferred stock, par value \$0.0001 per share Authorized: 10,000,000 shares at December 31, 2024 and December 31, 2023, Issued and outstanding: 0 shares at December 31, 2024 and December 31, 2023	—	—
Common stock, par value \$0.0001 per share		
Authorized: 100,000,000 shares at December 31, 2024 and December 31, 2023, Issued and outstanding: 4,238,581 and 3,618,431 shares, at December 31, 2024 and December 31, 2023, respectively	—	—
Additional paid-in capital	244,293	242,520
Accumulated deficit	(204,670)	(186,495)
Accumulated other comprehensive loss	—	(12)
Total stockholders' equity	<u>39,623</u>	<u>56,013</u>
Total liabilities and stockholders' equity	<u>\$ 49,609</u>	<u>\$ 60,412</u>

See accompanying notes to consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	Year Ended December 31, 2024	Year Ended December 31, 2023
Revenue	\$ 5	\$ 7
Operating expense:		
Research and development	6,038	9,713
Selling, general and administrative expenses	<u>14,364</u>	<u>21,739</u>
Total operating expense	<u>20,402</u>	<u>31,452</u>
(Loss) from operations	(20,397)	(31,445)
Interest and other income, net	<u>2,225</u>	<u>3,495</u>
(Loss) before taxes	(18,172)	(27,950)
Income tax (provision) benefit	<u>(3)</u>	<u>79</u>
Net (loss)	<u>\$(18,175)</u>	<u>\$(27,871)</u>
Basic (loss) per share	\$ (5.05)	\$ (7.79)
Diluted (loss) per share	<u>\$ (5.05)</u>	<u>\$ (7.79)</u>
Weighted average shares outstanding basic	<u>3,596</u>	<u>3,579</u>
Weighted average shares outstanding diluted	<u><u>3,596</u></u>	<u><u>3,579</u></u>

See accompanying notes to consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS)
(in thousands)

	<u>Year Ended December 31, 2024</u>	<u>Year Ended December 31, 2023</u>
Net (loss)	\$(18,175)	\$(27,871)
Other comprehensive (loss) income, net of tax:		
Change in unrealized gain on investments, net	15	306
Change in foreign currency translation, net.	<u>(3)</u>	<u>(4)</u>
Total other comprehensive gain, net of tax	<u>12</u>	<u>302</u>
Comprehensive (loss)	<u><u>\$(18,163)</u></u>	<u><u>\$(27,569)</u></u>

See accompanying notes to consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Year Ended	
	December 31,	
	2024	2023
Total shareholders' equity, beginning balances	\$ 56,013	\$ 152,244
Common stock and additional paid-in capital:		
Beginning balances	242,520	239,753
Common stock issued for options/RSUs/RS, net	(129)	(11)
Stock-based compensation	1,902	2,778
Ending balances	244,293	242,520
Accumulated deficit		
Beginning balances	(186,495)	(87,195)
Net (loss)	(18,175)	(27,871)
Dividends	—	(71,429)
Ending balances	(204,670)	(186,495)
Accumulated other comprehensive loss:		
Beginning balances	(12)	(314)
Change in unrealized investment (loss) gain, net	15	306
Change in foreign currency translation, net	(3)	(4)
Ending balances	—	(12)
Total shareholders' equity, ending balances	\$ 39,623	\$ 56,013
Dividends per share	\$ —	\$ 20

See accompanying notes to consolidated financial statements.

VIRNETX HOLDING CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31, 2024	Year Ended December 31, 2023
Cash flows from operating activities:		
Net (loss)	\$(18,175)	\$(27,871)
Adjustments to reconcile net (loss) to net cash from operating activities:		
Depreciation	21	9
Stock-based compensation	1,902	2,778
Bad debt	1	15
Changes in assets and liabilities:		
Prepaid expenses and other current assets	848	(3,369)
Accounts payable and accrued liabilities	(104)	67
Other liabilities	238	3,596
Accrued payroll and related expenses	(59)	5
Accounts receivable	1	(3)
Net cash used in operating activities	<u>(15,327)</u>	<u>(24,773)</u>
Cash flows from investing activities:		
Purchase of property and equipment	(22)	(65)
Purchase of investments at cost	—	(2,500)
Purchase of investments	(28,625)	(47,215)
Proceeds from sale or maturity of investments	41,110	85,721
Net cash provided by investing activities	<u>12,463</u>	<u>35,941</u>
Cash flows from financing activities:		
Dividend	—	(71,429)
Withholding taxes paid on cashless exercise of restricted stock and restricted stock units	(129)	(11)
Net cash used in financing activities	<u>(129)</u>	<u>(71,440)</u>
Net (decrease) in cash and cash equivalents	(2,993)	(60,272)
Cash and cash equivalents, beginning of period	26,289	86,561
Cash and cash equivalents, end of period	\$ 23,296	\$ 26,289
Cash paid for income taxes	<u>\$ 3</u>	<u>—</u>
Non-cash transaction		
ROU asset and lease liability	<u>\$ 5,512</u>	<u>\$ 3,689</u>

See accompanying notes to consolidated financial statements.

VIRNETX HOLDING CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(in thousands except share, per share and per device amounts)

Note 1 – Formation and Business of the Company

VirnetX Holding Corporation, which we refer to as “we”, “us”, “our”, “the Company” or “VirnetX”, is engaged in the business of commercializing a portfolio of patents. We seek to derive revenue from selling our software products including VirnetX War Room™ and VirnetX Matrix™ and licensing our technology, including VirnetX One™, to various original equipment manufacturers (“OEMs”) and others, that use our technologies in the development and manufacturing of their own products within the IP-telephony, mobility, fixed-mobile convergence, and unified communications markets or who seek to secure their systems and applications.

Our portfolio of intellectual property is the foundation of our business model. We currently own U.S. and foreign patents/validations/pending applications. Our patent portfolio is primarily focused on securing real-time communications over the Internet, as well as related services such as the establishment and maintenance of a secure domain name registry. Our patented methods also have additional applications in the key areas of device operating systems and network security. The subject matter of all our U.S. and foreign patents and pending applications relates generally to securing communications over the Internet and such covers all our technology and other products. Some of our issued U.S. and foreign patents expire at various times during the period from 2024 to 2034.

Note 2 – Summary of Significant Accounting Policies

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. The critical accounting policies we employ in the preparation of our consolidated financial statements are those which involve impairment of long-lived assets, income taxes, fair value of financial instruments and stock-based compensation.

Use of Estimates

We prepare our consolidated financial statements in accordance with U.S. GAAP. In doing so, we have to make estimates and assumptions that affect our reported amounts of assets, liabilities, revenues, and expenses, as well as related disclosure of contingent assets and liabilities. In some cases, we could reasonably have used different accounting policies and estimates. In some cases, changes in the accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ materially from our estimates. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations will be affected. We base our estimates on past experience and other assumptions that we believe are reasonable under the circumstances, and we evaluate these estimates on an ongoing basis. We refer to accounting estimates of this type as critical accounting policies and estimates, which we discuss further below. We have reviewed our critical accounting policies and estimates with the Audit Committee of our Board of Directors.

Basis of Consolidation

The consolidated financial statements include the accounts of VirnetX Holding Corporation and our wholly owned subsidiaries. All intercompany balances and transactions have been eliminated.

Revenue Recognition

The Company derives revenue from licensing and royalty fees from contracts with customers which often span several years. We account for this revenue in accordance with Accounting Standards Codification (“ASC”) Topic 606, Revenue from Contracts with Customers. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. A contract’s transaction price is allocated to each distinct performance obligation and recognized as revenue when, or as, the performance obligation is satisfied. Our revenue arrangements may consist of multiple-element arrangements, with revenue for each unit of accounting recognized as the product or service is delivered to the customer.

With the licensing of our patents, performance obligations are generally satisfied at a point in time as work is complete when our patent rights are transferred to our customers. We generally have no further obligation to our customers regarding our technology.

Certain contracts may require our customers to enter into a hosting arrangement with us and for these arrangements, revenue is recognized over time, generally over the life of the servicing contract.

The Company actively monitors and enforces its intellectual property (“IP”) rights, including seeking appropriate compensation from third parties that utilize the Company’s IP without a license. As a result, the Company may, from time to time, receive payments as part of a settlement or compensation for a patent infringement dispute. Proceeds received are allocated to each element identified in the settlement or compensation, based on the fair value of each element. Generally, settlements and compensation may include the following elements: the value of a license or royalty agreement, cost reimbursement, damages, and interest. Elements identified related to licensing and royalty are recognized as revenue. Elements identified as reimbursed costs are generally recorded as a reduction to the reported expenses. Elements identified as damages or interest are generally recorded in other income in the condensed consolidated statement of operations.

Licensing Costs

Included in operating expenses are licensing costs.

Contingent Gains

ASC Topic 450-30-25, Contingent Gains, prohibits recognition of contingent gains until realized. Accordingly, we do not record contingent gains ahead of such realization. Management generally considers any such gains as realized only upon the collection of cash.

Cash and Cash Equivalents

We consider all highly liquid investments purchased with original maturities of three months or less at the date of purchase to be cash equivalents. Our cash and cash equivalents are not subject to significant interest rate risk due to the short maturities of these investments.

Investments

Investments classified as available-for-sale are recorded at fair market value. Unrealized gains and losses are reported as other comprehensive income. Realized gains and losses are recorded in income in the period they are realized using specific identification of each security’s cost basis. We invest our excess cash primarily in highly liquid debt instruments including corporate, government and federal agency securities, with contractual maturities less than two years. By policy, we limit the amount of credit exposure to any one issuer.

We elected the investment measurement alternative for other investments without readily determinable fair values. During 2023, we invested \$2,000 in L2 Holdings LLC and \$500 in OP Media Inc. These investments are carried at our initial cost because we do not have the ability to exercise significant influence over operating and financial matters. For these investments, we adjust the carrying value for any purchases or sales of our ownership interests and other observable transactions. Periodically, we evaluate these investments for impairment. If we identify an impairment, we reduce the carrying value for the impairment loss with a charge to earnings. We have not identified any impairment as of December 31, 2024.

Concentration of Credit Risk and Other Risks and Uncertainties

Our cash and cash equivalents are primarily maintained at two major financial institutions in the United States. Deposits held with these financial institutions may exceed the amount of insurance provided on such deposits. A portion of those balances are insured by the Federal Deposit Insurance Corporation (“FDIC”). In 2024, we had, at times, funds that were uninsured. We do not believe that we are subject to any unusual financial risk beyond the normal risk associated with commercial banking relationships. We have not experienced any losses on our deposits of cash and cash equivalents.

Fair Value

The carrying amounts of our financial instruments, including cash equivalents, accounts payable, and accrued liabilities, approximate fair value because of their generally short maturities.

Property and Equipment

Property and equipment are stated at historical cost, less accumulated depreciation, and amortization. Depreciation and amortization are computed using the accelerated and straight-line methods over the estimated useful lives of the assets, which range from five to seven years. Repair and maintenance costs are charged to expense as incurred.

Leases

The Company determines if an arrangement is a lease at inception in accordance with ASC Topic 842. Operating lease right-of-use (“ROU”) assets are included in Prepaid expenses, and other assets, and lease liabilities are included in other liabilities in the Condensed Consolidated Balance Sheets. ROU assets represent the Company’s right to use an underlying asset for the lease term and lease liabilities represent the Company’s obligation to make lease payments arising from the lease. ROU assets and lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term, using the incremental borrowing rate, U.S. prime rate, of 8.5% in both 2023 and 2024.

Intangible Assets

We record intangible assets at cost, less accumulated amortization. Amortization of intangible assets is provided over their estimated useful lives, which can range from 3 to 15 years, on either a straight-line basis or as revenue is generated by the assets.

Impairment of Long-Lived Assets

We identify and record impairment losses on long-lived assets used in operations when events and changes in circumstances indicate that the carrying amount of an asset might not be recoverable, but not less than annually. Recoverability is measured by comparison of the anticipated future net undiscounted cash flows to the related assets’ carrying value. If such assets are deemed impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset.

Research and Development

Research and development costs include expenses paid to outside development consultants and compensation related expenses for our engineering staff. Research and development costs are expensed as incurred.

Income Taxes

We account for income taxes using the asset and liability method. The asset and liability method requires the recognition of deferred tax assets and liabilities for expected future tax consequences of temporary differences that currently exist between the tax basis and financial reporting basis of our assets and liabilities. We calculate current and deferred tax provisions based on estimates and assumptions that could differ from actual results reflected on the income tax returns filed during the following years. Adjustments based on filed returns are recorded when identified in the subsequent years. The effect on deferred taxes for a change in tax rates is recognized in income in the period that the tax rate change is enacted. In assessing our deferred tax assets, we consider whether it is more likely than not that all or some portion of the deferred tax assets will not be realized.

The 2017 U.S. Tax Cuts and Jobs Act changes IRC Section 174, regarding capitalization of book research and development (“R&D”) expenses for income tax purposes. Effective for tax years beginning in 2022 IRC Section 174 requires the capitalization of book R&D expenses which are capitalized and amortized over 5 years for domestic R&D expenses and over 15 years for foreign R&D expenses. To date there has been limited guidance from the IRS on how to quantify the amount of book R&D expenses subject to capitalization, including the indirect expenses supporting the R&D function. Due to the limited guidance, some assumptions were made in our estimates.

A valuation allowance is provided for deferred income tax assets when, in our judgment, based upon currently available information and other factors, it is more likely than not that all or a portion of such deferred income tax assets will not be realized. The determination of the need for a valuation allowance is based on an on-going evaluation of current information including, among other things, historical operating results, estimates of future earnings in different taxing jurisdictions and the expected timing of the reversals of temporary differences. We believe the determination to record a valuation allowance to reduce a deferred income tax asset is a significant accounting estimate because it is based, among other things, on an estimate of future taxable income in the United States and

certain other jurisdictions, which is susceptible to change and may or may not occur, and because the impact of adjusting a valuation allowance may be material. In determining when to release the valuation allowance established against our net deferred income tax assets, we consider all available evidence, both positive and negative. We continually assess our ability to generate sufficient taxable income during future periods in which our deferred tax assets may be realized. If and when we believe it is more likely than not that we will recover our deferred tax assets, we will reverse the valuation allowance as an income tax benefit in our statements of operations.

We account for our uncertain tax positions in accordance with U.S. GAAP, which utilizes a two-step approach to evaluate tax positions. Step one, recognition, requires evaluation of the tax position to determine if based solely on technical merits it is more likely than not to be sustained upon examination. Step two, measurement, is addressed only if a position is more likely than not to be sustained. In step two, the tax benefit is measured as the largest amount of benefit, determined on a cumulative probability basis, which is more likely than not to be realized upon ultimate settlement with tax authorities. If a position does not meet the more likely than not threshold for recognition in step one, no benefit is recorded until the first subsequent period in which the more likely than not standard is met, the issue is resolved with the taxing authority, or the statute of limitations expires. Positions previously recognized are derecognized when we subsequently determine the position no longer is more likely than not to be sustained. Evaluation of tax positions, their technical merits, and measurements using cumulative probability are highly subjective management estimates. Actual results could differ materially from these estimates.

Stock-Based Compensation

We account for stock-based compensation using the fair value recognition method in accordance with U.S. GAAP. We recognize these compensation costs on a straight-line basis over the requisite service period of the award, which is generally a vesting term of 4 years. We recognize forfeitures, if any, when they occur. In addition, we record stock-based compensation expense for awards granted to non-employees at fair value of the consideration received or the fair value of the equity instruments issued, as they vest, over the performance period (See Note 6 - Stock-Based Compensation).

Earnings per Share

Basic earnings per share are computed by dividing earnings available to common stockholders by the weighted average number of outstanding common shares during the period. Diluted earnings per share is computed by dividing net income by the weighted average number of shares outstanding during the period increased to include the number of additional shares of common stock that would have been outstanding if the potentially dilutive securities had been issued. Additionally, weighted average shares outstanding for both basic and diluted earnings per share include all vested restricted shares issued and outstanding.

New Accounting Pronouncements

In November 2023, the FASB issued *ASU 2023-07, Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*. The amendments in this ASU require disclosures, on an annual and interim basis, of significant segment expenses that are regularly provided to the chief operating officer decision maker (“CODM”), as well as the aggregate amount of other segment items included in the reported measure of segment profit or loss. The ASU requires that a public entity disclose the title and position of the CODM and an explanation of how the CODM uses the reported measure(s) of segment profit or loss in assessing segment performance and deciding how to allocate resources. The Company adopted ASU 2023-07 on January 1, 2024.

In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*, which requires disaggregated information about an entity’s effective tax rate reconciliation as well as information on income tax paid. The guidance in this ASU is effective for public companies with annual periods beginning after December 15, 2024. We plan to adopt the guidance for the fiscal year ending December 31, 2025. We are currently evaluating the effect adoption of this ASU will have on our consolidated financial statements.

Note 3 – Property and Equipment

Our major classes of property and equipment were as follows:

	December 31	
	2024	2023
Office furniture	\$ 165	\$ 143
Computer equipment	92	92
Total	257	235
Less accumulated depreciation	(190)	(168)
Total property and equipment, net	<u>\$ 67</u>	<u>\$ 67</u>

Depreciation expense for 2024 and 2023 was \$21 and \$9, respectively.

Note 4 – Commitments, Contingencies and Related Party Transactions

We have a non-exclusive service agreement for the use of an aircraft from K2 Investment Fund LLC (“LLC”) for business travel for our employees. Our Chief Executive Officer and Chief Administrative Officer are the managing partners and control the equity interests of the LLC. The agreement provided for the use of the plane at an initial rate of \$8.1 per flight hour, which increased to \$9.8 per flight hour in April 2024, includes no minimum usage requirement, contains other terms and conditions normal in such transactions and can be cancelled by either us or the LLC with 30 days’ notice. Neither party has exercised their termination rights. We incurred approximately \$1,556 and \$1,097 in rental fees and reimbursements to the LLC in 2024 and 2023, respectively.

See Note 13 for further discussion of our lease commitments.

Note 5 – Stock Plan

Our stockholders approved the Amended and Restated Equity Incentive Plan (the “A&R Plan”) at our annual shareholders’ meeting in June 2024, which added 1,000,000 shares to the plan. Our prior plan expired March 29, 2023; no further awards will be made under the prior plan, and the A&R Plan will govern awards granted under the prior plan. The A&R Plan provides for the granting of stock options, restricted stock units (“RSUs”) and restricted stock. Options granted under the A&R Plan are granted with an exercise price equal to the fair value of the of our stock on the date of grant. RSUs and restricted stock are granted at the fair value of our stock on the date of grant because they have no exercise price. The fair value of options, RSUs and restricted stock are expensed over the vesting periods. All options, RSUs and restricted stock are subject to forfeiture if service terminates prior to the shares vesting. At December 31, 2024, there were 575,055 shares available for grant under the A&R Plan.

Note 6 – Stock-Based Compensation

The following tables summarize information and activity under the plan for the indicated periods.

Options Outstanding				Options Vested and Exercisable		
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price
\$ 10.00 - 29.80	35,438	7.45	\$28.47	24,219	7.47	\$27.85
\$ 47.00 - 138.40	222,254	3.81	\$90.17	216,883	3.74	\$90.32
	<u>257,692</u>	<u>4.31</u>	<u>\$81.69</u>	<u>241,102</u>	<u>4.12</u>	<u>\$84.04</u>

	<u>Number</u>	<u>Options</u>		
		<u>Weighted Average Exercise Price</u>	<u>Weighted Average Remaining Contractual Life (Years)</u>	<u>Aggregate Intrinsic Value</u>
Outstanding, December 31, 2022.....	340,798	\$106.60	—	\$—
Options granted.....	1,875	10.00	—	—
Options exercised.....	—	—	—	—
Options cancelled.....	(12,656)	510.21	—	—
Outstanding, December 31, 2023.....	330,017	\$ 90.63	—	\$—
Options granted.....	—	—	—	—
Options exercised.....	—	—	—	—
Options cancelled.....	(72,325)	123.61	—	—
Outstanding, December 31, 2024.....	257,692	\$ 81.69	4.31	\$—
Options exercisable, December 31, 2024.....	241,102	\$ 84.04	4.12	\$—

	<u>Number</u>	<u>RSUs</u>	
		<u>Weighted Average Grant Date Fair Value</u>	<u>Aggregate Intrinsic Value</u>
Outstanding, December 31, 2022.....	27,605	\$73.00	\$—
RSUs granted.....	1,250	10.00	—
RSUs vested.....	(11,405)	83.81	—
RSUs cancelled.....	—	—	—
Outstanding, December 31, 2023.....	17,450	\$60.81	\$—
RSUs granted.....	—	—	—
RSUs vested.....	(7,971)	70.88	—
RSUs cancelled.....	(3,376)	58.91	—
Outstanding, December 31, 2024.....	6,103	\$49.20	\$—

	<u>Number</u>	<u>Restricted Stock</u>	
		<u>Weighted Average Grant Date Fair Value</u>	<u>Aggregate Intrinsic Value</u>
Outstanding, December 31, 2022.....	—	\$ —	\$ —
Restricted stock granted.....	36,927	9.12	—
Restricted stock vested.....	(3,617)	9.19	—
Restricted stock cancelled.....	(604)	9.60	—
Outstanding, December 31, 2023.....	32,706	\$9.11	\$ —
Restricted stock granted.....	649,000	5.91	—
Restricted stock vested.....	(12,866)	9.35	—
Restricted stock cancelled.....	(36,025)	7.97	—
Outstanding, December 31, 2024.....	632,815	\$5.95	\$1,215

Intrinsic value is calculated as the difference between the per-share market price of our common stock on the last trading day of 2024, which was \$7.85 and the grant price of the awards. For awards exercised, the intrinsic value is the difference between market price and the exercise price on the date of exercise.

Stock-based compensation expense is included in operating expense for each period as follows:

<u>Stock-Based Compensation by Type of Award</u>	<u>Year Ended December 31, 2024</u>	<u>Year Ended December 31, 2023</u>
Stock options.....	\$1,240	\$1,960
RSUs.....	333	778
Restricted stock.....	329	40
Total stock-based compensation expense.....	<u>\$1,902</u>	<u>\$2,778</u>

As of December 31, 2024, there was \$4,412 of unrecognized stock-based compensation expense; \$551 related to unvested stock options, \$162 related to unvested RSUs, and \$3,699 related to unvested restricted stock. These costs are expected to be recognized over a weighted-average period of 1.14 years for options, 1.12 years for RSUs, and 3.53 years for restricted stock.

The fair value of each option grant was estimated on the date of grant using the Black-Scholes option pricing model using the following weighted average assumptions:

	Year Ended December 31, 2024	Year Ended December 31, 2023
Expected stock price volatility.....	—%	81.39%
Risk-free interest rate.....	—%	3.9%
Expected life term.....	—	5.5 years
Expected dividends.....	—%	0%

Based on the Black-Scholes option pricing model, the weighted average estimated fair value of employee stock options granted was \$6.96 per share during 2023. The expected life was determined using the simplified method outlined in ASC 718, “*Compensation - Stock Compensation*”. Expected volatility of the stock options was based upon historical data and other relevant factors.

Note 7 – Earnings Per Share

Basic earnings per share are based on the weighted average number of shares outstanding for a period. Diluted earnings per share are based upon the weighted average number of shares and potentially dilutive common shares outstanding. Potential common shares outstanding principally include stock options, RSUs and unvested restricted stock under our stock plan and warrants. During 2024 and 2023 we incurred losses; therefore, the effect of any common stock equivalent would be anti-dilutive.

The table below sets forth the basic and diluted loss per share calculations:

	Year Ended December 31,	
	2024	2023
Net (loss).....	\$(18,175)	\$(27,871)
Basic weighted average number of shares outstanding.....	3,596	3,579
Effect of dilutive securities.....	—	—
Diluted weighted average number of shares outstanding.....	3,596	3,579
Basic (loss) per share.....	\$ (5.05)	\$ (7.79)
Diluted (loss) per share.....	\$ (5.05)	\$ (7.79)

Note 8 – Common Stock

Each share of common stock has the right to one vote. The holders of common stock are entitled to receive dividends whenever funds are legally available and when declared by our Board of Directors, subject to the prior rights of holders of all classes of stock outstanding having priority rights as to dividends. Our amended and restated certificate of incorporation authorize us to issue up to 100,000,000 shares of \$0.0001 par value common stock.

Effective October 25, 2023, every 20 shares of our common stock outstanding was combined into one share of common stock. Proportional adjustments were also made to the number of restricted stock, common stock issuable upon the exercise of options, warrants as well as common stock issuable upon the vesting of RSUs. The exercise price of all equity awards were also proportionally adjusted. The accompanying financial statements include the effect of this adjustment on all periods presented.

Dividends

In 2023, we paid a one-time capital dividend of \$20 per share of common stock to shareholders. The timing and amount of future dividends, if any, will depend on market conditions, corporate business and financial considerations and regulatory requirements.

Warrants

In 2020, we issued warrants for the purchase of 1,250 shares of common stock at an exercise price of \$115 per share, exercisable on the date of grant, expiring in April 2025. The weighted average fair value at the grant date was \$83.20 per warrant. The fair value at the grant date was estimated utilizing the Black-Scholes valuation model with the following weighted average assumptions (i) dividend yield on our common stock of 0 percent (ii) expected stock price volatility of 97 percent (iii) a risk-free interest rate of 0.27 percent and (iv) and expected option term of 5 years.

Warrants Issued	Exercise Price	Outstanding and Exercisable December 31, 2024	Issued	Exercised	Terminated / Cancelled	Outstanding and Exercisable December 31, 2023	Expiration Date
1,250	\$115	1,250	—	—	—	1,250	April 30, 2025

Note 9 – Employee Benefit Plan

We sponsor a defined contribution 401(k) plan covering substantially all our employees. Our matching contribution to the plan was approximately \$189 and \$229 in 2024 and 2023, respectively.

Note 10 – Income Taxes

The income tax provision (benefit) is comprised of the following:

	Year Ended December 31, 2024	Year Ended December 31, 2023
Current:		
Federal	\$—	\$ —
State	3	2
Foreign	—	—
	3	2
Deferred:		
Federal	—	(79)
State	—	(2)
	—	(81)
Total income tax (benefit) provision	\$ 3	\$(79)

A reconciliation of the United States federal statutory income tax rate to our effective income tax rate is as follows:

	Year Ended December 31, 2024	Year Ended December 31, 2023
United States federal statutory rate	21.00%	21.00%
State taxes, net of federal benefit	(0.01)%	(0.01)%
Valuation allowance	(20.50)%	(20.31)%
Stock based compensation	(0.62)%	(0.58)%
R&D Credit	1.55%	2.20%
Other	(1.41)%	(2.02)%
Effective income tax rate	0.01%	0.28%

Deferred tax assets (liabilities) consist of the following:

	As of December 31, 2024	As of December 31, 2023
Deferred tax assets:		
Reserves and accruals	\$ 2,066	\$ 65
Research and development credits and other credits	1,115	1,110
Net operating loss carry forward	17,907	15,262
Stock based compensation	3,451	4,360

	As of December 31, 2024	As of December 31, 2023
Other	2,796	2,382
Total deferred tax assets	\$ 27,335	\$ 23,179
Valuation allowance	(25,460)	(23,179)
Deferred tax assets after valuation allowance	\$ 1,875	—
Total deferred tax liability		
ROU	\$ (1,870)	—
Depreciation and amortization	(5)	—
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

Pursuant to IRC Section 174, we capitalized direct and indirect research and development costs for our tax return totaling \$5,251 in 2024 \$8,599 in 2023, of which \$3,273 will be amortized in our 2024 tax return and \$1,888 will be amortized in our 2023 tax return. Unamortized capitalized R&D expenditures as of December 31, 2024 total \$18,989 and after deducting amortization amounts the net capitalized R&D expenditures total \$13,315.

At December 31, 2024, we had federal and state net operating loss carryforwards of approximately \$85,241 and \$109,618, respectively. Federal net operating loss carryforwards do not expire. None of the state net operating loss carryforward is apportioned to a deferred tax asset, because currently we do not have operations in states where losses accumulated. The state net operating loss carryforward begins expiring in 2029. We provide valuation allowances for our net deferred tax assets, including NOL carryforwards generated during the years, based on our evaluation of positive and negative evidence, including our history of operating losses and the uncertainty of generating future taxable income that would enable us to realize our deferred tax assets.

We are required to recognize the financial statement effects of a tax position when it is more likely than not, based on the technical merits, that the position will be sustained upon examination. At December 31, 2024, we have no uncertain tax positions. Our policy is to recognize interest and penalties, if any, accrued on any unrecognized tax benefits, as a component of income tax expense. We had no interest or penalties accrued in 2024.

Our tax years for 2005 and forward are subject to examination by the U.S. tax authority and various state tax authorities. These years are open because NOLs and tax credits generated in these years were utilized in 2020. The statute of limitations for these years shall expire three years after the date of filing 2020 income tax returns.

Note 11 – Fair Value Measurement

Fair value is the price that would result from an orderly transaction between market participants at the measurement date. A fair value hierarchy prioritizes the inputs used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). Level 2 measurements utilize either directly or indirectly observable inputs in markets other than quoted prices in active markets.

Our financial instruments are stated at amounts that equal, or approximate, fair value. When we estimate fair value, we utilize market data or assumptions that we believe market participants would use in pricing the financial instrument, including assumptions about risk and inputs to the valuation technique. We use valuation techniques, primarily the income and market approach, which maximizes the use of observable inputs and minimize the use of unobservable inputs for recurring fair value measurements.

Mutual funds: Valued at the quoted net asset value (NAV) of shares held.

U.S. agency and treasury securities: Fair value measured at the closing price reported on the active market on which the individual securities are traded.

The following table shows the adjusted cost, gross unrealized gains, gross unrealized losses, and fair value of our financial assets as of December 31, 2024 and 2023 (in thousands):

	December 31, 2024					
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Investments Available for Sale
Cash	\$ 1,777	\$—	\$—	\$ 1,777	\$ 1,777	\$ —
Level 1:						
Mutual funds	20,077	—	—	20,077	20,077	—
U.S. agency and treasury securities	16,204	25	(1)	16,228	1,442	14,786
	<u>36,281</u>	<u>25</u>	<u>(1)</u>	<u>36,305</u>	<u>21,519</u>	<u>14,786</u>
Total	<u>\$38,058</u>	<u>\$25</u>	<u>\$ (1)</u>	<u>\$38,082</u>	<u>\$23,296</u>	<u>\$14,786</u>
	December 31, 2023					
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Investments Available for Sale
Cash	\$ 1,452	\$—	\$ —	\$ 1,452	\$ 1,452	\$ —
Level 1:						
Mutual funds	20,040	—	—	20,040	20,040	—
U.S. agency and treasury securities	32,046	27	(18)	32,055	4,797	27,258
	<u>52,086</u>	<u>27</u>	<u>(18)</u>	<u>52,095</u>	<u>24,837</u>	<u>27,258</u>
Total	<u>\$53,538</u>	<u>\$27</u>	<u>\$ (18)</u>	<u>\$53,547</u>	<u>\$26,289</u>	<u>\$27,258</u>

The maturities of our investments generally range from within one to two years. Actual maturities could differ from contractual maturities due to call or prepayment provisions.

Note 12 – Litigation

From time to time, we are subject to various legal proceedings, the outcomes of which are inherently uncertain. We record any potential gains related to legal proceedings only after cash is collected. We record a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. As additional information becomes available, we reassess our potential liability and may revise our estimates. Such resolutions could have a material impact on future quarterly or annual results of operations.

One or more potential intellectual property infringement claims may also be available to us against certain other companies who have the resources to defend against any such claims. Although we believe these potential claims are likely valid, commencing a lawsuit can be expensive and time-consuming, and there is no assurance that we could prevail on such potential claims if we made them.

Note 13 – Leases

In October 2023, we renewed our lease for office space in Nevada with a third party recording an ROU asset and lease liability of \$102. The lease requires monthly payments of \$4.6 and expires in October 2025. At December 31, 2024 and 2023, our ROU asset and lease liability totaled \$42 and \$93, respectively. Lease expense totaled \$56 in 2024 and \$55 in 2023.

In October 2023, we executed a facility lease in Utah to be used for technical integration and as a training facility recording an ROU asset and a lease liability of \$3,587. This operating lease requires monthly payments starting at \$72, includes periodic increases, provides six months of free rent, and expires in April 2029. At December 31, 2024, our ROU asset and lease liability totaled \$2,963 and \$3,430, respectively. At December 31, 2023, our ROU asset and lease liability totaled \$3,479 and \$3,546, respectively. Lease expense totaled \$838 in 2024 and \$140 in 2023.

The weighted average remaining life of the office and facility leases discussed above is approximately 8 years, and the related lease liability is as follows:

Due in 2025	\$ 6,946
Due in 2026	\$ 927
Due in 2027	\$ 954
Due in 2028	\$ 983
Thereafter	\$ 336
Total undiscounted lease liability	\$10,146
Less: imputed interest	\$ (757)
Total lease liability	<u>\$ 9,389</u>

We also lease a facility for corporate promotional and marketing purposes in California which was prepaid at inception and expires in 2025. In March 2024, we renewed the lease recording an ROU asset and lease liability of \$5,512. The renewal period begins in 2025, continues for 10 years through 2035, requires either a single payment of \$6,000, or annual payments each March, beginning in 2025 starting at \$600 and increasing annually for a total commitment of approximately \$7,500. (In January 2025, the Company elected the 10 annual payments option which will result in an adjustment to the carrying amount of the ROU asset and lease liability of just over \$600.) At December 31, 2024, the ROU asset totaled \$5,739 and our lease liability totaled \$5,917; at December 31, 2023, the ROU asset totaled \$349 and our lease liability was nil. Lease expense totaled \$527 in 2024 and \$300 in 2023.

We have a service agreement for the use of an aircraft from a related party discussed in more detail in Note 4. We incurred approximately \$1,556 and \$1,097 in rental fees and reimbursements to the LLC in 2024 and 2023, respectively.

Note 14 - Segment Reporting

The Company views its operations and makes decisions regarding how to allocate resources and manages its business as one reportable segment and one reporting unit. The Company's Chief Executive Officer, who is the chief operating decision maker ("CODM"), regularly assesses performance of the aggregated single operating and reporting segment and decides how to allocate resources based on net income calculated on the same basis as net income reported in the Company's consolidated statements of income and other comprehensive income. The CODM is also regularly provided with expense information at a level consistent with that disclosed in the Company's consolidated statements of income and other comprehensive income.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures**Evaluation of Disclosure Controls and Procedures**

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, December 31, 2024.

The purpose of this evaluation was to determine whether as of December 31, 2024 our disclosure controls and procedures were effective to provide reasonable assurance that the information we are required to disclose in our filings with the SEC, (i) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Based on their evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that as of December 31, 2024, our disclosure controls and procedures were effective.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls over financial reporting (as such term is defined in rules 13a-15(f) under the Securities Exchange Act of 1934, as amended) during the fiscal year ended December 31, 2024, that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of our financial reporting for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of our financial statements; providing reasonable assurance that receipts and expenditures of Company assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of Company assets that could have a material effect on our financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2024. There were no changes in our internal control over financial reporting during the period ended December 31, 2024, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

Securities Trading Plans of Directors and Executive Officers.

During the three months ended December 31, 2024, the Company did not adopt, modify or terminate and no directors or officers, as defined in Rule 16a-1(f), adopted, modified or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," each as defined in Regulation S-K Item 408.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item will be contained in our definitive proxy statement to be filed with the SEC in connection with our 2025 Annual Meeting of Stockholders (the “Proxy Statement”), which is expected to be filed not later than 120 days after the end of our fiscal year ended December 31, 2024 and is incorporated in this report by reference.

Item 11. Executive Compensation

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Securities Authorized for Issuance Under the Equity Compensation Plans

Our Amended and Restated Equity Incentive Plan (the “A&R Plan”) was approved by our shareholders in June 2023. Our prior plan expired March 29, 2023; no further awards will be made under the prior plan, and the A&R Plan will govern awards granted under the prior plan. The A&R Plan allows us to grant stock options, restricted stock units (“RSUs”) and restricted stock. Options granted under the A&R Plan are granted with an exercise price equal to the fair value of the of our stock on the date of grant. RSUs and restricted stock are granted at the fair value of our stock on the date of grant. The fair value of options, RSUs and restricted stock are expensed over the vesting periods. All awards are subject to forfeiture if service terminates prior to the shares vesting. At December 31, 2024, there were 575,055 shares available for grant under the A&R Plan.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and RSUs	Weighted-Average Exercise Price of Outstanding Options and RSUs	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders . . .	263,790	\$80.94	575,055
Equity compensation plans not approved by security holders	—	—	
Total	263,790	\$80.94	575,055

During 2024, we granted restricted stock awards totaling 45,000 to non-employee members of our Board of Directors, 65,000 to our advisory board members, and 539,000 restricted stock awards to our employees.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this item will be set forth in the Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

- (a) The following documents are filed as part of this Annual Report on Form 10-K
 - (1) *Financial Statements*: See the Index to Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K.
 - (2) *Financial Statement Schedule*: Financial statement schedules are omitted because they are not applicable, or the required information is shown in the financial statements or notes thereto. All other schedules are omitted because of the absence of conditions under which they are required or because the required information is given in the financial statements or the notes thereto.
 - (3) *Exhibits*: The documents listed in the Exhibit Index of this Annual Report on Form 10-K are incorporated by reference or are filed with this Annual Report on Form 10-K, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

EXHIBIT INDEX

Exhibit Number	Description	Incorporated by reference herein				Filed Herewith
		Form	Exhibit No.	Filing Date	File No.	
3.1	Amended and Restated Certificate of Incorporation of the Company, as amended.	8-K	3.1	11/01/2007	000-26895	
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of the Company.	8-K	3.1	10/25/2023	001-33852	
3.3	Amended and Restated Bylaws of the Company.	8-K	3.1	1/27/2023	001-33852	
4.1	Specimen Common Stock Certificate.	S-3	4.1	07/30/2018	333-226413	
4.2	Form of Senior Indenture.	S-3	4.2	07/30/2018	333-226413	
4.3	Form of Subordinated Indenture.	S-3	4.4	07/30/2018	333-226413	
4.4	Description of Capital Stock.					X
10.1	Form of Indemnification Agreement.	10-K	10.1	03/18/2019	001-33852	
10.2*	2007 Stock Plan, as amended.	10-Q	10.2	05/10/2012	001-33852	
10.3*	Amended Form of Stock Option Agreement – 2007 Stock Plan.	10-Q	4.5	05/10/2011	001-33852	
10.4*	Form of Restricted Stock Unit Award Agreement – 2007 Stock Plan.	10-Q	10.3	05/10/2012	001-33852	
10.5*	2013 Equity Incentive Plan, as amended.	DEF 14A	Appendix A	04/13/2021	001-33852	
10.6*	Amended and Restated 2013 Equity Incentive Plan.	8-K	10.1	06/18/2024	001-33852	
10.7*	Form of Stock Option Agreement – 2013 Equity Incentive Plan and Amended and Restated 2013 Equity Incentive Plan.	10-K	10.6	03/02/2015	001-33852	
10.8*	Form of Restricted Stock Unit Agreement – 2013 Equity Incentive Plan and Amended and Restated 2013 Equity Incentive Plan.	10-K	10.7	03/02/2015	001-33852	
10.9*	Form of Restricted Stock Agreement – Amended and Restated 2013 Equity Incentive Plan.	10-Q	10.2	08/11/2023	001-33852	
10.10	Patent License and Assignment Agreement by and between the Company and Leidos, Inc. (formerly Science Applications International Corporation) dated as of August 12, 2005.	8-K	10.4	07/12/2007	000-26895	
10.11**	Amendment No. 1 to Patent License and Assignment Agreement by and between the Company and Leidos, Inc. dated as of November 2, 2006.	8-K	10.6	07/12/2007	000-26895	
10.12	Amendment No. 2 to Patent License and Assignment Agreement by and between VirnetX, Inc. and Leidos, Inc. dated as of March 12, 2008.	8-K	10.1	03/18/2008	001-33852	
10.13	Security Agreement by and between the Company and Leidos, Inc. dated as of August 12, 2005.	8-K	10.5	07/12/2007	000-26895	

Exhibit Number	Description	Incorporated by reference herein				Filed Herewith
		Form	Exhibit No.	Filing Date	File No.	
10.14	Assignment Agreement between the Company and Leidos, Inc. dated as of December 21, 2006.	8-K	10.7	07/12/2007	000-26895	
10.15	Professional Services Agreement by and between the Company and Leidos, Inc. dated as of August 12, 2005.	8-K	10.8	07/12/2007	000-26895	
10.16**	Settlement and License Agreement, by and between Microsoft Corporation and VirnetX, Inc., dated May 14, 2010.	10-Q/A	10.1	01/31/2011	001-33852	
10.17**	Amended Settlement and License Agreement, by and between Microsoft Corporation and VirnetX, Inc., dated December 17, 2014.	10-K	10.23	03/02/2015	001-33852	
10.18*	Hire Letter by and between Katherine Allanson and the Company, dated as of September 1, 2021.	10-Q	10.1	11/08/2021	001-33852	
10.19*	Offer Letter by and between Darl C. McBride and the Company, dated as of December 22, 2023.	10-K/A	10.19	04/18/2024	001-33852	
10.20	Warrant to Purchase Shares of Common Stock of the Company by and between the Company and Odeon Capital Group LLC, dated as of April 29, 2020.	10-Q	10.2	05/15/2023	001-33852	
10.21*	Outside Director Compensation Policy, as adopted on November 30, 2023.	10-K/A	10.22	04/18/2024	001-33852	
19.1	Insider Trading and Disclosure Compliance Proogram, as adopted on March 30, 2023.					X
21.1	Subsidiaries of VirnetX Holding Corporation.	10-K	21.1	03/16/2024	001-33852	
23.1	Consent of Farber Hass Hurley LLP, Independent Registered Public Accounting Firm.					X
24.1	Power of Attorney (contained on signature page hereto)					X
31.1	Chief Executive Officer Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act.					X
31.2	Chief Financial Officer Certification pursuant to Rule 13a-14(a) of the Securities Exchange Act.					X
32.1†	Chief Executive Officer Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002					X
32.2†	Chief Financial Officer Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
97.1*	Compensation Recovery Policy of the Company as adopted November 8, 2023.	10-K/A	97.1	04/18/2024	001-33852	

Exhibit Number	Description	Incorporated by reference herein				Filed Herewith
		Form	Exhibit No.	Filing Date	File No.	
101.INS	XBRL Instance Document					X
101.SCH	XBRL Taxonomy Extension Schema Document					X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)					X

* Indicates management contract or compensatory plan.

** Confidential treatment has been granted by the SEC as to certain portions of this exhibit.

*** Portions of this exhibit have been omitted pending a determination by the SEC as to whether these portions should be granted confidential treatment.

† The certifications attached as Exhibit 32.1 and 32.2 that accompany this Report are not deemed filed with the Securities and Exchange Commission and are not to be incorporated by reference into any filing of VirnetX Holding Corporation under the Securities Act or the Exchange Act, whether before or after the date of this Report, irrespective of any general incorporation language contained in such filing.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

VirnetX Holding Corporation

By: /s/ Kendall Larsen

Name: Kendall Larsen

Title: Chief Executive Officer and President

Dated: March 17, 2025

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kendall Larsen as his attorney-in-fact, with full power of substitution, for him in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or his substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities indicated.

<u>Name</u>	<u>Capacity</u>	<u>Date</u>
<u>/s/Kendall Larsen</u> Kendall Larsen	Director, Chief Executive Officer and President (<i>Principal Executive Officer</i>)	March 17, 2025
<u>/s/Katherine Allanson</u> Katherine Allanson	Chief Financial Officer (<i>Principal Financial Officer and Principal Accounting Officer</i>)	March 17, 2025
<u>/s/Heidy Chow</u> Heidy Chow	Director	March 17, 2025
<u>/s/Gary Feiner</u> Gary Feiner	Director	March 17, 2025
<u>/s/Michael F. Angelo</u> Michael F. Angelo	Director	March 17, 2025
<u>/s/Thomas M. O'Brien</u> Thomas M. O'Brien	Director	March 17, 2025

