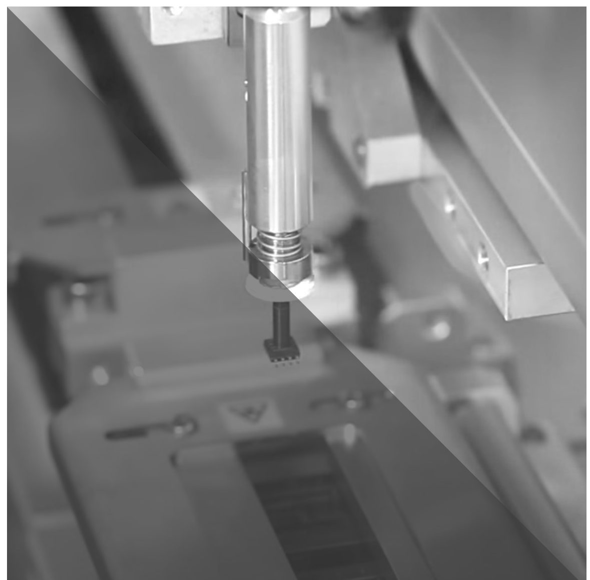
Letter to Shareholders

2021 Annual Report on Form 10-K

Notice of 2022 Annual Meeting & Proxy Statement

21 ANNUAL REPORT & PROXY STATEMENT

CELEBRATING 50 YEARS



Data I/O

Bringing Technology to Life

April 1, 2022

Dear Data I/O Shareholder:

2021 was a bounce back year from the depths of the COVID-19 induced automotive recession. We reported strong annual revenue growth of 27% and a doubling of sales for our new SentriX® security provisioning platform. Our performance in the fourth quarter and full year was driven by the continuing recovery in the automotive electronics market, solid delivery performance of our factories in challenging conditions, and strength in sales of adapters that support our ever-growing installed base.

2021 was also challenging as we continued to deal with the impact of COVID-19 for the entire year, as well as the related industry impact of semiconductor part shortages. We kept our team safe, delivered for our customers, and improved our already strong financial position. We won 20 new customers and expanded our global lead in programming market share with a focus on automotive electronics and security applications. Industry analysts are forecasting a 10-15% compounded annual growth rate for automotive electronics over the next decade, and we are focused on this market.

As a Data I/O shareholder, you are investing first and foremost in a resilient organization that is well capitalized and accustomed to rapid change and cyclicality. 2022 is our 50th anniversary as a company and we will be highlighting our historical achievements as well as our future plans throughout the year. We plan to continue our strategy of investments in R and D as well as security deployment patents to lead the industry. We will continue to lead in governance, as we welcomed two new directors since our last shareholder meeting.

We appreciate your continued support of Data I/O.

Sincerely,

Anthony Ambrose, CEO

Douglas Brown, Chair

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

(Mark One)

FORM 10-K

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

For the fiscal year ended **December 31, 2021**

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: **0-10394**

DATA I/O CORPORATION

(Exact name of registrant as specified in its charter)

Washington	91-0864123
(State or other jurisdiction of incorporation)	(I.R.S. Employer Identification No.)

6645 185th Ave NE, Suite 100, Redmond, Washington, 98052
(425) 881-6444

(Address, including zip code, of registrant's principle executive offices and telephone number, including area code)

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	DAIO	NASDAQ

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

None

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

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

		Accelerated filer	☐
Large accelerated filer	☐	Smaller reporting company	☒
Non-accelerated filer	☐	Emerging growth company	☐

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

Indicate by check mark whether the registrant 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. ☐

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

Aggregate market value of voting and non-voting common equity held by non-affiliates on the registrant as of June 30, 2021:
$55,095,093

Shares of Common Stock, no par value, outstanding as of March 21, 2022:
8,622,369

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement relating to its May 19, 2022 Annual Meeting of Shareholders are incorporated into Part III of this Annual Report on Form 10-K.

DATA I/O CORPORATION
FORM 10-K
For the Fiscal Year Ended December 31, 2021

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Item 1. Business

This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements based on current expectations, estimates and projections about Data I/O Corporation's industry, management's beliefs and certain assumptions made by management. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Forward Looking Statements."

General

Data I/O Corporation ("Data I/O", "We", "Our", "Us") is a global market leader for advanced programming, security deployment, security provisioning and associated Intellectual Property ("IP") protection and management solutions used in electronics manufacturing with flash memory, microcontrollers, and flash memory-based intelligent devices as well as secure element devices, authentication devices and secure microcontrollers. We collectively refer to IP protection, security provisioning of devices, provisioning of security into devices, and related services such as cloud onboarding and device and provisioning documentation management as "security deployment". Data I/O® designs, manufactures and sells programming and security deployment systems and services for electronic device manufacturers, specifically targeting high-growth areas such as high-volume users of flash memory and flash memory-based microcontrollers. Most electronic products today incorporate a number of programmable semiconductor devices that contain data, operating instructions and security credentials essential for the proper operation of the product and more and more products require security deployment.

Our mission is to bring the world's electronic devices to life. Programmable devices are used in products such as automobile electronics, smartphones, HDTV, smart meters, gaming systems and a broad category called Internet of Things ("IoT"). IoT is a broad term that addresses the interconnectivity of devices and other electronic or smart products. Our solutions, some of which include security deployment and process control capabilities, enable us to address the demanding requirements of the electronic device market, where applications security and IP protection are essential to our customer's success. Our largest customers are heavy users of programmable semiconductor devices and include original equipment manufacturers ("OEMs") in automotive electronics, consumer electronics and IoT markets as well as their programming center partners and electronic manufacturing service ("EMS") contract manufacturers.

Data I/O was incorporated in the State of Washington in 1969 and its business was founded in 1972. Our website address is www.dataio.com.

COVID-19

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

Industry Background

We enable companies to improve productivity, increase supply-chain security and reduce costs by providing device data programming and security deployment solutions that allow our customers to take IP (large design and data files) and protect and program it into memory, microcontroller, security and logic devices quickly and cost-effectively. We also provide services related to hardware support, system installation and repair, and device programming. Companies that design and manufacture products utilizing programmable electronic devices, ranging from automobiles to cell phones, purchase programming solutions from us. Trends of increasing device densities, shrinking device packages, increased demands for security, and customers increasing their software content file sizes, combined with the increasing numbers of intelligent devices such as automotive electronics and IoT applications, are driving demand for our solutions.

Traditionally, our programming market opportunity focused on the number of semiconductor devices to be programmed, but because of the rapid increase in the density of devices, and increasing demands for supply-chain security, the focus has shifted in many cases from the number and type of devices to the number and type of bits per device to be programmed or securely provisioned. With expected growth in IoT applications, the business opportunity for this market differentiates on quality, security and automation.

Some of our automated programming systems integrate data programming, automated handling functions and/or security deployment into a single product solution. During 2021, we continued to simplify and integrate security deployment into some of our solutions adding the capability to our PSV5000 and as a field upgrade to installed systems. Quality and security-conscious customers, particularly those in high-volume manufacturing and programming, drive this portion of our business.

Products

To accommodate the expanding variety and quantities of programmable devices being manufactured today, we offer multiple solutions for the numerous types of device mix and volume usage by our customers in the various market segments and applications. We work closely with leading manufacturers of programmable devices to develop our products to meet the requirements of a particular device. Our newer products are positioned and recognized as some of the most advanced programming and security deployment solutions.

Our programming solutions include a broad range of products, systems, modules and accessories, grouped into two general categories: automated programming systems and manual programming systems. We provide two categories of automated programming systems: off-line and in-line. Our PSV family of automated programming systems delivers a broad range of programming capacity and capability to the marketplace. Our recently announced PSV2800 Automated Programming System focuses on dedicated high-volume manufacturing in a lower cost platform. Our PSV7000 Automated Programming System continues to be well adopted in the marketplace, in particular for automotive electronics customers and as a base for security deployment upgrades. Our PSV5000 automated programming system combines mid-range capacity and flexibility with competitive pricing. Our PSV3000 Automated Programming System is a lower cost platform for basic programming needs. Our PSV family of handlers has won multiple industry awards for technical excellence and innovation.

Our automated systems have list selling prices ranging from $90,000 to $610,000 and our manual systems have list selling prices ranging from $10,000 to $36,000. Our security deployment system, SentriX®, is offered for security provisioning on a pay per part use basis along with related fees.

Data I/O programming technology is integrated with the PSV family to create highly-flexible systems that deliver outstanding performance with low total cost of ownership. The LumenX programming engine is designed to support large eMMC and UFS programming of large NAND FLASH. Increasing memory densities and the need for faster data interfaces are resulting in an expected transition to the use of UFS devices. LumenX is available on our PSV7000 and PSV5000 and as a standalone manual programmer. FlashCORE™, and our universal job setup tool, Tasklink™ for Windows®, are available in each family of our automated programming systems and in FlashPAK™, our manual programming system. The SentriX security system adds security deployment capability to our data programming system. SentriX allows customers of any size and demand-profile to securely add keys, certificates, and other security information to specialized regions of authentication integrated circuits ("ICs”), secure elements and secure microcontrollers. We provide device support and service on all of our products. Device support is a critical aspect of our business and consists of writing software algorithms for devices and developing socket adapters to hold and connect to the device for programming.

Our products have both an upfront solution sale and recurring revenue elements. Adapters are a consumable item and software and maintenance are typically recurring under subscription contracts. Our SentriX system revenue typically comes from per part use fees, set-up or minimum quarterly fees, consumables, non-recurring engineering fees, service fees and the sale of equipment related to SentriX.

Sales Percentage of Total Sales Breakdown by Type			
Sales Type	**2021**	**2020**	**Drivers**
Equipment Sales	58%	56%	Capacity, Process improvement, Technology
Adapter Sales	30%	28%	Capacity utilization, New customer products
Software and Maintenance Sales	12%	16%	Installed base, Added capabilities
Total	**100%**	**100%**	

The table below presents our main products and the key features that benefit our customers:

Products	Key Features	Customer Benefits
PSV Handlers: Off-line (Automated)	• Fast program and verify speeds • Up to 112 programming sites • Up to 3000 devices per hour throughput • UFS Support • Supports LumenX and FlashCORE III programmers • Supports multiple media types • Supports quality options – fiber laser marking, 3D coplanarity • ConneX Factory Integration, Job Composer & other Software	• Managed and secure programming • High throughput for high density Flash programming • High flexibility with respect to I/O options (tray, tape, tube), marking/labeling and vision for coplanarity inspection
SentriX Security Deployment System	• Unique ability to securely provision keys and certificates one device at a time • Pay per use model reduces capital spending requirements as the market develops.	• Create Secure IoT devices across a global network • Maintain IP control over the lifecycle of their products
RoadRunner & RoadRunner3 Series Handlers: In-line, (Automated)	• Just-in-time in-line programming • Direct integration with placement machine supporting SIPLACE, Fuji NXT, Panasonic, Universal/Genesis and Assembleon/K&S • Factory Integration Software • Supports FlashCORE III programmers	• Dramatic reduction in inventory carrying and rework costs • “Zero” footprint • Rapid return on investment (“ROI”) typically realized in a matter of months • Integration with factory systems
LumenX Programmer	• Extensible architecture for fast program, verify and download speeds • Supports UFS, microcontrollers, Serial FLASH, secure elements and other device types • Large file size support • Secure Job creation • 8 sockets with tool-less changeover with single socket adapters	• Managed and secure programming • Fast setup and job changeover • Highest yield and low total cost of programming • High performance
FlashPAK III programmer: (Non-Automated)	• Scalability • Network control via Ethernet • Stand-alone operation or PC compatible • Parallel programming	• Validate designs before moving down the firmware supply chain • Unmatched ease of use in manual production systems

Customers/Markets

We sell our solutions to customers worldwide, many of whom are world-class manufacturers of electronic devices used in a broad range of industries, as described in the following table:

	OEMs		EMS	Programming Centers
	Automotive Electronics	**IoT, Industrial, Consumer Electronics, including Wireless**	**Contract Manufacturers**	
Notable end customers	Borg Warner, Bosch, Alps Alpine, Visteon, Kostal, JVCKenwood, Harman, Denso Ten, Continental, Panasonic, Magna, Marelli, Tesla	LG, TCL, Siemens, Danfoss, Philips, Schneider, Endress+Hauser, Insta, Microsoft, Sony, Amazon, UTEC	Pegatron, Flex, Jabil, Wistron, Sanmina SCI, Foxconn, Leesys, Calcomp	Arrow, Avnet, BTV, CPS, EPS, Elsil, Elmitech, Noa Leading
Business drivers	Infotainment, Advanced Driver Assist (ADAS), Electrification, Connectivity and Security	Higher functionality driven by increasing electronic content. Shift from analog to connected intelligent devices, security	Production contract wins	Value-added services, logistics, security
Programming equipment drivers	Growing Electronic Content, Global Support, Resilient Supply Chains, new product rollouts, growing file sizes, quality control and traceability, security	Growing Electronic Content, need for IP protection. Process improvement and simplification as well as new product rollouts, memory and new technology, security	New contracts from OEMs, programming solutions specified by OEMs	Capacity utilization of their installed base of equipment, small parts handling, security
Buying criteria	Quality, reliability, configuration control, traceability, global support, IP protection, security	Quality, reliability, configuration control, traceability, global support, IP protection, Security.	Lowest equipment procurement cost, global support	Flexibility, lowest life-cycle cost-per programmed-part, low changeover time; use of multiple vendors provides negotiating leverage, device support availability
Security Deployment	End customer focus	End customer focus	End customer and partner Focus	Partner focus of our SentriX deployments

Our solutions address the data programming of devices and security deployment needs of programmable semiconductor devices. Semiconductor devices are a large, growing market, in terms of devices, bits programmed and need for security. We believe that our sales are driven by many of the same forces that propel the semiconductor industry. We sell to the same firms that buy the semiconductors. When their business grows, they buy more semiconductors which, in turn, require additional programming equipment to maintain production speeds or program new device technologies.

Our device programming solutions currently target two high volume, growing markets: automotive electronics and IoT systems including Industrial and Consumer devices.

Growth drivers for automotive electronics

- Consumers desire advanced car features requiring higher levels of sophistication, including autonomous cars, infotainment options (audio, radio, dashboard displays, navigation), ADAS, wireless connectivity and electrification
- Proliferation of programmable microcontrollers to support the next-generation electronic car systems
- Increasing use of high-density flash to provide memory for advanced applications that require programming
- Increasing complexity to support autonomous vehicles
- Increasing need for security solutions for a secure supply chain and lifecycle firmware integrity

Growth drivers for IoT: including industrial, consumer electronics and wireless

- Securely controlling groups of connected devices through a secure supply chain and lifecycle firmware integrity management
- Adding intelligence and processing into devices
- Connecting previously unconnected devices to networks and the internet (such as smart home, including intelligent thermostats and lighting)
- Emergence of new devices and applications (such as health and wellness wearable devices and applications)

All of the above growth drivers are long term and are likely to be adversely impacted, at least temporarily, due to the global pandemic of COVID-19 and other global political and economic factors in our markets. Annual projections on spending, growth, mix, and profitability are likely to be revised substantially as new information is obtained.

Diversification of accounts receivable and net sales

During 2021, we sold products to approximately 200 customers throughout the world.

The following represented greater than 10% of net sales for the applicable year:

Percentage of Net Sales	2021	2020	2019
Number of customers	1	1	1
Approximate percentage of net sales	14%	12%	11%

The following represented greater than 10% of our consolidated accounts receivable for the applicable year:

Percentage of Consolidated Accounts Receivable	2021	2020	2019
Number of customers	3	3	2
Approximate percentage of consolidated accounts receivable balance	36%	41%	32%
Percentage of each	13%	17%	17%
Percentage of each	12%	12%	15%
Percentage of each	11%	12%	n/a

Geographic Markets and Distribution

We market and sell our products through a combination of direct sales, indirect sales representatives and distributors, as well as services through programming centers. We continually evaluate our sales channels against our evolving markets and customers and realign them as necessary to ensure that we reach our existing and potential customers in the most effective and efficient manner possible.

U.S. Sales

We market our products throughout the U.S. using a variety of sales channels, including our own field sales management personnel, independent sales representatives and direct sales. Our U.S. independent sales representatives obtain orders on an agency basis, with shipments made directly to the customer by us. Net sales in the U.S. for 2021, 2020 and 2019 were (in millions) $2.6, $1.5 and $1.7, respectively. Some of our customers' orders delivered internationally are heavily influenced by U.S. sales-based efforts.

International Sales

International sales represented approximately 90%, 93% and 92% of net sales in 2021, 2020 and 2019, respectively. We make foreign sales through our wholly-owned subsidiaries in Germany and China, as well as through independent distributors and sales representatives operating in 45 countries. Our independent foreign distributors purchase our products for resale and we generally recognize the sale at the time of shipment to the distributor. As with U.S. sales representatives, sales made by international sales representatives are on an agency basis, with sales made directly to the customer by us.

Net international sales for 2021, 2020 and 2019 were (in millions) $23.2, $18.8 and $19.8, respectively. We determine international sales by the international geographic destination into which the products are sold and delivered, and include not only sales by foreign subsidiaries but also export sales from the U.S. to our foreign distributors and to our representatives' customers. International sales do not include transfers between Data I/O and our foreign subsidiaries. Export sales are subject to U.S. Department of Commerce regulations. We have not, however, experienced difficulties to date as a result of these requirements. Our products typically do not require export licenses. We have not made sales to Iran or any Iranian governmental entities or any other blacklisted companies or countries.

Fluctuating exchange rates and other factors beyond our control, such as the coronavirus, international monetary stability, tariff and trade policies and U.S. and foreign tax and economic policies, may affect the level and profitability of international sales. We cannot predict the effect of such factors on our business, but we try to consider and respond to changes in these factors, particularly as the majority of our costs are U.S. based while the vast majority of our sales are international.

Competition

The competition in the programming systems market is highly fragmented with a small number of organizations selling directly competitive solutions and a large number of smaller organizations offering less expensive solutions. In particular, low cost automated solutions have gained market share in recent years, where the competition is primarily based on price. Typically, their equipment meets a "good enough" standard, but with reduced quality, traceability, upgradability, security and other software features such as factory integration software. Many of these competitors compete on a regional basis, with local language and support. Although competition in the security deployment market is developing, we expect competition in the market to increase as security deployment becomes more important. There are alternative security deployment solutions such as software-based security, rather than the hardware-based security of our SentriX equipment.

In addition, we compete with multiple substitute forms of device programming including "home grown" solutions. Programming after device placement may be done with In Circuit Test ("ICT"), In System Programming ("ISP"), and End of Line Downloading ("EOL"). Some automotive products may also be programmed over the air ("OTA"). IoT devices may also be programmed with ICT, ISP, EOL or OTA. In addition, new security devices may be required to be programmed using device-specific programmers developed by the semiconductor manufacturer.

While we are not aware of any published industry market information covering the programming systems or security deployment market, according to our internal analysis of competitors' revenues, we believe we continue to be the largest competitor in the programming systems equipment market and have been gaining market share in recent years, especially with our new products.

Manufacturing, Raw Materials and Backlog

We strive to manufacture and provide the best solutions for advanced programming. We primarily assemble and test our products at our principal facilities in Redmond, Washington and Shanghai, China. Both of these locations are ISO 9001:2015 certified. We outsource our circuit board manufacturing and fabrication. As a resilient supply chain strategy, we manufacture various products in both of our production facilities. This strategy allows opportunity to mitigate some of the risks of having only one location, as well as enabling tariff and tax optimization strategies. We use a combination of standard components and fabricated parts manufactured to our specifications. Most components used are available from a number of different suppliers and subcontractors but certain items, such as some handler and programmer and security deployment subassemblies, custom integrated circuits, hybrid circuits and connectors, are purchased from single sources. We believe that additional sources can be developed for most present single-source components without significant difficulties. Single-source components may not always continue to be readily available or may be subject to part shortage delays. If we cannot develop alternative sources for these components, or if we experience deterioration in relationships with these suppliers, there may be price increases, minimum order quantities, end of life purchase requirements, costs associated with integrating alternatively sourced parts, and delays or reductions in product introductions or shipments, which may materially adversely affect our operating results.

In accordance with industry practices, generally all orders are subject to cancellation prior to shipment without penalty, except for contracts calling for custom configuration. To date, such cancellations have not had a material effect on our sales volume. To meet customers' delivery requirements, we manufacture certain products based upon a combination of backlog and anticipated orders. Most orders are scheduled for delivery within 1 to 90 days after receipt of the order. Our backlog of pending orders was approximately (in millions) $2.9, $3.9 and $2.9 as of December 31, 2021, 2020 and 2019, respectively. The size of backlog at any particular date is not necessarily a meaningful indicator of the trend of our business.

Research and Development

We believe that continued investment in research and development is critical to our future success. We continue to develop new technologies and products and enhance existing products. Future growth is, to a large extent, dependent upon the timely development and introduction of new products, as well as the development of technology and algorithms to support the latest programmable devices. Where possible, we may pursue partnerships and other strategic relationships to add new products, capabilities and services, particularly in security deployment. We are currently focusing our research and development efforts on strategic growth markets, including automotive electronics, IoT and security deployment. We are continuing to develop technology for security deployment to program new categories of semiconductors, including Secure Elements, TPMs, Authentication Chips, and Secure Microcontrollers. We plan to deliver new programming technology, automated handling systems and enhancements for security deployment in the manufacturing environment. We also continue to focus on increasing our capacity and responsiveness for new device support requests from customers and programmable integrated circuit manufacturers by revising and enhancing our internal processes and tools. Our research and development efforts have resulted in the release of significant new products and product enhancements over the past several years.

During 2021, 2020 and 2019, we made expenditures for research and development of (in millions) $6.6, $6.4 and $6.5, respectively, representing 26%, 31% and 29.9% of net sales, respectively. Research and development costs are generally expensed as incurred.

Patents, Copyrights, Trademarks and Licenses

We rely on a combination of patents, copyrights, trade secrets and trademarks to protect our IP, as well as product development and marketing skill to establish and protect our market position. We continue to apply for and add new patents to our patent portfolio as we develop strategic new technologies. We have approximately 20 U.S. and international awarded patents related to the SentriX platform and security provisioning architecture, processes, and methods.

We attempt to protect our rights in proprietary systems (architecture, implementations, software), including the SentriX Security Deployment System. We attempt to protect our software, including Lumen®X software, FlashCORE software, TaskLink software, ConneX smart programming software and other software products, by retaining the title to and copyright of the software and documentation, by including appropriate contractual restrictions on use and disclosure in our licenses, and by requiring our employees to execute non-disclosure agreements. Our software products are not typically sold separately from sales of programming systems. However, when we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

Because of the rapidly changing technology in the semiconductor, electronic equipment and software industries, portions of our products might infringe upon existing patents or copyrights, and we may be required to obtain licenses or discontinue the use of the infringing technology. We believe that any exposure we may have regarding possible infringement claims is a reasonable business risk similar to that assumed by other companies in the electronic equipment and software industries. However, any claim of infringement, with or without merit, could be costly and a diversion of management's attention, and an adverse determination could adversely affect our reputation, preclude us from offering certain products, and subject us to substantial liability. As of December 31, 2021, there were no pending actions regarding infringement claims.

Employees

As of December 31, 2021, we had a total of 95 employees, of which 46 were located outside the U.S. and 9 of which were part time. We also utilize independent contractors for specialty work, primarily in research and development, and utilize temporary workers to adjust capacity to fluctuating demand and for special projects. Many of our employees are highly skilled, trained and experienced in specialized areas and our continued success will depend in part upon our ability to attract and retain employees who can be in great demand within the industry. None of our employees are represented by a collective bargaining unit and we believe relations with our employees are favorable. In foreign countries we have employment agreements or, in China, the Shanghai Foreign Services Co., Ltd. ("FSCO") labor agreement.

When hiring and retaining talent, we create specialized knowledge that is difficult to replace short term. During COVID-19, we specifically avoided COVID-19 related layoffs and other short-term measures to retain specialized skills and advance our research and development efforts while some other competitors were forced to reduce their research and development efforts.

Environmental, Social and Governance ("ESG")

Data I/O is committed to the responsibilities associated with modern age ESG. The Company's key pillars for ESG support a framework for sustainable growth and include Leadership & Governance, Environment, Innovation, Human Capital, Social Capital, and Financial Excellence. Initiatives within these areas apply to the company's daily global operations as well as within its supply chains.

We believe we are the only supplier in our industry with a published conflict mineral policy, and public company governance. We believe we are the only programming industry supplier with a diverse Board of Directors. Our facilities are subject to numerous laws and regulations concerning the discharge of materials or otherwise relating to the environment. In addition to this commitment, the company has a track record of meeting its ESG regulatory obligations, being a solid corporate citizen, delivering superior value to its customers and partners, and demonstrating enduring corporate stewardship while consistently returning capital to shareholders through share buybacks.

As the largest and only publicly traded company in its sector, Data I/O has led its industry in disclosing significant operational and financial information. The Company's Board currently includes Data I/O's CEO and five Independent Directors. It is diverse in gender, education, professional experience and differences in viewpoints and skills. Through its continuous improvement practices and our operations focus on assembly and test with no fabrication, the company consumes relatively little energy, has minimal or no emissions or pollutants to air and wastewater, and complies with workplace labor, safety and business practices on three continents.

Data I/O is also committed to giving back to our local communities through volunteer and internship programs. The Company provides employees time-off to volunteer and also coordinates group projects. In addition, the Company provides internships to local high school and college students through STEM and technical colleges.

Compliance with environmental laws has not had, nor is it currently expected to have, a material effect on our capital expenditures, financial position, results of operations or competitive position.

Executive Officers of the Registrant

Set forth below is certain information concerning the executive officers of Data I/O as of March 21, 2022:

Name	Age	Position
Anthony Ambrose	60	President and Chief Executive Officer
Joel S. Hatlen	63	Vice President, Chief Operating and Financial Officer, Secretary and Treasurer
Rajeev Gulati	58	Chief Technology Officer, Vice President of Engineering
Michael Tidwell	53	Vice President of Marketing and Business Development

Anthony Ambrose joined Data I/O on October 25, 2012 and is our President and Chief Executive Officer ("CEO"), and a member of the Board of Directors. Prior to Data I/O, Mr. Ambrose was Owner and Principal of Cedar Mill Partners, LLC, a strategy consulting firm since 2011. From 2007 to 2011, he was Vice President and General Manager at RadiSys Corporation, a leading provider of embedded wireless infrastructure solutions, where he led all product divisions and worldwide engineering. Until 2007, he was general manager and held several other progressively responsible positions at Intel Corporation, where he led development and marketing of standards-based telecommunications platforms, and grew the industry standard server business to over $1B in revenues. He is Chair of the EvergreenHealth Foundation Board of Trustees. In 2019 he also became a board member of Cipherloc Corporation (OTCQB: CLOK). Mr. Ambrose has a Bachelor's of Science in Engineering from Princeton University. He has completed the Stanford Graduate School of Business Director Symposium and earned the Carnegie Mellon University Certificate in Cybersecurity Oversight.

Joel S. Hatlen joined Data I/O in September 1991 and in July 2017 became our Chief Operating Officer in addition to serving as our Vice President, Chief Financial Officer, Secretary and Treasurer since January 1998. He was Chief Accounting Officer since February 1997 and served as Corporate Controller from December 1993 to December 1997. Previously, he was Tax Manager and Senior Tax Accountant. From September 1981 until joining Data I/O, Joel was employed by Ernst & Young LLP as a Certified Public Accountant, where his most recent position was Senior Manager. Joel is a Certified Public Accountant and holds a Masters in Taxation from Golden Gate University and a Bachelor's in Business Administration in Accounting from Pacific Lutheran University.

Rajeev Gulati joined Data I/O in July 2013 and is our Chief Technology Officer and Vice President of Engineering. Prior to Data I/O, Rajeev served as Director of Software Engineering for AMD responsible for tools, compiler strategy and execution from 2006 to 2013. He has an extensive background in software, systems and applying technology to develop new markets. Previously, he served as Director of Strategy and Planning at Freescale from 2004 to 2006; as Director of Embedded Products at Metrowerks (acquired by Motorola) from 2000 to 2004 and Director of Compilers, Libraries & Performance Tools from 1997 to 2000; and engineering and programmer positions at Apple Computer, IBM and Pacific-Sierra Research. Rajeev holds a Master of Science in Electrical & Computer Engineering from the University of Texas, Austin and a BE in Electrical Engineering from Delhi College of Engineering, New Delhi.

Michael Tidwell joined Data I/O in May 2019 and is our Vice President of Marketing and Business Development. Prior to Data I/O, he was Vice President of Marketing & Business Development at Tignis, an AI and machine learning startup. From 2012 to 2018 Michael was head of Marketing and Business Development at Sansa Security, a leading software security IP provider that was sold to ARM Holdings. Prior to Sansa, Michael was Vice President of Business and Market Development at BSQUARE Corporation. Michael has a Master of Science in Electrical Engineering from the University of Washington and a Bachelor of Electrical Engineering (Summa Cum Laude) from Georgia Institute of Technology.

Item 1A. Risk Factors

Cautionary Factors That May Affect Future Results

Our disclosure and analysis in this Annual Report contains some forward-looking statements. Forward-looking statements include our current expectations or forecasts of future events. The reader can identify these statements by the fact that they do not relate strictly to historical or current facts. In particular, these include statements relating to future action, the impact of the coronavirus, supply chain expectations, semiconductor chip shortages, Russia-Ukraine war impacts, prospective products, expected market growth, new technologies and trends, industry partnerships, foreign operations, economic expectations, future performance or results of current and anticipated products, sales efforts, expenses, outcome of contingencies, impact of regulatory requirements, tariffs and financial results.

Any or all of the forward-looking statements in this Annual Report or in any other public statement made may turn out to be wrong. They can be affected by inaccurate assumptions we might make, or known or unknown risks and uncertainties can affect these forward-looking statements. Many factors -- for example, product competition and product development -- will be important in determining future results. Moreover, neither Data I/O nor anyone else assumes responsibility for the accuracy and completeness of these forward-looking statements. Actual future results may materially vary.

We undertake no obligation to publicly update any forward-looking statements after the date of this Annual Report, whether as a result of new information, future events or otherwise. The reader should not unduly rely on our forward-looking statements. The reader is advised, however, to consult any future disclosures we make on related subjects in our 10-Q, 8-K and 10-K reports to the SEC and press releases. Also, note that we provide the following cautionary discussion of risks, uncertainties and possible inaccurate assumptions relevant to our business. These are factors that we think could cause our actual results to differ materially from expected and historical results. Other factors besides those listed here could also adversely affect us. This discussion is permitted by the Private Securities Litigation Reform Act of 1995.

RISK FACTORS:

CORONAVIRUS

The coronavirus that causes the serious disease COVID-19 ("coronavirus"), has and may continue to adversely affect our business, including revenues, suppliers, employees and facilities.

As a global company with 90% of our 2021 sales in international markets, we have been and may continue to be, significantly impacted by the word wide coronavirus outbreak, which has affected all markets we serve. Thirty of our employees are based in Shanghai, China and we have a manufacturing facility there which manufactures some of our equipment and develops most of the adapters and algorithms for our equipment. Although our facilities in Shanghai, Redmond and Germany are currently operating, they could be closed for an extended period of time due to outbreaks of new variants of coronavirus. Additionally, we source other components from China and other countries that are used to manufacture our equipment in China and in our Redmond, Washington facility and these components may not be readily available. Many of our Redmond based employees and executives are working from home or hybrid schedules and we limit visitors to our facilities. All of our facilities are subject to restrictions and closure by governmental entities. Travel restrictions have in some cases prevented and may continue to impact equipment installations, repairs and selling at customer sites. As the coronavirus continues as a pandemic, it has and may continue to impact our revenues, our ability to obtain key components and to manufacture our products, as well as sell, install and support our products around the world.

The coronavirus has and continues to impact key tradeshows and travel plans for our employees. Because of the coronavirus, we are not able to visit many of our customers and prospects. Many tradeshows, marketing activities and conferences have been canceled, postponed or made virtual.

TARIFFS AND TRADE ISSUES

<u>Changes in tariffs and trade issues may adversely affect our business, including revenues and/or gross margins.</u>

We produce products in the United States and China. Currently, certain of our products are subject to tariffs imposed by one country on goods manufactured in the other country. This has materially impacted our gross margins negatively. There is uncertainty regarding the tariffs expected to be imposed, and any increase in tariff rates and subjecting additional items to tariffs, could impact our costs, revenues and the competitiveness of our products due to our manufacturing locations. Trade and tariff issues are creating business uncertainty and may spread to and impact other jurisdictions.

Additionally, trade tensions between the United States and China are impacting our ability to seamlessly design, build, market and sell our products. Some customers have moved production away from China, further from our facilities and engineers. We endeavor to have multi-sourced manufacturing, but this is not currently practical for all products in all locations.

War based restrictions, embargos, and supply chain disruptions are occurring as a result of the Russian invasion of Ukraine, which could have economic and other indirect impacts to our business. We do not have any operations in Russia or Ukraine, nor do we rely on any software or hardware components sourced from these two countries.

NEW PRODUCTS OR SERVICES

<u>We are pursuing new product or service initiatives, and business models that may develop more slowly and/or to a lesser extent than expected</u>

In order to lead in new and potentially lucrative market opportunities, for example in security deployment of programmable devices, circuit boards and electronic systems, we are making significant investments in people, technology and business development while the market is developing and uncertain. Due to the length of time to market from design to production in security provisioning, if these markets develop more slowly than planned, or if our security deployment solutions are not widely accepted, then we may not achieve our expected return on investment in new technologies, which may significantly affect the results of our existing business.

In the security deployment area, we have introduced a new pay per use business model and service fees that may not be accepted by our customers who are accustomed to paying for capital equipment upfront, rather than paying per use charges.

<u>Failure to adapt to technology trends in our industry may impact our competitiveness and financial results.</u>

Product and service technology in our industry evolves rapidly, making timely product innovation essential to success in the marketplace. Introducing products and services with improved technologies or features may render our existing products obsolete and unmarketable. Technological advances and trends that may negatively impact our business include:

- new device package types, densities, chip interfaces and technologies requiring hardware and software changes in order to be programmed by our products, particularly certain segments of the high-density flash memory markets where after placement programming is recommended by certain semiconductor manufacturers;
- reduction in semiconductor process geometries for certain 3 Dimensional (3D), Multi Level Cell (MLC) and Triple Level Cell

(TLC) NAND and eMMC FLASH memories impact the product data retention through Surface Mount Technology (SMT) reflow or X-ray inspection. Improper SMT process control can negatively impact the end customer's ability to successfully program devices. This can cause them to change their programing methods away from pre-programming to post placement programming techniques, including ISP, ICT. Data I/O has, and continues to work with several semiconductor manufacturers to develop best practices to minimize the impact of reflow and potential concerns about X-ray induced data loss;

- changes in Flash technology speeds will eventually require us to change the architecture of our programming engines;
- electronics equipment manufacturing practices, such as widespread use of in-circuit programming or downloading;
- adoption of proprietary security and programming protocols and additional security capabilities and requirements;
- customer software platform preferences different from those on which our products operate;
- customer adoption of newer unsupported semiconductor device technologies such as NVMe memory or device interface methods, particularly if these technologies are adopted by automotive electronics, IoT or wireless customers; and/or
- more rigid industry standards, which would decrease the value-added element of our products and support services.

If we cannot develop products or services in a timely manner in response to industry changes, or if our products or services do not perform well, our business and financial condition may be adversely affected. Also, our new products or services may contain defects or errors that give rise to product liability claims against us or cause our products to fail to gain market acceptance. Our future success depends on our ability to successfully compete with other technology firms in attracting and retaining key technical personnel.

<u>Failure to adapt to increasing automotive electronics customer requirements may impact our competitiveness and result in a decline in sales or increased costs.</u>

Concentration in Automotive Electronics and our orders related to automotive electronics customers has been dominant in recent years at 58% in 2021, 53% in 2020 and 60% in 2019. As we have been concentrated on automotive electronics customers, any decrease in demand from these customers (for example, many had plant shut downs during the second quarter of 2020 or experienced semiconductor part shortages during 2021) may materially impact our results, as it will take some time to transition our product line to other markets. Quality standards and business requirements by our automotive electronics customers, driven in turn by their automotive manufacturer customers, may demand processes, and certifications at a higher level than we currently are structured to provide. For example, although we currently meet the ISO 9001:2015 standard, new quality standards may be demanded by our customers with even more rigorous requirements. In addition, contractual provisions may expose us to greater potential liability and costs and we may be required to provide higher service levels than we currently provide. If we cannot adapt to these industry requirements or manage these contractual provisions, our business may be adversely affected.

<u>Delays in development, introduction and shipment of new products or services may result in a decline in sales or increased costs.</u>

We develop new engineering and automated programming systems and services. Significant technological, supplier, manufacturing or other problems may delay the development, introduction or production of these products or services.

For example, we may encounter these problems:

- technical problems in the development of a new programming and/or security deployment systems or the robotics for new automated handing systems;
- inability to hire qualified personnel or turnover in existing personnel or inability to engage or retain key technology partners;
- delays or failures to perform by us or third parties, including some smaller early stage or recently acquired companies, involved in our development projects;
- dependence on large semiconductor companies for cooperation and support to securely provision their devices. These companies must enable us with specific technical information, and support Data I/O as a qualified solution to their customers and channel partners;
- development of new products or services that are not accepted by the market; and/or
- experience delays in supply chain for parts needed for new products.

These problems may result in a delay or decline in sales or increased costs.

We may pursue business acquisitions that could impair our financial position and profitability.

We may pursue acquisitions of complementary technologies, product lines or businesses. Future acquisitions may include risks, such as:

- burdening management and our operating teams during the integration of the acquisition;
- diverting management's attention from other business concerns;
- failing to successfully integrate, scale or monetize the acquired products or technologies;
- lack of acceptance of the acquired products by our sales channels or customers;
- entering markets where we have no or limited prior experience;
- potential loss of key employees of the acquired company; and/or
- additional burden of support for an acquired programmer architecture.

Future acquisitions may also impact our financial position. For example, we may use significant cash or incur debt, which would weaken our balance sheet, or issue additional shares, potentially diluting existing shareholders. We may also capitalize goodwill and intangible assets acquired, the amortization or impairment of which would reduce our profitability. We cannot guarantee that future acquisitions will improve our business or operating results.

If we are unable to protect our IP, we may not be able to compete effectively or operate profitably.

We rely on patents, copyrights, trade secrets and trademarks to protect our IP, as well as product development and marketing skill to establish and protect our market position. In particular, patents are a key part of our security deployment strategy, and if we are not able to successfully enforce these patents, we might lose our competitive advantage in the security deployment market. We attempt to protect our rights in proprietary software products, including our user interface, product firmware, software module options and other software products by retaining the title to and copyright of the software and documentation, by including appropriate contractual restrictions on use and disclosure in our licenses, and by requiring our employees to execute non-disclosure agreements.

Because of the rapidly changing technology in the semiconductor, electronic equipment and software industries, portions of our products might possibly infringe upon existing patents or copyrights, and we might be required to obtain licenses or discontinue the use of the infringing technology. We believe that any exposure we may have regarding possible infringement claims is a reasonable business risk similar to that assumed by other companies in the electronic equipment and software industries. However, any claim of infringement, with or without merit, could be costly and a diversion of management's attention, and an adverse determination could adversely affect our reputation, preclude us from offering certain products, and subject us to substantial liability.

We might face increased competition and might not be able to compete successfully with current and future competitors.

Technological advances have reduced the barriers of entry into the market in which we compete. We expect competition to increase from both established and emerging companies. If we fail to compete successfully against current and future sources of competition, our profitability and financial performance will be adversely impacted.

THIRD PARTY RELATIONSHIPS

If we do not develop, enhance and retain our relationships with security partners, our business may be adversely affected and we may not be able to timely develop new and cost effective managed and secure programming solutions.

We may be required to complement our skills and expertise with partners' expertise. Some of these partners are operating with more limited capital and/or management expertise than established firms or recently acquired firms that may have different priorities. Other partners are very large companies where prioritizing work with us may be difficult in light of competing priorities. We may need to develop alternate suppliers, sales channels, and business strategies. In 2020 and 2021, we significantly reduced our dependence on third parties for our SentriX platform.

If we do not develop and enhance our relationships with semiconductor manufacturers, our business may be adversely affected.

We work closely with most semiconductor manufacturers to ensure that our data programming and security deployment systems comply with their requirements. In addition, many semiconductor manufacturers recommend our managed and secure programming systems for use by users of their programmable devices. These working relationships enable us to keep our programming systems product lines up to date and provide end-users with broad and current programmable device support. As technology changes occur that could limit the effectiveness of pre-placement programming, particularly for very small high-density NAND, e-MMC and UFS devices, certain semiconductor manufacturers may not recommend or may not continue recommending our programming systems for these devices. Our business may be adversely affected if our relationships with semiconductor manufacturers deteriorate or if semiconductor manufacturers are not willing to closely work with us on security deployment. Consolidation within the semiconductor industry may also impact us. As we develop more security deployment solutions, we will need to partner more closely with semiconductor manufacturers.

<u>Our reliance on a small number of suppliers may result in a shortage of key components, which may adversely affect our business, and our suppliers may experience financial difficulties which could impact their ability to service our needs.</u>

Certain parts or software used in our products are currently available from either a single supplier or from a limited number of suppliers. Our small relative level of business means we frequently lack influence and significant purchasing power. If we cannot develop alternative sources of these components, if sales of parts or software are discontinued by the supplier, if we experience deterioration in our relationship with these suppliers, or if these suppliers require financing which is not available, there may be delays or reductions in product introductions or shipments, which may materially adversely affect our operating results.

Because we rely on a small number of suppliers for certain parts, we are subject to possible price increases by these suppliers. In 2021, we have seen more part shortages and larger price increases than in recent years. Also, we may be unable to accurately forecast our production schedule. If we underestimate our production schedule, suppliers may be unable to meet our demand for components. This delay in the supply of key components may have a materially adverse effect on our business. For suppliers who discontinue parts, we may be required to make lifetime purchases covering future requirements. Over estimation of demand or excessive minimum order quantities will lead to excess inventories that may become obsolete. Part shortages, especially semiconductor parts in 2021, impact availability, lead times, and pricing that may be disruptive to our production plans, lead times, margins and may result in lost sales.

Some of our sockets, parts, subassemblies and boards are currently manufactured to our specifications by third-party foreign contract manufacturers and we are sourcing certain parts or options from foreign manufacturers, particularly in China. For example, due to the coronavirus or other viruses impacting workers, suppliers or travel, we may not be able to obtain a sufficient quantity of these products if and when needed or the quality of these parts or options may not meet our standards, which may result in lost sales.

<u>If we are unable to attract and retain qualified third-party distributors and representatives, our business may be adversely affected.</u>

We have an internal sales force and also utilize third-party distributors and representatives. Therefore, the financial stability of these distributors and representatives is important. Their ability to operate, timely pay us, and to acquire any necessary financing may be affected by the current economic climate. Highly skilled professional engineers use most of our products. To be effective, third-party distributors and representatives must possess significant technical, security, marketing, customer relationships and sales resources and must devote their resources to sales efforts, customer education, training and support. These required qualities limit the number of potential third-party distributors and representatives. Our business will suffer if we cannot attract and retain a sufficient number of qualified third-party distributors and representatives to market our products.

MARKET CONDITIONS

<u>A decline in economic and market conditions may result in delayed or decreased capital spending and delayed or defaulted payments from our customers.</u>

The coronavirus will continue to affect economic and market conditions as it continues to spread. Global impacts of the Russian invasion of Ukraine are uncertain at the present time. Our business is highly impacted by capital spending plans and other economic cycles that affect the users and manufacturers of integrated circuits. The industries are highly cyclical and are characterized by rapid technological change, short product life cycles and fluctuations in manufacturing capacity and pricing and gross margin pressures. As we experienced in this and recent prior years, our operations may in the future reflect substantial fluctuations from period-to-period as a consequence of these industry patterns, general economic conditions affecting the timing of orders from major customers, and other factors affecting capital spending. In a difficult economic climate, it may take us longer to receive payments from our customers and some of our customers' business may fail, resulting in non-payment. Our market growth forecasts and related business decisions may be wrong. These factors could have a material adverse effect on our business and financial condition.

<u>Our international operations may expose us to additional risks that may adversely affect our business.</u>

International sales represented approximately 90%, 93% and 92% of net sales in 2021, 2020 and 2019, respectively. We expect that international sales will continue to be a significant portion of our net revenue. International sales may fluctuate due to various factors, including:

- the impact of the coronavirus or other viruses;
- fluctuations in foreign currency exchange rates because 90% of our sales are to international markets, volatile exchange rates may also impact our competitiveness and margins;
- economic uncertainty related to the European energy cost increases;
- migration of manufacturing to low cost geographies;
- unexpected changes in regulatory requirements, including Brexit;
- tariffs and taxes;
- bi-lateral and multi-lateral trade agreements;
- difficulties in staffing and managing foreign operations;
- longer average payment cycles and difficulty in collecting accounts receivable;
- compliance with applicable export licensing requirements and the Foreign Corrupt Practices Act;
- product safety and other certification requirements;
- difficulties in integrating foreign and outsourced operations; and/or
- war, civil unrest, political and economic instability, including the Russian invasion of Ukraine.

Because we have customers located throughout the world, we have significant foreign receivables, although none are based in Russia or Ukraine. We may experience difficulties in collecting these amounts as a result of payment practices of certain foreign customers, economic uncertainty and regulations in foreign countries, the availability and reliability of foreign credit information, and potential difficulties in enforcing collection terms.

The European Union and European Free Trade Association ("EU") has established certain electronic emission and product safety requirements ("CE"). As applicable, our products currently meet these requirements; however, failure to obtain either a CE certification or a waiver for any product may prevent us from marketing that product in Europe. The EU also has directives concerning the Reduction of Hazardous Substances ("RoHS") and we believe we are classified within the EU RoHS Directive category list as Industrial Monitoring and Control Equipment (category 9). We believe all current products meet the RoHS directives. Failure to meet applicable directives or qualifying exemptions may prevent us from marketing certain products in Europe or other territories with similar requirements.

We have subsidiaries in Germany and China and large balances of cash are in our foreign subsidiaries. Our business and financial condition is sensitive to currency exchange rates and any restrictions imposed on their currencies including restrictions on repatriations of cash. A repatriation of cash has, and could in the future, result in tax costs and corresponding deferred tax assets with related tax valuation allowances. Currency exchange fluctuations in these countries may adversely affect our investment in our subsidiaries.

OPERATIONS

<u>Quarterly fluctuations in our operating results may adversely affect our stock price.</u>

Our operating results tend to vary from quarter to quarter. Our revenue in each quarter substantially depends upon orders received within that quarter. Conversely, our expenditures are based on investment plans and estimates of future revenues. We may, therefore, be unable to quickly reduce our spending if our revenues decline in a given quarter. As a result, operating results for that quarter will suffer. Our results of operations for any one quarter are not necessarily indicative of results for any future periods.

Other factors, which may cause our quarterly operating results to fluctuate, include:

- increased competition;
- timing of new product announcements and timing of development expenditures;
- product or service releases and pricing changes by us or our competitors;
- market acceptance or delays in the introduction of new products or services;
- production constraints, including part shortages impact on us and our supply chains;
- quality issues;
- labor or material constraints;
- timing of significant orders;
- timing of installation or customer acceptance requirements;
- sales channel mix of direct vs. indirect distribution;
- civil unrest, war or terrorism;
- health issues such as the outbreak of the coronavirus or other viruses impacting workers, suppliers, customers, travel, or our facilities;
- customers' budgets;
- changes in accounting rules, tax or other legislation;
- adverse movements in exchange rates, interest rates or tax rates;
- cyclical and seasonal nature of demand for our customers' products;
- general economic conditions in the countries where we sell products;
- expenses and delays obtaining authorizations in setting up new operations or locations; and/or
- facilities relocations.

Due to any of the foregoing factors, it is possible that in some future quarters, our operating results will be below expectations of analysts and investors.

<u>We have a history of operating losses and may be unable to generate enough revenue to achieve and maintain profitability.</u>

We have incurred operating losses in five of the last ten years. We operate in a cyclical industry. We will continue to examine our level of operating expense based upon our projected revenues. Any planned increases in operating expenses may result in losses in future periods if projected revenues are not achieved or the investment level required is too large. As a result, we may need to generate greater revenues than we have recently in order to maintain profitability. However, we cannot provide assurance that our revenues will continue to increase and our business strategies may not be successful, resulting in future losses.

<u>The loss of key employees may adversely affect our operations.</u>

We have employees located in the U.S., Germany and China. We also utilize independent contractors for specialty work, primarily in research and development, and utilize temporary workers to adjust capacity to fluctuating demand. Many of our employees are highly skilled, and our continued success will depend in part upon our ability to attract and retain employees who can be in great demand within the industry. None of our employees are represented by a collective bargaining unit, and we believe relations with our employees are favorable, though no assurance can be made that this will be the case in the future. In China, our workers have benefits and similar arrangements provided under a "FSCO" labor agreement, and we could be adversely affected if we were unable to continue that arrangement.

<u>We may need to raise additional capital and our future access to capital is uncertain.</u>

Our past revenues have sometimes been, and our future revenues may again be, insufficient to support the expense of our operations and any expansion of our business. We may therefore need additional equity or debt capital to finance our operations. If we are unable to generate sufficient cash flows from operations or to obtain funds through additional debt, lease or equity financing, we may have to reduce some or all of our development and sales and marketing efforts and limit the expansion of our business.

We believe that we have sufficient cash or working capital available under our operating plan to fund our operations and capital requirements through at least the next one-year period. In the event we require additional cash for U.S. operations or other needs, we may choose to repatriate some, or all, of the cash held in our foreign subsidiaries. There may be tax, legal and other impediments to any repatriation actions. Our working capital may be used to fund possible losses, business growth, project initiatives, share repurchases, and business development initiatives including acquisitions, which could reduce our liquidity and result in a requirement for additional cash before that time. Any substantial inability to achieve our current business plan could have a material adverse impact on our financial position, liquidity, or results of operations and may require us to reduce expenditures and/or seek additional financing.

Therefore, we may seek additional funding through public or private debt or equity financing or from other sources. We have no commitments for additional financing, and given a potential future unfavorable economic climate and our financial results, we may experience difficulty in obtaining funding on favorable terms, if at all. Any financing we obtain may contain covenants that restrict our freedom to operate our business or may require us to issue securities that have rights, preferences or privileges senior to our Common Stock and may dilute your ownership interest.

Cybersecurity breaches or terrorism could result in liabilities or costs as well as damage to or loss of our data or customer access to our website and information systems. The collection, storage, transmission, use and disclosure of user data and personal information, if accessed improperly, could give rise to liabilities or additional costs as a result of laws, governmental regulations and evolving views of personal privacy rights.

Cybersecurity attacks may increase as a result of the Russian invasion of Ukraine. Cybersecurity breaches or terrorism could result in the exposure or theft of private or confidential information as well as interrupt our business, including denying customer access to our website and information systems. We transmit, and in some cases store, end-user data, including personal information. In jurisdictions around the world, personal information is becoming increasingly subject to legislation and regulations intended to protect consumers' privacy and security. The interpretation of privacy and data protection laws and regulations regarding the collection, storage, transmission, use and disclosure of such information in some jurisdictions is unclear and evolving. These laws may be interpreted and applied in conflicting ways from country to country and in a manner that is not consistent with our current data protection practices. Complying with these varying international requirements could cause us to incur additional costs and change our business practices. Because our services are accessible in many foreign jurisdictions, some of these jurisdictions may claim that we are required to comply with their laws, even where we have no local entity, employees or infrastructure. We could be forced to incur significant expenses if we were required to modify our products, our services or our existing security and privacy procedures in order to comply with new or expanded regulations.

Our stock price may be volatile and, as a result, our shareholders may lose some or all of their investment.

The stock prices of technology companies tend to fluctuate significantly. We believe factors such as announcements of new products or services by us or our competitors and quarterly variations in financial results and outlook may cause the market price of our Common Stock to fluctuate substantially. In addition, overall volatility in the stock market, particularly in the technology company sector, is often unrelated to the operating performance of companies. If these market fluctuations continue in the future, they may adversely affect the price of our Common Stock. Additionally, securities of certain companies have recently experienced significant and extreme volatility in stock price due to short sellers of shares of common stock, known as a "short squeeze." These short squeezes have caused extreme volatility in both the stock prices of those companies and in the market, and have led to the price per share of those companies to trade at a significantly inflated rate that is disconnected from the underlying value of the company. Many investors who have purchased shares in those companies at an inflated rate face the risk of losing a significant portion of their original investment, as in many cases the price per share has declined steadily as interest in those stocks have abated. While we have no reason to believe our shares would be the target of a short squeeze, there can be no assurance that we won't be in the future, and you may lose a significant portion or all of your investment if you purchase our shares at a rate that is significantly disconnected from our underlying value.

REGULATORY REQUIREMENTS

Failure to comply with increasing regulatory requirements may adversely affect our stock price and business.

As a public company, we are subject to numerous governmental and stock exchange requirements, with which we believe we are in compliance. Our failure to meet regulatory requirements and exchange listing standards may result in actions such as: the delisting of our stock, impacting our stock's liquidity; SEC enforcement actions; and securities claims and litigation.

The Sarbanes-Oxley Act of 2002 and the Securities and Exchange Commission (SEC) have requirements that we may fail to meet or we may fall out of compliance with, such as the internal controls auditor attestation required under Section 404 of the Sarbanes-Oxley Act of 2002, with which we are not currently required to comply as we are a smaller reporting company. We assume that we will continue to have the status of a smaller reporting company based on the aggregate market value of the voting and non-voting shares held as of June 30, 2021. If we fail to achieve and maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002. Moreover, effective internal controls, particularly those related to revenue recognition, are necessary for us to produce reliable financial reports and are important to help prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our stock could drop significantly.

While we have policies and procedures in place designed to prevent corruption and bribery, because our business is significantly international, violations of the Foreign Corrupt Practices Act (FCPA) could have a significant adverse effect on our business due to the disruption and distraction of an investigation, financial penalties and criminal penalties.

Government regulations regarding the use of "conflict" minerals could adversely affect our prospects and results of operations.

Regulatory requirements regarding disclosure of our use of "conflict" minerals mined from the Democratic Republic of Congo and adjoining countries could affect the sourcing and availability of minerals used in the manufacture of certain products. Although we do not buy raw materials, manufacture, or produce any electronic equipment using conflict minerals directly, some components provided by our suppliers and contained in our products contain conflict minerals. Our goal is for our products to be conflict free. As a result, there may only be a limited pool of suppliers who provide conflict free metals, and we cannot assure you that we will be able to obtain products in sufficient quantities or at competitive prices. Single source suppliers may not respond, or respond negatively regarding conflict mineral sourcing, and we may be unable to find alternative sources to replace them. Also, because our supply chain is complex, we may face reputational challenges with our customers and other stakeholders if we are unable to sufficiently verify the origins for all metals used in the products that we sell. Further, if we are unable to comply with the new laws or regulations or if our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us. We may need to incur additional costs and invest additional resources, including management's time, in order to comply with the new regulations and anticipated additional reporting and disclosure obligations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

During the fourth quarter of 2021, we amended our lease agreement for the Redmond, Washington headquarters facility, extending the lease to January 31, 2026. The lease is for approximately 20,460 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $372,000 and $361,000, respectively.

In addition to the Redmond facility, approximately 24,000 square feet is leased at two foreign locations, including our sales, service, operations and engineering office located in Shanghai, China, and our German sales, service and engineering office located near Munich, Germany.

Our lease for a facility located in Shanghai, China ran through October 31, 2021. In April 2021, we signed a lease extension effective November 1, 2021 that extends the lease through October 31, 2024. This lease is for approximately 19,400 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $317,000 and $301,000, respectively.

Our lease for our facility located near Munich, Germany ran through February 28, 2022 and in March 2022 we entered into a lease extension to 2027. This lease is for approximately 4,895 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $58,000 and $62,000, respectively.

Item 3. Legal Proceedings

From time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business. As of December 31, 2021, we were not a party to any legal proceedings or aware of any indemnification agreement claims, the adverse outcome of which in management's opinion, individually or in the aggregate, would have a material adverse effect on our results of operations or financial position.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

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

Our Common Stock is listed on the NASDAQ Capital Market (NASDAQ symbol is DAIO). The closing price was $4.61 on December 31, 2021.

The approximate number of shareholders of record as of March 21, 2022 was 376.

Except for special cash dividend of $4.15 per share paid on March 8, 1989, we have not paid cash dividends on our Common Stock and do not anticipate paying regular cash dividends in the foreseeable future.

No sales of unregistered securities were made by us during the periods ended December 31, 2021, 2020 or 2019.

See Item 12 for the Equity Compensation Plan Information.

Item 6. Selected Financial Data

Not applicable.

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

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. This Act provides a "safe harbor" for forward-looking statements to encourage companies to provide prospective information about themselves as long as they identify these statements as forward-looking and provide meaningful cautionary statements identifying important factors that could cause actual results to differ from the projected results. All statements other than statements of historical fact made in this Annual Report on Form 10-K are forward-looking. In particular, statements herein regarding economic outlook, impact of COVID-19; industry prospects and trends; expected business recovery; industry partnerships; future results of operations or financial position; future spending; breakeven revenue point; expected market decline, bottom or growth; market acceptance of our newly introduced or upgraded products or services; the sufficiency of our cash to fund future operations and capital requirements; development, introduction and shipment of new products or services; changing foreign operations; trade issues and tariffs; expected inventory levels; expectations for unsupported platform or product versions and related inventory and other charges; Russia-Ukraine war impacts; supply chain expectations; semiconductor chip shortages; and any other guidance on future periods are forward-looking statements. Forward-looking statements reflect management's current expectations and are inherently uncertain. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements, or other future events. Moreover, neither Data I/O nor anyone else assumes responsibility for the accuracy and completeness of these forward-looking statements. We are under no duty to update any of these forward-looking statements after the date of this Annual Report. The Reader should not place undue reliance on these forward-looking statements. The following discussions and the section entitled "Risk Factors – Cautionary Factors That May Affect Future Results" describes some, but not all, of the factors that could cause these differences.

OVERVIEW

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

In production, in addition to adding protective health measures for our employees, we have focused on supply chain resilience and duplicating production capability for some products in both our Shanghai, China and Redmond, USA facilities. We implemented additional supplier financial and other monitoring, as well as adding additional local suppliers and increasing inventory stock levels of key parts. Other than production employees who are required to be onsite, most other employees are working with hybrid flexibility to be onsite as desired or needed and this is expected to continue. Our workforce is over 90% vaccinated world-wide.

Our short-term challenge continues to be operating in a cyclical, COVID-19 impacted, and rapidly evolving industry environment, which saw significant improvement of revenue, up 27%, as compared to 2020. Bookings were up 23% for 2021, compared to 2020, despite the demand decline in the third quarter of 2021 relative to the second quarter, which we believe, was due to semiconductor chip shortages discussed above. Our focus has been dealing with COVID-19 related issues, especially supply chain shortages and lead-times, which have been managed though carefully maintaining and increasing key inventory levels. We also continue to balance a host of current issues including industry changes, industry partnerships, new technologies, business geography shifts, travel and customer restrictions, customer shut downs, exchange rate volatility, trade issues and tariffs, semiconductor chip shortages, shipping challenges, increasing costs (inflation) and strategic investments in our business with the level of demand and mix of business we expect. We continue to manage our costs carefully and execute strategies for cash preservation, protecting our employee base and managing supply chain price increases. The Russia–Ukraine war has had little direct impact on our business, however, the uncertainty and ripple effects created by it, may have unknown indirect impacts.

We are focusing our research and development efforts in our strategic growth markets, namely automotive electronics and IoT new programming technologies, secure supply chain solutions, automated programming systems and their enhancements for the manufacturing environment and software. At Data I/O, we are investing for the long-term to retain and extend our leadership position in automotive electronics and security deployment. We are continuing to develop technology to securely provision newer categories of semiconductors, including Secure Elements, Authentication Chips, and Secure Microcontrollers. In late 2020, we released updated SentriX hardware and tools which simplify the customer acquisition process, and reduce dependency on third party suppliers. We also upgraded the SentriX® security deployment systems in the field to this new architecture. We plan to deliver new programming technology and automated handling systems for managed and secure programming in the manufacturing environment. We continue to focus on extending the capabilities and support for our product lines and supporting the latest semiconductor devices, including various configurations of NAND Flash, e-MMC, UFS and microcontrollers on our newer products.

Our customer focus has been on global and strategic high-volume manufacturers in key market segments like automotive electronics, IoT, industrial controls and consumer electronics, as well as programming centers.

Although the long-term prospects for our strategic growth markets should remain good, these markets and our business have been, and are likely to continue to be, adversely impacted by the global COVID-19 pandemic and other global political and economic factors. Semiconductor shortages are causing issues and some automotive plant or production shutdowns. This appears to be temporary and, in some cases for us, drives consumable adapter demand in order to support alternative semiconductors.

CRITICAL ACCOUNTING POLICY JUDGMENTS AND ESTIMATES

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires that we make estimates and judgments, which affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, sales returns, bad debts, inventories, intangible assets, income taxes, warranty obligations, restructuring charges, contingencies, such as litigation and contract terms that have multiple elements and other complexities typical in the capital equipment industry. We base our estimates on historical experience and other assumptions that we believe are reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our financial statements:

Revenue Recognition: Topic 606 provides a single, principles-based five-step model to be applied to all contracts with customers. It generally provides for the recognition of revenue in an amount that reflects the consideration to which the Company expects to be entitled, net of allowances for estimated returns, discounts or sales incentives, as well as taxes collected from customers when control over the promised goods or services are transferred to the customer.

We expense contract acquisition costs, primarily sales commissions, for contracts with terms of one year or less and will capitalize and amortize incremental costs with terms that exceed one year. During 2021 and 2020, the impact of capitalization of incremental costs for obtaining contracts was immaterial. We exclude sales, use, value added, some excise taxes and other similar taxes from the measurement of the transaction price.

We recognize revenue upon transfer of control of the promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We have determined that our programming equipment has reached a point of maturity and stability such that product acceptance can be assured by testing at the factory prior to shipment and that the installation meets the criteria to be a separate performance obligation. These systems are standard products with published product specifications and are configurable with standard options. The evidence that these systems could be deemed as accepted was based upon having standardized factory production of the units, results from batteries of tests of product performance to our published specifications, quality inspections and installation standardization, as well as past product operation validation with the customer and the history provided by our installed base of products upon which the current versions were based.

The revenue related to products requiring installation that is perfunctory is recognized upon transfer of control of the product to customers, which generally is at the time of shipment. Installation that is considered perfunctory includes any installation that is expected to be performed by other parties, such as distributors, other vendors, or the customers themselves. This considers the complexity, skill and training needed as well as customer expectations regarding installation.

We enter into arrangements with multiple performance obligations that arise during the sale of a system that includes an installation component, a service and support component and a software maintenance component. We allocate the transaction price of each element based on relative selling prices. Relative selling price is based on the selling price of the standalone system. For the installation and service and support performance obligations, we use the value of the discount given to distributors who perform these components. For software maintenance performance obligations, we use what we charge for annual software maintenance renewals after the initial year the system is sold. Revenue is recognized on the system sale based on shipping terms, installation revenue is recognized after the installation is performed, and hardware service and support and software maintenance revenue is recognized ratably over the term of the agreement, typically one year. Deferred revenue includes service, support and maintenance contracts and represents the undelivered performance obligation of agreements that are typically for one year.

When we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

We recognize revenue when there is an approved contract that both parties are committed to perform, both parties rights have been identified, the contract has substance, collection of substantially all the consideration is probable, the transaction price has been determined and allocated over the performance obligations, the performance obligations, including substantive acceptance conditions, if any, in the contract have been met, the obligation is not contingent on resale of the product, the buyer's obligation would not be changed in the event of theft, physical destruction or damage to the product, the buyer acquiring the product for resale has economic substance apart from us, and we do not have significant obligations for future performance to directly bring about the resale of the product by the buyer. We establish a reserve for sales returns based on historical trends in product returns and estimates for new items. Payment terms are generally 30 days from shipment.

We transfer certain products out of service from their internal use and make them available for sale. The products transferred are typically our standard products in one of the following areas: service loaners, rental or test units; engineering test units; or sales demonstration equipment. Once transferred, the equipment is sold by our regular sales channels as used equipment inventory. These product units often involve refurbishing and an equipment warranty, and are conducted as sales in our normal and ordinary course of business. The transfer amount is the product unit's net book value, and the sale transaction is accounted for as revenue and cost of goods sold.

Allowance for Doubtful Accounts: We base the allowance for doubtful accounts receivable on our assessment of the collectability of specific customer accounts and the aging of accounts receivable. If there is deterioration of a major customer's credit worthiness or actual defaults are higher than historical experience, our estimates of the recoverability of amounts due to us could be adversely affected.

Inventory: Inventories are stated at the lower of cost or net realizable value. Adjustments are made to standard cost, which approximates actual cost on a first-in, first-out basis. We estimate reductions to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted product demand. We evaluate our inventories on an item-by-item basis and record inventory adjustments accordingly. If there is a significant decrease in demand for our products, uncertainty during product line transitions, or a higher risk of inventory obsolescence because of rapidly changing technology and customer requirements, we may be required to increase our inventory adjustments, and our gross margin could be adversely affected.

Warranty Accruals: We accrue for warranty costs based on the expected material and labor costs to fulfill our warranty obligations. If we experience an increase in warranty claims, which are higher than our historical experience, our gross margin could be adversely affected.

Tax Valuation Allowances: Given the uncertainty created by our loss history, as well as the current and ongoing cyclical and COVID-19 related uncertain economic outlook for our industry and capital and geographic spending, as well as income and current net deferred tax assets by entity and country, we expect to continue to limit the recognition of net deferred tax assets and accounting for uncertain tax positions and maintain the tax valuation allowances. At the current time, we expect, therefore, that reversals of the tax valuation allowance will take place as we are able to take advantage of the underlying tax loss or other attributes in carry forward or their use by future income or circumstances allow us to realize these attributes. The transfer pricing and expense or cost sharing arrangements are complex areas where judgments, such as the determination of arms-length arrangements, can be subject to challenges by different tax jurisdictions.

Share-based Compensation: We account for share-based awards made to our employees and directors, including employee stock option awards and restricted stock unit awards, using the estimated grant date fair value method of accounting. For options, we estimate the fair value using the Black-Scholes valuation model and an estimated forfeiture rate. Restricted stock unit awards are valued based on the average of the high and low price on the date of the grant and an estimated forfeiture rate. For both options and restricted awards, expense is recognized as compensation expense on the straight-line basis. Employee Stock Purchase Plan ("ESPP") shares were issued under provisions that do not require us to record any equity compensation expense.

RESULTS OF OPERATIONS:

NET SALES

Net sales by product line	2021	Change	2020
(in thousands)			
Automated programming systems	$20,864	26.4%	$16,509
Non-automated programming systems	4,971	30.2%	3,819
Total programming systems	$25,835	27.1%	$20,328

Net sales by location	2021	Change	2020

(in thousands)			
United States	$2,607	72.0%	$1,516
% of total	10.1%		7.5%
International	$23,228	23.5%	$18,812
% of total	89.9%		92.5%

Net sales by type	2021	Change	2020
(in thousands)			
Equipment Sales	$14,989	30.6%	$11,480
Adapter Sales	7,818	41.5%	5,527
Software and Maintenance Sales	3,028	(8.8%)	3,321
Total	$25,835	27.1%	$20,328

Net sales for the year ended December 31, 2021 increased approximately 27.1% to $25.8 million compared to 2020 primarily as a result of COVID-19 related recovery in capital spending resulting in higher demand in Automotive Electronics and Programming Centers during 2021. On a regional basis, net sales increased approximately 21% in Asia and approximately 60% in the Americas and 12% in Europe.

Order bookings were $25.5 million for 2021, up approximately 23% compared to $20.8 million in 2020. Backlog at December 31, 2021 and 2020 was $2.9 million and $3.9 million, respectively. Deferred revenue was $1.5 million at December 31, 2021 compared to $1.1 million at December 31, 2020.

GROSS MARGIN

	2021	Change	2020
(in thousands)			
Gross margin	$14,720	36.0%	$10,822
Percentage of net sales	57.0%		53.2%

Gross margin as a percentage of sales for the year ended December 31, 2021 was 57.0%, compared to 53.2% in 2020. The improvement in gross margin percentage was due to the impact of channel and price mix, factory charges, and in 2020, one-time impairment obsolescence of $291,000 for certain end of service support and first generation SentriX parts.

RESEARCH AND DEVELOPMENT

	2021	Change	2020
(in thousands)			
Research and development	$6,635	4.4%	$6,357
Percentage of net sales	25.7%		31.3%

Research and development ("R&D") expense increased $278,000 for the year ended December 31, 2021 compared to 2020. The increase was primarily related to higher incentive compensation. R&D as a percentage of sales decreased primarily due to the increase in 2021 sales.

We believe it is essential to invest in R&D to significantly enhance our existing products and to create new products as markets develop and technologies change. During 2021, we continued strategically investing in creating a second generation of SentriX, which was introduced in the fourth quarter. In addition to product development, a significant part of R&D spending is on creating software and support for new devices introduced by the semiconductor companies. We are currently focusing our research development efforts on strategic growth markets, including automotive electronics and IoT. We are developing technology and the SentriX product line to securely program new categories of semiconductors, including Secure Elements, Authentication Chips, and Secure Microcontrollers. We delivered new enhanced programming technology and automated handling systems for managed and secure programming in the manufacturing environment and extending the capabilities and support for our programmer architecture. Our R&D spending fluctuates based on the number, type, and the development stage of our product initiatives and projects.

SELLING, GENERAL AND ADMINISTRATIVE

(in thousands)	2021	Change	2020
Selling, general & administrative	$8,358	21.3%	$6,891
Percentage of net sales	32.4%		33.9%

Selling, General and Administrative ("SG&A") expenses increased approximately $1.5 million for the year ended December 31, 2021 compared to 2020. The increase was primarily related to higher sales commissions on increased sales volume, higher incentive compensation, consulting and rent, offset in part by lower stock-based compensation and travel related expenses. Cost control measures remain in effect.

INTEREST

(in thousands)	2021	Change	2020
Interest income	$11	(21.4%)	$14

Interest income was relatively consistent for the year ended December 31, 2021 compared to 2020.

INCOME TAXES

(in thousands)	2021	Change	2020
Income tax (expense) benefit	($112)	(71.1%)	($387)

Income tax (expense) decreased by $275,000 for the year ended December 31, 2021 compared to 2020. The decrease was primarily a result of the withholding tax of $257,000 on the repatriation of cash from subsidiaries in 2020. Income tax (expense) in 2021 and 2020 is primarily the result of foreign subsidiary income tax and minimal U.S. state income tax.

The effective tax rate for 2021 of (25.4%) and 2020 of (10.8%) differed from the statutory tax rates in our tax reporting jurisdictions primarily due to the effect of valuation allowances. We have a valuation allowance of $7.9 million and $8.9 million as of December 31, 2021 and 2020, respectively. Our deferred tax assets and valuation allowance have increased by approximately $392,000 and $365,000 associated with the requirements of accounting for uncertain tax positions as of December 31, 2021 and 2020, respectively. Given the uncertainty created by our loss history, particularly in the U.S., which is where most of our net deferred tax assets are located, and the ongoing uncertain economic outlook for our industry, as well as capital and geographic spending, we currently expect to continue to limit the recognition of net deferred tax assets and maintain the tax valuation allowances.

INFLATION AND CHANGES IN FOREIGN CURRENCY EXCHANGE RATES

Sales and expenses incurred by foreign subsidiaries are denominated in the subsidiary's local currency and translated into U.S. Dollar amounts at average rates of exchange during the year. We recognized foreign currency transaction loss of $(202,000) in 2021 and foreign transaction loss of $(513,000) in 2020. The transaction gains or losses resulted primarily from translation adjustments to foreign inter-company accounts and U.S. Dollar accounts held by foreign subsidiaries and sales by our German subsidiary to certain customers, which were invoiced in U.S. Dollars. Because approximately 90% of our sales are to international markets, volatile exchange rates may also impact our competitiveness and margins. We increased prices in response to cost increases caused by inflation and part shortages and believe we will continue to utilize this strategy.

IMPAIRMENT & RELATED CHARGES

In 2021 we had no substantial impairments. During the fourth quarter of 2020, we launched a new generation of SentriX tools. This obsoleted components of the first-generation hardware, software and inventory. We also ended support for some legacy automated handlers, impairing the remaining service inventory. As a result, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired, totaling $943,000. This included impairment of $652,000, consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, as well as impairment related charges of $291,000, due to inventory obsolescence (cost of goods sold) for end of certain product support.

FINANCIAL CONDITION:

LIQUIDITY AND CAPITAL RESOURCES

	2021	Change	2020
(in thousands)			
Working capital	$18,484	$425	$18,059

At December 31, 2021, our principal sources of liquidity consisted of existing cash and cash equivalents which remained relatively unchanged from the December 31, 2020 cash balance. Our working capital increased in $425,000 during 2021 due to better business conditions, timely collections, and increases in inventories and accounts receivable, and offset in part by accrued incentive compensation and our operating loss. Our current ratio was 3.7 and 4.5 for December 31, 2021 and 2020, respectively. The company continues to have no debt.

Although we have no significant external capital expenditure plans currently, we expect to continue to carefully make and manage capital expenditures to support our business. We plan to increase our internally developed rental, security provisioning, sales demonstration and test equipment as we develop and release new products. Capital expenditures are currently expected to be funded by existing and internally generated funds.

As a result of our cyclical and seasonal industry, significant product development, customer support and selling and marketing efforts, we have required substantial working capital to fund our operations. We have tried to balance our level of development spending with the goal of profitable operations or managing down business levels related to COVID-19. We have implemented or have initiatives to implement geographic shifts in our operations, optimize real estate usage, reduce exposure to the impact of currency volatility and tariffs, increase product development differentiation, and reduce costs.

We believe that we have sufficient cash or working capital available under our operating plan to fund our operations and capital requirements through the next one-year period, and beyond. We may require additional cash at the U.S. headquarters, which could cause potential repatriation of cash that is held in our foreign subsidiaries. We have liquidated our subsidiary in Canada and repatriated its cash. For any repatriation, there may be tax and other impediments to any repatriation actions. As many repatriations typically have associated withholding taxes, those withheld will be a current tax without generating a current or deferred tax benefit. Our working capital may be used to fund possible losses, business growth, project initiatives, share repurchases and business development initiatives including acquisitions, which could reduce our liquidity and result in a requirement for additional cash before that time. Any substantial inability to achieve our current business plan could have a material adverse impact on our financial position, liquidity, or results of operations and may require us to reduce expenditures and/or seek possible additional financing.

OFF-BALANCE SHEET ARRANGEMENTS

Except as noted in the accompanying consolidated financial statements in Note 7, “Other Commitments”, we had no material off-balance sheet arrangements.

SHARE REPURCHASE PROGRAMS

Data I/O did not have a share repurchase program in 2021.

NON-GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP) FINANCIAL MEASURES

Earnings Before Interest, Taxes, Depreciation, and Amortization (“EBITDA”) and Adjusted EBITDA excluding equity compensation and impairment & related charges (non-cash, one-time items) are set forth below. Non-GAAP financial measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP. We believe that these non-GAAP financial measures provide meaningful supplemental information regarding our results and facilitate the comparison of results.

During 2021, we analyzed assets for impairment and none were identified as being impaired. During the fourth quarter of 2020, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired totaling $943,000. This included impairment of assets consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, of $652,000 as well as impairment related charges of $291,000 due primarily to end of certain product support as discussed further above.

A reconciliation of net income to EBITDA and Adjusted EBITDA follows:

	For Year Ended December 31,	
	2021	2020
(in thousands)		
Net Income (loss)	($555)	($3,964)
Interest (income)	(11)	(14)
Taxes	112	387
Depreciation and amortization	667	815
EBITDA	$213	($2,776)
Equity compensation	1,238	1,467
Impairment & related charges	-	943
Adjusted EBITDA, excluding equity compensation and impairment & related charges	$1,451	($366)

NEW ACCOUNTING PRONOUNCEMENTS

On January 1, 2021 the Company adopted ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This ASU clarifies and simplifies accounting for income taxes by eliminating certain exceptions for intraperiod tax allocation principles and the methodology for calculating income tax rates in an interim period, among other updates. The adoption of this ASU did not have a material impact on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

See pages 29 through 48.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Data I/O Corporation

Opinion on the financial statements
We have audited the accompanying consolidated balance sheets of Data I/O Corporation (a Washington corporation) and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2021, and the related notes and financial statement schedules included under Item 15(a)(2) (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, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, 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 were 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 critical audit matters 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Net realizable value of inventory

As described further in Note 1 to the financial statements, management measures the net realizable value of inventory based on estimated reductions to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted demand. We identified the net realizable value of inventory specifically as a critical audit matter.

The principal considerations for our determination that the net realizable value of inventory represents a critical audit matter are that the assessment of the valuation of inventory is complex and includes an estimate of forecasted demand. The demand estimate is subjective and requires the Company to consider significant assumptions such as economic conditions, technological advances, historical usage, and consumer trends, which are subject to significant uncertainty and therefore require significant auditor judgement.

Our audit procedures related to the net realizable value of inventory included the following, among others:

- obtained management's analysis of parts in inventory and expected customer demand, recalculated inputs into the analysis. This included, among other inputs, historical usage compared to quantities on hand, age, and general ledger balances.
- tested selected inventory items by making inquiries of management and evaluating the appropriateness of judgments, assumptions and documentation supporting adjustments to the reserve estimate.
- inquired with management and various staff members outside of the finance team to obtain support for selected forecast demand inputs as well as product specific trends

/s/ GRANT THORNTON LLP
We have served as the Company's auditor since 2001.

Bellevue, Washington
Date: March 29, 2022

DATA I/O CORPORATION
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$14,190	$14,167
Trade accounts receivable, net of allowance for doubtful accounts of $89 and $66, respectively	3,995	2,494
Inventories	6,351	5,270
Other current assets	737	1,319
TOTAL CURRENT ASSETS	25,273	23,250
Property, plant and equipment – net	946	1,216
Other assets	2,838	1,126
TOTAL ASSETS	$29,057	$25,592
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$1,373	$1,245
Accrued compensation	2,496	1,509
Deferred revenue	1,507	1,068
Other accrued liabilities	1,413	1,307
Income taxes payable	-	62
TOTAL CURRENT LIABILITIES	6,789	5,191
Operating lease liabilities	2,277	588
Long-term other payables	138	174
COMMITMENTS	-	-
STOCKHOLDERS' EQUITY		
Preferred stock - Authorized, 5,000,000 shares, including 200,000 shares of Series A Junior Participating Issued and outstanding, none	-	-
Common stock, at stated value - Authorized, 30,000,000 shares Issued and outstanding, 8,621,007 shares as of December 31, 2021 and 8,416,335 shares as of December 31, 2020	20,886	20,071
Accumulated earnings (deficit)	(2,011)	(1,456)
Accumulated other comprehensive income (loss)	978	1,024
TOTAL STOCKHOLDERS' EQUITY	19,853	19,639
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$29,057	$25,592

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	For the Years Ended December 31,	
	2021	**2020**
Net sales	$25,835	$20,328
Cost of goods sold	11,115	9,506
Gross margin	14,720	10,822
Operating expenses:		
Research and development	6,635	6,357
Selling, general and administrative	8,358	6,891
Impairment	-	652
Total operating expenses	14,993	13,900
Operating income (loss)	(273)	(3,078)
Non-operating income (loss):		
Interest income	11	14
Gain on sale of assets	21	-
Foreign currency transaction gain (loss)	(202)	(513)
Total non-operating income (loss)	(170)	(499)
Income (loss) before income taxes	(443)	(3,577)
Income tax (expense) benefit	(112)	(387)
Net income (loss)	($555)	($3,964)
Basic earnings (loss) per share	($0.06)	($0.48)
Diluted earnings (loss) per share	($0.06)	($0.48)
Weighted-average basic shares	8,545	8,333
Weighted-average diluted shares	8,545	8,333

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	For the Years Ended December 31, 2021	2020
Net Income (loss)	($555)	($3,964)
Other comprehensive income:		
Foreign currency translation gain (loss)	(46)	750
Comprehensive income (loss)	($601)	($3,214)

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Common Stock		Accumulated Earnings (Deficit)	Accumulated and Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount			
Balance at December 31, 2019	8,212,748	$18,748	$2,508	$274	$21,530
Stock options exercised, net	-	-	-	-	-
Repurchased shares	-	-	-	-	-
Stock awards issued, net of tax withholding	195,773	(173)	-	-	(173)
Issuance of stock through:					
Employee Stock Purchase Plan	7,814	29	-	-	29
Share-based compensation	-	1,467	-	-	1,467
Net income (loss)	-	-	(3,964)	-	(3,964)
Other comprehensive income gain (loss)	-	-	-	750	750
Balance at December 31, 2020	8,416,335	$20,071	($1,456)	$1,024	$19,639
Stock options exercised, net	2,444	(6)	-	-	(6)
Repurchased shares	-	-	-	-	-
Stock awards issued, net of tax withholding	197,744	(441)	-	-	(441)
Issuance of stock through:					
Employee Stock Purchase Plan	4,484	24	-	-	24
Share-based compensation	-	1,238	-	-	1,238
Net income (loss)	-	-	(555)	-	(555)
Other comprehensive income gain (loss)	-	-	-	(46)	(46)
Balance at December 31, 2021	8,621,007	$20,886	($2,011)	$978	$19,853

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	For the Twelve Months Ended December 31, 2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	($555)	($3,964)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:		
Depreciation and amortization	667	815
Equipment transferred to cost of goods sold	220	245
Share-based compensation	1,238	1,467
Impairment and related charges	-	943
Net change in:		
Trade accounts receivable	(1,565)	1,664
Inventories	(750)	(414)
Other current assets	598	(398)
Accounts payable and accrued liabilities	94	(38)
Deferred revenue	539	(380)
Other long-term liabilities	251	(491)
Deposits and other long-term assets	673	1,182
Net cash provided by (used in) operating activities	1,410	631
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property, plant and equipment	(623)	(860)
Cash provided by (used in) investing activities	(623)	(860)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from issuance of common stock, less payments for shares withheld to cover tax	(423)	(144)
Cash provided by (used in) financing activities	(423)	(144)
Increase (decrease) in cash and cash equivalents	364	(373)
Effects of exchange rate changes on cash	(341)	604
Cash and cash equivalents at beginning of period	14,167	13,936
Cash and cash equivalents at end of period	$14,190	$14,167
Supplemental disclosure of cash flow information:		
Cash paid during the period for:		
Income taxes	$415	$137

See notes to consolidated financial statements

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

Data I/O Corporation ("Data I/O", "We", "Our", "Us") designs, manufactures and sells programming systems used by designers and manufacturers of electronic products. Our programming system products are used to program integrated circuits ("ICs" or "devices" or "semiconductors") with the specific unique data necessary for the ICs contained in various products, and are an important tool for the electronics industry experiencing growing use of programmable ICs. Customers for our programming system products are located around the world, primarily in Asia, Europe and the Americas. Our manufacturing operations are currently located in Redmond, Washington, United States and Shanghai, China.

Principles of Consolidation

The consolidated financial statements include the accounts of Data I/O Corporation and our wholly-owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management 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 reporting period. Actual results could differ from those estimates.

Significant estimates include:

- Revenue Recognition
- Allowance for Doubtful Accounts
- Inventory
- Warranty Accruals
- Tax Valuation Allowances
- Share-based Compensation

Foreign Currency Translation

Assets and liabilities of foreign subsidiaries are translated at the exchange rate on the balance sheet date. Revenues, costs and expenses of foreign subsidiaries are translated at average rates of exchange prevailing during the year. Translation adjustments resulting from this process are charged or credited to stockholders' equity. Realized and unrealized gains and losses resulting from the effects of changes in exchange rates on assets and liabilities denominated in foreign currencies are included in non-operating expense as foreign currency transaction gains and losses.

Cash and Cash Equivalents

All highly liquid investments purchased with an original maturity of 90 days or less are considered cash equivalents. We maintain our cash and cash equivalents with major financial institutions in the United States of America, which are insured by the Federal Deposit Insurance Corporation (FDIC), and in foreign jurisdictions. Deposits in U.S. banks exceed the FDIC insurance limit. We have not experienced any losses on our cash and cash equivalents. Cash and cash equivalents held in foreign bank accounts in China and Germany, totaled (in millions) $6.8 at both December 31, 2021 and 2020.

Fair Value of Financial Instruments

Certain financial instruments are carried at cost on the consolidated balance sheets, which approximates fair value due to their short-term, highly liquid nature. These instruments include cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, and other short-term liabilities.

Accounts Receivable

The majority of our accounts receivable are due from companies in the electronics manufacturing industries. Credit is extended based on an evaluation of a customer's financial condition and, generally, collateral is not required. Accounts receivable are typically due within 30 to 60 days and are stated at amounts due from customers net of an allowance for doubtful accounts. Accounts receivable outstanding longer than the contractual payment terms are considered past due. We determine the allowance by considering a number of factors, including the length of time trade accounts receivable are past due, the industry and geographic payment practices involved, our previous bad debt experience, the customer's current ability to pay their obligation to us, and the condition of the general economy and the industry as a whole. We write off accounts receivable when they become uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. Interest may be charged, at the discretion of management and according to our standard sales terms, beginning on the day after the due date of the receivable. However, interest income is subsequently recognized on these accounts either to the extent cash is received, or when the future collection of interest and the receivable balance is considered probable by management.

Inventories

Inventories are stated at the lower of cost or net realizable value with cost being the currently adjusted standard cost, which approximates cost on a first-in, first-out basis. We estimate changes to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted product demand. We evaluate our inventories on an item by item basis and record an adjustment (lower of cost or net realizable value) accordingly.

Property, Plant and Equipment

Property, plant and equipment, including leasehold improvements, are stated at cost, and depreciation is calculated over the estimated useful lives of the related assets or lease terms on the straight-line basis. We depreciate substantially all property, plant and equipment over periods of three to seven years. We depreciate leasehold improvements over the remaining portion of the lease or over the expected life of the asset if less than the remaining term of the lease.

We regularly review all of our property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If the total of future undiscounted cash flows is less than the carrying amount of these assets, an impairment loss, if any, based on the excess of the carrying amount over the fair value of the assets, is recorded. Based on this evaluation, for the year ended December 31, 2021, no impairment was noted or recorded for property, plant and equipment. For the year ended December 31, 2020, approximately $252,000 of property, plant and equipment impairment was recorded.

Patent Costs

We expense external costs, such as filing fees and associated attorney fees, incurred to obtain initial patents, but capitalize patents obtained through acquisition as intangible assets. We also expense costs associated with maintaining and defending patents subsequent to their issuance.

Income Taxes

Income taxes are computed at current enacted tax rates, less tax credits using the asset and liability method. Deferred taxes are adjusted both for items that do not have tax consequences and for the cumulative effect of any changes in tax rates from those previously used to determine deferred tax assets or liabilities. Tax provisions include amounts that are currently payable, changes in deferred tax assets and liabilities that arise because of temporary differences between the timing of when items of income and expense are recognized for financial reporting and income tax purposes, and any changes in the valuation allowance caused by a change in judgment about the realization of the related deferred tax assets. A valuation allowance is established when necessary to reduce deferred tax assets to amounts expected to be realized. The CARES Act, enacted in Q1 2020, accelerated the AMT credit refund of $640,000, which was previously carried as a current asset, which the majority was received in September 2021.

Share-Based Compensation

All stock-based compensation awards are measured based on estimated fair values on the date of grant and recognized as compensation expense on the straight-line method. Our share-based compensation is reduced for estimated forfeitures at the time of grant and revised as necessary in subsequent periods if actual forfeitures differ from those estimates.

Revenue Recognition

Topic 606 provides a single, principles-based five-step model to be applied to all contracts with customers. It generally provides for the recognition of revenue in an amount that reflects the consideration to which the Company expects to be entitled, net of allowances for estimated returns, discounts or sales incentives, as well as taxes collected from customers when control over the promised goods or services are transferred to the customer.

We expense contract acquisition costs, primarily sales commissions, for contracts with terms of one year or less and will capitalize and amortize incremental costs with terms that exceed one year. During 2021 and 2020, the impact of capitalization of incremental costs for obtaining contracts was immaterial. We exclude sales, use, value added, some excise taxes and other similar taxes from the measurement of the transaction price.

We recognize revenue upon transfer of control of the promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We have determined that our programming equipment has reached a point of maturity and stability such that product acceptance can be assured by testing at the factory prior to shipment and that the installation meets the criteria to be a separate performance obligation. These systems are standard products with published product specifications and are configurable with standard options. The evidence that these systems could be deemed as accepted was based upon having standardized factory production of the units, results from batteries of tests of product performance to our published specifications, quality inspections and installation standardization, as well as past product operation validation with the customer and the history provided by our installed base of products upon which the current versions were based.

The revenue related to products requiring installation that is perfunctory is recognized upon transfer of control of the product to customers, which generally is at the time of shipment. Installation that is considered perfunctory includes any installation that is expected to be performed by other parties, such as distributors, other vendors, or the customers themselves. This considers the complexity, skill and training needed as well as customer expectations regarding installation.

We enter into arrangements with multiple performance obligations that arise during the sale of a system that includes an installation component, a service and support component and a software maintenance component. We allocate the transaction price of each element based on relative selling prices. Relative selling price is based on the selling price of the standalone system. For the installation and service and support performance obligations, we use the value of the discount given to distributors who perform these components. For software maintenance performance obligations, we use what we charge for annual software maintenance renewals after the initial year the system is sold. Revenue is recognized on the system sale based on shipping terms, installation revenue is recognized after the installation is performed, and hardware service and support and software maintenance revenue is recognized ratably over the term of the agreement, typically one year. Deferred revenue includes service, support and maintenance contracts and represents the undelivered performance obligation of agreements that are typically for one year.

When we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

We recognize revenue when there is an approved contract that both parties are committed to perform, both parties rights have been identified, the contract has substance, collection of substantially all the consideration is probable, the transaction price has been determined and allocated over the performance obligations, the performance obligations including substantive acceptance conditions, if any, in the contract have been met, the obligation is not contingent on resale of the product, the buyer's obligation would not be changed in the event of theft, physical destruction or damage to the product, the buyer acquiring the product for resale has economic substance apart from us and we do not have significant obligations for future performance to directly bring about the resale of the product by the buyer. We establish a reserve for sales returns based on historical trends in product returns and estimates for new items. Payment terms are generally 30 days from shipment.

We transfer certain products out of service from their internal use and make them available for sale. The products transferred are typically our standard products in one of the following areas: service loaners, rental or test units; engineering test units; or sales demonstration equipment. Once transferred, the equipment is sold by our regular sales channels as used equipment inventory. These product units often involve refurbishing and an equipment warranty, and are conducted as sales in our normal and ordinary course of business. The transfer amount is the product unit's net book value, and the sale transaction is accounted for as revenue and cost of goods sold.

The following table represents our revenues by major categories:

Net sales by type	2021	2020
(in thousands)		
Equipment Sales	$14,989	$11,480
Adapter Sales	7,818	5,527
Software and Maintenance Sales *	3,028	3,321
Total	$25,835	$20,328

* includes an insignificant amount of service and part sales

Leases - Accounting Standards Codification 842

Leases arise from contracts which convey the right to control the use of identified property or equipment for a period of time in exchange for consideration. Our leasing arrangements are primarily for office space we use to conduct our operations. In addition, there are automobiles and a small amount of office equipment leased. We determine whether contracts include a lease at the inception date, which is generally upon contract signing, considering factors such as whether the contract includes an asset which is physically distinct, which party obtains substantially all of the capacity and economic benefit of the asset, and which party directs how, and for what purpose, the asset is used during the contractual period of use. Our leases commence when the lessor makes the asset available for our use. At commencement, we record a lease liability at the present value of future lease payments, net of any future lease incentives to be received. Some of our lease agreements include cancellable future periods subject to termination or extension options. We include cancellable lease periods in our future lease payments when we are reasonably certain to continue to utilize the asset for those periods. We calculate the present value of future lease payments at commencement using a discount rate which we estimate as the collateralized borrowing rate we believe that would be incurred on our future lease payments over a similar term. At commencement, we also record a corresponding right-of-use asset, which is calculated based on the amount of the lease liability, adjusted for any advance lease payments paid, initial direct costs incurred or lease incentives received prior to commencement. Right-of-use assets are subject to evaluation for impairment or disposal on a basis consistent with other long-lived assets.

Leases are classified at commencement, as either operating or finance leases. As of December 31, 2021, all of our leases are classified as operating leases. Rent expense for operating leases is recognized on the straight-line method over the term of the agreement beginning on the lease commencement date.

In accounting for leases, we utilize certain practical expedients and policy elections available under the lease accounting standard. For example, we do not record right-of-use assets or lease liabilities for leases with terms of 12 months or less. For contracts containing real estate leases, we do not combine lease and non-lease components. The primary impact of this policy election is that we do not include in our calculation of lease liabilities any fixed and non-cancelable future payments due under the contract for items such as common area maintenance, utilities and other costs. Lease-related costs which are variable rather than fixed are expensed in the period incurred.

Assumptions, judgments and estimates impacting the carrying value of our right-of-use assets and liabilities include evaluating whether an arrangement contains a lease, determining whether the lease term should include any cancellable future periods, estimating the discount rate used to calculate our lease liabilities, estimating the fair value and useful life of the leased asset for the purpose of classifying the lease as an operating or finance lease, evaluating whether a lease contract amendment represents a new lease agreement or a modification to the existing lease and evaluating our right-of-use assets for impairment.

Research and Development

Research and development costs are generally expensed as incurred.

Advertising Expense

Advertising costs are expensed as incurred. Total advertising expenses were approximately $121,000 and $127,000 in 2021 and 2020, respectively.

Warranty Expense

We record a liability for an estimate of costs that we expect to incur under our basic limited warranty when product revenue is recognized. Factors affecting our warranty liability include the number of units sold and historical and anticipated rates of claims and costs per claim. We normally provide a warranty for our products against defects for periods ranging from ninety days to one year. We provide for the estimated cost that may be incurred under our product warranties and periodically assess the adequacy of our warranty liability based on changes in the above factors. We record revenues on extended warranties on a straight-line basis over the term of the related warranty contracts. Service costs are expensed as incurred.

Earnings (Loss) Per Share

Basic earnings (loss) per share exclude any dilutive effects of stock options. Basic earnings (loss) per share are computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share are computed using the weighted-average number of common shares and common stock equivalent shares outstanding during the period. The common stock equivalent shares from equity awards used in calculating diluted earnings per share were 186,000 and 74,000 for the years ended December 31, 2021 and 2020, respectively. Options to purchase 12,500 and 25,000 shares of common stock were outstanding as of December 31, 2021 and 2020, respectively, but were excluded from the computation of diluted earnings per share for the periods then ended, because the options were anti-dilutive.

Diversification of Credit Risk

Financial instruments, which potentially subject us to concentrations of credit risk, consist primarily of trade receivables. Our trade receivables are geographically dispersed and include customers in many different industries. Our consolidated accounts receivable balance as of December 31, 2021 and 2020 includes foreign accounts receivable in the functional currency of our foreign subsidiaries amounting to $1,813,000 and $587,000, respectively. We generally do business with our foreign distributors in U.S. Dollars. We believe that risk of loss is significantly reduced due to the diversity of our end-customers and geographic sales areas. We perform on-going credit evaluations of our customers' financial condition and require collateral, such as letters of credit and bank guarantees, or prepayment whenever deemed necessary.

The following represented greater than 10% of our consolidated accounts receivable for the applicable year:

Percentage of Consolidated Accounts Receivable	2021	2020
Number of customers	3	3
Approximate percentage of consolidated accounts receivable balance	36%	41%
Percentage of each	13%	17%
Percentage of each	12%	12%
Percentage of each	11%	12%

Diversification of net sales

The following represented greater than 10% of net sales for the applicable year:

Percentage of Net Sales	2021	2020
Number of customers	1	1
Approximate percentage of net sales	14%	12%

COVID-19

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

In production, in addition to adding protective health measures for our employees, we have focused on supply chain resilience and duplicating production capability for some products in both our Shanghai, China and Redmond, USA facilities. We implemented additional supplier financial and other monitoring, as well as adding additional local suppliers and increasing inventory stock levels of key parts. Other than production employees who are required to be onsite, most other employees are working with hybrid flexibility to be onsite as desired or needed and this is expected to continue.

New Accounting Pronouncements

On January 1, 2021 the Company adopted ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This ASU clarifies and simplifies accounting for income taxes by eliminating certain exceptions for intraperiod tax allocation principles and the methodology for calculating income tax rates in an interim period, among other updates. The adoption of this ASU did not have a material impact on our financial statements.

NOTE 2 – ACCOUNTS RECEIVABLE, NET

(in thousands)	December 31, 2021	December 31, 2020
Trade accounts receivable	$4,084	$2,560
Less allowance for doubtful receivables	89	66
Trade accounts receivable, net	$3,995	$2,494

Changes in Data I/O's allowance for doubtful accounts are as follows:

(in thousands)	December 31, 2021	December 31, 2020
Beginning balance	$66	$80
Bad debt expense (reversal)	23	(14)
Accounts written-off	-	-
Recoveries	-	-
Ending balance	$89	$66

NOTE 3 – INVENTORIES

(in thousands)	December 31, 2021	December 31, 2020
Raw material	$3,771	$3,143
Work-in-process	1,602	1,204
Finished goods	978	923
Inventories	$6,351	$5,270

NOTE 4 – PROPERTY, PLANT AND EQUIPMENT, NET

(in thousands)	December 31, 2021	December 31, 2020
Leasehold improvements	$430	$421
Equipment	5,218	5,625
Sales demonstration equipment	754	963
	6,402	7,009
Less accumulated depreciation	5,456	5,793
Property and equipment, net	$946	$1,216

Total depreciation expense recorded for 2021 and 2020 was $667,000 and $815,000, respectively.

NOTE 5 – OTHER ACCRUED LIABILITIES

Other accrued liabilities consisted of the following components:

(in thousands)	December 31, 2021	December 31, 2020
Lease liability - short term	$601	$673
Product warranty	432	371
Sales return reserve	71	61
Other taxes	180	109
Other	129	93
Other accrued liabilities	$1,413	$1,307

The changes in our product warranty liability for the year ending December 31, 2021 are follows:

(in thousands)	December 31, 2021
Liability, beginning balance	$371
Net expenses	864
Warranty claims	(864)
Accrual revisions	61
Liability, ending balance	$432

NOTE 6 – OPERATING LEASE COMMITMENTS

We have commitments under non-cancelable operating leases and other agreements, primarily for factory and office space, with initial or remaining terms of one year or more for the years ending December 31 are as follows:

(in thousands)	Operating Lease Commitments
2022	$802
2023	911
2024	826
2025	576
2026	124
Thereafter	16
Total	$3,255
Less Imputed interest	(377)
Total operating lease liabilities	$2,878

Cash paid for operating lease liabilities for the twelve months ended December 31, 2021 and 2020, respectively, was $815,000 and $770,000. There were eight new or modified leases during the twelve months ended December 31, 2021 that are accounted for in the amounts disclosed above.

The following table presents supplemental balance sheet information related to leases as of December 31, 2021:

	Year Ended December 31,	
(in thousands)	2021	2020
Right-of-use assets (Long-term other assets)	$2,793	$1,081
Lease liability-short term (Other accrued liabilities)	$601	$673
Lease liability-long term (Operating lease liabilities)	$2,277	$588

At December 31, 2021, the weighted average remaining lease term is 3.4 years and the weighted average discount rate used is 5%.

The components of our lease expense for the twelve months ended December 31, 2021 and 2020, respectively, include operating lease costs of $751,000 and $692,000, which includes short-term lease costs of $31,000 and $34,000. Variable payments were not material, and were treated as non-lease components and were recognized in the period for which the costs occur.

Our real estate facility leases are described below:

During the fourth quarter of 2021, we amended our lease agreement for the Redmond, Washington headquarters facility, extending the lease to January 31, 2026. The lease is for approximately 20,460 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $372,000 and $361,000, respectively.

In addition to the Redmond facility, approximately 24,000 square feet is leased at two foreign locations, including our sales, service, operations and engineering office located in Shanghai, China, and our German sales, service and engineering office located near Munich, Germany.

Our lease for a facility located in Shanghai, China ran through October 31, 2021. In April 2021, we signed a lease extension effective November 1, 2021 that extends the lease through October 31, 2024. This lease is for approximately 19,400 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $317,000 and $301,000, respectively.

Our lease for our facility located near Munich, Germany ran through February 28, 2022 and in March 2022 we entered into a lease extension to 2027. This lease is for approximately 4,895 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $58,000 and $62,000, respectively.

NOTE 7 – OTHER COMMITMENTS

We have purchase obligations for inventory and production costs, as well as other obligations such as capital expenditures, service contracts, marketing, and development agreements. Arrangements are considered purchase obligations if a contract specifies all significant terms, including fixed or minimum quantities to be purchased, a pricing structure and approximate timing of the transaction. Most arrangements are cancelable without a significant penalty, and with short notice, typically less than 90 days. At December 31, 2021, the purchase commitments and other obligations totaled $1.8 million, of which all but $3,500 are expected to be paid over the next twelve months.

NOTE 8 – CONTINGENCIES

As of December 31, 2021, we were not a party to any legal proceedings or aware of any indemnification agreement claims, the adverse outcome of which in management's opinion, individually or in the aggregate, would have a material adverse effect on our results of operations or financial position.

NOTE 9 – STOCK AND RETIREMENT PLANS

<u>Stock Option Plans</u>

At December 31, 2021, there were 570,892 shares available for future grant under Data I/O Corporation 2000 Stock Compensation Incentive Plan ("2000 Plan"). At December 31, 2021, there were shares of Common Stock reserved for issuance consisting of 37,500 inducement reserve shares and 598,777 shares under the 2000 Plan. The inducement reserve shares were granted in 2019 consisting of 25,000 options (12,500 unvested and unissued) and 50,000 RSU, which were not from the 2000 Plan, but were made under the terms of the 2000 Plan. During 2021, 12,500 shares were issued from the inducement reserve. Pursuant to the 2000 Plan, options are granted to our officers and key employees with exercise prices equal to the fair market value of the Common Stock at the date of grant and generally vest over four years. Options granted under the plans have a maximum term of six years from the date of grant. Stock awards are also granted under the 2000 Plan which generally vest over four years and one year for nonemployee Directors.

<u>Employee Stock Purchase Plan</u>

Under the Employee Stock Purchase Plan ("ESPP"), eligible employees may purchase shares of our Common Stock at six-month intervals at 95% of the fair market value on the last day of each six-month period. Employees may purchase shares having a value not exceeding ten percent of their gross compensation during an offering period. During 2021 and 2020, a total of 4,484 and 7,814 shares, respectively, were purchased under the plan at average prices of $5.38 and $3.71 per share, respectively. At December 31, 2021 and 2020, 29,098 and 31,769 shares were reserved for future issuance respectively.

Stock Appreciation Rights Plan

We have a Stock Appreciation Rights ("SAR") Plan under which each director, executive officer or holder of 10% or more of our Common Stock has a SAR with respect to each exercisable stock option. The SAR entitles the SAR holder to receive cash from us for the difference between the market value of the stock and the exercise price of the option in lieu of exercising the related option. SARs are only exercisable following a tender offer or exchange offer for our stock, or following approval by shareholders of Data I/O of any merger, consolidation, reorganization or other transaction providing for the conversion or exchange of more than 50% of the common shares outstanding. As no event has occurred, which would make the SARs exercisable, and no such event is deemed probable, no compensation expense has been recorded under this plan. At December 31, 2021 and 2020, there were 25,000 SARs outstanding.

Director Fee Plan

We have a Director Fee Plan available to compensate directors who are not employees of Data I/O Corporation with equity. During 2021, no shares were issued from the plan and 20,559 shares were issued from the plan in 2020. At December 31, 2021 and 2020 130,763 shares remain available in the plan.

Retirement Savings Plan

We have a savings plan that qualifies as a cash or deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the plan, participating U.S. employees may defer their pre-tax salary or post-tax salary if Roth is elected, subject to IRS limitations. In fiscal years 2021 and 2020, we contributed one dollar for each dollar contributed by a participant, with a maximum contribution of four percent of a participant's eligible earnings. Our matching contribution expense for the savings plan, net of forfeitures, was approximately $186,000 and $184,000 in 2021 and 2020, respectively. Employer matching contributions owed to the plan were $224,000 and $200,000 at December 31, 2021 and 2020, respectively.

NOTE 10 – SHARE-BASED COMPENSATION

For share-based awards granted, we have recognized compensation expense based on the estimated grant date fair value method. For these awards we have recognized compensation expense using a straight-line amortization method and reduced for estimated forfeitures. The impact on our results of operations of recording share-based compensation for the year ended December 31, 2021 and 2020 was as follows:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Cost of goods sold	$57	$44
Research and development	303	371
Selling, general and administrative	878	1,052
Total share-based compensation	$1,238	$1,467

An immaterial amount of share-based compensation was capitalized into inventory as overhead for the years ended December 31, 2021 and 2020, respectively.

The following table summarizes stock option activity under our stock option plans for the twelve months ended December 31:

	2021			2020		
	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life in Years	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life in Years
Outstanding at beginning of year	25,000	$4.98		25,000	$4.98	
Granted	-	-		-	-	
Exercised	(12,500)	4.98		-	-	
Cancelled, Expired or Forfeited	-	-		-	-	
Outstanding at end of year	12,500	$4.98	3.33	25,000	$4.98	4.33
Vested or expected to vest at the end of the period	12,166	$4.98	3.33	24,068	$4.98	4.33
Exercisable at end of year	3,125	$4.98	3.33	9,375	$4.98	4.33

The aggregate intrinsic value of outstanding options is $0. There were no stock option awards exercised in 2020.

Restricted stock award activity including performance-based stock award activity under our share-based compensation plan was as follows:

	2021		2020	
	Awards	Weighted - Average Grant Date Fair Value	Awards	Weighted - Average Grant Date Fair Value
Outstanding at beginning of year	643,228	$4.16	536,403	$5.44
Granted	262,001	5.95	383,951	3.02
Vested	(272,952)	4.56	(230,901)	5.16
Cancelled	(8,500)	4.15	(46,225)	4.58
Outstanding at end of year	623,777	$4.73	643,228	$4.16

During the years ended December 31, 2021 and 2020, 85,264 and 55,687 shares respectively were withheld from issuance related to restricted stock units vesting and stock option exercises to cover employee taxes and stock options exercise price.

The remaining unamortized expected future compensation expense and remaining amortization period associated with unvested option grants and restricted stock awards are:

	December 31, 2021	December 31, 2020
Unamortized future compensation expense	$2,300,286	$2,017,501
Remaining weighted average amortization period in years	2.57	2.35

NOTE 11 – SHARE REPURCHASE PROGRAMS

Data I/O did not have a share repurchase program in 2021.

NOTE 12 – INCOME TAXES

Components of income (loss) before taxes:

	Year Ended December 31,	
(in thousands)	2021	2020
U.S. operations	($2,086)	($4,451)
Foreign operations	1,643	874
Total income (loss) before taxes	($443)	($3,577)

Income tax expense (benefit) consists of:

	Year Ended December 31,	
(in thousands)	2021	2020
Current tax expense (benefit)		
U.S. federal	$0	$0
State	(2)	(2)
Foreign	114	389
	112	387
Deferred tax expense (benefit) – U.S. federal	-	-
Total income tax expense (benefit)	$112	$387

A reconciliation of our effective income tax and the U.S. federal tax rate is as follows:

	Year Ended December 31,	
(in thousands)	2021	2020
Statutory tax	($93)	($751)
State and foreign income tax, net of federal income tax benefit	(254)	151
Valuation allowance for deferred tax assets	454	1,513
Foreign sourced deemed dividend income	341	(394)
Stock based compensation	(325)	(136)
Other	(11)	4
Total income tax expense (benefit)	$112	$387

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets are presented below:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Deferred income tax assets:		
Allowance for doubtful accounts	$13	$10
Inventory and product return reserves	484	573
Compensation accruals	2,421	1,973
Accrued liabilities	202	179
Book-over-tax depreciation and amortization	23	91
Foreign net operating loss carryforwards	22	53
U.S. net operating loss carryforwards	3,301	3,739
U.S. credit carryforwards	1,440	2,345
	7,906	8,963
Valuation Allowance	(7,906)	(8,963)
Total Deferred Income Tax Assets	$ -	$ -

The valuation allowance for deferred tax assets decreased $1,057,000 and increased $1,422,000 during the years ended December 31, 2021 and 2020, respectively. The net deferred tax assets have a full valuation allowance provided due to uncertainty regarding our ability to utilize such assets in future years. This full valuation allowance evaluation is based upon our volatile history of losses and the cyclical nature of our industry and capital spending. Credit carryforwards consist primarily of research and experimental and foreign tax credits. We intend to continue to reinvest foreign earnings of our operating subsidiaries.

U.S. net operating loss carryforwards are $15.7 million at December 31, 2021 with expiration years from 2023 to 2034. Utilization of net operating loss and credit carryforwards is subject to certain limitations under Section 382 of the Internal Revenue Code of 1986, as amended.

The gross changes in uncertain tax positions resulting in unrecognized tax benefits are presented below:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Unrecognized tax benefits, opening balance	$365	$348
Prior period tax position increases	-	-
Additions based on tax positions related to current year	27	17
Unrecognized tax benefits, ending balance	$392	$365

Historically, we have incurred minimal interest expense and no penalties associated with tax matters. We have adopted a policy whereby amounts related to penalties associated with tax matters are classified as general and administrative expense when incurred and amounts related to interest associated with tax matters are classified as interest income or interest expense.

Tax years that remain open for examination include 2018, 2019, 2020 and 2021 in the United States of America. In addition, various tax years from 2002 to 2014 may be subject to examination in the event that we utilize the net operating losses and credit carryforwards from those years in our current or future year tax returns.

NOTE 13 – SEGMENT AND GEOGRAPHIC INFORMATION

We consider our operations to be a single operating segment, focused on the design, manufacturing and sale of programming systems used by designers and manufacturers of electronic products.

Major operations outside the U.S. include sales, engineering and service support by subsidiaries in Germany as well as in China, which also manufactures some of our products.

The following tables provide summary operating information by geographic area:

(in thousands)	Year Ended December 31, 2021	2020
Net sales:		
U.S.	$2,607	$1,516
Europe	9,387	8,415
Rest of World	13,841	10,397
	$25,835	$20,328
Included in Europe and Rest of World are the following significant balances:		
Germany	$3,783	$3,851
China	$4,203	$3,490
Operating income:		
U.S.	$257	($713)
Europe	(1,037)	(1,698)
Rest of World	507	(667)
	($273)	($3,078)
Identifiable assets:		
U.S.	$15,840	$13,858
Europe	5,638	5,878
Rest of World	7,579	5,856
	$29,057	$25,592

NOTE 14 – IMPAIRMENT AND RELATED CHARGES

During 2021, no impairment or impairment related charges were taken. During the fourth quarter of 2020, we launched a new generation of SentriX tools and capability. This obsoleted components of the first-generation hardware, software and inventory. We also ended support for some legacy automated handlers, impairing the remaining service inventory. As a result, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired, totaling $943,000 in the fourth quarter of 2020. This included impairment of $652,000, consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, as well as impairment related charges of $291,000, due to inventory obsolescence (cost of goods sold) for end of certain product support.

NOTE 15 – SUBSEQUENT EVENTS

In preparing the financial statements, the Company has reviewed all known events which have occurred after December 31, 2021 through March 29, 2022, the date on which the financial statements are available for issuance, for potential recognition or disclosure in the consolidated financial statements and footnotes.

On February 23, 2022, Edward J. Smith was appointed a director of Data I/O.

During the first quarter of 2022, new COVID-19 outbreaks resulted in sporadic government restrictions on our facilities, customers and vendors in China, which caused supply chain, production, shipment and economic uncertainty impacting our business. On March 28, 2022, the Shanghai China government announced additional restrictive measures which will close the Company's Shanghai operations through April 5, 2022.

The Russia-Ukraine war is resulting in increased geo-political and economic uncertainty. Even though we do not have operations in Russia or Ukraine, our business may be impacted.

There were no other subsequent events which would require additional disclosures to the financial statements other than those already disclosed throughout the Notes to Consolidated Financial Statements.

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

None.

Item 9A. Controls and Procedures

(a) 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 evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act) as of the end of the period covered by this report (the "Evaluation Date"). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the Evaluation Date, our disclosure controls and procedures were effective at the reasonable assurance level. Disclosure controls are controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls are also designed to ensure that such information is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

(b) Management's Report on Internal Control Over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control systems are designed to provide reasonable assurance to the Company's management and board of directors regarding reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting is defined in Rule 13a-15(f) promulgated under the Exchange Act and includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;
(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

All internal controls, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statements preparation and presentation.

Our management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2021. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control – Integrated Framework (2013). Based on this assessment our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2021, our internal control over financial reporting was effective.

This annual report does not include an attestation report of the company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the company's registered public accounting firm pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act, which permanently exempts smaller reporting companies from complying with Section 404(b) of the Sarbanes-Oxley Act of 2002.

(c) Changes in internal controls.

There were no changes made in our internal controls during the period covered by this report that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information regarding the Registrant's directors is set forth under "Election of Directors" in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. Such Proxy Statement will be filed within 120 days of our year-end. Information regarding the Registrant's executive officers is set forth in Item 1 of Part I herein under the caption "Executive Officers of the Registrant."

Code of Ethics

We have adopted a Code of Ethics that applies to all directors, officers and employees of Data I/O, including the Chief Executive Officer and Chief Financial Officer. The key principles of the Code of Ethics are to act legally and with integrity in all work for Data I/O. The Code of Ethics is posted on the corporate governance page of our website:

http://www.dataio.com/Company/InvestorRelations/CorporateGovernance.aspx

We will post any amendments to our Code of Ethics on our website. In the unlikely event that the Board of Directors approves any sort of waiver to the Code of Ethics for our executive officers or directors, information concerning such waiver will also be posted on our website. In addition to posting information regarding amendments and waivers on our website, the same information will be included in a Current Report on Form 8-K within four business days following the date of the amendment or waiver, unless website posting of such amendments or waivers is permitted by NASDAQ's rules.

Item 11. Executive Compensation

Information called for by Part III, Item 11, is included in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. The information appears in the Proxy Statement under the caption "Executive Compensation." Such Proxy Statement will be filed within 120 days of our year-end.

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

Information called for by Part III, Item 12, is included in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. The information appears in the Proxy Statement under the caption "Voting Securities and Principal Holders." Such Proxy Statement will be filed within 120 days of our year end.

Equity Compensation Plan Information

The following table gives information about our Common Stock that may be issued upon the exercise of options and rights under all of our existing equity compensation plans as of December 31, 2021. See Notes 9 and 10 of "Notes to Consolidated Financial Statements."

	(a) Number of securities to be issued upon the exercise of outstanding options, warrants and rights	(b) Weighted–average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by the security holders (1) (2)	1,362	$4.75	730,753
Equity compensation plans not approved by the security holders (3)	12,500	$4.98	-
Total	13,862	$4.96	730,753

(1) Represents shares of our Common Stock issuable pursuant to the Data I/O Corporation 2000 Stock Compensation Incentive Plan, 1982 Employee Stock Purchase Plan and 1996 Director Fee Plan. Table excludes unvested restricted stock awards of 598,777 from the 2000 Plan.

(2) Stock Appreciation Rights Plan ("SAR") provides that directors, executive officers or holders of 10% or more of our Common Stock have an accompanying SAR with respect to each exercisable option. While the plan has been approved by the security holders, no amounts are included in columns (a), (b), or (c) relating to the SAR.

(3) Inducement grant to Michael Tidwell of 25,000 non-qualified stock options with 12,500 remaining unexercised. Table excludes 25,000 unvested 2019 restricted stock inducement grant to Michael Tidwell.

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

The information required by this item is contained in, and incorporated by reference from, the Proxy Statement for our 2022 Annual Meeting of Shareholders under the caption "Certain Relationships and Related Transactions."

Item 14. Principal Accounting Fees and Services

The information required by this Item with respect to principal accountant fees and services is incorporated by reference to the section captioned "Principal Accountant's Fees and Services" in the Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022. Such Proxy Statement will be filed within 120 days of our year-end.

PART IV

Item 15. Exhibits, Financial Statement Schedules

Executive Compensation Plans and Arrangements

The following list is a subset of the list of exhibits described below and contains all compensatory plans, contracts or arrangements in which any director or executive officer of Data I/O is a participant, unless the method of allocation of benefits thereunder is the same for management and non-management participants:

(1) Amended and Restated 1982 Employee Stock Purchase Plan. See Exhibit 10.5.

(2) Data I/O Corporation Tax Deferral Retirement Plan and Trust with Great West Financial (formerly Orchard Trust Company). See Exhibits 10.15, 10.16, 10.17, 10.29, 10.30 and 10.37.

(3) Summary of Amended and Restated Management Incentive Compensation Plan. See Exhibit 10.2.

(4) Amended and Restated 1983 Stock Appreciation Rights Plan. See Exhibit 10.1.

(5) Amended and Restated Executive Agreements. See Exhibit 10.8, 10.19, 10.22 and 10.26.

(6) 1996 Director Fee Plan. See Exhibit 10.4.

(7) Data I/O Corporation 2000 Stock Compensation Incentive Plan. See Exhibit 10.6, 10.11, 10.21, 10.25 and 10.35.

(8) Form of Option Agreement. See Exhibit 10.7.

(9) Form of Indemnification Agreement. See Exhibit 10.18.

(10) Letter Agreement with Anthony Ambrose. See Exhibit 10.20.

(11) Letter Agreement with Rajeev Gulati. See Exhibit 10.23.

(12) Form of Restricted Stock Agreement. See Exhibit 10.12.

(13) Letter Agreement with Joel S. Hatlen. See Exhibit 10.27.

(14) Form of Executive Agreement. See Exhibit 10.26.

(15) Form of Restricted Stock Unit Award Agreement. See Exhibit 10.24.

(16) Letter Agreement with Michael Tidwell. See Exhibit 10.34.

(a) **List of Documents Filed as a Part of This Report:** Page

(1) Index to Financial Statements:

(2) Index to Financial Statement Schedules:

All other schedules not listed above have been omitted because the required information is included in the consolidated financial statements or the notes thereto, or is not applicable or required.

(3) Index to Exhibits:

3 **Articles of Incorporation:**

3.1 Data I/O's restated Articles of Incorporation filed November 2, 1987 (Incorporated by reference to Exhibit 3.1 of Data I/O's 1987 Annual Report on Form 10-K (File No. 0-10394) and attached as a PDF to Exhibit 3.1 in our 2017 Annual Report on Form 10-K).

3.2 Data I/O's Bylaws as amended and restated as of July 20, 2011 (Incorporated by reference to Data I/O's Current Report on Form 8-K filed July 26, 2011).

3.3 Certification of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock (Incorporated by reference to Exhibit 1 of Data I/O's Registration Statement on Form 8-A filed March 13, 1998 (File No. 0-10394)).

4 **Instruments Defining the Rights of Security Holders, Including Indentures:**

4.1 Rights Agreement dated as of April 4, 1998, between Data I/O Corporation and ChaseMellon Shareholder Services, L.L.C. as Rights Agent, which includes: as Exhibit A thereto, the Form of Right Certificate; and, as Exhibit B thereto, the Summary of Rights to Purchase Series A Junior Participating Preferred Stock (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 13, 1998).

4.2 Description of Data I/O Corporation's Common Stock. 59

10 **Material Contracts:**

10.1 Amended and Restated 1983 Stock Appreciation Rights Plan dated February 3, 1993 (Incorporated by reference to Exhibit 10.23 of Data I/O's 1992 Annual Report on Form 10-K (File No. 0-10394) and attached as a PDF to Exhibit 10.1 in our 2017 Annual Report on Form 10-K).

10.2 Amended and Restated Management Incentive Compensation Plan dated January 1, 1997 (Incorporated by reference to Exhibit 10.25 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).

10.3 Amended and Restated Performance Bonus Plan dated January 1, 1997 (Incorporated by reference to Exhibit 10.26 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).

10.4 Amended and Restated Data I/O Corporation 1996 Director Fee Plan (Incorporated by reference to Exhibit 10.32 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).

10.5 Amended and Restated 1982 Employee Stock Purchase Plan dated May 16, 2003 (Incorporated by reference to Data I/O's 2003 Proxy Statement dated March 31, 2003).

10.6 Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan dated May 24, 2006 (Incorporated by reference to Data I/O's 2006 Proxy Statement dated April 6, 2006).

10.7 Form of Option Agreement (Incorporated by reference to Data I/O's 2004 Annual Report on Form 10-K (File No. 0-10394)).

10.8 Amended and Restated Executive Agreement with Joel S. Hatlen dated December 31, 2011 (Incorporated by reference to Data I/O's 2011 Annual Report on Form 10K (File No. 0-10394)).

10.9 Lease, Redmond East Business Campus between Data I/O Corporation and Carr Redmond PLLC dated February 28, 2006 (Incorporated by reference to Data I/O's 2005 Annual Report on Form 10K (File No. 0-10394)).

10.10 Second Amendment to Lease, (Redmond East) between Data I/O Corporation and Arden Realty Limited Partnership, made as of January 31, 2011. (Incorporated by reference to Data I/O's 2010 Annual Report on Form 10-K (File No. 0-10394)).

10.11 Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 17, 2011 (Incorporated by reference to Data I/O's 2011 Proxy Statement filed April 5, 2011).

10.12 Form of Restricted Stock Award Agreement (Incorporated by reference to Exhibit 10.29 of Data I/O's June 30, 2006 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.13 Patent Purchase Agreement (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 25, 2008)).

10.14 First Amendment to the Patent Purchase Agreement (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 25, 2008).

10.15 Great West Financial (formerly Orchard Trust Company) Defined Contribution Prototype Plan and Trust (Incorporated by reference to Data I/O's 2007 Annual Report on Form 10-K (File No. 0-10394)).

10.16 Great West Financial (formerly Orchard Trust Company) Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2007 Annual Report on Form 10-K (File No. 0-10394)).

10.17 Great West Financial (formerly Orchard Trust Company) Defined Contribution Prototype Plan and Trust Amendment for Pension Protection Act and Heart Act. (Incorporated by reference to Data I/O's 2009 Annual Report on Form 10-K (File No. 0-10394)).

10.18 Form of Indemnification Agreement. (Incorporated by reference to Data I/O's 2010 Annual Report on Form 10-K (File No. 0-10394)).

10.19 Executive Agreement with Anthony Ambrose dated October 25, 2012. (Incorporated by reference to Data I/O's 2012 Annual Report on Form 10-K (File No. 0-10394)).

10.20 Letter Agreement with Anthony Ambrose (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on October 29, 2012).

10.21 Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 10, 2012 (Incorporated by reference to Data I/O's 2012 Proxy Statement filed April 3, 2012).

10.22 Executive Agreement with Rajeev Gulati dated July 25, 2013. (Incorporated by reference to Data I/O's 2013 Annual Report on Form 10-K (File No. 0-10394)).

10.23 Letter Agreement with Rajeev Gulati (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on July 31, 2013).

10.24 Form of Restricted Stock Unit Award Agreement (Incorporated by reference to Exhibit 10.29 of Data I/O's March 31, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.25 Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved April 30, 2014 (Incorporated by reference to Exhibit 10.30 of Data I/O's March 31, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.26 Form of Executive Agreement (Incorporated by reference to Exhibit 10.31 of Data I/O's June 30, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.27 Letter Agreement with Joel S. Hatlen (Incorporated by reference to Exhibit 10.32 of Data I/O's June 30, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.28 Third Amendment to Lease, (Redmond East) between Data I/O Corporation and Arden Realty Limited Partnership, made as of June 1, 2015 (Incorporated by reference to Exhibit 10.29 of Data I/O's June 30, 2015 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.29 Great West Financial Adoption Agreement #005 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2015 Annual Report on Form 10-K (File No. 0-10394)).

10.30 Great West Financial Adoption Agreement #005 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2016 Annual Report on Form 10-K (File No. 0-10394)).

10.31 Negotiation Protocol for the Purchase of Data I/O's PSV7000, a supply agreement executed July 20, 2016, between Data I/O Corporation and Bosch Car Multimedia Group (Incorporated by reference to Exhibit 10.31 of Data I/O's September 30, 2016 Quarterly Report on Form 10-Q (File No. 0-10394)). (Portions of this exhibit have been omitted based on confidential treatment granted by the SEC. The omitted portions of these exhibits have been filed separately with the SEC. The registrant undertakes to furnish on a supplemental basis a copy of any omitted schedules to the Securities and Exchange Commission upon request.).

10.32 Fifth Amendment to Lease, between Data I/O Corporation and BRE WA OFFICE OWNER LLC, made as of September 12, 2017 (Incorporated by reference to Data I/O's September 30, 2017 Quarterly Report on Form 10-Q (File No. 0-10394)).

10.33 1st Amendment to Negotiation Protocol executed on September 24,2018 between Data I/O Corporation and Robert Bosch GmbH (Incorporated by reference to Exhibit 10.35 of Data I/O's September 30, 2018 Quarterly Report on Form 10-Q (File No. 0-10394)). (Portions of this exhibit have been omitted based on a request for confidential treatment made to the SEC. The omitted portions of these exhibits have been filed separately with the SEC. The registrant undertakes to furnish on a supplemental basis a copy of any omitted schedules to the Securities Exchange Commission upon request.).

10.34 Letter Agreement with Michael Tidwell (Incorporated by reference to Form 8-K filed on May 1, 2019).

10.35 Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 20, 2021 (Incorporated by reference to Data I/O's 2021 Proxy Statement dated April 5, 2021).

10.36 Sixth Amendment to Lease, between Data I/O Corporation and Alco Redmond East, LLC, made as of October 4, 2021 (Incorporated by reference to Data I/O's 2021 Annual Report on Form 10-K filed on March 29, 2022). 60

10.37 Great West Financial Adoption Agreement #001 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2021 Annual Report on Form 10-K filed on March 29, 2022). 61

21.1 Subsidiaries of the Registrant 62

23.1 Consent of Independent Registered Public Accounting Firm 63

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DATA I/O CORPORATION
(REGISTRANT)

DATED: March 29, 2022

By: /s/Anthony Ambrose
Anthony Ambrose
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

NAME & DATE		TITLE
By: /s/Anthony Ambrose Anthony Ambrose	March 29, 2022	President and Chief Executive Officer (Principal Executive Officer), Director
By: /s/Joel S. Hatlen Joel S. Hatlen	March 29, 2022	Chief Operating and Financial Officer Vice President Secretary, Treasurer (Principal Financial and Accounting Officer)
By: /s/Douglas W. Brown Douglas W. Brown	March 29, 2022	Director
By: /s/Mark J. Gallenberger Mark J. Gallenberger	March 29, 2022	Director
By: /s/Sally A. Washlow Sally A. Washlow	March 29, 2022	Director
By: /s/Cheemin Bo-Linn Cheemin Bo-Linn	March 29, 2022	Director
By: /s/Edward J. Smith Edward J. Smith	March 29, 2022	Director

DATA I/O CORPORATION

SCHEDULE II – CONSOLIDATED VALUATION AND QUALIFYING ACCOUNTS

(in thousands)	Balance at Beginning of Period	Charged/ (Credited) to Costs and Expenses	Deductions-Describe	Balance at End of Period
Year Ended December 31, 2020:				
Allowance for bad debts	$80	($14)	$ - [1]	$66
Year Ended December 31, 2021:				
Allowance for bad debts	$66	$23	$ - [1]	$89

[1] Uncollectable accounts written off, net of recoveries

EXHIBIT 4.2

DATA I/O CORPORATION

DESCRIPTION OF DATA I/O CORPORATION'S COMMON STOCK

The common stock of Data I/O Corporation is its only class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**").

The following description of our Common Stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Restated Articles of Incorporation and Certificate of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock (the "**Articles**") and our Amended and Restated Bylaws (the "**Bylaws**"), each of which attached as exhibit to the Annual Report on Form 10-K. We are incorporated in the State of Washington and are subject to the Washington Business Corporation Act, Title 23B of the Revised Code of Washington.

Authorized Capital Shares

Our authorized capital shares are thirty-five million (35,000,000), consisting of thirty million (30,000,000) shares of Common Stock ("**Common Stock**"), and five million (5,000,000) shares of Preferred Stock. Two hundred thousand (200,000) shares of Series A Junior Participating Preferred Stock have been designated. The outstanding shares of our Common Stock are fully paid and nonassessable. There are no shares of Preferred Stock outstanding.

Voting Rights

Holders of Common Stock are entitled to one vote per share on all matters voted on by the shareholders, including the election of directors. Our Common Stock does not have cumulative voting rights.

Dividend Rights

The holders of Common Stock are entitled to receive dividends, if any, as may be declared from time to time by the Board of Directors in its discretion out of funds legally available for the payment of dividends.

Liquidation Rights

Holders of Common Stock will share ratably in all assets legally available for distribution to our shareholders in the event of dissolution.

Other Rights and Preferences

Our Common Stock has no sinking fund or redemption provisions or preemptive, conversion or exchange rights. Holders of Common Stock may act by unanimous written consent.

Potential Limitations on Rights of Holders of Common Stock

Our Articles authorize our board of directors to issue up to 5,000,000 shares of Preferred Stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the shareholders. Two hundred thousand (200,000) shares of Series A Junior Participating Preferred Stock have been designated, but none are outstanding. The rights of the holders of Common Stock may be subject to, and may be adversely affected by, the rights of the holders of any Preferred Stock that may be issued in the future.

Listing

The Common Stock is traded on The Nasdaq Stock Market LLC under the trading symbol "DAIO."

EXHIBIT 10.36 - Sixth Amendment to Lease, between Data I/O Corporation and Alco Redmond East, LLC, made as of October 4, 2021 (Incorporated by reference to Data I/O's 2021 Annual Report on Form 10-K filed on March 29, 2022).

EXHIBIT 10.37 - Great West Financial Adoption Agreement #001 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2021 Annual Report on Form 10-K filed on March 29, 2022).

EXHIBIT 21.1

DATA I/O CORPORATION

SUBSIDIARIES OF THE REGISTRANT

The following table indicates the name, jurisdiction of incorporation and basis of ownership of each of Data I/O's subsidiaries:

Name of Subsidiary	State or Jurisdiction of Organization	Percentage of Voting Securities Owned
Data I/O International, Inc.	Washington	100%
RTD, Inc.	Washington	100%
Data I/O FSC International, Inc.	Territory of Guam	100%
Data I/O GmbH	Germany	100%
Data I/O Electronics (Shanghai) Co., Ltd.	China	100%

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 29, 2022, with respect to the consolidated financial statements included in the Annual Report of Data I/O Corporation on Form 10-K for the year ended December 31, 2021. We consent to the incorporation by reference of said report in the Registration Statements of Data I/O Corporation on Forms S-3 (333-121566) and on Forms S-8 (File Nos. 002-76164, 002-86785, 002-98115, 002-78394, 33-95608, 33-66824, 33-42010, 33-26472, 33-54422, 333-20657, 333-55911, 33-02254, 33-03958, 333-107543, 333-81986, 333-48595, 333-121861, 333-151006, 333-166730, 333-175840, and 333-224971).

/s/ GRANT THORNTON LLP

Bellevue, Washington

March 29, 2022

EXHIBIT 31.1

Certification by Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 302(a) of the Sarbanes-Oxley Act of 2002

I, Anthony Ambrose, certify that:

1) I have reviewed this annual report on Form 10-K of Data I/O Corporation;
2) Based upon my knowledge, this annual report does not contain any untrue statement of material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3) Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f)0 for the registrant and we have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and
    d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
    a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: March 29, 2022

/s/ Anthony Ambrose
Anthony Ambrose
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

Certification by Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 302(a) of the Sarbanes-Oxley Act of 2002

I, Joel S. Hatlen, certify that:

1) I have reviewed this annual report on Form 10-K of Data I/O Corporation;
2) Based upon my knowledge, this annual report does not contain any untrue statement of material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3) Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f)0 for the registrant and we have:
    a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
    b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purpose in accordance with generally accepted accounting principles;
    c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and
    d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
    a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: March 29,2022

/s/ Joel S. Hatlen
Joel S. Hatlen
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

Certification by Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Data I/O Corporation (the "Company") on Form 10-K for the period ended December 31, 2021as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Anthony Ambrose, Chief Executive Officer of the Company, certify, that pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of § 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Anthony Ambrose
Anthony Ambrose
Chief Executive Officer
(Principal Executive Officer)

Date: March 29, 2022

Exhibit 32.2

Certification by Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Data I/O Corporation (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joel S. Hatlen, Chief Financial Officer of the Company, certify, that pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joel S. Hatlen
Joel S. Hatlen
Chief Financial Officer
(Principal Financial Officer)

Date: March 29, 2022

DATA I/O CORPORATION

NOTICE OF 2022

ANNUAL MEETING

and

PROXY STATEMENT

DATA I/O CORPORATION

April 1, 2022

To Our Shareholders:

You are cordially invited to attend the 2022 Annual Meeting of Data I/O Corporation, which will be held at Data I/O's headquarters at 6645 185th Ave NE, Suite 100, Redmond, Washington 98052. The meeting will begin at 10:00 a.m. Pacific Daylight Time on Thursday, May 19, 2022.

Officers of Data I/O will be attending and will respond to questions after the meeting. Formal business will include the election of directors, ratification of the continued appointment of Grant Thornton LLP as Data I/O's independent auditors and an advisory vote on executive compensation.

Please read the proxy materials carefully. Your vote is important. Data I/O appreciates you considering and acting on the proposals presented. The meeting is not being held as a virtual or hybrid meeting, so in order to attend and vote at the meeting (as opposed to voting by proxy), you must attend the meeting in person. However, due to ongoing concerns related to the spread of COVID-19, and in order to mitigate potential risks to the health and safety of our shareholders, employees, and other stakeholders, the Company encourages shareholders to vote on the matters before the meeting by proxy, and if you wish to listen to the annual meeting matters and voting results via conference call, we encourage you to use the conference call, rather than attend the meeting in person. There is no other business presentation planned for the meeting. The conference call information will be available on the Company's website at https://www.dataio.com/Company/Investor-Relations/Annual-Meeting or contact the corporate Secretary.

Sincerely,

/s/ Anthony Ambrose
Anthony Ambrose
President and Chief Executive Officer

DATA I/O CORPORATION

NOTICE OF ANNUAL MEETING OF SHAREHOLDERS – May 19, 2022

To the Shareholders of Data I/O Corporation:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Shareholders of Data I/O Corporation (the "Company" or "Data I/O") will be held at 10:00 a.m. Pacific Daylight Time, on Thursday, May 19, 2022, at Data I/O's principal offices, 6645 185th Ave NE, Suite 100, Redmond, Washington 98052, for the following purposes:

(1) **Election of Directors:**
To elect five directors, each to serve until the next annual meeting of shareholders or until his or her successor is elected and qualified or until such director's earlier death, resignation, or removal.

(2) **Ratification of Independent Auditors:**
To ratify the continued appointment of Grant Thornton LLP as Data I/O's independent auditors for the calendar year ended December 31, 2022.

(3) **Say on Pay – Advisory Vote on Executive Compensation:**
To consider and vote on an advisory resolution on the compensation of our named executive officers.

(4) **Other Business:**
To consider and vote upon such other business as may properly come before the meeting or any adjournments or postponements thereof.

Important Notice Regarding the Availability of Proxy Materials for the Shareholder Meeting To Be Held on May 19, 2022. The proxy statement and annual report to security holders are also available at http://www.dataio.com/company/investorrelations/annualmeeting.aspx.

The Board of Directors has fixed the close of business on March 21, 2022, as the Record Date for the determination of shareholders entitled to notice of, and to vote at, the 2022 Annual Meeting and any adjournment or postponement thereof.

By Order of the Board of Directors

/s/ Anthony Ambrose
Anthony Ambrose
President and Chief Executive Officer

Redmond, Washington
April 1, 2022

YOUR VOTE IS IMPORTANT

Whether or not you expect to attend the meeting in person, we urge you to sign, date, and return the accompanying proxy card at your earliest convenience, or you may vote as provided in the instructions on the proxy card (for Computershare accounts: by the internet at http://www.envisionreports.com/DAIO or by telephone at 1-800-652-8683, and for other accounts: by internet at www.ProxyVote.com or by phone at 1-800-579-1639). This will ensure the presence of a quorum at the meeting. **Promptly returning a signed and dated proxy card, or voting by the internet or by telephone, will save Data I/O the extra expense of additional solicitation.** Your proxy is revocable at your request any time before it is voted. If you attend the meeting, you may vote in person if you wish, even if you have previously returned your proxy card. If you vote by mail, an addressed, postage-paid envelope is provided in order to make certain that your shares will be represented at the Annual Meeting.

DATA I/O CORPORATION

6645 185th Ave NE, Suite 100

Redmond, Washington 98052

PROXY STATEMENT

ANNUAL MEETING OF SHAREHOLDERS

May, 19, 2022

INFORMATION REGARDING PROXY

This Proxy Statement and the accompanying form of proxy are furnished in connection with the solicitation of proxies by the Board of Directors ("Board of Directors") of Data I/O Corporation (the "Company" or "Data I/O") for use at the Annual Meeting of Shareholders to be held on Thursday, May 19, 2022, at 10:00 a.m. Pacific Daylight Time at Data I/O's principal office, 6645 185th Ave NE, Suite 100, Redmond, Washington 98052, and at any adjournment of the meeting (the "Annual Meeting"). Shareholders of record at the close of business on March 21, 2022, (the "Record Date") are entitled to notice of, and to vote at, the Annual Meeting. This Proxy Statement and a copy of Data I/O's 2021 Annual Report to Shareholders are being mailed to shareholders on or about April 8, 2022.

A proxy card is enclosed for your use. *You are requested on behalf of the Board of Directors to sign, date, and return the proxy card in the accompanying envelope*, which is postage-paid if mailed in the United States or Canada. Alternatively, you may vote as provided in the instructions on the proxy card (for Computershare accounts: by the internet at http://www.envisionreports.com/DAIO or by telephone at 1-800-652-8683, and for other accounts: by internet at www.ProxyVote.com or by phone at 1-800-579-1639). If you vote by the internet or by telephone, you do not need to mail back the proxy card.

A proxy in the accompanying form, which is properly signed, dated and returned and not revoked, will be voted in accordance with its instructions. To vote on the election of directors, check the appropriate box under Proposal 1 on your proxy card. You may (a) vote "FOR" all of the director nominees as a group, (b) "WITHHOLD" authority to vote for all director nominees as a group, or (c) vote "FOR" all director nominees as a group except those nominees indicated to the contrary. To vote on Proposal 2 to ratify the continued appointment of Grant Thornton LLP as Data I/O's independent auditors for the calendar year ended December 31, 2022, check the appropriate box under Proposal 2 on your proxy card. You may (a) vote "FOR" approval of the ratification of Grant Thornton LLP as Data I/O's independent auditors, (b) vote "AGAINST" approval of the ratification of Grant Thornton LLP as Data I/O's independent auditors, or (c) "ABSTAIN" from voting on the ratification of Grant Thornton LLP as Data I/O's independent auditors. To vote on Proposal 3, Say on Pay – Advisory Vote on Executive Compensation, you may vote (a) "FOR" the advisory resolution, (b) "AGAINST" the advisory resolution, or (c) "ABSTAIN" from voting on the advisory resolution on executive compensation.

Proxies which are returned to Data I/O without instructions will be voted as recommended by the Board of Directors. Any shareholder who returns a proxy may revoke it at any time prior to voting on any matter (without, however, affecting any vote taken prior to such revocation) by (i) delivering written notice of revocation to the Secretary of Data I/O at Data I/O's principal offices, (ii) executing and delivering to Data I/O another proxy dated as of a later date, or (iii) voting in person at the Annual Meeting.

VOTING SECURITIES AND PRINCIPAL HOLDERS

The only outstanding voting securities of Data I/O are shares of common stock (the "Common Stock"). As of the Record Date, there were 8,622,369 shares of Common Stock issued and outstanding, and each such share is entitled to one vote at the Annual Meeting. The presence in person or by proxy of holders of record of a majority of the outstanding shares of Common Stock is required for a quorum for transacting business at the Annual Meeting. Shares of Common Stock underlying abstentions will be considered present at the Annual Meeting for the purpose of calculating a quorum. Under Washington law and Data I/O's charter documents, if a quorum is present, the five nominees for election to the Board of Directors who receive the greatest number of affirmative votes cast at the Annual Meeting will be elected directors. Abstentions and broker non-votes will have no effect on the election of directors because they are not cast in favor of any particular candidate.

The proposal to ratify the continued appointment of Grant Thornton LLP as Data I/O's independent auditors will be approved, if a quorum is present, if the number of votes cast in favor of the proposal exceeds the number of votes cast against the proposals.

Abstentions and broker non-votes on the proposals will have no effect because approval of the proposal is based solely on the votes cast.

Say on Pay – The advisory vote on the compensation of Data I/O's named executive officers will be approved, if a quorum is present, if the number of votes cast in favor of the advisory resolution exceeds the number of votes cast against the advisory resolution. Abstentions and broker non-votes on the advisory resolution will have no effect because approval of the advisory resolution is based solely on the votes cast.

Proxies and ballots will be received and tabulated by Computershare, an independent business entity not affiliated with Data I/O.

Effect of Not Casting Your Vote

If you hold your shares in street name, it is critical that you instruct your broker or bank how to vote if you want it to count in Proposal 1, the election of directors; and Proposal 3, Say on Pay. Regulations no longer allow your bank or broker to vote your uninstructed shares in the election of directors on a discretionary basis. If you hold your shares in street name and you do not instruct your bank or broker how to vote in the Proposal 1, election of directors; and Proposal 3, Say on Pay, votes will not be cast on your behalf for these Proposals. Your bank or broker will, however, continue to have discretion to vote any uninstructed shares on Proposal 2, ratification of the appointment of Data I/O's independent auditors. If you are a shareholder of record and you do not cast your vote, votes will not be cast on your behalf on any of the items of business at the Annual Meeting.

The Common Stock is traded on The NASDAQ Capital Market under the symbol "DAIO". The last sale price for the Common Stock, as reported by The NASDAQ Capital Market on March 21, 2022, was $4.57 per share.

Principal Holders of Data I/O's Common Stock

The following table sets forth information for all shareholders known by Data I/O to be the beneficial owners of more than five percent of its outstanding Common Stock as of March 21, 2022. Except as noted below, each person or entity has sole voting and investment powers with for the shares shown.

Name and Address	Amount and Nature of Beneficial Ownership		Percent of Shares Outstanding
Renaissance Technologies LLC Renaissance Technologies Holding Corporation 800 Third Avenue New York, NY 10022	646,243	(1)	7.5%
David L. Kanen Kanen Wealth Management LLC Philotimo Fund, LP 5850 Coral Ridge Drive, suite 309 Coral Springs, FL33076	593,461	(2)	6.9%

(1) The holding reported as of December 31, 2021, as jointly reported by Renaissance Technologies LLC ("RTC") and Renaissance Technologies Holding Corporation ("RTHC") on the most recent (filed February 11, 2022) Schedule 13G/A filed under the Securities Exchange Act of 1934. The Schedule 13G/A indicates that RTC has sole voting power for 582,328 shares and dispositive power for 646,243 shares. The Schedule 13G further indicates that RTHC has sole voting power for 582,328 shares and dispositive power for 646,243 shares, comprising the shares beneficially owned by RTHC, because of RTHC's majority ownership of RTC.

(2) The holding reported as of November 3, 2021, as jointly reported by Philotimo Fund, LP, David L. Kanen and Kanen Wealth Management LLC ("KWM"), on the most recent (filed November 16, 2021) Schedule 13D filed under the Securities Exchange Act of 1934. The Schedule 13D indicates that Philotimo Fund, LP has 0 sole voting, 0 sole dispositive power, 593,461 shared voting power and 593,461 shared dispositive power for shares. KWM has 0 shares sole voting, 0 shares sole dispositive power, 593,461

shared voting power and 593,461 shared dispositive power for shares. Mr. Kanen has 0 shares sole voting, 0 shares sole dispositive power, 593,461 shared voting power and 593,461 shared dispositive power for shares. KWM is the General Partner of Philotimo Fund, LP, and Mr. Kanen is the managing member of KWM. They may be deemed to beneficially own the Shares owned in turn by Philotimo Fund, LP and KWM.

Directors' and Officers' Share Ownership

The following table indicates ownership of Data I/O's Common Stock by each director of Data I/O, each executive officer named in the compensation tables appearing later in this Proxy Statement, and by all directors and executive officers as a group, all as of March 21, 2022. Data I/O is not aware of any family relationships between any director, director nominee or executive officer of Data I/O.

Name	Amount and Nature of Beneficial Ownership	Percent of Shares Outstanding
Anthony Ambrose	247,443	2.9%
Joel S. Hatlen	123,262	1.4%
Rajeev Gulati	87,024	1.0%
Michael Tidwell [2]	60,902	[1]
Douglas W. Brown	43,159	[1]
Mark J. Gallenberger	69,509	[1]
Sally A. Washlow	17,051	[1]
Cheemin Bo-Linn	4,601	[1]
Edward J. Smith	2,515	[1]
All current directors and executive officers as a group (9 persons)[2]	655,466	7.6%

[1] Less than 1 percent each.
[2] Includes 6,250 options exercisable within 60 days.

Data I/O is not aware of any arrangement the operation of which may at a subsequent date result in a change of control of Data I/O.

Legal Proceedings

Neither the Data I/O nor any of its property is currently subject to any material legal proceedings or other adverse regulatory proceedings. Data I/O does not currently know of any material legal proceedings against it or its subsidiaries involving its directors, proposed directors, or executive officers, or any associate of any such director or executive officer, or any material interest adverse to Data I/O or its subsidiaries. None of Data I/O's directors, proposed directors or executive officers has, during the past ten years, been involved in any material bankruptcy, criminal or securities law proceedings.

CORPORATE GOVERNANCE

Board Charters

The Board of Directors has adopted Corporate Governance and Nominating Committee, Audit Committee and Compensation Committee Charters. All our Charters are reviewed and updated periodically by our Board of Directors. All of our Charters were reviewed during 2021 and again in early 2022 and no changes were made. The current versions of our Charters are posted on the corporate governance page of our website at https://www.dataio.com/Company/Investor-Relations/Corporate-Governance.aspx. All of these Charters are consistent with the applicable requirements of United States security laws and our NASDAQ listing standards.

Code of Ethics

Our Code of Ethics was reviewed by our Board of Directors during 2021 and again in early 2022 and no substantive changes were made. The current version of our Code of Ethics is posted on the Corporate Governance page of our website at https://www.dataio.com/Company/Investor-Relations/Corporate-Governance.aspx. Data I/O's Code of Ethics apply to all directors, officers and employees of Data I/O, including the named executive officers. The key principles of the Code are to act legally, and with integrity in all work for Data I/O. We will post any amendments to our Code of Ethics on the corporate governance page of our website at www.dataio.com/company/investorrelations/corporategovernance.aspx. In the unlikely event that the Board of Directors approves any waiver to the Code of Ethics for our executive officers or directors, information concerning such waiver will also be posted on our website. In addition to posting information regarding amendments and waivers on our website, the same information will be included in a Current Report on Form 8-K within four business days following the date of the amendment or waiver, unless website posting of such amendments or waivers is permitted by the rules of The NASDAQ Stock Market LLC.

Risk Oversight

Our current Board of Directors consists of five independent directors, and one non-independent director, our Chief Executive Officer. Risk oversight is generally handled by our entire Board of Directors, although certain risk oversight areas such as internal control and cyber risk are handled by our Audit Committee, and compensation is handled by our Compensation Committee, respectively. The Board leadership structure promotes effective oversight of the Company's risk management for the same reasons that the structure is most effective for the Company in general, that is, by providing the Chief Executive Officer and other members of senior management with the responsibility to assess and manage the Company's day-to-day risk exposure and providing the Board, and specifically the Audit Committee of the Board, with the responsibility to oversee these efforts of senior management.

Director Independence

Messrs. Brown, Gallenberger, and Smith, and Mss. Washlow and Bo-Linn are independent directors as defined by applicable U.S. Securities and Exchange Commission ("SEC") rules and NASDAQ listing standards. Mr. Gallenberger will not be standing for reelection at the 2022 Annual Meeting and Mr. Howe was also independent, but was no longer a director as of May 20, 2021. Mr. Ambrose, our Chief Executive Officer, is not an independent director.

Leadership Structure

Our Board Chair, Mr. Brown, is an independent director and Mr. Ambrose is our Chief Executive Officer, President, and Director.

PROPOSAL 1: ELECTION OF DIRECTORS

At the 2021 Annual Meeting, the shareholders elected four directors to serve until the next Annual Meeting or until such director's successor has been qualified and elected or such director's earlier death, resignation or removal. For the 2022 Annual Meeting, the Board of Directors has approved the five nominees named below. The five nominees are currently members of the Board of Directors. Each of the nominees has indicated that they are willing and able to serve as directors. However, should one or more of the nominees not accept the nomination, or otherwise be unwilling or unable to serve, it is intended that the proxies will be voted for the election of a substitute nominee or nominees designated by the Board of Directors.

RECOMMENDATION: The Board of Directors recommends a vote FOR each of the director nominees.

Anthony Ambrose, age 60, was appointed a director of Data I/O effective October 25, 2012. He joined Data I/O October 25, 2012 and has served as President and Chief Executive Officer ("CEO"). Prior to Data I/O, Mr. Ambrose was Owner and Principal of Cedar Mill Partners, LLC, a strategy consulting firm since 2011. From 2007 to 2011, he was Vice President and General Manager at RadiSys Corporation, a leading provider of embedded wireless infrastructure solutions, where he led all product divisions and worldwide engineering. Until 2007, he was general manager and held several other progressively responsible positions at Intel Corporation, where he led development and marketing of standards-based telecommunications platforms, and grew the industry standard server business to over $1B in revenues. He is Chair of the EvergreenHealth Foundation Board of Trustees. In 2019 he also became a board member of Cipherloc Corporation (OTCQB: CLOK). Mr. Ambrose has a Bachelor's of Science in Engineering from Princeton University. He has completed the Stanford Graduate School of Business Director Symposium and earned the Carnegie Mellon University Certificate in Cybersecurity Oversight.

Mr. Ambrose has extensive semiconductor, systems and networking industry operating experience. He has significant executive experience in strategy development, business management, marketing, engineering, and new product development. His role as our President and CEO gives him knowledge as well as unique insight into our challenges, opportunities and operations, for which the Board of Directors believes he is qualified to serve as a director of Data I/O.

Douglas W. Brown, age 66, was appointed a director of Data I/O effective April 1, 2011. Mr. Brown retired in 2019 from Executive Chairman of All Star Directories, Inc., Seattle, Washington, a Web-based publisher of post-secondary online and career school directories which he joined as President in 2005 and served in that capacity until 2016. From 2003 to 2005, he provided governance and interim executive services, with engagements including Interim President and Board member, to venture-backed clients. From 1998 to 2003, he was a Board member of GoAhead Software and was appointed its President in 2001. From 1993 to 1999, he was a President of a Seattle-area manufacturing company which became a Division of Leggett & Platt in 1996. Prior to that time, he was the Chief Financial Officer ("CFO") of Seattle Silicon, and Executive Vice President, Finance and Operations at Phamis. He started his career as a Certified Public Accountant at Arthur Young & Co, now Ernst & Young, in Seattle. Mr. Brown has a Bachelor's degree in Business from University of Idaho.

Mr. Brown has extensive software, financial, CEO, CFO, and board level experience for which the Board of Directors believes he is qualified to serve as a director of Data I/O.

Sally A. Washlow, age 50, was appointed a director of Data I/O effective October 28, 2020. She currently leads the Midwest geographic area of the United States for LHH's International Center for Executive Options working with senior level and C-Suite executives from companies ranging from Fortune 10 to privately held. She operates SW Consulting LLC supporting companies with executive management, strategy initiatives and board service to privately held companies since 2017. She is also a member of the Consumer Technology Association and serves on the audit committee as well as the Board of Industry Leaders. From 2015 to 2017, Ms. Washlow was the Chief Executive Officer of Cedar Electronics Corporation, a supplier of radar detectors, GPS systems, dash cameras and other electronic products, and led the integration of the Cobra and Escort electronics businesses. Prior to that, Ms. Washlow worked for 13 years at Cobra Electronics Corporation (COBR) in various capacities, including as President from 2013 until 2015. Prior roles included leadership positions in product development, marketing and supply chain with Motorola in the automotive and telecommunication sectors along with LG/ Zenith and the launch of Digital Television. Ms. Washlow received an MBA in Marketing from DePaul University and a BA in Supply Chain Management from Michigan State University. In 2019, she became a board member and serves as Chair of Costar Technologies, Inc. (OTC Markets Group: CSTI).

Ms. Washlow, as a consultant and former Chief Executive Officer, has extensive experience as an operating leader in the security and automotive electronics markets, for which the Board of Directors believes she is qualified to serve as a director of Data I/O.

Cheemin Bo-Linn, age 68, was appointed a director of Data I/O effective December 17, 2021. She is the CEO of Peritus Partners, Inc., a valuation accelerator, for industry sectors including automotive, electronics, consumer, and medical sectors with integrated security, from 2013 to 2022. Her prior positions include 20+ years in IBM senior executive roles, where she led global teams as IBM's VP of Industrial Sector/Electronics, responsible for IBM's software, semiconductor chips, storage, and consulting services. Dr. Bo-Linn earned a doctorate degree in computer-based management information and organizational change from the University of Houston. She was also named a Visiting Professor in the Joint 2017-2018 EMBA/MBA program of Columbia University, London School of Business, and the University of Hong Kong. Her teaching domain included digital transformation and technology (artificial intelligence, IoT, sensory farms, data analytics, and security). Currently she is Lead Independent Director at BlackLine Safety, (TSX: BLN) a global manufacturer of hardware enabled IoT SaaS solutions for the transportation, consumer and industrial sectors. In October 2021 she joined the board of KORE Wireless, (NYSE: KORE) an IoT solutions and services business and in January 2022 was appointed as an independent director of Flux Power Holdings, Inc. (NASDAQ: FLUX).

Dr. Bo-Linn has extensive board, executive and industry expertise, for which the Board of Directors believes she is qualified to serve as a director of Data I/O.

Edward J. Smith, age 59, was appointed a director of Data I/O effective February 23, 2022. He is President and Chief Executive Officer of SMTC Corporation. Mr. Smith is a seasoned and successful executive with more than 25 years of experience in electronic manufacturing services (EMS) industry and the electronic components distribution industry. Prior to joining SMTC he served as President of Avnet Inc. for 7 years and held various other senior positions since 1994. Mr. Smith served, as President and Chief Executive Officer of SMTEK International Inc., from 2002 to 2004, a tier II manufacturer in the EMS industry. Mr. Smith has served on numerous private company and non-profit boards and currently serves on the board of directors at Aqua Metals, Inc. (NASDAQ: AQMS) and previously served on the board of directors of SMTC Corporation (NASDAQ: SMTX). Mr. Smith is the founder and currently runs the We Will Never Forget charitable foundation.

Mr. Smith has extensive board, CEO and industry expertise, for which the Board of Directors believes he is qualified to serve as a director of Data I/O.

THE BOARD OF DIRECTORS

Communications with the Board of Directors

Shareholders may communicate with the Board of Directors by sending an email or by sending a letter to Data I/O Corporation Board of Directors, c/o the Secretary, 6645 185th Ave NE, Suite 100, Redmond, WA 98052. The Secretary will receive the correspondence and forward it to the Chair of the applicable Board of Directors Committee or to any individual director or directors to whom the communication is directed.

BOARD COMMITTEES

During the year ended December 31, 2021, there were six meetings of the Board of Directors. Each of the incumbent directors who was on the Board of Directors during 2021 attended 100% of the aggregate of the total number of meetings of the Board of Directors and the total number of meetings held by all committees of the Board of Directors on which they served during their term of service on the Board of Directors. Data I/O does not have a policy requiring members of the Board of Directors to attend the Annual Meeting, although we typically encourage our Board of Directors to attend. Due to COVID-19, Mr. Brown, Mr. Gallenberger, and Ms. Washlow attended our 2021 Annual Meeting telephonically and Mr. Ambrose attended in person.

The Board of Directors had three standing Committees during 2021: The Audit Committee, the Compensation Committee and the Corporate Governance and Nominating Committee. Each committee was comprised solely of independent directors during 2021, as defined by applicable SEC rules, NASDAQ listing standards including director independence generally as well as additional independence requirements for audit and compensation committees, and the Sarbanes-Oxley Act of 2002. The following table shows the composition of the Board Committees and Board Leadership structure during 2021 and through the date of this Proxy Statement.

Director (M=member)	Audit Committee	Compensation Committee	Corporate Governance and Nominating Committee	Comments
Anthony Ambrose				President & CEO
Doug Brown	M	M	Chair (until 5/20/2021); M	Chair of the Board effective May 20, 2021
Alan Howe	M (until 5/20/2021)		M (until 5/20/2021)	Chair of the Board until May 20, 2021. No longer a director effective May 20, 2021
Mark Gallenberger	Chair	M	M	No longer a director effective May 19, 2022
Sally Washlow	M (start 5/20/2021)	Chair	M (until 5/20/2021) Chair (start 5/20/2021)	

Cheemin Bo-Linn	M (start 12/17/2021; until 2/23/2022)	M (start 12/17/2021)	M (start 12/17/2021)	A director effective December 17, 2021
Edward Smith	M (start 2/23/2022)	M (start 2/23/2022)	M (start 2/23/2022)	A director effective February 23, 2022

Audit Committee

The Audit Committee appoints, oversees, evaluates, and engages independent certified public accountants for the ensuing year and approves the compensation and other terms of such engagement; reviews the scope of the audit; periodically reviews Data I/O's program of internal control and audit functions; receives and reviews the reports of the independent accountants; and reviews the annual financial report to the directors and shareholders of Data I/O. Each member of the Audit Committee is an independent director, as defined by applicable NASDAQ listing standards and the Sarbanes-Oxley Act of 2002. During 2021 and through the date of this Proxy statement, all Audit Committee members are "audit committee financial experts" as defined by the applicable SEC rules adopted pursuant to the Sarbanes-Oxley Act of 2002. The Audit Committee met five times during 2021 and recorded 100% committee attendance at such meetings. See the "Report of the Audit Committee" for additional information.

Corporate Governance and Nominating Committee

The Corporate Governance and Nominating Committee, or "CGNC", develops, recommends to the Board of Directors, and monitors a set of corporate governance principles applicable to Data I/O. The CGNC seeks qualified candidates to serve on the Board of Directors, recommends them for the Board of Directors' consideration for election as directors at the Annual Meeting of Shareholders and proposes candidates to fill vacancies on the Board of Directors. The CGNC met six times in 2021 and recorded 100% committee attendance at such meetings held during their term of service. The CGNC continues to seek qualified candidates and recommends the director nominees to the Board of Directors. The CGNC identifies, evaluates, and recommends director nominees and Committee assignments which are described in greater detail below.

Compensation Committee

The Compensation Committee is composed entirely of independent directors, as defined by applicable NASDAQ listing standards for compensation committees. The Compensation Committee is responsible for setting and administering the policies which govern all of the compensation programs of Data I/O. The Compensation Committee may delegate its authority and duties to subcommittees or individual members of the Compensation Committee as it considers appropriate.

The Compensation Committee makes recommendations to the Board of Directors concerning the compensation of Data I/O's executive officers. The Compensation Committee administers Data I/O's long-term equity incentive plans. The Compensation Committee reviews all employee benefit programs and approves significant changes in major programs and all new programs. The Compensation Committee met seven times during 2021 and recorded 100% committee attendance at such meetings.

As authorized by the Compensation Committee charter, the Compensation Committee may retain consultants or other advisors, as well as purchase compensation surveys, to assist in carrying out its responsibilities.

Consideration of Director Nominees

The Corporate Governance and Nominating Committee has developed, and the Board has approved, Board Responsibilities and Director Recruitment Objectives, which further outline our directors' roles and responsibilities and desired traits, diversity, characteristics, experience and criteria for selection. The Corporate Governance and Nominating Committee in evaluating and determining whether to recommend a person as a candidate for election as a director consider, in light of the Board Responsibilities and Director Recruitment Objectives, considers the relevant management and/or technology industry experience of potential director candidates (such as experience as chief executive, operations or financial officer, or similar positions); business development, mergers and acquisitions experience; public/corporate board experience, diversity, knowledge of Data I/O; educational experience; commitment to maximizing shareholder value; certain values such as integrity, accountability, judgment and adherence to high performance standards; independence pursuant to applicable guidelines; ability and willingness to undertake the required time commitment to Board functions; shareholder input; and an absence of conflicts of interest with Data I/O.

Director Diversity

The Corporate Governance and Nominating Committee also considers issues of diversity, such as diversity of gender, race and national origin, education, professional experience and differences in viewpoints and skills. The CGNC does not have a formal policy on Board diversity; however, the CGNC believes that it is important for Board members to represent diverse viewpoints, and comply with specific applicable laws. Data I/O believes it is already in compliance with the NASDAQ diversity requirements for the coming year. The composition and quantity of board members may be potentially impacted as we maintain compliance with these and future requirements. In considering candidates for the Board, the CGNC considers the entirety of each candidate's credentials in the context of these standards. With respect to evaluating the nomination of continuing directors for re-election, the CGNC considered each director's contributions to the company as well as the results of the Board of Directors self-evaluations process. The following table presents a Board Diversity Matrix per NASDAQ requirements:

Board Diversity Matrix (As of March 21, 2022)				
Total Number of Directors	6			
	Female	Male	Non-Binary	Did not Disclose Gender
Directors	2	4	0	0
Number of Directors who identify in Any of the Categories Below:				
African American or Black	0	0	0	0
Alaskan Native or Native American	0	0	0	0
Asian	1	0	0	0
Hispanic or Latinx	0	0	0	0
Native Hawaiian or Pacific Islander	0	0	0	0
White	1	4	0	0
Two or More Races or Ethnicities	0	0	0	0
LGBTQ+	0			
Did not Disclose Demographic Background	0			

Directors who are Military Veterans: 0

Directors with Disabilities: 0

Directors who identify as Middle Eastern: 0

Identifying Director Nominees; Consideration of Nominees of the Shareholders

The Corporate Governance and Nominating Committee may employ a variety of methods for identifying and evaluating nominees for director. The CGNC regularly assesses the size of the Board, the need for particular expertise on the Board, and whether any vacancies on the Board are expected due to retirement or otherwise. In the event that vacancies are anticipated, or otherwise arise, the CGNC considers various potential candidates for director which may come to the CGNC's attention through current Board members, professional search firms, shareholders, or other persons and evaluates these candidates in light of the Board Responsibilities and Director Recruitment Objectives. These candidates are evaluated at regular or special meetings of the CGNC, and may be considered at any point during the year.

The Corporate Governance and Nominating Committee will consider candidates recommended by shareholders, when the nominations are properly submitted, under the criteria summarized above in "Consideration of Director Nominees" and in accordance with the procedures described below in "Shareholder Nominations and Proposals for the 2022 Annual Meeting of Shareholders." Following verification of the shareholder status of persons proposing candidates, the CGNC makes an initial analysis of the qualifications of any candidate recommended by shareholders or others pursuant to the criteria summarized above to determine if the candidate is qualified for service on the Data I/O Board of Directors before deciding to undertake a complete evaluation of the candidate. If any materials are provided by a shareholder or professional search firm in connection with the nomination of a director candidate, such materials are forwarded to the CGNC as part of its review. Other than the verification of compliance with procedures and shareholder status, and the initial analysis performed by the CGNC, a potential candidate nominated by a shareholder is treated like any other potential candidate during the review process by the CGNC. For eligible shareholder nominees to be placed on the ballot for the 2022 Annual Meeting of Shareholders, shareholders were required to deliver nominations for proposed director nominees to Data I/O by February 19, 2022. While no formal candidate nominations were made by shareholders for election at the 2022 Annual Meeting, Mr. Smith was initially identified by discussions with significant shareholders and the Board; Ms. Washlow was initially identified and introduced by a Board member; Ms. Bo-Linn was initially identified as a candidate through our Board members' network; and Mr. Brown was initially identified and introduced by a member of management.

Certain Relationships and Related Transactions

Our Audit Committee is charged with monitoring and reviewing issues involving potential conflicts of interest, and reviewing and approving related party transactions as set forth in the Code of Ethics, which is posted on the corporate governance page of our website at https://www.dataio.com/Company/Investor-Relations/Corporate-Governance.aspx. Under our Code of Ethics, our directors, officers and employees are expected to avoid conflicts of interest with Data I/O and are required to report any such conflicts of interest to our Chief Executive Officer or Chief Financial Officer, or to the Chair of our Audit Committee. Our Audit Committee reviews all such transactions and relationships by our directors and executive officers that come to its attention either through the director and officer questionnaires or otherwise, and considers whether to approve or take other appropriate action with respect to such transactions or relationships. During 2020 and 2021, no related party transactions that were significant or material occurred.

BOARD COMPENSATION

Employee directors (Anthony Ambrose) do not receive additional compensation for serving on the Board of Directors. During 2021, non-employee directors received a cash retainer of $7,750 for each quarter of service. Data I/O paid additional quarterly compensation to the non-employee directors who served as Chair of the Board of Directors or as a Committee chair: $3,750 for Chair of the Board of Directors; $2,500 for Chair of the Audit Committee; $2,000 for Chair of the Compensation Committee; and $2,000 for Chair of the Corporate Governance and Nominating Committee. Fees are prorated based on time served for changes in directors and assignments.

In addition, each non-employee Board of Directors member as of May 20, 2021, was granted a restricted stock award for 9,300 shares of Data I/O stock. Our new Directors, Cheemin Bo-Linn and Edward J. Smith, were given a prorated share grant upon appointment. The restricted stock awards were granted under the provisions and terms of the Amended and Restated 2000 Stock Compensation Incentive Plan ("2000 Plan") and generally vest in one year or on the date of the next Annual Meeting, if earlier. Data I/O also reimburses non-employee directors for actual travel and out-of-pocket expenses incurred in connection with service to Data I/O.

Each Data I/O non-employee member of the Board of Directors is required to achieve ownership of Data I/O stock at least equal to three times the annual director cash retainer fee based on Data I/O's then current share price. Non-employee directors have five years from their initial election or appointment to meet the ownership target requirement. Amounts that count toward meeting the target requirement include: shares owned; shared ownership (shares owned or held in trust by immediate family); and the gain amount from any in-the-money vested options. If the stock ownership target requirement has not been met by any non-employee director, until such time as such director reaches the target requirement, he or she will be required to retain any Data I/O shares issued by Data I/O to such director (other than those disposed of to pay for the exercise and associated taxes on those shares). As of the Record Date, Messrs. Brown and Gallenberger have met the stock ownership target requirement and Ms. Washlow, Ms. Bo-Linn and Mr. Smith as a result of their recent appointment, have not yet met the requirement.

The Chief Executive Officer ("CEO") is required to achieve ownership of Data I/O stock of at least two times the base pay of the CEO based on Data I/O's then current share price. The CEO has five years from appointment to meet the ownership target requirement. Amounts that count toward meeting the target requirement are the same as for the Board of Directors. If the stock ownership target requirement has not been met by the CEO, until such time as the CEO reaches the requirement amount, he or she will be required to retain any Data I/O shares issued by Data I/O (other than those disposed of to pay for the exercise and associated taxes on those shares). As of the Record Date the CEO has met the stock ownership target requirement.

Data I/O has a Securities Trading Policy that includes a prohibition against hedging transactions.

DIRECTOR COMPENSATION

The following table shows compensation paid by Data I/O to non-employee directors during 2021.

Name [5] (a)	Fees Earned or Paid in Cash [3] ($) (b)	Stock Awards ($) (c)	Option Awards ($) (d)	Non-Equity Incentive Plan Compensation ($) (e)	Nonqualified Deferred Compensation Earnings ($) (f)	All Other Compensation ($) (g)	Total ($) (h)
Douglas W. Brown [1][2]	$ 43,288	$ 59,334	$0	$0	$0	$0	$102,622
Sally A. Washlow [1][2]	$ 43,901	$ 59,334	$0	$0	$0	$0	$103,235
Alan B. Howe [1][2][4]	$ 17,819	$0	$0	$0	$0	$0	$ 17,819
Mark J. Gallenberger [1][2][3]	$ 41,000	$ 59,334	$0	$0	$0	$0	$100,334
Cheemin Bo-Linn [1][2]	$ 1,264	$ 21,234	$0	$0	$0	$0	$ 22,497

(1) Each outside director elected at the annual meeting in 2021 was awarded 9,300 shares of restricted stock with a fair value of $6.38 on May 20, 2021, vesting in one year or the next annual meeting, if earlier. Ms. Bo-Linn received a prorated grant under the same provisions on the date of her appointment on December 17, 2021.

(2) No outside director had option awards outstanding at December 31, 2021.

(3) Mark Gallenberger will resign as a Director and not seek re-election at the Annual Meeting on May 19, 2022.

(4) Alan Howe was no longer a Director as of May 20, 2021.

(5) Edward J. Smith was appointed a director on February 23, 2022 and had no compensation in 2021.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities Exchange Act of 1934 requires Data I/O's directors, certain officers and persons who own more than ten percent (10%) of Data I/O's Common Stock ("Reporting Persons") to file with the SEC initial reports of ownership and reports of changes in ownership of Common Stock and other equity securities of Data I/O. Reporting Persons are required by SEC regulations to furnish Data I/O with copies of all Section 16(a) reports.

REPORT OF THE AUDIT COMMITTEE

The Audit Committee oversees Data I/O's financial reporting process on behalf of the Board of Directors. Management has the primary responsibility for the consolidated financial statements and the reporting process, including the systems of internal controls. Audit Committee members are not professional accountants or auditors and their functions are not intended to duplicate or to certify the activities of management or the independent auditors. In fulfilling its oversight responsibilities, the Committee reviewed the audited consolidated financial statements in the Annual Report (Form 10-K) with management, including a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments, and the clarity of disclosures in the financial statements.

The Committee reviewed with the independent auditors, who are responsible for expressing an opinion on the conformity of those audited consolidated financial statements with generally accepted accounting principles in the United States, their judgments as to the quality, not just the acceptability, of Data I/O's accounting principles and such other matters as are required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board ("PCAOB") and the Commission, with the Committee under generally accepted auditing standards. In addition, the Committee has discussed with the independent auditors the auditors' independence from management and Data I/O including the matters in the written disclosures and the letter provided by the independent auditors, as required by the applicable requirements of the Public Company Oversight Board and the SEC for independent auditor communications with Audit Committees concerning independence, and considered the compatibility of non-audit services with the auditors' independence.

The Committee selects and engages Data I/O's independent auditors, is involved in selecting and approving the independent auditors' lead audit partner, and discusses the overall scope and plans for the audits. The Committee meets with the independent auditors, with and without management present, to discuss the results of their examinations, their evaluations of Data I/O's internal controls, and the overall quality of Data I/O's financial reporting. The Committee held five meetings during 2021, of which five were attended by Data I/O's independent auditors.

In reliance on the reviews and discussions referred to above, the Committee recommended to the Board of Directors (and the Board has approved) that the audited consolidated financial statements be included in Data I/O's Annual Report (Form 10-K) for the year ended December 31, 2021, for filing with the Securities and Exchange Commission. The Committee has considered the Shareholder vote of approval of 97% in May 2021, as well as the impact of changing independent auditors and has selected Grant Thornton LLP as Data I/O's auditors for the current year.

Respectfully submitted,

AUDIT COMMITTEE

Mark J. Gallenberger (Chair)
Douglas W. Brown
Sally A. Washlow
Edward J. Smith

April 1, 2022

PRINCIPAL ACCOUNTANT'S FEES AND SERVICES

Audit Fees: Aggregate fees billed by Grant Thornton LLP for professional services rendered for the audit of Data I/O's financial statements for each of the years ended December 31, 2021 and 2020 and for review of the financial statements included in each of Data I/O's quarterly reports on Form 10-Q during each of the years ended December 31, 2021 and 2020, were approximately $219,718 and $210,058, respectively.

Audit Related Fees: No aggregate fees were billed for the years ended December 31, 2021 and 2020 for assurance and subsidiary related services by Grant Thornton LLP *that* are reasonably related to the performance of the audit or review of Data I/O's financial statements that are not reported under the caption "Audit Fees" above, including accounting treatment consultations.

Tax Fees: No aggregate fees were billed for the years ended December 31, 2021 and 2020 for professional tax services rendered by Grant Thornton LLP.

All Other Fees: No aggregate fees were billed for the years ended December 31, 2021 and 2020, for all other products and services provided by Grant Thornton LLP that are not otherwise disclosed above.

Policy on Pre-Approval by Audit Committee of Services Performed by Independent Auditors

The Audit Committee's policy is to pre-approve all audit and permissible non-audit services provided by the independent auditors. These services may include audit services, non-audit services, tax services and other services. Pre-approval is detailed as to the particular service or category of service and is subject to a specific engagement authorization.

During the year, circumstances may arise when it may become necessary to engage the independent auditors for additional services not contemplated in the original pre-approval. In those circumstances, the Audit Committee has delegated pre-approval authority to the Chair of the Audit Committee for those instances when pre-approval is needed prior to a scheduled Audit Committee meeting. These additional approvals should be reported at the next scheduled Audit Committee meeting.

For 2021, all services provided by the independent auditors were pre-approved.

EXECUTIVE COMPENSATION

Shareholder Vote

At our 2021 Annual Meeting of Shareholders, our shareholders approved, in an advisory vote, the compensation of our Named Executive Officers, as disclosed in the Executive Compensation discussion and analysis, the compensation tables and the related disclosures in our Proxy Statement. The proposal was approved by our shareholders with 94% of the votes cast voting "for" approval and 4% voting "against" approval. In light of the level of approval by our stockholders, the Compensation Committee considered the result of the vote and did not make changes to our compensation policies or practices specifically in response to the stockholder vote.

Elements of Our Company's Compensation Plan

Annual executive officer compensation consists of the following elements which are described in more detail below:

- Annual base salary;
- Management Incentive Compensation Plan or "MICP";
- Long-term equity incentives;
- Benefits;
- Perquisites and other perceived benefits; and
- Individual Executive Officers' Performance.

It is the Compensation Committee's policy to set total executive officer compensation at competitive levels based on compensation surveys with similar positions in similar sized company revenue ranges and at levels sufficient to attract and retain a strong, motivated leadership team. Our philosophy for compensation of executive officers is based on the following two principles:

i. Executive base compensation levels should be established by comparison of job responsibility to similar positions in comparable companies and be adequate to retain highly-qualified personnel; and

ii. Variable compensation should be a critical element of compensation and be set to be comparably competitive and to provide strong incentives to improve performance and shareholder value.

- **Annual Base Salary.** The Compensation Committee establishes a base salary structure for each executive officer position. This structure defines the salary levels and the relationship of base salary to total cash compensation. The Compensation Committee reviews the salary structure periodically.

- **MICP.** The MICP offers each executive officer a performance-based opportunity to earn the variable component of annual cash compensation in an amount tied to a percentage of the executive officer's base salary. The Compensation Committee's philosophy in setting executive MICP percentages and the formulas for MICP payout is to pay above average total compensation for better than average historical or expected financial performance and below average compensation for lower than or average historical or expected financial performance. The percentages of base salary targeted for MICP payout ("the MICP Target") for specific executive officers for a given year are generally the same as the previous year, but can be changed by the Compensation Committee on an annual basis. The MICP payout can range from 0% to 200% of each executive's MICP Target based upon the actual achieved MICP Measures for the period. The 2020 and 2021 MICP Target percentages for our executive officers were as follows:

	Executive's MICP 2020 Target	Executive's MICP 2021 Target	Estimated Payout at Maximum Measure for 2022
Ambrose	70%	70%	140%
Gulati	50%	50%	100%
Hatlen	50%	50%	100%
Tidwell	50%	50%	100%

The Compensation Committee determined for 2020 and again for 2021 that it was critical to emphasize profitability. For the profitability measure: Financial Performance ("FP"), which is based on achievement of various levels of operating income as percentage of revenue. (See below for the Financial Performance Matrix.) For 2020 as a result of the continued investment in Data I/O's SentriX® Security Deployment Platform, and the critical focus on completion of key development, customer objectives, and revenue growth objectives related to SentriX to deliver future new revenue and profitability, Executive Officers had their MICP measures spilt 50% SentriX objectives and 50% FP. For 2021, the focus was on revenue growth for SentriX and profitability for the rest of the business. Executive Officers had their MICP measures spilt 30% on SentriX revenue objectives and 70% on FP. The SentriX revenue objective was based on revenue growth in 2021 over a minimum threshold. The FP was based on achievement of various levels of adjusted operating income established for the year as a percentage of revenue. The adjustment made in the FP was to add a certain amount of the investment in SentriX spending back in determining adjusted operating income. For 2022, the focus is split with 80% on FP measured on pre- incentive compensation operating income, as well as 20% on SentriX Qualifying Revenue growth targets over a minimum threshold.

The Compensation Committee believes that for 2020, 2021 and 2022, the applicable measures of key results for Data I/O have affected or will affect near-term and long-term shareholder value. A greater or lesser percentage of MICP Target is to be paid based on Data I/O's actual achievement of these measures with the payout target typically based on company financial plans as the Board determines appropriate. For 2020, as a result of an operating loss the FP measure was 0% and no MICP FP payout was made. The SentriX objectives for 2020 were subject to a minimum defined operating income which was not met, so the payout was 0%. For 2021, adjusted operating income measure resulted in a payout of 47% for the FP 70% portion of the MICP. The SentriX revenue growth objective resulted in a payout of 103% for the SentriX 30% portion of the MICP. The combined payout for 2021 was 63.7% of MICP Target. The Compensation Committee retains discretion to adjust the calculation of the two measures for changes outside normal business operations such as acquisitions or asset sales.

Data I/O Corporation 2020 & 2021 MICP Variable Compensation Matrix
Range of Payouts (actual results interpolated)

The 2020 & 2021 MICP Variable Compensation Matrix consisted of two possible measures: Financial Performance (FP) and a SentriX performance objective.

2020 & 2021 Financial Performance Matrix			Target Payout		Target 200% Payout
Operating Profit as a % of Revenue for 2020 or Adjusted Operating Profit as a % of Revenue for 2021	0.0%	3.0%	6.0%	9.0%	12.0%
FP matrix payout as a % of Target	0%	50%	100%	150%	200%

2020 Performance Objectives for SentriX	Minimum	Target 100% Payout	Target 200% Payout
Product Revenue Objectives 50%	$ Threshold	4X $ Threshold	8X $ Threshold
Product and Marketing Objectives 50%	0%	100%	

2020 Overall limitation: No Payout unless defined operating income minimum achieved

2021 SentriX Revenue Growth Objective	Minimum		Target Payout		Target 200% Payout
SentriX Revenue Growth over Threshold %	Threshold %	20.0%	40.0%	130.0%	220.0%
SentriX Revenue Growth Payout	0%	50%	100%	150%	200%

- **Long-Term Equity Incentives.** The Compensation Committee approves grants under the Data I/O Corporation 2000 Stock Compensation Incentive Plan (the "2000 Plan"). This is Data I/O's only long-term employee incentive plan. The primary purpose of the 2000 Plan is to make a significant element of executive pay a reward for taking actions which maximize shareholder value over time. Generally, new options or stock awards are granted under the 2000 Plan. New options or stock awards may also be granted to the Board of Directors under the 2000 Plan.

  Award Criteria
  The Compensation Committee grants options or restricted stock unit awards based primarily on its perception of the executive's ability to affect future shareholder value and secondarily on the competitive conditions in the market for highly-qualified executives who typically command compensation packages which include a significant equity incentive. All restricted stock unit awards granted to our executive officers in 2021 and 2020 were based on these criteria.

  Exercise Price
  Historically, all options granted by Data I/O have been granted with an exercise price equal to the fair market value (an average of the day's high and low selling price) of Data I/O's Common Stock on the date of grant and, accordingly, will only have value if Data I/O's stock price increases. Options granted to employees are non-qualified.

  Vesting and Exercise
  Options granted to employees generally vest quarterly over four years at a rate of 6.25% per quarter and have a six-year term. Options granted to non-employee Directors are also non-qualified options and vest quarterly over a three-year period. The current primary form of equity compensation is restricted stock grants. Restricted stock grants to employees typically vest annually over a four-year period. Restricted stock grants to non-employee Directors vest in one year or on the date of the next Annual Meeting of Shareholders, if earlier. All grants are subject to possible acceleration of vesting in connection with certain events leading to a change in control of Data I/O or in the event in a change in control or at any other time at the discretion of the Compensation Committee. All options granted to executive officers are issued in tandem with limited stock appreciation rights ("SARs"), which become exercisable only in the event of a change in control of Data I/O. See: "Change in Control and other Termination Arrangements."

  Award Process
  The timing of our typical grant/award is usually determined well in advance, with approval at a scheduled meeting of our Board of Directors or its Compensation Committee with the grant date generally to be effective on the date of our next Annual Meeting of Shareholders. The Annual Meeting of Shareholders does not coincide with any of our scheduled earning releases. We do not anticipate option grants or restricted stock awards at other dates, except for grants/awards to new employees based on their first date of employment or in specific circumstances approved by the Compensation Committee. The grant/award date is established when the Compensation Committee approves the grant/award and all key terms have been determined. If at the time of any planned grant/award date, any member of our Board of Directors or Executive Officers is aware of material non-public information, the Company would not generally make the planned grant/award. In such an event, as soon as practical after material information is made public, the Compensation Committee would authorize the delayed grant/award.

- **Benefits.** Executive Officers of Data I/O are eligible for the same benefits as other Data I/O employees. Data I/O has no defined benefit pension programs. Data I/O has a 401(k) tax qualified retirement savings plan in which all U.S. based employees, including U.S. Executive Officers are able to contribute the lesser of up to 100% of their annual salary or the limit prescribed by the IRS on a Roth or pre-tax basis. In 2021 and prior, Data I/O matched 100% of up to 4% of pay contributed. Effective January 2022, Data I/O's match formula is now 100% on the first 2% and 50% on the next 4%, which now requires a 6% contribution to receive a 4% matching contribution. Matching contributions in any year require employment on December 31, except in the case of retirement per the plan, and vest after three years of service credit.

- **Perquisites and Other Personal Benefits.** We believe perquisites are not conditioned upon performance, create divisions among employees, undermine morale, and are generally inconsistent with our compensation philosophy and policy of equitable treatment of all employees based upon their contribution to our business. No executive officer received perquisites valued at $10,000 or more in 2020 or 2021.

- **Individual Executive Officers' Performance.** The base salary of each executive officer is reviewed annually by the President and Chief Executive Officer. This is done on the basis of a review by the President and Chief Executive Officer, evaluating the executive's prior year performance against their individual job responsibilities and attainment of corporate objectives and Data I/O's financial performance. In developing executive compensation packages to recommend to the Compensation Committee, the President and Chief Executive Officer considers, in addition to each executive's prior year performance, the executive's long-term value to Data I/O, the executive's pay relative to that for comparable surveyed jobs, the executive's experience and ability relative to executives in similar positions, and the current year increases in executive compensation projected in industry surveys.

The Compensation Committee then reviews the President and Chief Executive Officer's recommendations for executive officers' total compensation and approves final decisions on pay for each executive officer based on the President and Chief Executive Officer's summary of the executive officer's performance and on the other criteria and survey data described above. In this process, the Compensation Committee consults with Data I/O's President and Chief Executive Officer.

The base salary, total cash compensation, and long-term equity incentive compensation for the President and CEO are reviewed annually by the Compensation Committee. This review includes a written evaluation of the CEO's performance for the previous year. The Compensation Committee meets annually without the President and Chief Executive Officer to evaluate his performance and to develop a recommendation for his compensation for the coming year. In addition to reviewing Data I/O's financial performance for the prior year, the Committee reviewed compensation surveys for chief executive officers and the President and Chief Executive Officer's individual performance, including development and execution of short-term and long-term strategic objectives, Data I/O revenue growth and profitability, the achievement of which is expected to increase shareholder value.

The Compensation Committee determined the compensation package, including salary, bonus, MICP participation, stock option grants, restricted stock awards, and other benefits for Mr. Ambrose, President and Chief Executive Officer, based on the Committee's perception of his qualifications for the position and his ability to affect future shareholder value, results delivered, compensation surveys and the competitive conditions in the market. No salary base pay adjustments were made in 2021 or 2020 for Mr. Ambrose, excluding the COVID-19 related 20% pay cut for 2 quarters in 2020 for Officers and Directors.

Consideration of Risk in Compensation

The Compensation Committee believes that promoting the creation of long-term value discourages behavior that leads to excessive risk. The Compensation Committee believes that the following features of our compensation programs provide incentives for the creation of long-term shareholder value and encourage high achievement by our executive officers without encouraging inappropriate or unnecessary risks:

- Our long-term incentives in the form of stock options or restricted stock awards are at the discretion of the Compensation Committee and not formulaic.
- Stock options become exercisable over a four-year period and remain exercisable for up to six years from the date of grant and restricted stock awards vest over a four-year period, encouraging executives to look to long-term appreciation in equity values.
- We balance short and long-term decision-making with the annual cash incentive program and stock options and restricted stock that vest over four years.
- Because of the extent of the CEO and CFO's direct stock ownership, they could lose significant wealth if Data I/O were exposed to inappropriate or unnecessary risks which in turn affected our stock price.
- The metric used in the MICP measure is set by the Compensation Committee, which believes it will drive shareholder value. Moreover, the Committee attempts to set ranges for these measures that encourage success without encouraging excessive risk-taking to achieve short-term results.
- In addition, the overall MICP incentive compensation cannot exceed two times the MICP Target amount, no matter how much performance exceeds the measures established for the year.

Accounting and Tax Considerations of our Compensation Program

Options granted to employees are non-qualified options because of the more favorable tax treatment for Data I/O. We are required to value granted stock options under the fair value method and expense those amounts in the income statement over the stock option's remaining vesting period. Restricted stock is valued at its fair value on the award date and is expensed over its vesting period.

We have structured our compensation program in the past to comply with Internal Revenue Code Sections 162(m) and 409A. Under Section 162(m) of the Internal Revenue Code, a limitation was placed on tax deductions of any publicly-held corporation for individual compensation to covered employees (generally the chief executive officer and the three other most highly compensated executive officers, other than the chief financial officer, whose compensation must be disclosed pursuant to rules and regulations under the Securities Exchange Act of 1934) exceeding $1 million in any taxable year, unless the compensation is performance-based. Tax reform in 2017 has revised and eliminated the performance-based pay exception for new or modified compensation arrangements for 2018 and beyond. The Compensation Committee is aware of this limitation and believes that no compensation paid in 2020 or 2021 or to be paid in 2022 by Data I/O will exceed the $1 million limitation of Section 162(m), as portions of taxable equity compensation expected to be issued in 2022 continue to be excluded under a prior unmodified performance-based compensation arrangement, except possibly related to a change of control. The new Section 162(m) treatment will be part of future compensation considerations.

Change in Control and other Termination Arrangements

- **Change in Control Arrangements**. Data I/O has entered into agreements (the "Executive Agreements") with Messrs. Ambrose, Gulati, Hatlen and Tidwell which entitle them to receive payments if they are terminated without cause or resign with good reason within specified periods before or after the occurrence of certain events deemed to involve a change in control of Data I/O. Effective July 30, 2014, the Executive Agreements of Messrs. Ambrose, Gulati, and Hatlen were amended and restated and the term of their Executive Agreements was extended with automatic renewal provisions. An Executive Agreement was entered into Mr. Tidwell on his hiring in 2019. The Executive Agreements ensure appropriate incentives are in place for Messrs. Ambrose, Gulati, Hatlen and Tidwell to complete any change in control related transaction and transition, as well as comply with the provisions of Section 409A of the Internal Revenue Code. The Executive Agreements state that the resulting additional severance will be calculated under the Executive Agreements based on Data I/O's severance arrangements in place immediately preceding the date of a change in control (See: "Other Termination Arrangements" below for current severance policy). The Executive Agreements provide for continuation and vesting in Data I/O's matching 401(k) contributions through the date of termination after a change in control and include a reimbursement allowance of $20,000 for outplacement services. The Executive Agreements also have a transaction closing incentive of one-half year's annual salary for Messrs. Ambrose, Gulati, Hatlen and Tidwell to encourage the consideration of all forms of strategic alternatives.

  Data I/O's option grants and stock awards have been granted pursuant to the provisions of the 2000 Plan. The Change in Control provision applicable to the 2000 Plan is as follows:

  <u>2000 Plan</u>
  The 2000 Plan allows for the granting of "Awards", which include options, restricted stock and other awards made pursuant to the 2000 Plan. Subject to any different terms set forth in the award agreement, vesting of "qualifying" options and restricted stock awards may be affected by a Change in Control as described out in the table below. A "Change in Control" is defined to include (i) a merger or consolidation of the Company in which more than 50% of the voting power of the Company's outstanding stock after the transaction is owned by persons who are not shareholders immediately prior to such transaction, and (ii) the sale or transfer of all or substantially all of the Company's assets. A "Qualifying Award' is defined as an option or other Award that has been held for at least 180 days as of the Change of Control. "Qualifying Shares" means common stock issued pursuant to a Qualifying Award which are subject to the right of Data I/O to repurchase some or all of such shares at the original purchase price (if any) upon the holder's termination of services to Data I/O.

Treatment of Awards on a Change in Control	Acceleration of Vesting
The outstanding Awards do not remain outstanding or are not assumed by the surviving entity or replaced with comparable Awards.	Subject to certain limitations, the vesting of Qualifying Awards is accelerated in full. Restricted stock will vest and options will be exercisable in full prior to the effective date of the Change of Control.
The outstanding Awards remain outstanding after a Change of Control or are assumed by the surviving entity or replaced with comparable Awards.	Subject to certain limitations, the vesting of outstanding Qualifying Awards will be accelerated to the extent of 25% of the unvested portion thereof. The remaining 75% of the unvested portion will vest in accordance with the vesting schedule set forth in the applicable Award agreement.
The outstanding Awards remain outstanding after a Change of Control or are assumed by the surviving entity or replaced with comparable Awards, but the holder of a Qualifying Award is terminated involuntarily within 180 days of the Change of Control.	All Awards held by such person will be accelerated in full. Restricted stock will vest and options will be exercisable in full for a period of 90 days commencing on the effective date of the involuntary termination, or if shorter, the remaining term of the option.

In 1983, Data I/O adopted a SAR Plan which allows the Board of Directors to grant to each director, executive officer or holder of 10% or more of the stock of Data I/O a SAR with respect to certain options granted to these parties. A SAR has been granted in tandem with each option granted to an executive officer of Data I/O. SARs granted which have been held for at least six months are exercisable for a period of 20 days following the occurrence of either of the following events: (i) the close of business on the day that a tender or exchange offer by any person (with certain exceptions) is first published or sent or given if, upon consummation thereof, such person would be the beneficial owner of 30% or more of the shares of Common Stock then outstanding; or (ii) approval by the shareholders of Data I/O (or, if later, approval by the shareholders of a third party) of any merger, consolidation, reorganization or other transaction providing for the conversion or exchange of more than 50% of the outstanding shares of Data I/O's Common Stock into securities of a third party, or cash, or property, or a combination of any of the foregoing.

- **Other Termination Arrangements.** Data I/O has a severance policy for U.S. employees that provides for severance payouts for terminations without cause based upon years of service. The current formula, effective March 1, 2014, is 1 week pay for each year of service with a limit of six months' pay. For Mr. Hatlen, the prior standard formula applies, with pay and service years frozen at March 1, 2014, which provided 1.5 weeks of pay for each year of service for those with 10 or more years of service. Mr. Ambrose, Mr. Hatlen, Mr. Gulati and Mr. Tidwell had at March 21, 2022, approximately 9, 30, 9 and 3 years of service, respectively. Mr. Ambrose is entitled to a one year of base salary severance, except in the case of a change in control, as part of his employment arrangement. Mr. Gulati and Mr. Tidwell are entitled to a one-half year of base salary severance, except in the case of a change in control, as part of his employment arrangement. Data I/O does not have a formal policy regarding executive severance but has generally provided an amount it believes is consistent with severance typically provided for executives in similar positions and with similar periods of service.

Change in Control and Other Termination Arrangements

Name	Termination without cause and Change in Control not applicable	Termination without cause and Change in Control applicable		Change in Control applicable without termination	
	Compensation [3]	Compensation [2]	Option/SAR/RSA Vesting [1]	Compensation [4]	Option/SAR/RSA Vesting [1]
Anthony Ambrose [5]	$330,000	$623,703	168,750	$165,000	168,750
Joel S. Hatlen [3]	$134,351	$569,831	57,188	$130,000	57,188
Rajeev Gulati [6]	$120,000	$444,288	57,188	$120,000	57,188
Michael Tidwell [6]	$120,000	$431,509	94,375	$120,000	94,375

(1) Maximum vesting on Change in Control as of March 21, 2022.

(2) Represents the Data I/O standard employee severance, alternative Executive/Employment Agreement severance, change in control transition/closing incentive, and outplacement expense reimbursement, as applicable as of March 21, 2022.

(3) Minimum amount per Data I/O standard employee severance plan; no formal executive severance plan is in place as of March 21, 2022. A letter agreement provides that Mr. Hatlen’s severance shall be equal to the Data I/O standard severance in effect at March 1, 2014. (See [5] below for Mr. Ambrose and [6] below for Mr. Gulati and Mr. Tidwell.)

(4) Represents change in control transition/closing incentive as of March 21, 2022.

(5) Mr. Ambrose is entitled to a one year of base salary severance, except in the case of a change in control, as part of his employment arrangement.

(6) Mr. Gulati and Mr. Tidwell are entitled to a one-half year of base salary severance, except in the case of a change in control, as part of their employment arrangement.

SUMMARY COMPENSATION TABLE

The following table shows compensation paid by Data I/O for services rendered during 2021 and 2020 to each of our named executive officers.

Name[1] (a)	Year (b)	Salary[2] (c)	Bonus[3] (d)	Stock Awards[4] (e)	Option Awards[4,5] (f)	Non-Equity Incentive Plan Compen-sation[6] (g)	Non-Qualified Deferred Compen-sation Earnings[7] (h)	All Other Compen-sation[8] (i)	Total (j)
Anthony Ambrose	2021	$330,000	$0	$355,722	$0	$147,147	$0	$11,600	$844,469
Chief Executive Officer & President	2020	$297,000	$0	$270,900	$0	$0	$0	$10,400	$578,300
Joel Hatlen	2021	$240,000	$1,000	$118,574	$0	$76,440	$0	$11,371	$447,385
Vice President Chief Operating & Financial Officer Secretary, Treasurer	2020	$216,000	$0	$90,300	$0	$0	$0	$10,227	$316,527
Rajeev Gulati	2021	$231,667	$0	$118,574	$0	$73,786	$0	$9,963	$433,990
Vice President Chief Technical Officer	2020	$207,000	$0	$90,300	$0	$0	$0	$8,918	$306,218
Michael Tidwell	2021	$227,500	$0	$177,861	$0	$72,459	$0	$10,018	$487,838
Vice President Marketing & Business Development	2020	$202,500	$0	$120,400	$0	$0	$0	$9,893	$332,793

(1) Data I/O currently has four named executive officers.

(2) Base pay adjustments were made effective November 2021 for Mr. Gulati and Mr. Tidwell. Mr. Hatlen's base pay was adjusted effective January 2022. No base pay adjustments were made for executive officers in 2020. In 2020, for the second and third quarter, a COVID-19 impact related 20% temporary pay reduction was in effect.

(3) Employee patent and service awards paid in 2021 or 2020.

(4) Amount represents the fair value of restricted stock or the fair value of stock options granted during the year.

(5) All options granted to executive officers are granted in tandem with an equal number of SARs. SARs are only exercisable upon the occurrence of certain events leading to a change in the control of Data I/O. See "Change in Control and Other Termination Arrangements." No options and SARs were awarded to executive officers in 2021.

(6) Amounts earned under the MICP variable compensation arrangement in place for the year as approved by the Board.

(7) Not applicable for Data I/O.

(8) These amounts represent for Mr. Ambrose, Mr. Hatlen, Mr. Gulati and Mr. Tidwell, Data I/O's matching contributions to Data I/O's 401(k) Plan, and the value of group term life insurance in excess of premiums paid by each of the executive officers under the standard employee benefit plans.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

	Option Awards					Stock Awards			
Name	Number of Securities Underlying Unexer-cised Options Exercisable (#)	Number of Securities Underlying Unexe-rcised Options Unexer-cisable (#)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock Held That Have Not Vested #	Market Value of Shares or Units of Stock That Have Not Vested ($)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
Anthony Ambrose	0	0	0			168,750	$777,938	0	$0
Joel Hatlen	0	0	0			57,188	$263,637	0	$0
Rajeev Gulati	0	0	0			57,188	$263,637	0	$0
Michael Tidwell	3,125	9,375		4.98	5/1/2025	85,000	$391,850	0	$0

EQUITY COMPENSATION PLAN INFORMATION

The following table gives information about Data I/O's Common Stock that may be issued upon the exercise of options and rights under all of Data I/O's existing equity compensation plans as of December 31, 2021.

	(a) Number of securities to be issued upon the exercise of outstanding options, warrants and rights	(b) Weighted–average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)
Equity compensation plans approved by the security holders (1) (2)	1,362	$4.75	730,753
Equity compensation plans not approved by the security holders (3)	12,500	$4.98	-
Total	13,862	$4.96	730,753

(1) Represents shares of our Common Stock issuable pursuant to the Data I/O Corporation 2000 Stock Compensation Incentive Plan, 1982 Employee Stock Purchase Plan and 1996 Director Fee Plan. Table excludes unvested restricted stock awards of 598,777 from the 2000 Plan.

(2) Stock Appreciation Rights Plan ("SAR") provides that directors, executive officers or holders of 10% or more of our Common Stock have an accompanying SAR with respect to each exercisable option. While the plan has been approved by the security holders, no amounts are included in columns (a), (b), or (c) relating to the SAR.

(3) Inducement grant to Michael Tidwell of 25,000 non-qualified stock options with 12,500 remaining unexercised. Table excludes 25,000 unvested 2019 restricted stock inducement grant to Michael Tidwell.

PROPOSAL 2: RATIFICATION OF INDEPENDENT AUDITORS

The Board of Directors requests that the shareholders ratify the continued appointment of Grant Thornton LLP to serve as Data I/O's independent auditors for calendar year 2022. Grant Thornton LLP examined the consolidated financial statements of Data I/O for the year ended December 31, 2021. Representatives of Grant Thornton LLP are invited to be present at the Annual Meeting to make a statement if they desire to do so and to respond to questions by shareholders.

The Board recommends a vote "FOR" the continued appointment of Grant Thornton LLP to serve as Data I/O's independent auditors for calendar year 2022.

PROPOSAL 3: SAY ON PAY - ADVISORY VOTE ON EXECUTIVE COMPENSATION

The Board of Directors requests that the shareholders approve, on an advisory basis, the compensation paid to Data I/O's Named Executive Officers, as described in "Executive Compensation", pursuant to the following Advisory Resolution:

"RESOLVED, that Data I/O's shareholders approve, on an advisory basis, the compensation of Data I/O's named executive officers, as disclosed in Data I/O's Proxy Statement for the 2022 Annual Meeting of Shareholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the 2021 Summary Compensation Table and the other related tables and disclosure."

Our executive compensation program contains elements of cash, incentive and equity-based compensation and is designed to align the interests of our executives with those of our shareholders. The "Executive Compensation" section of this Proxy Statement, describes in detail our executive compensation programs.

The Board has implemented an executive compensation program that is intended to reward financial performance based on goals established by the Board. The Board fosters a performance-oriented culture by linking a significant portion of each executive officer's compensation to overall Company financial performance (80%), as measured in 2022 by pre-incentive compensation operating income, and SentriX Qualifying Revenue (20%), as measured by revenue growth targets over a minimum threshold, which the Company believes are important metrics for Data I/O and its shareholders. We believe that equity awards align the interests of our executives with those of our long-term shareholders by encouraging long-term performance and incentivizing our executives to increase long-term shareholder value. Equity awards represent a key component, and are a significant portion, of our executive compensation.

The Board has designed Data I/O's executive compensation program to attract, motivate, reward and retain our executive officers to achieve Data I/O's corporate objectives and increase shareholder value.

The Say on Pay vote is advisory and not binding on Data I/O or the Board of Directors; however, the Board will consider the outcome of the vote when making future compensation decisions for our executive officers.

The Board recommends a vote "FOR" the Advisory Resolution (Say on Pay) approving the compensation of the Company's named executive officers as described in this Proxy Statement.

OTHER BUSINESS

As of the date of this Proxy Statement, Data I/O is not aware of any other business to be acted upon at the Annual Meeting. If any other business calling for a vote of the shareholders is properly presented at the meeting, the holders of the proxies will vote or refrain from voting in accordance with their best judgment.

SHAREHOLDER NOMINATIONS AND PROPOSALS FOR THE 2022 AND 2023 ANNUAL MEETING OF SHAREHOLDERS

Data I/O's Bylaws provide that advance notice of nominations for the election of directors at a meeting of shareholders must be delivered to or mailed and received by Data I/O at its principal offices on or before February 19, 2022, in the case of the 2022 Annual Meeting of Shareholders, and in the case of a special meeting of shareholders to elect directors, the close of business on the 10th day following the date on which notice of such meeting is first given to shareholders. Data I/O's Bylaws also provide that advance notice of business to be brought before the 2022 Annual Meeting of Shareholders by a shareholder must be submitted in writing and delivered to, or mailed and received by, Data I/O on or before February 19, 2022.

Each notice of a nomination or proposal of business must contain, among other things: (i) the name and address of the shareholder who intends to make the nomination or proposal; (ii) a representation that the shareholder is a holder of record of stock of Data I/O entitled to vote at such meeting and intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice or to vote at the meeting for the proposal; (iii) a description of all arrangements or understandings between the shareholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination or nominations are to be made by the shareholder and any material interest of such shareholder in any proposal to be submitted to the meeting; (iv) such other information regarding each nominee or proposal as would be required to be included in a proxy statement filed pursuant to the proxy rules of the SEC; and (v) with respect to the nominations, the consent of each nominee to serve as a director of Data I/O if elected.

A copy of the full text of the provisions of Data I/O's Bylaws dealing with shareholder director nominations and proposals is available to shareholders from the Secretary of Data I/O upon written request. The Bylaws may also be accessed online, as a Form 10-K exhibit as referenced in our Annual Report on Form 10-K. SEC rules establish a deadline for submission of shareholder nominations proposals that are not intended to be included in Data I/O's proxy statement with respect to discretionary voting (the "Discretionary Vote Deadline"). The Discretionary Vote Deadline for the 2022 Annual Meeting was February 19, 2022. If a shareholder gives notice of such a nomination or proposal after the Discretionary Vote Deadline, Data I/O's proxy holders will be allowed to use their discretionary voting authority to vote against the shareholder nomination or proposal when and if the proposal is raised at the 2022 Annual Meeting.

Eligible shareholders who intend to have a nomination or proposal considered for inclusion in Data I/O's proxy materials for presentation at the 2023 Annual Meeting must submit the proposal to Data I/O at its principal offices no later than December 9, 2022. Shareholders who intend to present a nomination or proposal at the 2023 Annual Meeting without inclusion of such nomination or proposal in Data I/O's proxy materials are required to provide notice of such nomination or proposal to Data I/O no later than February 18, 2023, as further directed above.

To qualify as an "eligible" shareholder, a shareholder must have been a record or beneficial owner of at least one percent (1%) of Data I/O's outstanding Common Stock, or shares of Common Stock having a market value of at least $2,000, for a period of at least one (1) year prior to submitting the proposal, and the shareholder must continue to hold the shares through the date on which the meeting is held.

Data I/O reserves the right to reject, rule out of order, or take appropriate action with respect to any nomination or proposal that does not comply with these and other applicable requirements, but only after Data I/O has notified the shareholder(s) who have submitted the nomination or proposal of the problem and such shareholder(s) have failed to correct it. This obligation to notify the appropriate shareholder(s) does not apply to the failure to submit such nomination or proposal prior to the deadlines discussed above.

STOCKHOLDERS SHARING THE SAME ADDRESS

To reduce the expenses of delivering duplicate materials, we are taking advantage of the SEC's "house holding" rules which permit us to deliver only one set of proxy materials (or one Notice of Internet Availability of Proxy Materials) to shareholders who share an address unless otherwise requested. If you share an address with another shareholder and have received only one set of these materials, you may request a separate copy at no cost to you by contacting Investor Relations by email at investorrelations@dataio.com, by phone at (425) 881-6444, by fax at (425) 881-2917, or by writing to Data I/O investor relations, attention Joel Hatlen, 6645 185th Avenue NE, Suite 100, Redmond WA 98052. For future annual meetings, you may request separate materials, or request that we send only one set of materials to you if you are receiving multiple copies, by contacting Investor Relations as noted above.

SOLICITATION OF PROXIES

The proxy accompanying this Proxy Statement is solicited by the Board of Directors on behalf of the Company. Proxies may be solicited by officers, directors and regular supervisory and executive employees of Data I/O, none of whom will receive any additional compensation for their services. In addition, Data I/O may engage an outside proxy solicitation firm to render proxy solicitation services and, if so, will pay a fee for such services. Solicitations of proxies may be made personally, or by mail, telephone, telegraph or messenger. Data I/O will pay persons holding shares of Common Stock in their names or in the names of nominees, but not owning such shares beneficially, such as brokerage houses, banks and other fiduciaries, for the expense of forwarding soliciting materials to their principals. All such costs of solicitation of proxies will be paid by Data I/O.

Copies of our annual report on Form 10-K for the year ended December 31, 2021, are being mailed with this Proxy Statement to each shareholder of record. If you did not receive a copy of our annual report Form 10-K, you may obtain a copy (without exhibits) without charge by writing c/o Secretary, 6645 185th Avenue NE, Suite 100, Redmond, WA 98052 or by calling (425) 881-6444. Copies of the exhibits to our annual report on Form 10-K are available for a nominal fee or may be viewed at https://www.dataio.com/Company/Investor-Relations/Annual-Meeting.aspx or www.sec.gov in the EDGAR filing of our report.

By Order of the Board of Directors

/s/ Anthony Ambrose
Anthony Ambrose
President and Chief Executive Officer

Redmond, Washington
April 1, 2022

Board of Directors:

Anthony Ambrose (2012)
President/CEO

Douglas W. Brown (2011)
Formerly Executive Chairman
All Star Directories, Inc.
(Web Services Software)

Mark J. Gallenberger (2013)*
Executive Vice President/CFO
Cerence, Inc.
(Voice A.I. Solutions)
**Will not stand for reelection at the 2022 Annual Meeting*

Sally A. Washlow (2020)
Practice Lead
Lee Hecht Harrison LLC
(Management Consulting)

Cheemin Bo-Linn (2021)
CEO
Peritus Partners, Inc.
(Valuation Acceleration)

Edward J. Smith (2022)
President/CEO
SMTC Corporation
(Electronics Manufacturing)

The calendar year in ( ) indicates when the individuals became directors of Data I/O.

Corporate Officers:

Anthony Ambrose
President/CEO

Joel S. Hatlen
Vice President
Chief Operating Officer
Chief Financial Officer
Secretary/Treasurer

Rajeev Gulati
Vice President
Chief Technology Officer

Michael Tidwell
Vice President of Marketing and Business Development

Corporate Offices:

Data I/O Corporation
6645 185th Ave NE, Suite 100
Redmond, WA 98052

Sales and Service Offices:

China
Data I/O Electronics (Shanghai) Co. Ltd
6F, Building 3, JuXin Park
188 Ping Fu Road
Shanghai, China PRC 200231

Germany
Data I/O GmbH
Am Haag 10
82166 Graefelfing
Germany

Legal Counsel:

Dorsey & Whitney LLP
Columbia Center
701 5th Ave, #6100
Seattle, WA 98101

Auditors:

Grant Thornton LLP
2010 156th Ave. NE, Suite 300
Bellevue, WA 98007

Investor Relations:

Shareholders of Data I/O Corporation who would like information about the Company are invited to contact:

Darrow Associates, Inc.
Jordan Darrow
(512) 551-9296
jdarrow@darrowir.com

Joel Hatlen
Vice President, Chief Operating Officer & Chief Financial Officer
6645 185th Ave NE, Suite 100
Redmond, WA 98052
(425) 881-6444
investorrelations@dataio.com

Form 10-K:

To obtain a copy of the Company's Annual Report on Form 10-K, filed with the Securities and Exchange Commission, go to our website at https://www.dataio.com/Company/Investor-Relations/Financial-Reports.aspx or contact Joel Hatlen, Vice President, Chief Operating Officer & Chief Financial Officer
6645 185th Ave NE, Suite 100
Redmond, WA 98052.

Shareholders Meeting:

The 2022 Annual Meeting of Shareholders will be held on Thursday, May 19, 2022 at 10:00 a.m. Pacific Time at the Company's headquarters:

Data I/O Corporation
6645 185th Ave NE, Suite 100
Redmond, Washington 98052

Shareholder Information:

Shareholders needing information relating to their shareholdings in Data I/O should contact the Company's Transfer Agent and Registrar at the mailing address, telephone number or web address below.

Transfer Agent and Registrar:

Computershare Investor Services
P.O. Box 505005
Louisville, KY 40233-5005
(888) 540-9882

Overnight correspondence
Computershare Investor Services
462 South 4th Street, Suite 1600
Louisville, KY 40202

Shareholder website:
www.computershare.com/investor

Shareholder online inquiries:
https://www-us.computershare.com/investor/Contact

Exchange Listing:

Stock Symbol: DAIO
NASDAQ

CELEBRATING

50 YEARS

Since 1972 Data I/O has developed innovative solutions to enable the design and manufacture of electronic products for automotive, Internet-of-Things, medical, wireless, consumer electronics, industrial controls and other electronic devices. Today, our customers use Data I/O security deployment and programming solutions to reliably, securely, and cost-effectively bring innovative new products to life. These solutions are backed by a global network of Data I/O support and service professionals, ensuring success for our customers.

Redmond, WA USA | Graefelfing, Germany | Shanghai, China

Data I/O