

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

FORM 10-K

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

For the Fiscal year ended December 31, 2021

OR

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

For the transition period from _____ to _____

Commission file number: 333-234741

Odyssey Semiconductor Technologies, Inc.
(Exact name of registrant as specified in its charter)

Delaware

(State or other Jurisdiction of
Incorporation or Organization)

84-1766761

(I.R.S. Employer
Identification No.)

**9 Brown Road
Ithaca, NY 14850
(607) 351-9768**

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

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

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

Title of class
Not Applicable

Not Applicable

(Former name, former address and former fiscal year, if changed since last report)

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

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

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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

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

As of March 31, 2022, there were 12,726,911 outstanding shares of the registrant's common stock, par value \$0.0001 per share.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES

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PART I

Forward-Looking Information

This Annual Report of Odyssey Semiconductor Technologies, Inc. on Form 10-K contains forward-looking statements, particularly those identified with the words, “anticipates,” “believes,” “expects,” “plans,” “intends,” “objectives,” and similar expressions. These statements reflect management’s best judgment based on factors known at the time of such statements. The reader may find discussions containing such forward-looking statements in the material set forth under “Management’s Discussion and Analysis and Plan of Operations,” generally, and specifically therein under the captions “Liquidity and Capital Resources” as well as elsewhere in this Annual Report on Form 10-K. Actual events or results may differ materially from those discussed herein. The forward-looking statements specified in the following information have been compiled by our management on the basis of assumptions made by management and considered by management to be reasonable. Our future operating results, however, are impossible to predict and no representation, guaranty, or warranty is to be inferred from those forward-looking statements. The assumptions used for purposes of the forward-looking statements specified in the following information represent estimates of future events and are subject to uncertainty as to possible changes in economic, legislative, industry, and other circumstances. As a result, the identification and interpretation of data and other information and their use in developing and selecting assumptions from and among reasonable alternatives require the exercise of judgment. To the extent that the assumed events do not occur, the outcome may vary substantially from anticipated or projected results, and, accordingly, no opinion is expressed on the achievability of those forward-looking statements. No assurance can be given that any of the assumptions relating to the forward-looking statements specified in the following information are accurate, and we assume no obligation to update any such forward-looking statements.

Unless the context otherwise requires, the terms “we”, “our”, “ours” “us” and “Odyssey Technologies”, refer to Odyssey Semiconductor Technologies, Inc. and its direct and indirect subsidiaries, including Odyssey Semiconductor, Inc. and JR2J LLC, on a combined basis.

ITEM 1. BUSINESS

Background

Odyssey Semiconductor Technologies, Inc. (the “Company”), formed as a Delaware corporation on April 12, 2019, is a semiconductor device company developing revolutionary high-voltage power switching components and systems based on proprietary Gallium Nitride (GaN) processing technology. The Company acquired its wholly-owned subsidiary, Odyssey Semiconductor, Inc., a Delaware corporation (“Odyssey Semiconductor”), on June 21, 2019. Odyssey Semiconductor commenced business operations on June 17, 2019 when it acquired its wholly-owned subsidiary, JR2J LLC (“JR2J”), from its founders Richard Brown and James Shealy in exchange for shares of Odyssey Semiconductor.

Overview of The Semiconductor Industry

The semiconductor industry was formed in 1960 when the production of semiconductors became a viable option. The global semiconductor market has grown rapidly, from over \$1 billion in 1964¹ to \$425.96 billion in 2020 and projected to grow to \$803.15 billion by 2028².

The application of semiconductors has expanded extensively from radio in the 1960s to crucial electronic components nowadays to all manufactured products with computing or power management capabilities, ranging from computers and personal electronics to automotive goods and heavy machinery. Semiconductor devices mounted inside many electronics appliances are important electronic components that support our everyday lives.

Integrated circuits (ICs) and electronic discrete components such as diodes (which are two-terminal electronic components that conduct current primarily in one direction) and transistors (which are devices possessing an amplification function) are made of semiconductors.

¹ Pines, Lawrence. \Who Are Advanced Micro Devicesf Main Competitors?. Investopedia. Accessed September 30, 2019. <https://www.investopedia.com/articles/markets/041816/who-are-advanced-micro-devices-main-competitors-amd.asp>

² <https://www.fortunebusinessinsights.com/semiconductor-market-102365>

The semiconductor industry is divided into six broad categories based on the end-use application:

- Data processing: This comprises chips used in servers, computers, printers, and related hardware. This is the largest segment where semiconductors are used. However, growth in this segment has moderated, and no breakthrough innovation is expected in the near future.
- Communications: This comprises chips used in wired and wireless communication equipment such as smartphones, tablets, and broadband equipment. This segment is growing at a faster pace.
- Consumer electronics: This comprises chips used in household appliances, LCD TVs, and gaming consoles.
- Industrial: This comprises chips used in scanning devices such as bar code scanners and point-of-sale terminals, medical devices such as patient monitors and ultrasound imaging, and power supply equipment.
- Automotive: This comprises chips used in electronic automotive components such as power steering and lighting.
- Military and civil aerospace: This is a specialized segment where integrated circuits related to a particular application are built.

Advantage and Market Focus of the Company

Semiconductors are materials which have a conductivity between conductors (generally metals), which has full conductivity, and nonconductors or insulators (such as most ceramics), which has negligible conductivity. The conductivity of a semiconductor material may be altered in useful ways by the deliberate, controlled introduction of impurities into the crystal structure of the material to modulate its electrical, optical and structural properties. This process is known as “doping”.

Silicon (Si) is traditionally the most common semiconductor material. However, Si-based systems have proven to perform inadequately. We described the applications where Si-based systems perform inadequately as the premium power switching device market, which was \$571 million in 2018 and is projected to pass \$5 billion by 2029³. This growth is largely driven by the rapid adoption of electric vehicles (EV) and hybrid electric vehicles (HEV) and the growing number of installations of renewables such as solar and wind power as well as increased demand for more efficient industrial motor drives.

The premium power switching device market is currently dominated by the semiconductor material silicon carbide (SiC). GaN-based systems outperform Si and SiC based systems in every way due to the superior material properties of GaN. However, GaN devices have, to-date proven difficult to process using standard semiconductor processing methods that are used to create Si and SiC based devices. While GaN can be implanted with ions through doping process like any other semiconductor, unlike Si or SiC, the temperature required to activate the ions in GaN destroys the crystal, making implant and activate scheme impractical in the GaN material. The Company has developed proprietary technology that allows activation of dopants in the GaN. This proprietary technology allows GaN to be processed in a manner that for the first time makes high voltage GaN power switching devices viably manufacturable.

The Company expects that its GaN power products will completely overlap the current market for SiC power switching market. Furthermore, the Company expects that its GaN power products will exceed switching speeds and operating voltages currently attainable reliably with SiC.

GaN is both less expensive to produce and offers significant performance advantages over SiC in system efficiency and system size. Currently there are no GaN devices in the market with ratings more than 1,000 V, which will be our strength area, however, our products will address voltages as low as 650 V.

³ Omdia: \GaN & SiC power semiconductor markets set to pass \$1 billion mark in 2021. published July 22, 2020



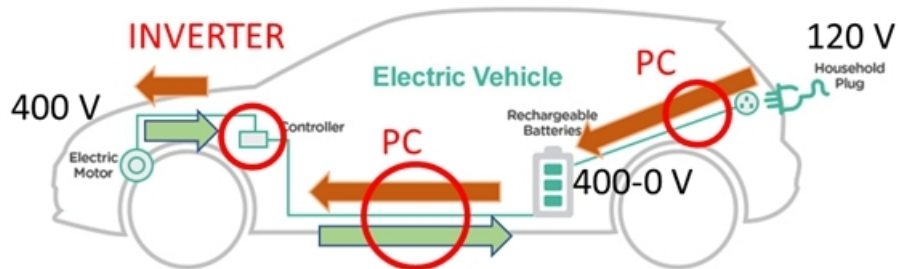
What Is A Switch-Mode Power Converter

Broadly speaking, switch-mode power converters are used to efficiently transform one voltage to another for the purpose of supplying power to and from different systems.

Simple case - Power converter (brick) converts power at 120 V wall plug to power to 18.5 V to safely charge laptops/phones:



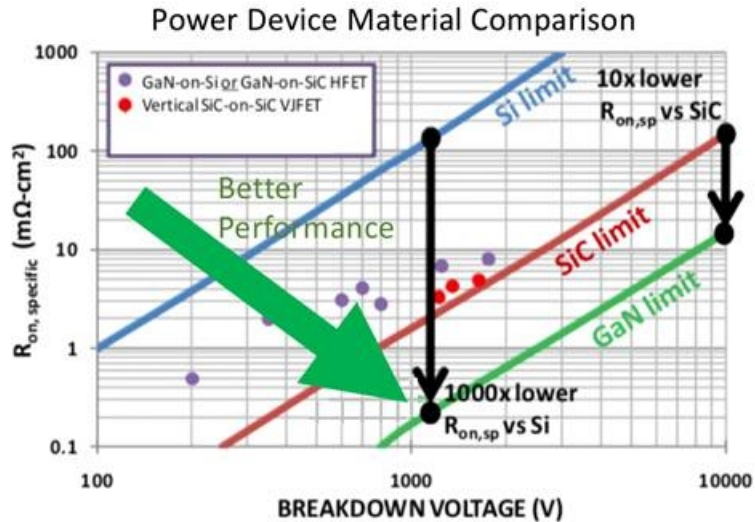
Advanced case - Power converters charge 400 V batteries from 120 V wall plug / Power motor at 400 V from variable battery voltage / Charge batteries from regenerative braking to 400 V:



What Is A Power Switch

A power switch is a semiconductor device that can switch large voltages and currents at high frequency. It is the heart of any power converter. An ideal power switch presents little resistance in the “on” state, infinite resistance in the “off” state, and can switch between “on” and “off” at high speed with no stored charge.

Different semiconductor materials are better suited to making power switches. For a given operating voltage, GaN is 1000 times less resistive than Si, and 10 times less resistive than SiC. Lower resistance results in switches that reduce power loss. Moreover, GaN devices take up less area than Si or SiC, which lowers their capacitance, which allows a faster system switching speed.



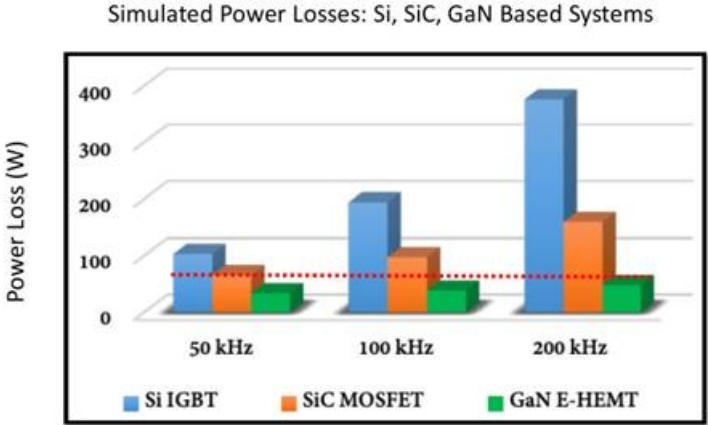
Inductors and transformers typically are the largest components in the system. GaN based solutions are approximately 1/4 of the size of SiC based solutions. Smaller passive components are cheaper than larger variants because of the requirement of less materials such as copper.

The system size of a power converter is inversely related to the switching speed at which it operates. As switching speed increases, the size of the surrounding passive components become much smaller. GaN power converter circuits are approximately 4x smaller than SiC solutions for equivalent power ratings.



Examples of Passive Components Accompanying Switches

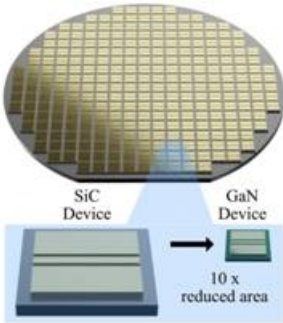
Furthermore, replacing SiC devices with GaN devices has the potential to reduce power loss by 40-70% compared to SiC. The diagram below compares the level of power losses with the use of Si, SiC and GaN based systems:



In summary, GaN-based solutions are smaller in size, cost less and yield greater efficiency comparing to Si-based or SiC-based solutions.

Comparing SiC and GaN Solutions for EVs

Our proprietary vertically conducting GaN devices are approximately 10 times smaller in chip size compared to devices fabricated from SiC, since the resistance of GaN is approximately one-tenth of that of SiC. As such, the cost of making vertically conducting devices are significantly lower than SiC devices.



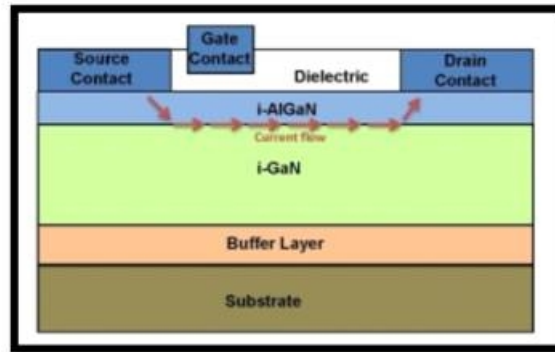
The Company expects that a significant market exists for GaN solutions, especially in the EV market. For example, there are 24 units of SiC metal-oxide-semiconductor field-effect transistor (MOSFET) used in each Tesla Model 3 module. There were over 800,000 Tesla Model 3 units delivered as of December 2020, which represents about 19,200,000 SiC MOSFETs. It is estimated that by 2025 each year there will be approximately 8.4 million EVs and 25 million HEVs to be sold⁴.

In November 2020, Yole provided the following forecast on the power SiC market that the market is growing at a 30% Compound Annual Growth Rate (CAGR) and will grow to \$2.5 billion by 2025. The largest segment in this market is for automotive (e.g., EV) and estimated to be \$1.55 billion in 2025. Our products will completely overlap those of SiC power devices and as such, our Total Available Market will be at least equal that of the power SiC market.

⁴ <https://www.jpmorgan.com/global/research/electric-vehicles>

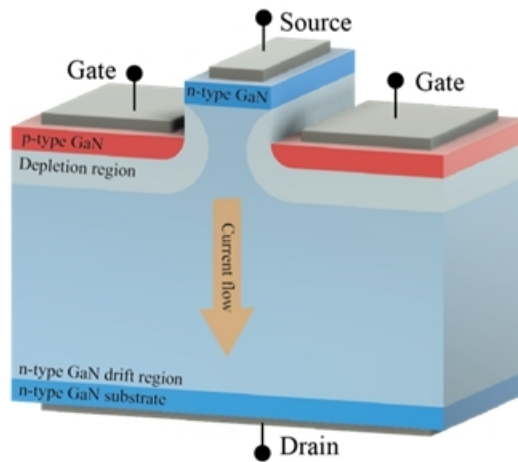
Competition and Challenges

There are many horizontal-conduction (meaning the current flows horizontally, along the surface of the wafer), high-electron-mobility transistor (HEMT) products emerging from industry. HEMT transistors are able to operate at higher frequencies than ordinary transistors, up to millimeter wave frequencies, and are used in high-frequency products such as cell phones, satellite television receivers, voltage converters, and radar equipment. However, horizontal-conduction device technology has difficulty scaling beyond 650 V.

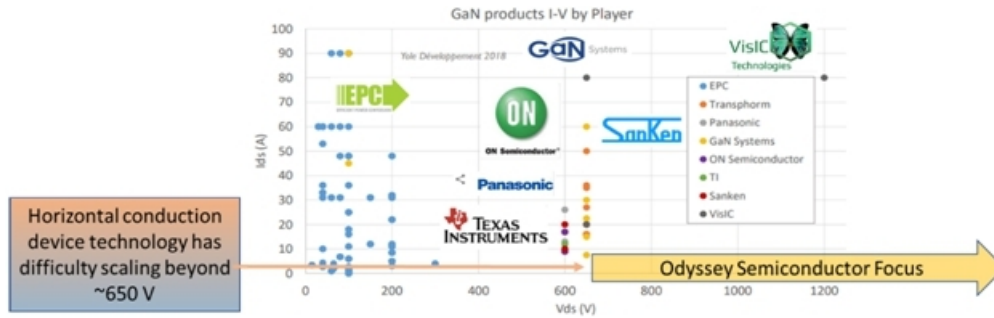


Demonstration of Horizontal Conduction

In contrast to horizontal-conduction devices, vertical-conduction (meaning the current flows from the top surface of the wafer to the bottom surface) devices could easily have scaling beyond 650 V; however, there are currently few discrete parts available with ratings above 650 V, and none above 1,000 V. The Company believes it is uniquely poised to enter into the >1,000 V device market and above with its vertical conduction device technology.



Demonstration of Vertical Conduction



We expect that our competitors will include a number of larger companies, particularly in the SiC area (such as STMicro, WolfSpeed, Texas Instruments (TI), Infineon, On Semiconductor, and etc.) which have more substantial research and development budgets than us. Even smaller companies which are more targeted in their development efforts, such as Nexgen Power Systems, Inc., may be our potential competitors. If we are unable to compete effectively with our competitors, our products or technologies may be rendered obsolete or noncompetitive, which could materially adversely affect our business and results of operations.

Intellectual Property

The company has two issued patents to date by the U.S. Patent and Trademark Office. In addition, the Company also currently has a number of additional patent applications pending.

The Company is continuing to actively prepare and submit new patent applications based on its proprietary technology. Furthermore, the Company continues to perform research and development that will likely result in additional patent applications in the future.

Research & Development, and Commercialization of Our Technology

We perform research and development on GaN power switching devices as well as provide consulting services to third parties with regard to similar foundry processing which may involve materials other than GaN. We plan to meet the following milestones for the commercialization of our GaN technology:

From inception to 2021:

- Continue developing medium to high voltage GaN-based vertical conduction devices
- Confirm specifications and packaging plans for samples of first product with customers
- Write and submit patent applications

From 2022

- Complete initial development of first GaN-based vertical conduction product
- Continue to write and submit patent applications
- Provide customers with engineering samples of first product
- Hire new CEO and develop sales and marketing capability
- Ship first GaN-based vertical conduction product to customers (fourth quarter of 2022)
- Start qualifications under qualified under Joint Electron Device Engineering Council (“JEDEC”) standards

From 2023

- Provide customers with engineering samples of second product
- Expand the production of the first product
- Ship second product

We plan to market our products in the following market verticals:

- *Industrial motor drives*: It is estimated that motor drives consume 45% of all power generated in the world.⁵ Energy consumption can be drastically reduced by using variable-frequency drives (VFDs) on induction motors. The compound annual growth rate (CAGR) of the VFD market is estimated to be 6.7% to 2025, by which year the market size of the market is estimated to be \$33.1 billion.⁶
- *EV / HEV power systems*: It is projected that electric vehicles will account for over 22% of all vehicle sales by 2030.⁷ We estimate that adoption of GaN-based drive systems could potentially increase efficiency by 15%. The CAGR of the EV power electronics market is estimated to be 4.48% from 2017-2022, and the market size is estimated to be \$5.49 billion by 2022.⁸
- *Grid connected renewable power systems*: Solar power accounted for 29% of all new electric generating capacity brought online in 2018.⁹ We believe that GaN-based power conversion systems will reduce system size and increase efficiency and reliability. The CAGR of the Photovoltaic (PV) power electronics market is estimated to be 3.9% by 2026 with a market share of \$10.37 billion.¹⁰

The Company has incurred \$1,519,631 in research expenses during the year ended December 31, 2021.

Employees

As of December 31, 2021, we have 11 full time employees and 1 part-time employee. No employees are subject to collective bargaining agreements.

Principal Offices

Our principal offices are located at 9 Brown Road, Ithaca, NY 14850.

We lease one (1) 10,000 sq. ft. facility in the State of New York for our operations. Our lease expires on November 30, 2025.

ITEM 1A. RISK FACTORS

The risks and uncertainties described below could materially and adversely affect our business, financial condition and results of operations and could cause actual results to differ materially from our expectations and projections. You should read these Risk Factors in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in Item 7 and our Consolidated Financial Statements and related notes in Item 8. There also may be other factors that we cannot anticipate or that are not described in this report generally because we do not currently perceive them to be material. Those factors could cause results to differ materially from our expectations.

We face risks related to health epidemics and other outbreaks, which could significantly disrupt our operations and could have a material adverse impact on us. The recent coronavirus outbreak could materially and adversely affect our business.

An outbreak of a new respiratory illness caused by coronavirus disease 2019 (“COVID-19”) has resulted in millions of infections and hundreds of thousands of deaths worldwide as of the date hereof, and continues to spread across the globe, including within the United States. The outbreak of COVID-19 or by other epidemics could materially and adversely affect our business, financial condition and results of operations. If the spread of the virus worsens in regions in which we have material operations or sales, our business activities originating from affected areas, including sales, manufacturing and supply chain related activities, could be adversely affected. Disruptive activities could include the temporary closure of our facilities and those used in our supply chain processes, restrictions on the shipment of our products, business closures in impacted areas, and restrictions on our employees’ and consultants’ ability to travel and to meet with customers. If workers at one or more of our offices or the offices of our suppliers or manufacturers become ill or are quarantined and in either or both events are therefore unable to work, our operations could be subject to disruption. Further, if our manufacturers become unable to obtain necessary raw materials or components, we may incur higher supply costs or our manufacturers may be required to reduce production levels, either of which may negatively affect our financial condition or results of operations.

⁵ CleanTechnica. \Electric Motors Use 45% of Global Electricity, Europe Responding {+ Electric Motor Efficiency Infographic},. June 16, 2011. <https://cleantechnica.com/2011/06/16/electric-motors-consume-45-of-global-electricity-europe-responding-electric-motor-efficiency-infographic/>.

⁶ <https://www.grandviewresearch.com/industry-analysis/variable-frequency-speed-drives-vfd-vsd-market>

⁷ <https://www.prnewswire.com/in/news-releases/electric-vehicles-market-sales-will-surge-to-4-million-units-in-2020-12-million-units-in-2025-and-21-million-units-in-2030-858019212.html>

⁸ <https://www.marketsandmarkets.com/Market-Reports/automotive-power-electronics-market-226516353.html>

⁹ <https://www.seia.org/research-resources/solar-market-insight-report-2018-q3>

¹⁰ <https://www.prnewswire.com/news-releases/pv-inverter-market-size-worth-10-37-billion-by-2026-cagr-3-9-grand-view-research-inc-300902312.html>

As events are rapidly changing, we do not know how long the COVID-19 pandemic and the measures that have been introduced to respond to it will disrupt our operations or the full extent of that disruption. Further, once we are able to restart normal business hours and operations doing so may take time and will involve costs and uncertainty. We also cannot predict how long the effects of COVID-19 and the efforts to contain it will continue to impact our business after the pandemic is under control. Governments could take additional restrictive measures to combat the pandemic that could further impact our business or the economy in the geographies in which we operate. It is also possible that the impact of the pandemic and response on our suppliers, customers and markets will persist for some time after governments ease their restrictions. These measures have negatively impacted, and may continue to impact, our business and financial condition as the responses to control COVID-19 continue.

We are recently formed and are currently operating at a loss. Our lack of operating history makes it difficult to evaluate our business and prospects and may increase the risks associated with an investment in our shares of common stock (“Common Stock”).

The Company was recently formed in 2019 and is currently operating at a loss. Therefore, the Company is subject to the risks involved with any speculative early-stage enterprise. There is no assurance that the Company will successfully offer, market and distribute its products or services. The Company may continue to experience net losses and negative cash flows from operations or become only marginally profitable. The time required to reach substantial profitability is highly uncertain. There is no assurance that the Company will be able to achieve substantial profitability or that profitability, if achieved, can be sustained on an ongoing basis. There is no assurance that actual cash requirements will not exceed our estimates. Such risks for the Company include, but are not limited to:

- an evolving, unpredictable and unproven business model;
- an intensely competitive developing market;
- rapidly changing technology and unpredictable characteristics of materials and processes;
- managing growth;
- dependence on key personnel;
- limited operating capital and limited access to credit; and
- other unforeseen changes and developments.

In order to address these risks, the Company must, among other things:

- implement and successfully execute its business strategy;
- provide superior customer service;
- respond to competitive developments;
- attract, retain and motivate qualified personnel; and
- respond to unforeseen and changing circumstances

The Company cannot assure investors that it will succeed in addressing these risks.

Our business depends substantially on the continuing efforts of our executive officers and our business may be severely disrupted if we lose their services.

Our future success depends substantially on the continued services of our executive officers. We do not maintain key man life insurance on any of our executive officers and directors. If one or more of our executive officers are unable or unwilling to continue in their present positions, we may not be able to replace them readily, if at all. Under such circumstances our business may be severely disrupted and we may incur additional expenses attempting to recruit and retain new officers.

We may be unable to attract and retain highly skilled personnel.

Our success depends on our ability to attract, motivate and retain highly skilled personnel, including research, technical, marketing, management and staff personnel. In the semiconductor industry, the competition for qualified personnel, particularly experienced design engineers and other technical employees, is intense, particularly when the business cycle is improving. During such periods, competitors may try to recruit our most valuable technical employees. Moreover, there can be no assurance that we will be able to retain our current personnel or recruit the key personnel we require. Loss of the services of, or failure to effectively recruit, qualified personnel, including senior managers, could have a material adverse effect on our competitive position and on our business.

There may be limitations on the effectiveness of our internal controls. Failure of our internal control over financial reporting could harm our business and financial results.

Proper systems of internal controls over financial accounting and disclosure are critical to the operation of a public company. Our management is responsible for establishing and maintaining effective internal control over financial reporting. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with accounting principles generally accepted in the United States. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of the financial statements; providing reasonable assurance that receipts and expenditures of our assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements would be prevented or detected on a timely basis. Any failure to maintain an effective system of internal control over financial reporting could limit our ability to report our financial results accurately and timely or to detect and prevent fraud.

We do not expect that disclosure controls or internal control over financial reporting, even if established, will prevent all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Failure of our control systems to prevent error or fraud could materially adversely impact us. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that a reasonable possibility exists that a material misstatement of our annual or interim financial statements would not be prevented or detected on a timely basis.

We are a small organization and we do not have a Chief Financial or Accounting Officer. In connection with the evaluation of our internal control over financial reporting as of December 31, 2021 that was undertaken by management in connection with the preparation of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, management determined that our internal controls were not operating effectively.

We may be unable to complete our analysis of our internal controls over financial reporting in a timely manner, or these internal controls may not be determined to be effective, which may adversely affect investor confidence in our company and, as a result, the value of our Common Stock.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by our management on, among other things, the effectiveness of our internal control over financial reporting for each fiscal year. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting, as well as a statement that our independent registered public accounting firm has issued an opinion on our internal control over financial reporting.

If we are unable to assert that our internal control over financial reporting is effective, or, if applicable, our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our Common Stock to decline, and we may be subject to investigation or sanctions by the SEC. We will also be required to disclose changes made in our internal control and procedures on a quarterly basis.

However, our independent registered public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 until the date we are no longer an “emerging growth company” as defined in the recently enacted JOBS Act, if we continue to take advantage of the exemptions contained in the JOBS Act. We will remain an “emerging growth company” for up to five years, although if the market value of our Common Stock that is held by non-affiliates exceeds \$700 million as of any June 30 before that time, we would cease to be an “emerging growth company” as of the following December 30.

At such time, our independent registered public accounting firm may issue a report that is adverse in the event it is not satisfied with the level at which our controls are documented, designed or operating. Our remediation efforts may not enable us to avoid a material weakness in our internal control over financial reporting in the future. Any of the foregoing occurrences, should they come to pass, could negatively impact the public perception of our company, which could have a negative impact on our stock price.

Our management team has limited experience managing a public company.

Most members of our management team have limited experience managing a publicly-traded company, interacting with public company investors and complying with the increasingly complex laws pertaining to public companies. Our management team may not successfully or efficiently manage the Company as a public company subject to significant regulatory oversight and reporting obligations under the federal securities laws and the continuous scrutiny of securities analysts and investors. These obligations and constituents will require significant attention from our senior management and could divert their attention away from the day-to-day management of our business, which could adversely affect our business, financial condition and operating results.

We depend on a limited number of customers and the loss of one or more of these customers could have a material adverse effect on our business, financial condition and results of operations.

During the year ended December 31, 2021, approximately 56% of revenues were generated from two governmental entities (“Governmental client”). Our contracts with both of such Governmental clients expired in 2021. During the year ended December 31, 2020, approximately 85% of revenues were generated from one Governmental client pursuant to our contract with such entity. No other client accounted for more than 10% of revenues.

Due to the concentration of revenues from a limited number of customers, if we do not receive the payments expected from any of these major customers, our revenue, results of operation and financial condition will be negatively impacted.

In addition, we cannot assure that any of our customers in the future will not cease purchasing products or services from us in favor of products or services produced by other suppliers, significantly reduce orders or seek price reductions in the future, and any such event could have a material adverse effect on our revenue, profitability, and results of operations.

Furthermore, if a significant portion of our revenue is derived from customers in certain industries, a downturn or lower sales to customers in such industries could materially adversely affect our business and results of operations.

If we do not have access to capital on favorable terms, on the timeline we anticipate, or at all, our financial condition and results of operations could be materially adversely affected.

We currently anticipate that our current cash on hand, grant revenue and customer payments will be sufficient to fund our operations for the next 12 months. However, we anticipate that we will routinely incur significant costs to conduct research and development, implement new manufacturing and information technologies, to increase our productivity and efficiency, to upgrade equipment and to expand production capacity. There can be no assurance that we will realize a return on the capital expended. We also anticipate incurring material amounts of debt to fund these requirements in the future. Significant volatility or disruption in the global financial markets may result in us not being able to obtain additional financing on favorable terms, on the timeline we anticipate, or at all, and we may not be able to refinance, if necessary, any outstanding debt when due, all of which could have a material adverse effect on our financial condition. We currently have no commitments for any additional capital and there can be no assurance that we will receive any such commitments, or that any commitments for capital will be on terms that are acceptable to us. Any inability to obtain additional funding on favorable terms, on the timeline we anticipate, or at all, may cause us to curtail our operations significantly, reduce planned capital expenditures and research and development, or obtain funds through arrangements that management does not currently anticipate, including disposing of our assets and relinquishing rights to certain technologies, the occurrence of any of which may significantly impair our ability to remain competitive. If our operating results falter, our cash flow or capital resources prove inadequate, or if interest rates increase significantly, we could face liquidity problems that could materially and adversely affect our results of operations and financial condition.

If our estimates related to expenditures and/or expected revenue are inaccurate, our business may fail.

The success of our business is dependent in part upon the accuracy of our management's estimates of expenditures and revenue for the next 12 months and beyond. If such estimates are inaccurate or we encounter unforeseen expenses and delays or significant unexpected reduction of revenue, we may not be able to carry out our business plan, which could result in the failure of our business.

If the Company cannot effectively manage growth by implementing and improving its operational and financial systems, the Company's business, prospects, financial condition and results of operations could be materially adversely affected.

In order to maximize the potential growth in the Company's market opportunities, the Company may have to expand rapidly and significantly. The impetus for expansion could place a significant strain on the management, operational and financial resources of the Company. In order to manage growth, the Company will be required to implement and continually improve its operational and financial systems, expand operations, attract and retain superior management and train, manage and expand its employee base. The Company can give no assurance that it will effectively manage its operations, that its system, procedures, or controls will adequately support operations or that management of the Company will successfully implement its business plan. If the Company cannot effectively manage growth, the Company's business, prospects, financial condition and results of operations could be materially adversely affected.

We may not obtain insurance coverage to adequately cover all significant risk exposures.

We will be exposed to liabilities that are unique to the products we provide. There can be no assurance that we will acquire or maintain insurance for certain risks, that the amount of our insurance coverage will be adequate to cover all claims or liabilities, or that we will not be forced to bear substantial costs resulting from risks and uncertainties of business. It also may not be possible to obtain insurance to protect against all operational risks and liabilities. The failure to obtain adequate insurance coverage on terms favorable to us, or at all, could have a material adverse effect on our business, financial condition and results of operations.

If product liability lawsuits are brought against us, we may incur substantial liabilities.

We face a potential risk of product liability as a result of any of the products that we develop, manufacture and/or offer for sale. For example, we may be sued if any product we develop, manufacture and/or sell allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for products that we may offer for sale;
- injury to our reputation;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients; and
- product recalls, withdrawals or labeling, marketing or promotional restrictions.

We currently do not maintain any product liability insurance. We may obtain product liability insurance in the future. However, there is no guarantee that we will be able to obtain product liability insurance or that such insurance will be affordable or sufficient. If we are unable to obtain or retain sufficient product liability insurance coverage, it could prevent or inhibit the commercialization of products we develop. Even if we obtain product liability insurance in the future, we may have to pay amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

Warranty claims, product liability claims and product recalls could harm our business, results of operations and financial condition.

Manufacturing semiconductors is a highly complex and precise process, requiring production in a tightly controlled, clean environment. Minute impurities in our manufacturing materials, contaminants in the manufacturing environment, manufacturing equipment failures, and other defects can cause our products to be non-compliant with customer requirements or otherwise nonfunctional. We face an inherent business risk of exposure to warranty and product liability claims in the event that our products fail to perform as expected or such failure of our products results, or is alleged to result, in bodily injury or property damage (or both). In addition, if any of our designed products are or are alleged to be defective, we may be required to participate in their recall. A successful warranty or product liability claim against us in excess of our available insurance coverage, if any, and established reserves, or a requirement that we participate in a product recall, could have material adverse effects on our business, results of operations and financial condition. Additionally, in the event that our products fail to perform as expected or such failure of our products results in a recall, our reputation may be damaged, which could make it more difficult for us to sell our products to existing and prospective customers and could materially adversely affect our business, results of operations and financial condition.

Since a defect or failure in our product could give rise to failures in the goods that incorporate them (and claims for consequential damages against our customers from their customers), we may face claims for damages that are disproportionate to the revenue and profits we receive from the products involved. We plan to attempt to limit our liability through our standard terms and conditions of sale and other customer contracts in certain instances; however, there is no assurance that such limitations will be effective. To the extent that we are liable for damages in excess of the revenue and profits we received from the products involved, our results of operations and financial condition could be materially adversely affected.

A significant product defect or product recall could materially and adversely affect our brand image, causing a decline in our sales and profitability, and could reduce or deplete our financial resources.

Provided we are successful in developing and selling our products, any product defect could materially harm our brand image and could force us to conduct a product recall. This could damage our relationships with our customers. A product recall would be particularly harmful to us because we will likely have limited financial and administrative resources to effectively manage a product recall and it would detract management's attention from implementing our core business strategies. As a result, a significant product defect or product recall could cause a decline in our sales and profitability and could reduce or deplete our financial resources.

We will be dependent on the services of third-party suppliers and contract manufacturers, and any disruption in or deterioration of the quality of the services delivered by such third parties could materially adversely affect our business and results of operations.

We plan to use third-party contractors for certain of our manufacturing activities. Our agreements with these manufacturers may require us to commit to purchase services based on forecasted product needs, which may be inaccurate, and, in some cases, require longer-term commitments. We may be also dependent upon a limited number of highly specialized third-party suppliers for required components and materials for certain of our key technologies. Arranging for replacement manufacturers and suppliers can be time consuming and costly, and the number of qualified alternative providers can be extremely limited. Our business operations, productivity and customer relations could be materially adversely affected if these contractual relationships were disrupted or terminated, the cost of such services increased significantly, the quality of the services provided deteriorated or our forecasted needs proved to be materially incorrect.

Natural disasters and other business disruptions could cause significant harm to our business operations and facilities and could adversely affect our supply chain and our customer base, any of which may materially adversely affect our business, results of operation, and financial condition.

We expect that our manufacturing and other facilities, as well as the operations of our third-party suppliers, are susceptible to losses and interruptions caused by floods, hurricanes, earthquakes, typhoons, and similar natural disasters, as well as power outages, telecommunications failures, industrial accidents, and similar events. The occurrence of natural disasters in any of the regions in which we or our suppliers will operate could severely disrupt the operations of our businesses by negatively impacting our supply chain, our ability to deliver products, and the cost of our products. Such events can negatively impact revenue and earnings and can significantly impact cash flow, both from decreased revenue and from increased costs associated with the event. In addition, these events could cause consumer confidence and spending to decrease. We may in the future carry insurance to generally compensate for losses of the type noted above, however, even if we obtain such insurance it may not be adequate to cover all losses that may be incurred or continue to be available in the affected area at commercially reasonable rates and terms. To the extent any losses from natural disasters or other business disruptions are not covered by insurance, any costs, write-downs, impairments and decreased revenue can materially adversely affect our business, our results of operations and our financial condition.

We may be subject to litigation from time to time during the normal course of business, which may adversely affect our business, financial condition and results of operations.

From time to time in the normal course of business or otherwise, we may become subject to litigation that may result in liability material to our financial statements as a whole or may negatively affect our operating results if changes to business operation are required. The cost to defend such litigation may be significant and may require a diversion of our resources. There also may be adverse publicity associated with litigation that could negatively affect customer perception of our products and business, regardless of whether the allegations are valid or whether we are ultimately found liable. As a result, litigation may adversely affect our business, financial condition and results of operations.

There is no assurance on the future successful completion of strategic transactions by us to successfully implement our business strategies.

Our ability to complete future strategic transactions could be important to the successful implementation of our business strategies, including our strategies to strengthen our geographic diversity and broaden its customer base. Successful completion of an acquisition or other similar transaction depends on a number of factors that are not entirely within our control, including our ability to negotiate acceptable terms, conclude satisfactory agreements and obtain all necessary regulatory approvals. In seeking to acquire a target company, we may face competition from other companies interested in acquiring the target company that have significantly greater financial and other resources than us. If we need to finance a transaction, we may not be able to obtain the necessary financing on satisfactory terms and within the timeframe that would permit the transaction to proceed. If any of these factors prevents us from completing one or more strategic transactions, we may not be able to expand our business in the manner and on the schedule that we plan. In addition, we may incur significant costs arising from our efforts to engage in strategic transactions. These costs may exceed the returns that we realize from a given transaction. Moreover, these expenditures may not result in the successful completion of a transaction.

Even if we complete one or more strategic transactions, we may be unable to integrate successfully the personnel and operations of a new business or achieve the operational synergies or other benefits that we had anticipated. Moreover, we might fail to discover liabilities of a business or operating or other problems prior to completing a transaction. We could experience adverse accounting and financial consequences, such as the need to make large provisions against the acquired assets or to write down acquired assets. We might also experience a dilutive effect on our earnings. Depending on how any such transaction is structured, there may be an adverse impact on our capital structure. Further, an acquisition could disrupt our ongoing business, distract management and employees or lead to increased expenses.

Risks Related to the Semiconductor Industry

The semiconductor industry is highly competitive, and our inability to compete effectively could materially adversely affect our business and results of operations.

The semiconductor industry is highly competitive, and our ability to compete successfully depends on elements both within and outside of our control. We will face significant competition from major global semiconductor companies as well as smaller companies focused on specific market niches. In addition, companies not currently in direct competition with us may introduce competing products in the future.

Our inability to compete effectively could materially adversely affect our business and results of operations. Products or technologies developed by competitors that are larger and have more substantial research and development budgets, or that are smaller and more targeted in their development efforts, may render our products or technologies obsolete or noncompetitive. We also may be unable to market and sell our products if they are not competitive on the basis of price, quality, technical performance, features, system compatibility, customized design, innovation, availability, delivery timing and reliability. If we fail to compete effectively on developing strategic relationships with customers and customer sales and technical support, our sales and revenue may be materially adversely affected. Competitive pressures may limit our ability to raise prices, and any inability to maintain revenue or raise prices to offset increases in costs could have a significant adverse effect on our gross margin. Reduced sales and lower gross margins would materially adversely affect our business and results of operations.

The semiconductor industry has experienced rapid consolidation and our inability to compete with large competitors or failure to identify attractive opportunities to consolidate may materially adversely affect our business.

The semiconductor industry is characterized by the high costs associated with developing marketable products and manufacturing technologies as well as high levels of investment in production capabilities. As a result, the semiconductor industry has experienced, and may continue to experience, significant consolidation among companies and vertical integration among customers. Larger competitors resulting from consolidations may have certain advantages over us, including, but not limited to: substantially greater financial and other resources with which to withstand adverse economic or market conditions and pursue development, engineering, manufacturing, marketing and distribution of their products; longer independent operating histories; presence in key markets; patent protection; and greater name recognition. In addition, we may be at a competitive disadvantage to our peers if we fail to identify attractive opportunities to acquire companies to expand our business. Consolidation among our competitors and integration among our customers could erode our market share, negatively impact our capacity to compete and require us to restructure our operations, any of which would have a material adverse effect on our business.

Downturns or volatility in general economic conditions could have a material adverse effect on our business and results of operations.

In recent years, worldwide semiconductor industry sales have tracked the impact of the financial crisis, subsequent recovery and persistent economic uncertainty. We believe that the state of economic conditions in the United States is particularly uncertain due to the global pandemic as well as recent and expected shifts in legislative and regulatory conditions concerning, among other matters, international trade and taxation, and that an uneven recovery or a renewed global downturn may put pressure on our sales due to reductions in customer demand as well as customers deferring purchases. Volatile and/or uncertain economic conditions can adversely impact sales and profitability and make it difficult for us and our competitors to accurately forecast and plan our future business activities. To the extent we incorrectly plan for favorable economic conditions that do not materialize or take longer to materialize than expected, we may face oversupply of our products relative to customer demand. Reduced customer spending may in the future drive us and our competitors, to reduce product pricing, which will result in a negative effect on gross profit. Moreover, volatility in revenue as a result of unpredictable economic conditions may alter our anticipated working capital needs and interfere with our short-term and long-term strategies. To the extent that our sales, profitability and strategies are negatively affected by downturns or volatility in general economic conditions, our business and results of operations may be materially adversely affected.

The semiconductor industry is highly cyclical, and significant downturns or upturns in customer demand can materially adversely affect our business and results of operations.

The semiconductor industry is highly cyclical and, as a result, is subject to significant downturns and upturns in customer demand for semiconductors and related products. We cannot accurately predict the timing of future downturns and upturns in the semiconductor industry or how severe and prolonged these conditions might be. Significant downturns often occur in connection with, or in anticipation of, maturing product cycles (for semiconductors and for the end-user products in which they are used) or declines in general economic conditions and can result in reduced product demand, production overcapacity, high inventory levels and accelerated erosion of average selling prices, any of which could materially adversely affect our operating results as a result of increased operating expenses outpacing decreased revenue, reduced margins, underutilization of our manufacturing capacity and/or asset impairment charges. On the other hand, significant upturns can cause us to be unable to satisfy demand in a timely and cost-efficient manner. In the event of such an upturn, we may not be able to expand our workforce and operations in a sufficiently timely manner, procure adequate resources and raw materials, or locate suitable third-party suppliers to respond effectively to changes in demand for our existing products or to the demand for new products requested by our customers, and our business and results of operations could be materially and adversely affected.

Rapid innovation and short product life cycles in the semiconductor industry can result in price erosion of older products, which may materially adversely affect our business and results of operations.

The semiconductor industry is characterized by rapid innovation and short product life cycles, which often results in price erosion, especially with respect to products containing older technology. Products are frequently replaced by more technologically advanced substitutes and, as demand for older technology falls, the price at which such products can be sold drops, in some cases precipitously. In addition, our and our competitors' excess inventory levels can accelerate general price erosion.

Shortages or increased prices of raw materials could materially adversely affect our results of operations.

Our manufacturing processes will rely on many raw materials. Generally, we expect that our agreements with suppliers of raw materials will impose no minimum or continuing supply obligations, and we will obtain our raw materials and supplies from a large number of sources on a just-in-time basis. From time to time, suppliers of raw materials may extend lead times, limit supplies or increase prices due to capacity constraints or other factors beyond our control. Shortages could occur in various essential raw materials due to interruption of supply or increased demand. If we are unable to obtain adequate supplies of raw materials in a timely manner, the costs of our raw materials increase significantly, their quality deteriorates or they give rise to compatibility or performance issues in our products, our results of operations could be materially adversely affected.

Our facilities and processes may be interdependent and an operational disruption at any particular facility could have a material adverse effect on our ability to produce our products, which would materially adversely affect our business and results of operations.

We may utilize an integrated manufacturing platform in which multiple facilities may each produce one or more components necessary for the assembly of a single product. If we do, an operational disruption at a facility toward the front-end of our manufacturing process may have a disproportionate impact on our ability to produce our products. For example, if our multiple facilities rely predominantly on one third-party for manufacturing at the front-end of its manufacturing process, in the event of any operational disruption, natural or man-made disaster or other extraordinary event at such third-party facility, we may be unable to effectively source replacement components on acceptable terms from qualified third parties, in which case our ability to produce our products could be materially disrupted or delayed.

Conversely, if our facilities are single source facilities that only produce one of our end-products, a disruption at any such facility would materially delay or cease production of the related product. In the event of any such operational disruption, we may experience difficulty in beginning production of replacement components or products at new facilities (for example, due to construction delays) or transferring production to other existing facilities (for example, due to capacity constraints or difficulty in transitioning to new manufacturing processes), any of which could result in a loss of future revenues and materially adversely affect our business and results of operations.

If we are unable to protect the intellectual property we use, our business, results of operations and financial condition could be materially adversely affected.

The enforceability of any patents, trademarks, copyrights, software licenses and other intellectual property ("IP") we own may be uncertain in certain circumstances. Effective IP protection may be unavailable, limited or not applied for in the U.S. and internationally. The various laws and regulations governing registered and unregistered IP assets, patents, trade secrets, trademarks, mask works and copyrights to protect products and technologies are subject to legislative and regulatory change and interpretation by courts. With respect to our IP generally, we cannot assure you that:

- any of the U.S. or foreign patents and pending patent applications that we may employ in our business will not lapse or be invalidated, circumvented, challenged, abandoned or licensed to others;
- any of our pending or future patent applications will be issued or have the coverage originally sought;
- any of the trademarks, copyrights, trade secrets, know-how or mask works that we employ or will employ in our business will not lapse or be invalidated, circumvented, challenged, abandoned or licensed to others; or
- any of our pending or future trademark, copyright, or mask work applications will be issued or have the coverage originally sought.

If we seek to enforce our rights, we may be subject to claims that the IP right is invalid, is otherwise not enforceable or is licensed to the party against whom we are asserting a claim. In addition, our assertion of IP rights may result in the other party seeking to assert alleged IP rights of its own against us, which may materially adversely impact our business. An unfavorable ruling in these sorts of matters could include money damages or an injunction prohibiting us from manufacturing or selling one or more products, which could in turn negatively affect our business, results of operations or cash flows.

In addition, some of our products and technologies may not be covered by any patents or pending patent applications. We intend to protect our proprietary technologies, including technologies that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our collaborators, advisors, employees and consultants. We cannot assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that persons or institutions will not assert rights to IP arising out of our research. Should we be unable to protect our IP, competitors may develop products or technologies that duplicate our products or technologies, benefit financially from innovations for which we bore the costs of development and undercut the sales and marketing of our products, all of which could have a material adverse effect on our business, results of operations and financial condition.

If our technologies are subject to claims of infringement on the intellectual property rights of third parties, efforts to address such claims could have a material adverse effect on our results of operations.

We may from time to time be subject to claims that we may be infringing third-party IP rights. If necessary or desirable, we may seek licenses under such IP rights. However, we cannot assure you that we will obtain such licenses or that the terms of any offered licenses will be acceptable to us. The failure to obtain a license from a third-party for IP we use could cause us to incur substantial liabilities or to suspend the manufacture or shipment of products or our use of processes requiring such technologies. Further, we may be subject to IP litigation, which could cause us to incur significant expense, materially adversely affect sales of the challenged product or technologies and divert the efforts of our technical and management personnel, whether or not such litigation is resolved in our favor. In the event of an adverse outcome in any such litigation, we may be required to:

- pay substantial damages;
- indemnify customers or distributors;
- cease the manufacture, use, sale or importation of infringing products;
- expend significant resources to develop or acquire non-infringing technologies;
- discontinue the use of processes; or
- obtain licenses, which may not be available on reasonable terms, to the infringing technologies.

The outcome of IP litigation is inherently uncertain and, if not resolved in our favor, could materially and adversely affect our business, financial condition and results of operations.

We may be unable to maintain manufacturing efficiency, which could have a material adverse effect on our results of operations.

We believe that our success will materially depend on our ability to maintain or improve our margin levels related to manufacturing. Semiconductor manufacturing requires advanced equipment and significant capital investment, leading to high fixed costs, which include depreciation expense. Manufacturing semiconductor components also involves highly complex processes that we and our competitors are continuously modifying to improve yields and product performance. In addition, impurities, waste or other difficulties in the manufacturing process can lower production yields. Our manufacturing efficiency will be an important factor in our future profitability, and we cannot assure you that we will be able to manufacture efficiently, increase manufacturing efficiency to the same extent as our competitors, or be successful in our manufacturing rationalization plans. If we are unable to utilize manufacturing and testing facilities at expected levels, or if production capacity increases while revenue does not, the fixed costs and other operating expenses associated with these facilities will not be fully absorbed, resulting in higher average unit costs and lower gross profits, which could have a material adverse effect on our results of operations.

The failure to successfully implement cost reduction initiatives, including through restructuring activities, could materially adversely affect our business and results of operations.

From time to time, we may implement cost reduction initiatives in response to significant downturns in our industry, including relocating manufacturing to lower cost regions, transitioning higher-cost external supply to internal manufacturing, working with our material suppliers to lower costs, implementing personnel reductions and voluntary retirement programs, reducing employee compensation, temporary shutdowns of facilities with mandatory vacation and aggressively streamlining our overhead.

We cannot assure you that any cost reduction initiatives will be successfully or timely implemented or that they will materially and positively impact profitability.

If we are unable to identify and make the substantial research and development investments required to remain competitive in our business, our business, financial condition and results of operations may be materially adversely affected.

The semiconductor industry requires substantial investment in research and development in order to develop and bring to market new and enhanced technologies and products. The development of new products is a complex and time-consuming process and often requires significant capital investment and lead time for development and testing. We cannot assure you that we will have sufficient resources to maintain the level of investment in research and development that is required to remain competitive.

In addition, the lengthy development cycle for our products will limit our ability to adapt quickly to changes affecting the product markets and requirements of our customers and end-users. There can be no assurance that we will win competitive bid selection processes, known as “design wins,” for new products. In addition, design wins do not guarantee that we will make customer sales or that we will generate sufficient revenue to recover design and development investments, as expenditures for technology and product development are generally made before the commercial viability for such developments can be assured. There is no assurance that we will realize a return on the capital expended to develop new products, that a significant investment in new products will be profitable or that we will have margins as high as we anticipate at the time of investment or have experienced historically. To the extent that we underinvest in our research and development efforts, or that our investments and capital expenditures in research and development do not lead to sales of new products, we may be unable to bring to market technologies and products that are attractive to our customers, and as a result our business, financial condition and results of operations may be materially adversely affected.

We may be unable to develop new products to satisfy changing customer demands or regulatory requirements, which may materially adversely affect our business and results of operations.

The semiconductor industry is characterized by rapidly changing technologies, evolving regulatory and industry standards and certifications, changing customer needs and frequent new product introductions. Our success will be largely dependent on our ability to accurately predict, identify and adapt to changes affecting the requirements of our customers in a timely and cost-effective manner. Additionally, the emergence of new industry or regulatory standards and certification requirements may adversely affect the demand for our products. We plan to focus our new product development efforts on market segments and applications that we anticipate will experience growth, but there can be no assurance that we will be successful in identifying high-growth areas or develop products that meet industry standards or certification requirements in a timely manner. A fundamental shift in technologies, the regulatory climate or consumption patterns and preferences in our existing product markets or the product markets of our customers or end-users could make our current products obsolete, prevent or delay the introduction of new products that we planned to make or render our current or new products irrelevant to our customers’ needs. If our new product development efforts fail to align with the needs of our customers, including due to circumstances outside of our control like a fundamental shift in the product markets of our customers and end users or regulatory changes, our business and results of operations could be materially adversely affected.

Uncertainties regarding the timing and amount of customer orders could lead to excess inventory and write-downs of inventory that could materially adversely affect our financial condition and results of operations.

We expect that our sales will be typically made pursuant to individual purchase orders or customer agreements, and we do not expect to have long-term supply arrangements with our customers requiring a commitment to purchase. We expect that the agreements with our customers may allow them to cancel orders prior to shipment for standard products and, generally prior to start of production for custom products without incurring a penalty. We anticipate to routinely generate inventory based on customers' estimates of end-user demand for their products, which is difficult to predict. In times of under supply for certain products, some customers could respond by inflating their demand signals. As markets level off and supply capacity begins to match actual market demands, we could experience an increased risk of inventory write-downs, which may materially adversely affect our results of operations and our financial condition. In addition, our customers may change their inventory practices on short notice for any reason. Furthermore, short customer lead times are standard in the industry due to overcapacity. The cancellation or deferral of product orders, the return of previously sold products, or overproduction of products due to the failure of anticipated orders to materialize could result in excess obsolete inventory, which could result in write-downs of inventory or the incurrence of significant cancellation penalties under our arrangements with our raw materials and equipment suppliers. Unsold inventory, canceled orders and cancellation penalties may materially adversely affect our results of operations, and inventory write-downs, which may materially adversely affect our financial condition.

Our customers may require our products to undergo a lengthy and expensive qualification process without any assurance of product sales.

Prior to purchasing our products, our customers may require that our products undergo an extensive qualification process, which involves testing of the products in the customer's system as well as rigorous reliability testing. This qualification process may continue for a few months or longer. However, qualification of a product by a customer does not ensure any sales of the product to that customer. Even after successful qualification and sales of a product to a customer, a subsequent revision to the product or software, changes in the product's manufacturing process or the selection of a new supplier by us may require a new qualification process, which may result in delays and in us holding excess or obsolete inventory. After our products are qualified, it can take an additional few months or more before the customer commences volume production of components or devices that incorporate our products. Despite these uncertainties, we will devote substantial resources, including design, engineering, sales, marketing and management efforts, toward qualifying our products with customers in anticipation of sales. If we are unsuccessful or delayed in qualifying any of our products with a customer, such failure or delay would preclude or delay sales of such product to the customer, which may impede our growth and cause our business to suffer.

Our products are based on novel Gallium Nitride (GaN) processing technology, which makes it difficult to predict the time and cost of product development.

Our products are based on novel GaN processing technology. Our future success depends on the successful development of high-voltage power switching components and systems based on GaN processing technology. There can be no assurance that any development problems we experience in the future related to our products will not cause significant delays or unanticipated costs, or that such development problems can be solved. We may also experience delays in developing a sustainable, reproducible and manufacturing process, which may prevent us from commercializing our products on a timely or profitable basis, if at all.

Our potential future global operations may subject us to risks inherent in doing business on a global level that could adversely impact our business, financial condition and results of operations.

We anticipate that a certain amount of our total revenue may be derived from countries outside of the United States, and we might maintain certain operations in these regions. In addition, we may rely on a number of contract manufacturers whose operations are primarily located in outside of the United States. Risks inherent in doing business on a global level include, among others, the following:

- economic and geopolitical instability (including as a result of the threat or occurrence of armed international conflict or terrorist attacks);
- changes in regulatory requirements, international trade agreements, tariffs, customs, duties and other trade barriers;
- licensing requirements for the import or export of certain products;

- exposure to different legal standards, customs, business practices, tariffs, duties and other trade barriers, including changes with respect to price protection, competition practices, IP, anti-corruption and environmental compliance, trade and travel restrictions, pandemics, import and export license requirements and restrictions, and accounts receivable collections;
- transportation and other supply chain delays and disruptions;
- power supply shortages and shutdowns;
- difficulties in staffing and managing foreign operations, including collective bargaining agreements and workers councils, exposure to foreign labor laws and other employment and labor issues;
- currency fluctuations;
- currency convertibility and repatriation;
- taxation of our earnings and the earnings of our personnel;
- limitations on the repatriation of earnings and potential additional taxation of foreign profits in the U.S.;
- potential violations by our international employees or third-party agents of international or U.S. laws relevant to foreign operations (e.g., the Foreign Corrupt Practices Act (“FCPA”));
- difficulty in enforcing intellectual property rights;
- other risks relating to the administration of or changes in, or new interpretations of, the laws, regulations and policies of the jurisdictions in which we conduct our business; and
- the effect that the global pandemic has on the countries in which we may contract to do business.

We cannot assure you that we will be successful in overcoming the risks that relate to or arise from operating in international markets, the materialization of any of which could materially adversely affect our business, financial condition and results of operations.

Changes in tariffs or other government trade policies may materially adversely affect our business and results of operations, including by reducing demand for our products.

The imposition of tariffs and trade restrictions as a result of international trade disputes or changes in trade policies may adversely affect our sales and profitability. For example, the U.S. government imposed, among other actions, new or higher tariffs on specified imported products originating from China in response to what it characterizes as unfair trade practices, and China has responded by imposing and proposing new or higher tariffs on specified products including some semiconductors fabricated in the United States. There can be no assurance that a broader trade agreement will be successfully negotiated between the United States and China to reduce or eliminate these tariffs. These tariffs, and the related geopolitical uncertainty between the United States and China, may cause decreased end-market demand for our products from distributors and other customers, which could have a material adverse effect on our business and results of operations. For example, certain of our future foreign customers may respond to the imposition of tariffs or threat of tariffs on products we produce by delaying purchase orders, purchasing products from our competitors or developing their own products. Ongoing international trade disputes and changes in trade policies could also impact economic activity and lead to a general contraction of customer demand. In addition, tariffs on components that we may import from China or other nations that have imposed, or may in the future impose, tariffs will adversely affect our profitability unless we are able to exclude such components from the tariffs or we raise prices for our products, which may result in our products becoming less attractive relative to products offered by our competitors. Future actions or escalations by either the United States or China that affect trade relations may also impact our business, or that of our suppliers or customers, and we cannot provide any assurances as to whether such actions will occur or the form that they may take. To the extent that our sales or profitability are negatively affected by any such tariffs or other trade actions, our business and results of operations may be materially adversely affected.

Changes in government trade policies could limit our ability to sell our products to certain customers, which may materially adversely affect our sales and results of operations.

The U.S. Congress or U.S. regulatory authorities may take administrative, legislative or regulatory action that could materially interfere with our ability to make sales, particularly in China. We could experience unanticipated restrictions on our ability to sell to certain foreign customers where sales of products and the provision of services may require export licenses or are prohibited by government action. For example, the U.S. Department of Commerce could ban the export of U.S. products to foreign customers. The terms and duration of any such restrictions may not be known to us in advance and may be subject to ongoing modifications. Even to the extent such restrictions are subsequently lifted, any financial or other penalties imposed on affected foreign customers could have a negative impact on future orders. Such foreign customers may also respond to sanctions or the threat of sanctions by developing their own solutions or adopting alternative solutions or competitors’ solutions. The loss or temporary loss of customers as a result of such future regulatory limitations could materially adversely affect our sales, business and results of operations.

Environmental and health and safety liabilities and expenditures could materially adversely affect our results of operations and financial condition.

Our future manufacturing operations may be subject to various environmental laws and regulations relating to the management, disposal and remediation of hazardous substances and the emission and discharge of pollutants into the air, water and ground, and we may be identified as either a primary responsible party or a potentially responsible party at sites where we or our predecessors operated or disposed of waste in the past. Our operations may also be subject to laws and regulations relating to workplace safety and worker health, which, among other requirements, regulate employee exposure to hazardous substances. We do not currently maintain environmental insurance to cover certain claims related to historical contamination and future releases of hazardous substances. Moreover, we cannot assure you that even if such insurance is purchased, that it will cover any or all of our material environmental costs. In addition, the nature of our future operations may expose us to the continuing risk of environmental and health and safety liabilities including:

- changes in U.S. and international environmental or health and safety laws or regulations, including, but not limited to, future laws or regulations imposed in response to climate change concerns;
- the manner in which environmental or health and safety laws or regulations will be enforced, administered or interpreted;
- our ability to enforce and collect under indemnity agreements and insurance policies relating to environmental liabilities;
- the cost of compliance with future environmental or health and safety laws or regulations or the costs associated with any future environmental claims, including the cost of clean-up of currently unknown environmental conditions; or
- the cost of fines, penalties or other legal liability, should we fail to comply with environmental or health and safety laws or regulations.

To the extent that we face unforeseen environmental or health and safety compliance costs or remediation expenses or liabilities that are not covered by insurance, we may bear the full effect of such costs, expense and liabilities, which could materially adversely affect our results of operations and financial condition.

We may be subject to disruptions or breaches of our secured network that could irreparably damage our reputation and our business, expose us to liability and materially adversely affect our results of operations.

We may routinely collect and store sensitive data, including IP and other proprietary information about our business and our customers, suppliers and business partners. The secure processing, maintenance and transmission of this information will be critical to our operations and business strategy. We may be subject to disruptions or breaches of our secured network caused by computer viruses, illegal hacking, criminal fraud or impersonation, acts of vandalism or terrorism or employee error. Our security measures and/or those of our third-party service providers and/or customers may not detect or prevent such security breaches. The costs to us to reduce the risk of or alleviate cyber security breaches and vulnerabilities could be significant, and our efforts to address these problems may not be successful and could result in interruptions and delays that may materially impede our sales, manufacturing, distribution or other critical functions. Any such compromise of our information security could result in the misappropriation or unauthorized publication of our confidential business or proprietary information or that of other parties with which we do business, an interruption in our operations, the unauthorized transfer of cash or other of our assets, the unauthorized release of customer or employee data or a violation of privacy or other laws. In addition, computer programmers and hackers also may be able to develop and deploy viruses, worms and other malicious software programs that attack our systems, or that otherwise exploit any security vulnerabilities, and any such attack, if successful, could expose us to liability to customer claims. Any of the foregoing could irreparably damage our reputation and business, which could have a material adverse effect on our results of operations.

Sales through distributors and other third parties will expose us to risks that, if realized, could have a material adverse effect on our results of operations.

We may sell a significant portion of our products through distributors. Distributors may sell products that compete with our products, and we may need to provide financial and other incentives to focus distributors on the sale of our products. We may rely on one or more key distributors for a product, and the loss of these distributors could reduce our revenue. Distributors may face financial difficulties, including bankruptcy, which could harm our collection of accounts receivable and financial results. Violations of the FCPA or similar laws by distributors or other third-party intermediaries could have a material impact on our business. Failure to manage risks related to our use of distributors may reduce sales, increase expenses, and weaken our competitive position, any of which could have a material adverse effect on our results of operations.

The failure to comply with the terms and conditions of our contracts could result in, among other things, damages, fines or other liabilities.

We expect to have a diverse customer base consisting of both private sector clients and public sector clients, including the U.S. government. Sales to our private sector clients are generally expected to be based on stated contractual terms, the terms and conditions on our website or terms contained in purchase orders on a transaction-by-transaction basis. Sales to our public sector clients are generally expected to be derived from sales to federal, state and local governmental departments and agencies through various contracts and programs, which may require compliance with regulations covering many areas of our operations, including, but not limited to, accounting practices, IP rights, information handling, and security. Noncompliance with contract terms, particularly with respect to highly-regulated public sector clients, or with government procurement regulations could result in fines or penalties against us, termination of such contracts or civil, criminal and administrative liability to the Company. With respect to public sector clients, the government's remedies may also include suspension or debarment from future government business. The effect of any of these possible actions or the adoption of new or modified procurement regulations or practices could materially adversely affect our business, financial position and results of operations.

Risks Related to Our Common Stock

An investment in our company should be considered illiquid.

An investment in the Company requires a long-term commitment, with no certainty of return. Because we did not become an SEC reporting company by the traditional means of conducting an initial public offering of our Common Stock, we may be unable to establish a liquid market for our Common Stock. Moreover, we do not expect security analysts of brokerage firms to provide coverage of the Company in the near future. In addition, investment banks may be less likely to agree to underwrite primary or secondary offerings on behalf of the Company or its stockholders in the future than they would if we were to become a public reporting company by means of an initial public offering of common stock. If all or any of the foregoing risks occur, it would have a material adverse effect on the Company.

Our common stock is not listed on a national securities exchange which may affect the price and liquidity of our common stock and impair our ability to obtain future equity financing.

Our Common Stock is presently quoted on the OTCQB Venture Market (the "OTCQB") and there is currently limited trading activity of our common stock. The OTCQB is not a national securities exchange, and provides significantly less liquidity than a national exchange such as NASDAQ and the NYSE American (formerly NYSE MKT, formerly NYSE AMEX). Consequently, selling our common stock is likely to be more difficult because of diminished quantities of shares of our Common Stock being bought and sold. These factors could result in lower prices and larger spreads in the bid and ask prices for the Shares. As a result, investors may be unable to sell their Shares at such times and in such quantities as they may desire.

There is no guarantee that our Common Stock will qualify to be listed on a national exchange in the future. The inability to list our Common Stock on a national security exchange may impair our ability to raise additional necessary capital in such amounts, at such times and at such prices as we may require.

Our Common Stock may be considered a “penny stock,” and thereby be subject to additional sale and trading regulations that may make it more difficult to sell.

The Securities and Exchange Commission (the “SEC”) has adopted rules that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stocks are generally equity securities with a price of less than \$5.00 (other than securities registered on certain national securities exchanges or authorized for quotation on certain automated quotation systems, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system). The OTCQB does not meet such requirements and if the price of our Common Stock is less than \$5.00, our Common Stock will be deemed penny stocks. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from those rules, to deliver a standardized risk disclosure document containing specified information. In addition, the penny stock rules require that prior to effecting any transaction in a penny stock not otherwise exempt from those rules, a broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive (i) the purchaser’s written acknowledgment of the receipt of a risk disclosure statement; (ii) a written agreement to transactions involving penny stocks; and (iii) a signed and dated copy of a written suitability statement. These disclosure requirements may have the effect of reducing the trading activity in the secondary market for our Common Stock, and therefore stockholders may have difficulty selling their shares.

FINRA sales practice requirements may also limit an investor’s ability to buy and sell our Common Stock, which could depress the price of our Common Stock.

FINRA rules require broker-dealers to have reasonable grounds for believing that an investment is suitable for a customer before recommending that investment to the customer. Prior to recommending speculative low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer’s financial status, tax status and investment objectives, among other things. Under interpretations of these rules, FINRA believes that there is a high probability that such speculative low-priced securities will not be suitable for at least some customers. FINRA requirements may make it more difficult for broker-dealers to recommend that their customers buy our Common Stock, which may limit an investor’s ability to buy and sell shares of Common Stock, have an adverse effect on the market for our Common Stock, and thereby depress the price of our Common Stock. In addition, it has been more difficult in recent years for holders of “penny stocks” to deposit their shares with brokerage firms, which may limit any shareholder’s ability to sell shares of our Common Stock.

The shares of our Common Stock may experience dilution by exercises of outstanding warrants and options.

As of the date hereof, we have outstanding warrants to purchase an aggregate of 155,966 shares of our Common Stock at a price of \$1.50 per share, warrants to purchase an aggregate of 89,730 shares of our Common Stock at a price of \$4.00 per share, and outstanding options granted under our 2019 Equity Compensation Plan to purchase 1,398,246 shares of Common Stock. In addition, there are 2,886,129 shares available to be issued in the future under the Amended and Restated 2019 Equity Compensation Plan. The exercise of such outstanding options and warrants, as well as any future issuance of other warrants and options, will result in substantial dilution of the investment of our shareholders. In addition, our shareholders may experience additional dilution if we issue Common Stock in the future for additional capital raises. Any of such dilution may have adverse effect on the price of our Common Stock.

There are a significant number of shares of Common Stock eligible for sale, which could depress the market price of such shares.

We previously filed a registration statement on Form S-1 (Registration No. 333-234741), which is currently effective registering the resale of a total of 1,794,977 shares of Common Stock, and a registration statement on Form S-1 (Registration No. 333-257178), which is currently effective registering the resale of a total of 1,341,355 shares of Common Stock. The availability of such a large number of shares of Common Stock for sale in the public market could harm the market price of the stock. Further, other shares may be offered from time to time in the open market pursuant to Rule 144, and these sales may have a depressive effect as well.

We are an “emerging growth company,” and will be able take advantage of reduced disclosure requirements applicable to “emerging growth companies,” which could make our Common Stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act, and, for as long as we continue to be an “emerging growth company,” we intend to take advantage of certain exemptions from various reporting requirements applicable to other public companies but not to “emerging growth companies,” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. In addition, as an “emerging growth company,” we have chosen to take advantage of the extended transition period for complying with new or revised accounting standards, which will allow us to delay the adoption of new or revised accounting standards that have different effective dates for public and private companies until those standards apply to private companies. Accordingly, our financial statements may not be comparable to companies that comply with all public company accounting standards which could impact the valuation of our securities.

We could be an “emerging growth company” for up to five years, or until the earliest of (i) the last day of the first fiscal year in which our annual gross revenues exceed \$1.07 billion, (ii) the date that we become a “large accelerated filer” as defined in Rule 12b-2 under the Exchange Act, which would occur if the market value of our Common Stock that is held by non-affiliates exceeds \$700 million as of the last business day of our most recently completed second fiscal quarter, or (iii) the date on which we have issued more than \$1 billion in non-convertible debt during the preceding three year period. We cannot predict if investors will find our Common Stock less attractive if we choose to rely on these exemptions. If some investors find our Common Stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our Common Stock and our stock price may be more volatile.

We will incur significantly increased costs and devote substantial management time as a result of operating as a public company particularly after we are no longer an “emerging growth company.”

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. For example, we will be required to comply with certain of the requirements of the Sarbanes-Oxley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. We expect that compliance with these requirements will increase our legal and financial compliance costs and will make some activities more time consuming and costly. In addition, we expect that our management and other personnel will need to divert attention from operational and other business matters to devote substantial time to these public company requirements. In particular, we expect to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley Act. We are just beginning the process of compiling the system and processing documentation needed to comply with such requirements. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. In that regard, we currently do not have an internal audit function, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge.

However, for as long as we remain an “emerging growth company” as defined in the JOBS Act, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We intend to take advantage of these reporting exemptions until we are no longer an “emerging growth company.”

After we are no longer an “emerging growth company,” we expect to incur additional management time and cost to comply with the more stringent reporting requirements applicable to companies that are deemed accelerated filers or large accelerated filers, including complying with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act.

We cannot predict or estimate the amount of additional costs we may incur as a result of becoming a public company or the timing of such costs.

Our officers and directors have significant control over shareholder matters.

Our officers and directors own (or can own subject to exercise within a 60-day period from the date hereof) approximately 46.95% of the Company's outstanding Common Stock, and thus collectively have significant control over shareholder matters, such as election of directors, amendments to our Articles of Incorporation, and approval of significant corporate transactions. As a result, the Company's minority shareholders may have little or no effective control over our affairs.

We do not currently intend to pay dividends on our Common Stock in the foreseeable future, and consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our Common Stock.

We have never declared or paid cash dividends on our Common Stock and do not anticipate paying any cash dividends to holders of our Common Stock in the foreseeable future. Consequently, investors must rely on sales of their shares after price appreciation, which may never occur, as the only way to realize any future gains on their investments. There is no guarantee that shares of our Common Stock will appreciate in value or even maintain the price at which our stockholders have purchased their shares.

Upon dissolution of the Company, you may not recoup all or any portion of your investment.

In the event of a liquidation, dissolution or winding-up of our company, whether voluntary or involuntary, the proceeds and/or assets of the Company remaining after giving effect to such transaction, and the payment of all of our debts and liabilities will be distributed to the stockholders of Common Stock on a pro rata basis. There can be no assurance that we will have available assets to pay to the holders of Common Stock, or any amounts, upon such a liquidation, dissolution or winding-up of our Company. In this event, you could lose some or all of your investment.

If securities industry analysts do not publish research reports on us, or publish unfavorable reports on us, then the market price and market trading volume of our securities could be negatively affected.

Any trading market for our Common Stock may be influenced in part by any research reports that securities industry analysts publish about us. We do not currently have and may never obtain research coverage by securities industry analysts. If no securities industry analysts commence coverage of us, the market price and market trading volume of our securities could be negatively affected. In the event we are covered by analysts, and one or more of such analysts downgrade our securities, or otherwise reports on us unfavorably, or discontinues coverage of us, the market price and market trading volume of our securities could be negatively affected.

We are authorized to issue "blank check" preferred stock without stockholder approval, which could adversely impact the rights of holders of our securities.

Our certificate of incorporation authorizes us to issue up to 5,000,000 shares of blank check preferred stock. Any preferred stock that we issue in the future may rank ahead of our securities in terms of dividend priority or liquidation premiums and may have greater voting rights than our securities. In addition, such preferred stock may contain provisions allowing those shares to be converted into shares of Common Stock, which could dilute the value of our securities to current stockholders and could adversely affect the market price, if any, of our securities. In addition, the preferred stock could be utilized, under certain circumstances, as a method of discouraging, delaying or preventing a change in control of our company. Although we have no present intention to issue any shares of authorized preferred stock, there can be no assurance that we will not do so in the future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal offices are located at 9 Brown Road, Ithaca, NY 14850. As of December 31, 2021, we leased one (1) 10,000 sq. ft. facility in the State of New York for our operations. Our lease expires on November 30, 2025. The Company has arranged for a \$100,000 letter of credit in favor of the landlord in lieu of a security deposit, which is included as restricted cash on the condensed consolidated balance sheet as of December 31, 2021 and December 31, 2020. The minimum lease payments for the years ending December 31 are approximately as follows: \$200,000 each in 2022 through 2024, and \$183,000 in 2025.

ITEM 3. LEGAL PROCEEDINGS

There are no outstanding lawsuits or judgments against the Company or any consent decrees or injunctions to which the Company is subject or by which any of its assets are bound and there are no claims, proceedings, actions or lawsuits in existence, or to our knowledge threatened or asserted, against the Company or with respect to any of its assets that would materially and adversely affect the business, property or financial condition of the Company.

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

MARKET INFORMATION

We received approval from the OTCQB Market to trade our Common Stock under the ticker symbol of "ODII" as of August 27, 2020. There is currently limited trading volume for our Common Stock.

Future sales of substantial amounts of our shares in the public market could adversely affect market prices prevailing from time to time and could impair our ability to raise capital through the sale of our equity securities.

HOLDERS

As of the date hereof, there are 73 record holders of our Common Stock.

DIVIDEND POLICY

We have never paid any cash dividends on our Common Stock. We anticipate that we will retain funds and future earnings to support operations and to finance the growth and development of our business. Therefore, we do not expect to pay cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors that our board of directors deems relevant. In addition, the terms of any future debt or credit financings may preclude us from paying dividends.

RECENT SALES OF UNREGISTERED SECURITIES

During the past two fiscal years, the Company made sales of the following unregistered securities:

March 2021 Private Placement

On March 30, 2021, the Company sold a total of 1,251,625 shares of Common Stock in a private placement (the “March 2021 Private Placement”), at a price of \$4.00 per share. The Company raised a total of \$5,006,500 from 48 accredited investors.

Grants Under the 2019 Plan

On March 11, 2020, Alex Behfar was appointed as the Company’s Acting Chief Executive Officer and Executive Chairman, in connection with which appointment he was granted an option under the 2019 Plan to purchase 375,000 shares of Common Stock that vests ratably on a monthly basis over two years and an option to purchase 125,000 shares of Common Stock which vested on March 30, 2021.

On July 16, 2020, Alex Behfar was granted an option under the 2019 Plan to purchase 800,000 shares of Common Stock at \$1.50 per share that would vest ratably on a monthly basis over two years.

On September 16, 2020, in connection with his appointment as the Company’s Chief Executive Officer and Chairman, Mr. Behfar was granted options to purchase 1,637,410 shares of Common Stock at the price of \$1.50 per share that will vest ratably on a monthly basis over 24 months starting from March 11, 2022.

On June 2, 2021, the Company granted 5-year options to purchase an aggregate of 168,000 shares of Common Stock at \$3.93 per share to eight employees under the 2019 Plan. On the same day, the Company granted 10-year options to purchase 50,000 shares of Common Stock at a price of \$3.93 per share to each of Richard Ogawa and Michael Thompson, non-employee directors of the Company.

On June 7, 2021, Khurram Khan Afridi was appointed as an Advisory Board Member of the Company. In connection with such appointment, Mr. Afridi was granted 10-year options to purchase 50,000 shares of Common Stock at a price of \$3.55 per share.

On June 22, 2021, John Edmunds was appointed Director of the Company and later was appointed Chairman of the Board on September 13, 2021. In connection with Mr. Edmunds’s appointment as a Director and Chairman of Audit Committee of the Company, the Company agreed to pay Mr. Edmunds (i) a one-time grant on June 22, 2021 of non-qualified stock options under the Company 2019 Equity Compensation Plan to purchase 70,246 shares of Common Stock of the Company at \$2.90 per share; and (ii) an annual grant of non-qualified stock options under the 2019 Plan to purchase a number of shares of Common Stock of the Company that have a value of \$60,000, calculated using the fair market value of Common Stock of the Company as determined by the Board as of the date of grant, with an exercise price equal to the closing bid price of Common Stock of the Company as of the date of grant; provided that Mr. Edmunds shall have served on the Board for at least six months prior to the date of grant.

On December 30, 2021, the board of directors approved the following grants under the 2019 Plan: (i) 10-year non-qualified stock options to purchase 20,000 shares of Common Stock at a price of \$1.77 per share to each of John Edmunds, Richard Ogawa and Michael Thompson, non-employee directors of the Company; (ii) 10-year non-qualified stock options to purchase 20,000 shares and 35,000 shares of Common Stock at a price of \$1.77 per share to John Edmunds (for providing service to the Company as Chairman of the Board) and Richard Ogawa, respectively; (iii) 5-year options to purchase 100,000 shares and 80,000 shares of Common Stock at a price of \$1.77 per share to Richard Brown and James Shealy, respectively; and (iv) 5-year options to purchase an aggregate of 150,000 shares of Common Stock at \$1.77 per share to eight employees.

Securities Act Exemptions

We deemed all of the above offers, sales and issuances of our shares of Common Stock and warrants (except described under “Grants Under the 2019 Plan”) to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act, including Regulation D and Rule 506 promulgated thereunder, relative to transactions by an issuer not involving a public offering. All purchasers of securities in transactions exempt from registration pursuant to Regulation D represented to us that they were accredited investors and were acquiring the shares for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

We deemed the grants of stock options prior to February 14, 2020 (starting from such date the Company became subject to Exchange Act reporting requirements) described above under “Grants Under the 2019 Plan” and issuances of Common Stock upon exercise of such options to be exempt from registration under the Securities Act in reliance on Rule 701 of the Securities Act. The Rule 701 exemption is not available to Exchange Act reporting companies. In general, the Company is eligible to rely on the Rule 701 exemption to offer and sell securities to any of its employees, directors, officers, consultants or advisors in connection with a written compensatory benefit plan or other written agreement in compliance with Rule 701 under the Securities Act before it became subject to Exchange Act reporting requirements. Subject to any applicable lock-up agreements, beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act, under Rule 701 our affiliates may resell shares in reliance on Rule 144 without having to comply with the holding period requirement thereunder, and non-affiliates of the Company can resell shares in reliance on Rule 144 without having to comply with Rule 144’s current public information and holding period requirements thereunder.

All certificates representing the securities issued in the transactions described in this Item 5 included appropriate legends setting forth that the securities had not been offered or sold pursuant to a registration statement and describing the applicable restrictions on transfer of the securities. There were no underwriters employed in connection with any of the transactions set forth in this Item 5.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

Management’s Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis of our financial condition and results of operations should be read together with our financial statements and the related notes and the other financial information included elsewhere in this report, as well as our Annual Report on Form 10-K for the year ended December 31, 2020 filed on April 8, 2021, as amended on Form 10-K/A on May 28, 2021. This discussion contains forward-looking statements that involve risks and uncertainties. Forward looking statements are statements not based on historical information and which relate to future operations, strategies, financial results or other developments. Forward looking statements, particularly those identified with the words, “anticipates,” “believes,” “expects,” “plans,” “intends,” “objectives,” and similar expressions, are necessarily based upon estimates and assumptions that are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and many of which, with respect to future business decisions, are subject to change. These uncertainties and contingencies can affect actual results and could cause actual results to differ materially from those expressed in any forward-looking statements made by, or on our behalf. We disclaim any obligation to update forward looking statements, except as required by law. Dollars in tabular format are presented in thousands, except per share data, or otherwise indicated. When used herein, unless the context requires otherwise, references to the “Company,” “we,” “our” and “us” refer to Odyssey Semiconductor Technologies, Inc., a Delaware corporation, collectively with its wholly-owned subsidiary, Odyssey Semiconductor, Inc, a Delaware corporation.

OVERVIEW

Odyssey Semiconductor Technologies, Inc. (the “Company”) was formed as a Delaware corporation on April 12, 2019. The Company acquired its wholly-owned subsidiary, Odyssey Semiconductor, Inc., a Delaware corporation (“Odyssey Semiconductor”), on June 21, 2019.

We are a semiconductor device company developing revolutionary high-voltage power switching components and systems based on proprietary Gallium Nitride (GaN) processing technology. The premium power switching device market, which is described as applications where silicon-based (Si) systems perform insufficiently, is projected to reach over \$3.5 billion by 2025 and is currently dominated by the semiconductor material silicon carbide (SiC). GaN-based systems outperform Si and SiC based systems in every way due to the superior material properties of GaN. However, GaN devices have, to-date, proven difficult to process using standard semiconductor processing methods that are used to create Si and SiC based devices. We have developed a novel processing modification that allows GaN to be processed in a manner that for the first time, makes high voltage GaN power switching devices viably manufacturable. Our mission is to disrupt the rapidly growing premium power switching device market using our newly developed GaN high voltage power transistor for switching applications.

RECENT DEVELOPMENTS

On September 22, 2021, Alex Behfar resigned as our Chief Executive Officer, Chairman of the Board of Directors and a Director. On the same day, Richard Brown was appointed as our Interim Chief Executive Officer and John Edmunds as our Chairman. As of the date of such resignation, Mr. Behfar owned stock options to purchase 2,672,000 shares of common stock, of which 1,911,000 unvested options were forfeited.

On October 6, 2021, in connection with Mr. Behfar’s resignation, the Company entered into a separation agreement with Mr. Behfar. Pursuant to the separation agreement, among other things, Mr. Behfar agreed to certain waiver and release of claims in favor of the Company, and the Company agreed to pay Mr. Behfar certain severance consideration, including payment of three months of health insurance premium and acceleration of vesting of 25,000 non-qualified stock options (granted on September 25, 2019 and exercisable at \$1.50 per share) which were to vest as of September 25, 2021.

Governmental Assistance

Paycheck Protection Program

On May 1, 2020, the Company received loan proceeds in the amount of approximately \$211,000 under the Paycheck Protection Program (“PPP”). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act, as amended (“CARES Act”), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of such qualifying business. The loans and accrued interest are forgivable after certain time periods further defined in the CARES Act (“Covered Period”) as long as the borrower uses the loan proceeds for eligible purposes, including payroll, benefits, rent and utilities, and maintains its payroll levels. The amount of loan forgiveness will be reduced if the borrower terminates employees or reduces salaries during the Covered Period. On March 6, 2021, the entire loan balance was forgiven.

On February 24, 2021, the Company received \$193,625 pursuant to a promissory note issued under the Paycheck Protection Program Part 2 (“PPP2”). Interest was to accrue at 1% per annum and the note is payable in 60 monthly installments of \$3,300 commencing May 2022, however, on November 15, 2021, the entire loan balance was forgiven.

Economic Injury Disaster Loan Advance

On May 1, 2020, the Company received an advance in the amount of \$10,000 from the U.S. Small Business Administration (“SBA”) under the Economic Injury Disaster Loan (“EIDL”) program administered by the SBA, which program was expanded pursuant to the CARES Act. Such advance amount will reduce the Company’s PPP loan forgiveness amount described above. The Company received an additional \$138,900 under this program on August 30, 2020. The loan is payable in monthly payments of \$678 including interest at 3.75% payable over 30 years.

Tomkins County Area Development Loan

On May 27, 2020, the Company received loan proceeds in the amount of \$50,000 from the Tomkins County Area Development (“TCAD”) Emergency Relief Loan Fund. The loan matures after four years and bears interest in the amount of 2.5% per annum, with one year of no interest or principal payments, followed by three years of monthly payments of principal and interest in the amount of \$1,443 per month. The loan is collateralized against certain assets of the Company.

Equipment Loans

On August 20, 2020, the Company received a loan of \$100,000 from Broome County Industrial Development Agency (5 year facility, 2.5% annual interest rate, monthly payment of \$1,775); on September 1, 2020, the Company received a loan of \$100,000 from Southern Tier Region Economic Development Corporation (5 year facility, 5.0% annual interest rate, monthly payment of \$2,072) ; and on September 10, 2020, the Company received a loan of \$75,000 from TCAD (5 year facility, 2.5% annual interest rate, monthly payment of \$1,331). These loans were used to acquire equipment used in the laboratory, and are secured by the underlying assets of the Company.

Consulting Service

On October 18, 2019, the Company entered into an exclusive two-year consulting agreement with Akash Systems, Inc. (“Akash”), pursuant to which the Company agreed to provide certain consulting services to Akash in connection with process development and fabrication of GaN-on-Diamond high-electron-mobility transistors and monolithic microwave integrated circuits. Pursuant to the agreement, Akash guarantees to purchase at least one wafer per month from the Company for a total of 24 wafers during the term of the agreement, at a price of \$85,000 per wafer. The Company delivered 2 wafers as of December 31, 2020, and the contract expired as of October 18, 2021.

COMPONENTS OF OUR RESULTS OF OPERATIONS

Revenues

Our revenues are derived from contracts with customers that require us to design, develop, manufacture, test and integrate complex equipment and to provide engineering and technical services according to customer specifications. These contracts are often priced on a time and material type basis. Revenues on time and material type contracts are generally recognized in each period based on the amount billable to the customer which is based on direct labor hours expended multiplied by the contractual fixed rate per hour, plus the actual costs of materials and other direct non-labor costs. We bill customers based upon contractual terms, and accordingly, we have deferred revenues and contract assets depending upon whether we can bill in advance of earnings or in arrears, respectively.

Cost of Revenues

Cost of revenues consist of material, labor, a portion of occupancy expenses, and other expenses directly related to our revenue contracts.

Research and Development

Research and development includes expenses, primarily material, labor, a portion of occupancy expenses, and other expenses incurred in connection with the research and development of certain exploratory projects. Research and development expenses are expensed as they are incurred.

Selling, General, and Administrative

Selling, general, and administrative expenses consist of salaries, payroll taxes and other benefits, legal and professional fees, stock-based compensation, rent and office expenses, marketing and travel and other costs associated with our operation.

Other Income

Other income (expense) consists primarily of interest income on cash balances, forgiveness of PPP loan and other miscellaneous items.

RESULTS OF OPERATIONS

For the year ended December 31, 2021 compared with year ended December 31, 2020

Overview

The following table presents certain information from the condensed consolidated statements of operations:

	For The Years Ended December 31			
	2021	2020	Difference \$	Difference %
Revenues	\$ 748,948	\$ 1,374,420	\$ (625,472)	-46%
Cost of Revenues	832,205	1,453,005	(620,800)	-43%
Gross Loss	(83,257)	(78,585)	(4,672)	6%
Operating Expenses:				
Research and development	1,519,631	607,148	912,483	150%
Selling, general, and administrative	1,954,962	1,354,069	600,893	44%
Total Operating Expenses	3,474,593	1,961,217	1,513,376	77%
Loss From Operations	(3,557,850)	(2,039,802)	(1,518,048)	74%
Other Income:				
Forgiveness of PPP loan and other income	432,357	—	435,663	100%
Interest expense	(16,260)	(3,306)	(12,954)	392%
Net Loss	<u>\$ (3,141,753)</u>	<u>\$ (2,043,108)</u>	<u>\$ (1,098,645)</u>	<u>54%</u>

Revenues

Revenues for the years ended December 31, 2021 and 2020 were approximately \$749,000 and \$1,374,000, respectively, which represented a decrease of \$625,000, or 46%. The timing of revenue recognition is driven by the completion of specified deliverables and the billing of time and materials over periods of time. Accordingly, the recognition of revenue for these contracts will vary from time to time. During the year ended December 31, 2020, the Company also recognized substantially all of our revenue from one of our government contract customers. In the year ended December 31, 2021, we recognized substantially all of our revenue under six customer contracts, including the government contract and a contract with another governmental entity (comprising 56% of our total revenues for the year ended December 31, 2021 in the aggregate). The customer contracts with governmental entities have concluded. We have a few other customers and several outstanding proposals to new customers.

Cost of Revenues

Cost of revenues for the years ended December 31, 2021 and 2020 were approximately \$832,000 and \$1,453,000, respectively, which represented a decrease of \$621,000, or 43%. The base salary, facility and equipment usage fees to operate the fabrication facility during the 2021 and 2020 periods are and allocated between research and development and cost of revenues based upon the specific projects worked on during the period. During the year ended December 31, 2021, we also incurred a loss of \$60,000 on one government customer contract due to costs exceeding the contract revenues. We have operated at a gross loss for the past year as our revenues are not yet significant to cover our fixed costs of the facility.

Research and Development

Research and development expenses for the years ended December 31, 2021 and 2020 were approximately \$1,520,000 and \$607,000, respectively, which represented an increase of \$912,000, or 150%. The increase was primarily attributable to an overall increase in our focus on research and development activities, which resulted in increased wage allocation of approximately \$110,000 as well as increased rent, facility fees, depreciation, equipment usage costs and general lab supplies.

General and Administrative

Selling, general, and administrative expenses for the years ended December 31, 2021 and 2020 were approximately \$1,955,000 and \$1,354,000, respectively, which represented an increase of \$601,000, or 44%. The increase was primarily driven by an increase in stock-based compensation costs related to options granted to the Chief Executive Officer (including performance awards that related to the private placement that occurred in March 2021) and board members of approximately \$623,000 as compared to the 2020 period. Legal and professional fees were approximately \$315,000 in the 2021 period as compared to \$336,000 for the 2020 period.

Other Income and expense

Other income for the year ended December 31, 2021 includes the forgiveness of our PPP loans of \$ 404,000. Other income (expense) for the year ended December 31, 2021 includes to the sale of miscellaneous tools of \$28,000. Other income in the year 2020 was insignificant.

Interest expense for the years ended December 31, 2021 and 2020 were approximately \$16,000 and \$3,000, respectively, which represented an increase of \$13,000, or 392%. The increase was primarily driven by a full year of interest on the governmental loans in 2021 as compared to a partial year in 2020.

Net (Loss) Income

Net (loss) income for the years ended December 31, 2021 and 2020 was approximately \$(3,142,000) and \$(2,043,000), respectively, which represented a decrease of \$(1,099,000), or 54%. The decrease was primarily attributable to the decrease in revenues of approximately \$625,000 and an increase in non-cash stock compensation expense of \$536,000. The costs of the operations of the Company remained relatively consistent for the year ended December 31, 2021 as compared to 2020.

LIQUIDITY AND CAPITAL RESOURCES

Liquidity

We measure our liquidity in a number of ways, including the following:

	December 31, 2021
Cash	\$ 2,598,213
Working Capital	\$ 2,605,432

As of December 31, 2021, we had cash and working capital of \$2,598,213 and \$2,605,432, respectively. We were awarded a grant from the Empire State Development Grant Funds through the Southern Tier REDC in the amount of \$650,000 in 2022. Funding of the grant is dependent on the Company maintaining capital expenditure and headcount metrics specified in the grant award.

The Company believes its current cash on hand will not be sufficient to meet its operating obligations and capital requirements for at least twelve months from the issuance of these financial statements. Therefore, the Company will need to raise further capital through the sale of additional equity or debt securities or other debt instruments to support its future operations. The Company has engaged with an investment bank to assist with the fund raise, however there can no assurance that a financing can be completed on terms acceptable to the Company. The Company has also taken preliminary steps to file a registration statement on Form S-1 with the SEC for a proposed public offering and a listing application with Nasdaq, but there is no assurance that the offering and the listing application will be successful.

The Company's operating needs include the planned costs to operate its business, including amounts required to fund working capital and capital expenditures. The Company's future capital requirements and the adequacy of its available funds will depend on many factors, including the Company's ability to successfully commercialize its products and services, competing technological and market developments, and the need to enter into collaborations with other companies or acquire other companies or technologies to enhance or complement its product and service offerings. There is also no assurance that the amount of funds the Company might raise will enable the Company to complete its development initiatives or attain profitable operations. If the Company is unable to obtain additional financing on a timely basis, it may have to curtail its development, marketing and promotional activities, which would have a material adverse effect on the Company's business, financial condition and results of operations, and ultimately, the Company could be forced to discontinue its operations and liquidate.

Our sources and uses of cash were as follows:

Net cash (used in) provided by operating activities for the year ended December 31, 2021 and 2020 was approximately \$(2,457,000) and \$(776,000), respectively. Net cash used in operating activities for the years ended December 31, 2021 includes cash used to fund a net loss of approximately \$3,142,000, reduced by \$922,000 of non-cash expenses, and increased by \$237,000 of net cash provided by changes in the levels of operating assets and liabilities.

Net cash provided by operating activities for the years ended December 31, 2020 included cash provided by net loss of approximately \$(2,043,000) partially offset by \$859,000 of non-cash expenses and reduced by \$408,000 of net cash used in changes in the levels of operating assets and liabilities.

Net cash used in investing activities for the years ended December 31, 2021 and 2020 was approximately \$(33,000) and \$(687,000), respectively. Net cash used in investing activities for the years ended December 31, 2020 was primarily attributable to the purchase property and equipment, and leasehold improvements in the laboratory.

Net cash provided by financing activities for the years ended December 31, 2021 and 2020 was approximately \$4,815,000 and \$1,041,000, respectively. Net cash used in financing activities for the years ended December 31, 2021 was primarily attributable to expenditures to the private placement of our common stock which yielded approximately \$4.6 million in net proceeds, and the proceeds from the PPP2 loan of \$194,000 and proceeds from the exercise of stock options of \$68,000. Net cash used in financing activities for the years ended December 31, 2020 was primarily attributable to proceeds under government loan programs of \$685,000 and proceeds from the exercise of stock options of \$405,000.

OFF-BALANCE SHEET ARRANGEMENTS

We do not have any off-balance sheet arrangements (as that term is defined in Item 303 of Regulation S-K) that are reasonably likely to have a current or future material effect on our financial condition, revenue or expenses, results of operations, liquidity, capital expenditures or capital resources.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the 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. We base our estimates and judgments on historical experience, current economic and industry conditions and on various other factors that are believed to be reasonable under the circumstances. This forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that full consideration has been given to all relevant circumstances that we may be subject to, and the consolidated financial statements accurately reflect our best estimate of the results of operations, financial position and cash flows for the periods presented.

On an ongoing basis, we evaluate our estimates and judgments for all assets and liabilities, including those related to stock-based compensation expense and the timing of revenue and related cost recognition. The amount of stock based compensation has been a significant expense over the years ended December 31, 2021 and 2020. The assumptions that go into the Black-Scholes calculation are the major driver of the calculation of the fair value of the stock options at the date of grant. The major assumption of volatility is based upon historical data, and the majority of the other assumptions used in the Black Scholes computation is based upon the terms of the specific stock option grant.

Revenues and cost of sales are important metrics in demonstrating the completion of projects and shipment of products to customers, and the profitability of such revenues. The timing of the Company's revenue recognition may differ from the timing of payment by its customers. A receivable is recorded when revenue is recognized prior to payment and the Company has an unconditional right to payment. Alternatively, when payment precedes the provision of the related services, the Company records deferred revenue until the performance obligations are satisfied. Contract assets are comprised of unbilled contract receivables related to revenues earned but not yet invoiced to customers.

We review the status of each project at each period end and determine whether the earnings process is complete and the revenue and costs of sales should be recognized.

RECENTLY ISSUED ACCOUNTING STANDARDS

Our recently issued accounting standards are included in Note 2 of our financial statements included elsewhere in this Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Consolidated Financial Statements for the years ended December 31, 2021 and 2020

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of
Odyssey Semiconductor Technologies, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Odyssey Semiconductor Technologies, Inc. and Subsidiaries (the "Company") as of December 31, 2021 and 2020, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the two years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 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.

Explanatory Paragraph – Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company has a significant working capital deficiency, has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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 audits 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 provides a reasonable basis for our opinion.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2019.

Melville, NY
March 31, 2022

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2021	December 31, 2020
Assets		
Current Assets:		
Cash	\$ 2,598,213	\$ 272,705
Contract assets	—	62,273
Accounts receivable	6,170	10,877
Deferred expenses	7,870	185,084
Prepaid expenses and other current assets	225,260	33,569
Total Current Assets	2,837,513	564,508
Restricted cash	103,201	103,149
Property and equipment, net	853,290	986,407
Total Assets	\$ 3,794,004	\$ 1,654,064
Liabilities and Stockholders' Equity		
Current Liabilities:		
Accounts payable and accrued expenses	\$ 147,947	\$ 187,046
Loan payable - short term	74,134	53,858
Deferred revenue	10,000	260,447
Total Current Liabilities	232,081	501,351
Loans payable - long term	345,459	621,600
Total liabilities	577,540	1,122,951
Commitments and contingencies	—	—
Stockholders' Equity:		
Preferred stock, \$0.0001 par value, 5,000,000 shares authorized; 0 shares issued and outstanding as of December 31, 2021 and December 31, 2020	—	—
Common stock, \$0.0001 par value, 45,000,000 shares authorized, 12,726,911 and 11,429,661 shares issued and outstanding as of December 31, 2021 and December 31, 2020, respectively	1,272	1,143
Additional paid-in capital	9,873,345	4,046,370
Accumulated deficit	(6,658,153)	(3,516,400)
Total Stockholders' Equity	3,216,464	531,113
Total Liabilities and Stockholders' Equity	\$ 3,794,004	\$ 1,654,064

See notes to these consolidated financial statements.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	For The Years Ended December 31	
	2021	2020
Revenues	\$ 748,948	\$ 1,374,420
Cost of Revenues	832,205	1,453,005
Gross Loss	(83,257)	(78,585)
Operating Expenses:		
Research and development	1,519,631	607,148
Selling, general, and administrative	1,954,962	1,354,069
Total Operating Expenses	3,474,593	1,961,217
Loss From Operations	(3,557,850)	(2,039,802)
Other Income:		
Forgiveness of PPP loan and other income	432,357	—
Interest expense	(16,260)	(3,306)
Net Loss	\$ (3,141,753)	\$ (2,043,108)
Net (Loss) Income Per Share:		
Basic	\$ (0.25)	\$ (0.18)
Diluted	\$ (0.25)	\$ (0.18)
Weighted Average Number of Common Shares Outstanding:		
Basic	12,419,399	11,229,966
Diluted	12,419,399	11,229,966

See notes to these consolidated financial statements.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020

	<u>Common Stock</u>		<u>Additional Paid- In Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance December 31, 2019	11,159,661	1,116	3,017,940	(1,473,292)	1,545,764
Stock based compensation	—	—	623,457	—	623,457
Exercise of stock options	270,000	27	404,973	—	405,000
Net loss for the year ended 2020	—	—	—	(2,043,108)	(2,043,108)
Balance December 31, 2020	11,429,661	1,143	4,046,370	(3,516,400)	531,113

	<u>Common Stock</u>		<u>Additional Paid- In Capital</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Equity</u>
	<u>Shares</u>	<u>Amount</u>			
Balance - December 31, 2020	11,429,661	1,143	4,046,370	(3,516,400)	531,113
Stock based compensation	—	—	1,159,611	—	1,159,611
Exercise of stock options	45,625	4	68,434	—	68,438
Sale of shares of common stock	1,251,625	125	5,006,375	—	5,006,500
Costs of stock sale	—	—	(407,445)	—	(407,445)
Net loss for the year ended 2021	—	—	—	(3,141,753)	(3,141,753)
Balance - December 31, 2021	12,726,911	1,272	9,873,345	(6,658,153)	3,216,464

See notes to these consolidated financial statements.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For The Years Ended December 31,	
	2021	2020
Cash Flows From Operating Activities:		
Net loss	\$ (3,141,753)	\$ (2,043,108)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	1,159,611	623,457
Forgiveness of PPP loan	(404,305)	—
Write off of deferred offering costs and other	—	123,875
Depreciation and amortization	166,535	111,311
Changes in operating assets and liabilities:		
Contract assets	62,273	481,671
Accounts receivable	4,707	(9,397)
Prepaid expenses and other current assets	(191,691)	92,538
Deferred expenses	177,214	(73,536)
Accounts payable and accrued expenses	(39,099)	(30,959)
Deferred revenue	(250,447)	(51,931)
	684,798	1,267,029
Net Cash Used In Operating Activities	(2,456,955)	(776,079)
Cash Flows Used In Investing Activities:		
Purchases of property and equipment	(32,506)	(686,915)
Net Cash Used In Investing Activities	(32,506)	(686,915)
Cash Flows From Financing Activities:		
Proceeds from sale of common stock, net of costs	4,599,055	—
Proceeds from government loans	193,625	684,580
Repayment of government loans	(46,097)	(4,714)
Proceeds from exercise of stock options	68,438	405,000
Payment of deferred offering costs	—	(39,740)
Payment of deferred loan costs	—	(4,560)
	4,815,021	1,040,566
Net Cash Provided By Financing Activities	4,815,021	1,040,566
Net Increase (Decrease) In Cash and Restricted Cash	2,325,560	(422,428)
Cash and Restricted Cash - Beginning Of Year	375,854	798,282
Cash and Restricted Cash - End Of Year	\$ 2,701,414	\$ 375,854
Cash and Restricted Cash Consisted of the Following:		
Cash	\$ 2,598,213	\$ 272,705
Restricted cash	103,201	103,149
	\$ 2,701,414	\$ 375,854
Supplemental Disclosures of Cash Flow Information:		
Cash paid during the year for:		
Interest	\$ 6,911	\$ 2,200
Income taxes	\$ —	\$ —
Non-cash investing and financing activities:		
Fixed assets purchased on account	\$-	\$ 20,598

See notes to these consolidated financial statements.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020

Note 1 – Nature of Operations and Liquidity

Organization and Operations

Odyssey Semiconductor Technologies, Inc. (“Odyssey Technologies”) was incorporated on April 12, 2019 under the laws of the State of Delaware. Odyssey Technologies, through its wholly-owned subsidiary, Odyssey Semiconductor, Inc. (“Odyssey Semiconductor”) and Odyssey Semiconductor’s wholly owned subsidiary, JR2J, LLC (“JR2J”) (collectively, the “Company”), is a semiconductor device company developing high-voltage power switching components and systems based on proprietary Gallium Nitride (“GaN”) processing technology.

COVID-19

The extent of the impact and effects of the recent outbreak of the coronavirus (COVID-19) on the operation and financial performance of our business will depend on future developments, including the duration and spread of the outbreak, related travel advisories and restrictions, the consequential potential of staff shortages, and project development delays, all of which are highly uncertain and cannot be predicted. If demand for the Company’s services or the Company’s ability to service customers are impacted for an extended period, especially as it relates to major customers, our financial condition and results of operations may be materially adversely affected.

Liquidity and Financial Condition

As of December 31, 2021, the Company had a cash balance, working capital and accumulated deficit of approximately \$2,600,000, \$2,600,000 and \$6,600,000, respectively. During the year ended December 31, 2021, the Company generated a net loss of approximately \$3,100,000.

The Company believes its current cash on hand will not be sufficient to meet its operating obligations and capital requirements for at least twelve months from the issuance of these financial statements. Therefore, the Company will need to raise further capital through the sale of additional equity or debt securities or other debt instruments to support its future operations. The Company has engaged with an investment bank to assist with the fund raise, however there can no assurance that a financing can be completed on terms acceptable to the Company. The Company has also taken preliminary steps to file a registration statement on Form S-1 with the SEC for a proposed public offering and a listing application with Nasdaq, but there is no assurance that the offering and the listing application will be successful.

The Company’s operating needs include the planned costs to operate its business, including amounts required to fund working capital and capital expenditures. The Company’s future capital requirements and the adequacy of its available funds will depend on many factors, including the Company’s ability to successfully commercialize its products and services, competing technological and market developments, and the need to enter into collaborations with other companies or acquire other companies or technologies to enhance or complement its product and service offerings. There is also no assurance that the amount of funds the Company might raise will enable the Company to complete its development initiatives or attain profitable operations. If the Company is unable to obtain additional financing on a timely basis, it may have to curtail its development, marketing and promotional activities, which would have a material adverse effect on the Company’s business, financial condition and results of operations, and ultimately, the Company could be forced to discontinue its operations and liquidate.

Note 2 - Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

Use of Estimates

Preparation of financial statements in conformity with U.S. GAAP requires management to make estimates, judgments and assumptions that affect the amounts reported in the financial statements and the amounts disclosed in the related notes to the financial statements. The Company's significant estimates used in these financial statements include, but are not limited to, fair value calculations for equity securities, stock-based compensation, the collectability of receivables, the recoverability and useful lives of long-lived assets, and the valuation allowance related to the Company's deferred tax assets. Certain of the Company's estimates could be affected by external conditions, including those unique to the Company and general economic conditions. It is reasonably possible that these external factors could have an effect on the Company's estimates and could cause actual results to differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents in the financial statements. As of December 31, 2021 and December 31, 2020, the Company had no cash equivalents. The Company has cash on deposits in several financial institutions which, at times, may be in excess of Federal Deposit Insurance Corporation ("FDIC") insurance limits. The Company has not experienced losses in such accounts and periodically evaluates the creditworthiness of its financial institutions. The Company reduces its credit risk by placing its cash and cash equivalents with major financial institutions.

Restricted Cash

Restricted cash was comprised of cash held as a security deposit in connection with the Company's operating lease. See Note 8 – Commitments and Contingencies - Operating Lease for additional details.

Deferred Expenses

Deferred expenses consist of labor, materials and other costs that are attributable to customer contracts that the Company has not completed its performance obligation under the contract and, as a result, has not recognized revenue. As of December 31, 2021 and December 31, 2020, deferred expenses were approximately \$8,000 and \$185,000, respectively.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation using the straight-line method over their estimated useful lives, once the asset is placed in service. Expenditures for maintenance and repairs, which do not extend the economic useful life of the related assets, are charged to operations as incurred, and expenditures which extend the economic life are capitalized. Leasehold improvements are depreciated over the lesser of their estimated useful lives or the remaining term of their respective lease. When assets are retired or otherwise disposed of, the costs and related accumulated depreciation or amortization are removed from the accounts and any gain or loss on disposal is recognized in the statement of operations for the respective period.

The Company's long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. An impairment loss would be recognized when estimated future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount.

The estimated useful lives of property and equipment are as follows:

Schedule of estimated useful lives of property and equipment	
Asset	Useful lives (years)
Computer and office equipment	5
Lab equipment	5
Leasehold improvements	shorter of useful life or lease term
Machinery	7-15
Furniture	7

Offering Costs

Deferred offering costs, which primarily consist of direct, incremental professional fees incurred in connection with a debt or equity financing, are capitalized as non-current assets on the consolidated balance sheets. Once the financing closes, the Company reclassifies such costs as either discounts to notes payable or as a reduction of proceeds received from equity transactions so that such costs are recorded as a reduction of additional paid-in capital. If the completion of a contemplated financing was deemed to be no longer probable, the related deferred offering costs would be charged to general and administrative expense in the consolidated financial statements. At December 31, 2020, the Company wrote off the previously capitalized offering costs.

Revenue Recognition

The Company recognizes revenue under ASC Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). The Company determines revenue recognition through the following steps:

- Step 1: Identify the contract with the customer;
- Step 2: Identify the performance obligations in the contract;
- Step 3: Determine the transaction price;
- Step 4: Allocate the transaction price to the performance obligations in the contract; and
- Step 5: Recognize revenue when the company satisfies a performance obligation.

A majority of the Company's revenues are generated from contracts with customers that require it to design, develop, manufacture, test and integrate complex equipment and to provide engineering and technical services according to customer specifications. These contracts are often priced on a time and material type basis. Revenues on time and material type contracts are generally recognized in each period based on the amount billable to the customer which is based on direct labor hours expended multiplied by the contractual fixed rate per hour, plus the actual costs of materials and other direct non-labor costs.

The timing of the Company's revenue recognition may differ from the timing of payment by its customers. A receivable is recorded when revenue is recognized prior to payment and the Company has an unconditional right to payment. Alternatively, when payment precedes the provision of the related services, the Company records deferred revenue until the performance obligations are satisfied. Contract assets are comprised of unbilled contract receivables related to revenues earned but not yet invoiced to customers.

During the years ended December 31, 2021 and 2020, there was no revenue recognized from performance obligations satisfied (or partially satisfied) in previous periods.

The Company generates revenue from government contracts that reimburse the Company for certain allowable costs for funded projects. For contracts with government agencies, when the Company has concluded that it is the principal in conducting the research and development expenses and where the funding arrangement is considered central to the Company's ongoing operations, the Company classifies the recognized funding received as revenue. The Company has determined that revenue generated from government grants is outside the scope of ASC 606 and, as a result, the Company recognizes revenue upon incurring qualifying, reimbursable expenses. During the years ended December 31, 2021 and 2020, the Company recognized approximately \$418,000 and \$1,170,000, respectively, of grant revenue.

Research and Development

Research and development expenses are charged to operations as incurred.

Stock-Based Compensation

The Company measures the cost of services received in exchange for an award of equity instruments based on the fair value of the award. The fair value of the award is measured on the grant date. The fair value amount is then recognized over the period during which services are required to be provided in exchange for the award, usually the vesting period. Upon the exercise of an award, the Company issues new shares of common stock out of its authorized shares.

The risk-free interest rate was determined from the implied yields from U.S. Treasury zero-coupon bonds with a remaining term consistent with the expected term of the instrument being valued. Option forfeitures are accounted for at the time of occurrence. The expected term used is the estimated period of time that warrants or options are expected to be outstanding. The Company utilizes the “simplified” method to develop an estimate of the expected term of “plain vanilla” employee options. For investor warrants and non-employee options, the expected term used is the contractual life of the instrument being valued. The Company does not yet have a trading history to support its historical volatility calculations. Accordingly, the Company is utilizing an expected volatility figure based on a review of the historical volatility of comparable entities over a period of time equivalent to the expected life of the instrument being valued.

Net (Loss) Income per share of Common Stock

Basic net (loss) income per share of common stock is computed by dividing net (loss) income by the weighted average number of vested shares of common stock outstanding during the period. Diluted net income per share of common stock is computed by dividing net income by the weighted average number of common and dilutive common-equivalent shares outstanding during each period.

The following shares were excluded from the calculation of weighted average dilutive shares of common stock because their inclusion would have been anti-dilutive:

	As of December 31,	
	2021	2020
Warrants	245,696	155,966
Options	1,398,246	3,257,410
Total	1,643,942	3,413,376

Income Taxes

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of items that have been included or excluded in the financial statements or tax returns. Deferred tax assets and liabilities are determined on the basis of the difference between the tax basis of assets and liabilities and their respective financial reporting amounts (“temporary differences”) at enacted tax rates in effect for the years in which the temporary differences are expected to reverse. The Company has recorded a full valuation allowance against its deferred tax assets for all periods, due to the uncertainty of future utilization.

The Company utilizes a recognition threshold and measurement process for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Management has evaluated and concluded that there were no material uncertain tax positions requiring recognition in the Company's financial statements as of December 31, 2021 and 2020. The Company does not expect any significant changes in its unrecognized tax benefits within twelve months of the reporting date. The Company's policy is to classify assessments, if any, for tax related interest as interest expense and penalties as selling, general and administrative expenses in the consolidated statements of operations.

Critical Accounting Policies and Estimates

Our consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the 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. We base our estimates and judgments on historical experience, current economic and industry conditions and on various other factors that are believed to be reasonable under the circumstances. This forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that full consideration has been given to all relevant circumstances that we may be subject to, and the consolidated financial statements accurately reflect our best estimate of the results of operations, financial position and cash flows for the periods presented.

On an ongoing basis, we evaluate our estimates and judgments for all assets and liabilities, including those related to the fair value of stock options for determination of the stock-based compensation expense. The amount of stock based compensation has been a significant expense over the years ended December 31, 2021 and 2020. The assumptions that go into the Black-Scholes calculation are the major driver of the calculation of the fair value of the stock options at the date of grant. The major assumption of volatility is based upon historical data, and the majority of the other assumptions used in the Black Scholes computation is based upon the terms of the specific stock option grant.

Revenues and cost of sales are important metrics in demonstrating the completion of projects and shipment of products to customers, and the profitability of such revenues. Accordingly, revenue recognition is a critical accounting policy. The timing of the Company's revenue recognition may differ from the timing of payment by its customers. A receivable is recorded when revenue is recognized prior to payment and the Company has an unconditional right to payment. Alternatively, when payment precedes the provision of the related services, the Company records deferred revenue until the performance obligations are satisfied. Contract assets are comprised of unbilled contract receivables related to revenues earned but not yet invoiced to customers. We review the status of each project at each period end and determine whether the earnings process is complete and the revenue and costs of sales should be recognized.

Recently Issued Accounting Standards

In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)," ("ASU 2016-02"). ASU 2016-02 requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases. ASU 2016-02 will also require new qualitative and quantitative disclosures to help investors and other financial statement users better understand the amount, timing, and uncertainty of cash flows arising from leases. The FASB issued ASU No. 2018-10 "Codification Improvements to Topic 842, Leases" ("ASU 2018-10"), ASU No. 2018-11 "Leases (Topic 842) Targeted Improvements" ("ASU 2018-11") in July 2018, and ASU No. 2018-20 "Leases (Topic 842) - Narrow Scope Improvements for Lessors" ("ASU 2018-20") in December 2018. ASU 2018-10 and ASU 2018-20 provide certain amendments that affect narrow aspects of the guidance issued in ASU 2016-02. ASU 2018-11 allows all entities adopting ASU 2016-02 to choose an additional (and optional) transition method of adoption, under which an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. Pursuant to ASU 2019-10 the effective date for ASC 842 was deferred an additional year. The Company expects to recognize operating lease right-of-use assets and lease liabilities on the balance sheet upon adoption of this ASU for its 2022 financial period. The Company is currently evaluating these ASUs and their impact on its consolidated financial statements.

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, "Financial Instruments - Credit Losses". This update requires immediate recognition of management's estimates of current expected credit losses ("CECL"). Under the prior model, losses were recognized only as they were incurred. The new model is applicable to all financial instruments that are not accounted for at fair value through net income. The standard is effective for fiscal years beginning after December 15, 2022 for public entities qualifying as small reporting companies. Early adoption is permitted. The Company is currently assessing the impact of this update on our consolidated financial statements and do not anticipate a significant impact.

Note 3 - Prepaid Expenses and Other Current Assets

Prepaid expenses consisted of the following:

	<u>December 31, 2021</u>	<u>December 31, 2020</u>
Insurance	\$ 30,666	\$ 33,569
Legal Fees	16,180	—
Deposit for equipment purchase	25,288	—
Deposit for leased equipment purchase (Note 11)	153,126	—
Total	<u>\$ 225,260</u>	<u>\$ 33,569</u>

In December 2021, the Company made a deposit of \$153,126 to purchase equipment (included in prepaid expenses in the accompanying balance sheet). The remainder of the purchase price was to be financed through a long-term lease. Terms and finalization of the lease has not yet occurred, and the Company may request a refund of its deposit.

Note 4 – Property and Equipment

Property and equipment consisted of the following:

	<u>December 31, 2021</u>	<u>December 31, 2020</u>
Computer and office equipment	\$ 2,807	\$ 2,807
Lab equipment	15,606	15,606
Furniture	43,705	43,705
Leasehold improvements	450,374	422,318
Machinery	627,641	623,190
Subtotal	1,140,132	1,107,626
Accumulated Depreciation	<u>(286,842)</u>	<u>(121,219)</u>
Property and Equipment, net	<u>\$ 853,290</u>	<u>\$ 986,407</u>

Depreciation and amortization expense related to property and equipment was approximately \$166,000 and \$111,000 for the years ended December 31, 2021 and 2020, respectively. For the year ended December 31, 2021, depreciation expense of approximately \$36,000 was recorded within cost of sales, \$29,000 recorded within general and administrative expenses, and \$101,000 recorded within research and development. For the year ended December 31, 2020, depreciation expense of approximately \$52,000 was recorded within cost of sales, \$26,000 recorded within general and administrative expenses, and \$23,000 recorded within research and development.

Note 5 - Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following:

	<u>December 31, 2021</u>	<u>December 31, 2020</u>
Accounts payable	\$ 67,970	\$ 80,548
Accrued payroll	29,994	46,650
Credit cards payable	36,690	49,045
Accrued interest and Other	13,293	10,803
Total	<u>\$ 147,947</u>	<u>\$ 187,046</u>

Note 6 – Stockholders' Equity

Authorized Capital

The Company is authorized to issue 45,000,000 shares of common stock, \$0.0001 par value per share, and 5,000,000 shares of preferred stock, \$0.0001 par value per share. The holders of the Company's common stock are entitled to one vote per share. No preferred shares have been issued through December 31, 2021.

Common Stock Transactions

In March 2021, the Company sold 1,251,625 shares of common stock at \$4.00 per share for gross proceeds of \$5,006,500 in connection with a private placement of securities. The costs associated with such issuance were \$407,445 in cash and warrants to purchase 89,730 shares of Common Stock of the Company with a term of 5 years and an exercise price of \$4.00 per share. An aggregate of \$480,000 of proceeds were raised from related parties (including an aggregate of \$430,000 from Alex Behfar's family member, Richard Brown, Richard Ogawa and James Shealy), representing approximately 10% of the total gross proceeds.

Note 7 – Equity Compensation Plan

On June 18, 2019, the Board of Directors and a majority of the Company's shareholders, respectively, approved the 2019 Equity Compensation Plan (the "2019 Plan"). Under the 2019 Plan, 1,326,000 shares of common stock of the Company were authorized for issuance. The 2019 Plan provides for the issuance of incentive stock options, non-statutory stock options, rights to purchase common stock, stock appreciation rights, restricted stock, performance shares and performance units to employees, directors and consultants of the Company and its affiliates. The 2019 Plan requires the exercise price of stock options to be not less than the fair value of the Company's common stock on the date of grant, or 110% of fair value in the case of incentive options granted to a ten-percent stockholder.

On March 11, 2020, the Company granted the following 10 ten-year options to purchase shares of common stock at an exercise price of \$1.50 per share to the Company's then newly appointed Executive Chairman and Acting Chief Executive Officer under the 2019 Plan: (i) an option to purchase 965,850 shares of common stock that vests ratably on a monthly basis over two years and (ii) an option to purchase 321,950 shares of common stock that vests based on performance criteria to be mutually agreed to by the Board and the executive. The grant was reduced to 500,000 options, including 375,000 options and 125,000 options respectively under the two categories, due to limitations under the 2019 Plan. The terms of the 125,000 performance-based options were established in the quarter ended December 31, 2020. The terms of the performance-based options were met during the quarter ended March 31, 2021.

On May 26, 2020, the Board of Directors and a majority of the Company's shareholders approved an amendment to the 2019 Plan to (i) increase the number of shares of common stock authorized for issuance under the 2019 Plan by 1,174,000 shares, such that a total of 2,500,000 shares of common stock are now authorized for issuance under the 2019 Plan; (ii) increase the maximum aggregate number of shares, options and/or other awards that may be granted to any one person during any calendar year from 500,000 to 1,300,000; and (iii) clarify the availability of cashless exercise as a form of consideration.

On July 16, 2020, the Company granted the following 10 ten-year options to purchase shares of common stock at an exercise price of \$1.50 per share to the Company's then Executive Chairman and Acting Chief Executive Officer under the 2019 Plan: (i) an option to purchase 600,000 shares of common stock that vests ratably on a monthly basis over one year and (ii) an option to purchase 200,000 shares of common stock that vests based on specified performance criteria.

On September 16, 2020, the Board of Directors and a majority of the Company's shareholders approved an amendment to the 2019 Plan to increase the number of shares of common stock authorized for issuance under the 2019 Plan from 2,500,000 shares to 4,600,000 shares.

On September 22, 2020, the Company granted a 10 ten-year option to purchase shares 1,637,410 shares of common stock at an exercise price of \$1.50 per share to the Company's then Chairman and Chief Executive Officer under the 2019 Plan that vests ratably on a monthly basis over two years commencing March 11, 2022.

From June 1 to June 22, 2021, the Company granted five and 10 ten-year options to purchase 388,246 shares of common stock at an exercise price of \$2.90 to \$3.93 per share to employees, an advisory board member and board members under the 2019 Plan that vest over two to five years.

On September 22, 2021, upon the resignation of our then Chief Executive Officer and Chairman, a total of 1,911,160 unvested options that he received on September 25, 2019, March 11, 2020, July 16, 2020 and September 22, 2020 were forfeited as of such date. On such date, the Company also provided the acceleration of 25,000 unvested stock options issued on September 25, 2019, which were to vest as of September 25, 2021. The impact of the modification of the stock option was not material.

On December 30, 2021, the Company granted five and 10 ten-year options to purchase 445,000 shares of common stock at an exercise price of \$1.77 per share to employees, an advisory board member and board members under the 2019 Plan that vest over one to four years.

The stock option activity from January 1, 2020 through December 31, 2021 is as follows:

	Shares	Weighted-Average Exercise Price per share	Weighted-Average Remaining Contractual Life (years)
Balance, January 1, 2020	590,000	\$ 1.5	7.8
Options granted (1)	2,937,410	1.5	9.5
Options exercised	(270,000)	1.5	—
Options converted	—	—	—
Options forfeited or expired	—	—	—
Balance, December 31, 2020	3,257,410	1.5	9.1
Options granted	833,246	2.7	6.7
Options exercised	(45,625)	1.5	—
Options converted	—	—	—
Options expired	(735,625)	1.5	—
Options forfeited	(1,911,160)	1.5	—
Balance, December 31, 2021	1,398,246	2.2	6.3
Vested shares at December 31, 2021	404,750	1.51	6.8

The following table summarizes the outstanding options at December 31, 2021 by exercise price.

Exercise price	Outstanding options	Exercisable options
\$ 1.50	565,000	392,667
\$ 1.77	388,246	0
\$ 3.93	445,000	12,083
	1,398,246	404,750

At December 31, 2021, the Company has 2,886,129 options available to grant under the 2019 Plan.

The Company has estimated the fair value of all stock option awards as of the date of grant by applying the Black-Scholes option-pricing model. In applying the Black-Scholes option pricing model, the Company used the following weighted average assumptions for 2021 and 2020 issuances:

	2021	2020
Risk-free interest rate	1.2%	0.62 - 1.75 %
Expected term	7.0 years	10 years
Expected volatility	91%	78%
Expected dividends	0	0.00%
Grant date fair value of common stock	\$ 1.91/share	\$ 1.50/share

During the year ended December 31, 2021, the Company recognized stock-based compensation expense related to stock options of approximately \$1,160,000 (\$1,043,000 of which was included within general and administrative expenses, \$77,000 of which was included in research and development expenses and \$40,000 of which was included within cost of revenues on the consolidated statements of operations). During the year ended December 31, 2020, the Company recognized stock-based compensation expense related to stock options of approximately \$623,000 (\$420,000 of which was included within general and administrative expenses, \$67,000 of which was included in research and development expenses, \$13,000 of which was included in deferred costs and \$123,000 of which was included within cost of revenues).

As of December 31, 2021, there was unamortized stock-based compensation of approximately \$1,600,000 which the Company expects to recognize over approximately 3.0 years. At December 31, 2021, the intrinsic value of outstanding and vested stock options was approximately \$304,000 and \$145,000, respectively.

Note 8 - Commitments and Contingencies

Litigations, Claims, and Assessments

From time to time, the Company is involved in various disputes, claims, liens and litigation matters arising out of the normal course of business which could result in a material adverse effect on the Company's combined financial position, results of operations or cash flows. Liabilities for loss contingencies arising from claims, assessments, litigation, fines and penalties and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated. As of December 31, 2021 and December 31, 2020, the Company had no outstanding claims or litigation and had no liabilities recorded for loss contingencies.

Operating Lease

On August 21, 2019, the Company entered into a lease for a 10,000 square foot facility consisting of lab and office space. The lease requires monthly payments of \$16,667 and expires on November 30, 2025. The Company has arranged for a \$100,000 letter of credit in favor of the landlord in lieu of a security deposit, which is included as restricted cash on the consolidated balance sheet as of December 31, 2021 and December 31, 2020.

The minimum lease payments for the years ending December 31 are approximately as follows: \$200,000 in each of 2022 through 2024 and \$183,000 in 2025.

Note 9 – Concentrations

During the year ended December 31, 2021, approximately 56% of revenues were generated from two government entities. Both of these contracts were completed as December 31, 2021. The remainder of the revenues were derived from four customers. At December 31, 2021, deferred costs and deferred revenues are attributable to one customer contract.

During the year ended December 31, 2020, substantially all revenues were generated from one customer pursuant to our contract with a governmental entity and amounted to approximately 85% of total revenues.

Note 10 – Government Loans

Paycheck Protection Program Loans

On May 1, 2020, the Company received loan proceeds in the amount of approximately \$211,000 under the Paycheck Protection Program (“PPP”). The PPP, established as part of the Coronavirus Aid, Relief and Economic Security Act, as amended (“CARES Act”), provides for loans to qualifying businesses for amounts up to 2.5 times of the average monthly payroll expenses of such qualifying business. The loans and accrued interest are forgivable after certain time periods further defined in the CARES Act (the “Covered Period”) as long as the borrower uses the loan proceeds for eligible purposes, including payroll, benefits, rent and utilities, and maintains its payroll levels. The amount of loan forgiveness will be reduced if the borrower terminates employees or reduces salaries during the Covered Period. The outstanding balance was included in long-term loans payable at December 31, 2020. On March 6, 2021, the entire loan balance was forgiven.

On February 24, 2021, the Company received \$193,625 pursuant to a promissory note issued under the Paycheck Protection Program Part 2 (“PPP2”). Interest was to accrue at 1% per annum and the note is payable in 60 monthly installments of \$3,300 commencing May 2022, however on November 15, 2021, the entire loan balance was forgiven.

Economic Injury Disaster Loan Advance

On May 1, 2020, the Company received an advance in the amount of \$10,000 from the U.S. Small Business Administration (“SBA”) under the Economic Injury Disaster Loan (“EIDL”) program administered by the SBA, which program was expanded pursuant to the CARES Act. Such advance amount will reduce the Company’s PPP loan forgiveness amount described above. The Company received an additional \$138,900 under this program on August 30, 2020. The loan is payable in monthly payments of \$678 including interest at 3.75% payable over 30 years.

Tomkins County Area Development Loan

On May 27, 2020, the Company received loan proceeds in the amount of \$50,000 from the Tomkins County Area Development (“TCAD”) Emergency Relief Loan Fund. The loan matures after four years and bears interest in the amount of 2.5% per annum, with one year of no interest or principal payments, followed by three years of monthly payments of principal and interest in the amount of \$1,443 per month. The loan is collateralized by certain assets of the Company. The outstanding balance is included in long term loans payable.

Equipment Loans

On August 20, 2020, the Company received a loan of \$100,000 from Broome County Industrial Development Agency (5 year facility, 2.5% annual interest rate, monthly payment of \$1,775); on September 1, 2020, the Company received a loan of \$100,000 from Southern Tier Region Economic Development Corporation (5 year facility, 5.0% annual interest rate, monthly payment of \$2,072) ; and on September 10, 2020, the Company received a loan of \$75,000 from TCAD (5 year facility, 2.5% annual interest rate, monthly payment of \$1,331). These loans were used to acquire equipment used in the laboratory, and are secured by the underlying assets of the Company.

The loans are summarized as follows:

	<u>December 31, 2021</u>	<u>December 31, 2020</u>
Principal outstanding	\$ 423,089	\$ 679,866
Deferred loan costs, net of amortization	(3,496)	(4,408)
Subtotal	<u>419,593</u>	<u>675,458</u>
Less current portion	(74,134)	(53,858)
Total long term portion	<u>\$ 345,459</u>	<u>\$ 621,600</u>

Interest expense on the above debt instruments was approximately \$16,300 and \$5,000 for the years ended December 31, 2021 and 2020, respectively.

	<u>December 31, 2021</u>
Payments expected for year ended	
2022	\$ 87,584
2023	87,584
2024	77,483
2025	58,728
2026	22,334
Thereafter	208,529
Subtotal	<u>542,242</u>
Less interest portion	<u>(119,153)</u>
Total debt balance	<u>\$ 423,089</u>

Note 11 – Income Taxes

The Company does not have any current income tax provision (other than state minimum income taxes, which is included in general and administrative expenses in the accompanying consolidated statements of operations) due to losses. The deferred tax benefit has been offset by an increase in the valuation allowance of approximately \$1,305,000 and \$545,000 for the years ended December 31, 2021 and 2020, respectively.

The provision for income taxes for the taxable periods ended December 31, 2021 and 2020 differs from the statutory federal income tax rate as follows:

	2021	2020
Tax benefit at the Federal statutory rate	21.0%	21.0%
State tax, net of Federal benefit	7.0%	6.6%
R&D credits	5.0%	—
Permanent differences	1.0%	9.5%
Change in valuation allowance	(34.0)%	(37.1)%
Effective income tax rate	<u>0%</u>	<u>0%</u>

Significant components of the Company's deferred tax assets at December 31, 2021 and 2020:

	December 31,	
	2021	2020
Deferred taxes assets:		
Net operating loss carryforward	\$ 1,365,000	\$ 526,000
Stock compensation expense	463,000	166,000
Depreciation	16,000	—
R&D Credit	<u>217,000</u>	<u>64,000</u>
Total deferred tax assets	2,061,000	756,000
Valuation allowance	<u>(2,061,000)</u>	<u>(756,000)</u>
Deferred tax asset, net of valuation allowance	\$ —	\$ —

The effective tax rate for the years ended December 31, 2021 and 2020 differed from the amounts computed by applying the US federal income tax rate of 21 % primarily because of the increase in the valuation allowance, which resulted in an effective tax rate of zero for both years.

At December 31, 2021, the Company had approximately \$4,900,000 of net operating loss (“NOL”) carryforwards that may be available to offset future Federal taxable income indefinitely and New York State taxable income through 2039. The utilization of NOL carryforwards to offset future taxable income may be subject to limitations under Section 382 of the Internal Revenue Code and similar state statutes as a result of ownership changes that could occur in the future. If necessary, the deferred tax assets will be reduced by any carryforward that expires prior to utilization as a result of such limitations, with a corresponding reduction of the valuation allowance.

The Company has assessed the likelihood that deferred tax assets will be realized in accordance with the provisions of ASC 740 *Income Taxes* (“ASC 740”). ASC 740 requires that such a review considers all available positive and negative evidence, including the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies. ASC 740 requires that a valuation allowance be established when it is “more likely than not” that all, or a portion of, deferred tax assets will not be realized. After the performance of such a review as of December 31, 2021 and 2020, management believes that uncertainty exists with respect to future realization of its deferred tax assets and has, therefore, established a full valuation allowance as of those dates.

Management has evaluated and concluded that there were no material uncertain tax positions requiring recognition in the Company's financial statements as of December 31, 2021 or 2020. The Company does not expect any significant changes in its unrecognized tax benefits within twelve months of the reporting date. No tax audits were commenced or were in process for the taxable periods ended December 31, 2021 and 2020. No tax related interest or penalties were incurred during the years ended December 31, 2021 and 2020.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending tax examinations. The Company's tax returns are open under statute from 2018 to the present.

Note 12 - Subsequent Events

The Company has evaluated events that have occurred after the balance sheet and through March 31, 2022. Based upon the evaluation, the Company did not identify any recognized or non-recognized subsequent events that would have required adjustment or disclosure in the financial statements, except as follows

In February 2022, the Company received a notification that it had been awarded a \$650,000 grant through the Empire State Development Grant Funds through the Southern Tier REDC. Funding of the grant is dependent on the Company maintaining capital expenditure and head count metrics specified in the grant award.

ITEM 9. CHANGES AND DISAGREEMENT WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) that are designed to be effective in providing reasonable assurance that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that such information is accumulated and communicated to our management to allow timely decisions regarding required disclosure.

In designing and evaluating disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute assurance of achieving the desired objectives. Also, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. The design of any system of controls is based, in part, upon certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of management, including our chief executive officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based upon that evaluation, management concluded that our disclosure controls and procedures were not effective as of December 31, 2021 to cause the information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods prescribed by SEC, and that such information is accumulated and communicated to management, including our chief executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Management’s Report on Internal Control Over Financial Reporting

As required by the SEC rules and regulations for the implementation of Section 404 of the Sarbanes-Oxley Act, our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our consolidated financial statements for external reporting purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that: (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the consolidated financial statements.

In making the assessments on the effectiveness of our internal controls over financial reporting as of December 31, 2021, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control — Integrated Framework (2013). A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that a reasonable possibility exists that a material misstatement of our annual or interim financial statements would not be prevented or detected on a timely basis. We are a small organization and do not have a Chief Financial or Accounting Officer. Based on our assessments and those criteria, management determined that our internal controls over financial reporting were not effective as of December 31, 2021.

This Report does not include an attestation report of the Company's registered public accounting firm regarding internal control over financial reporting. As an emerging growth company, management's report is not subject to attestation by our registered public accounting firm.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the most recent fiscal quarter, that have materially affected, or are 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

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

All directors of the Company hold office for one-year terms until the election and qualification of their successors. Officers are appointed by our Board and serve at the discretion of the board, subject to applicable employment agreements. The following table sets forth information regarding our executive officers and the members of our Board.

Name	Age	Position
Richard Brown	39	Interim Chief Executive Officer, Chief Technical Officer and Director
James Shealy	65	Secretary and Treasurer
John Edmunds	64	Chairman of the Board and Director
Richard Ogawa	59	Director
Michael Thompson	64	Director

Richard Brown joined the Company as Chief Executive Officer, Chairman and a Director on June 21, 2019. He resigned from the positions of Chief Executive Officer and Chairman, and was appointed as Chief Technical Officer of the Company as of March 11, 2020. He was appointed our Interim Chief Executive Officer on September 13, 2021. He received his B.S., M.S., and Ph.D. from Cornell University, all in Electrical and Computer Engineering in 2004, 2007, and 2010, respectively. His Ph.D. research was focused on advanced dielectrics for the passivation of microwave AlGaIn/GaN HEMTs. After graduation, he was a founding member of the company that became Avogy, Inc., where he worked on the development of vertical GaN power devices for 2 years. Prior to the founding of Odyssey Semiconductor, Inc., the wholly-owned subsidiary of the Company, he co-owned JR2J, LLC, a semiconductor device prototyping business, as well as working as a visiting scientist at Cornell University researching GaN based HEMTs. Mr. Brown has over 18 years of semiconductor device experience, most of it specializing in topics relating to GaN devices. We believe that Mr. Brown's technical experience in the semiconductor industry and extensive knowledge of the Company from his current role as our Interim Chief Executive Officer and Chief Technical Officer qualify him to serve on our board of directors.

James Shealy has been Secretary and Treasurer of the Company since June 21, 2019. He is a co-founder of the Odyssey Semiconductor, Inc., the wholly-owned subsidiary of the Company, and JR2J. He received his BS from North Carolina State University in 1978, his M.S. from Rensselaer Polytechnic in 1980, and his Ph.D. from Cornell University in 1983. After earning his doctorate, Mr. Shealy held a dual appointment at Cornell University as a research associate and at General Electric as a principal staff scientist. In 1983 he co-founded, and has chaired, the biennial international workshop on OMVPE (organometallic vapor phase epitaxy), a technique used for growing semiconductor crystals. He joined the faculty in 1987 and is active in developing Cornell's laboratory research in compound semiconductor materials and related graduate courses.

John Edmunds has been a Director and Chairman of the Audit Committee since June 22, 2021, and became Chairman of the Board since September 22, 2021. Mr. Edmunds served as Chief Financial Officer and Chief Accounting Officer of Inphi Corporation since January 2008. He previously served as Chief Financial Officer of Trident Microsystems, a semiconductor company, from June 2004 to January 2008. Mr. Edmunds also served as Senior Vice President and Chief Financial Officer for Oak Technology, Inc. from January 2000 until it was acquired by Zoran Corporation in August 2003. He continued to serve as Vice President of Finance for Zoran until June 2004. Mr. Edmunds started his career as a C.P.A. with Coopers & Lybrand in San Francisco and San Jose in 1980s. He holds a B.S. degree in finance and accounting from the University of California, Berkeley. We believe that Mr. Edmunds' financial experience qualifies him to be Chairman of our Audit Committee and that his financial and technical experience in the semiconductor industry and his leadership roles in other technology companies qualify him to serve on our board of directors. Since September 2001, Mr. Edmunds has also been serving as the interim part-time Chief Financial Officer of Mythic Inc., a late stage private artificial intelligence semiconductor company called in Redwood City, California.

Richard Ogawa joined the Board of Directors of the Company on June 21, 2019 and joined our Audit Committee on June 22, 2021. Mr. Ogawa currently also serves on the board of directors of Amesite Inc., an SEC reporting company in the artificial intelligence software industry, since February 2018. He has been General Counsel at Inphi Corporation since Jan 2013, responsible for overseeing legal matters as well as corporate, intellectual property, and government affairs. Mr. Ogawa is a Registered United States Patent Attorney and a Member of the California State Bar with more than 25 years of experience specializing in technology companies. Prior to Inphi, from January 1993 to January 2010, he was a Partner at Townsend and Townsend and Crew, a law firm focused on intellectual property. He is the founder and owner of Ogawa Professional Corporation, his own law firm, focusing on startup companies. Since February 2008, he has been General Counsel for Sora Laser Diode, Inc., a venture funded company by Khosla Ventures and acquired by Kyocera Corporation in 2022, and since December 2009 has been General Counsel for MCube, Inc., a venture funded company by Kleiner Perkins Caufield & Byers. He also held a variety of engineering and management positions at NEC Electronics from December 1984 to December 1992. He received a B.S. in Chemical Engineering from the University of California, Davis in 1984, and a J.D. from McGeorge School of Law, University of the Pacific in 1991. We believe that Mr. Ogawa's many years of legal expertise in technology companies qualifies him to serve on our board of directors and Audit Committee.

Michael Thompson joined the Board of Directors of the Company on June 21, 2019. He received his B.S. in Applied Physics from CalTech in 1979 and M.S./Ph.D. degrees in Applied and Engineering Physics from Cornell in 1984. After completing his Ph.D, he joined the faculty in the Department of Materials Science at Cornell University continuing his work on the interaction of materials with intense laser sources. He has co-authored over 100 journal publications, is co-inventor on 25 patents, and has founded or co-founded three startup companies. He was the recipient of the 2009 SEMI Award for technical contributions to the semiconductor industry. For the past 28 years, Dr. Thompson's research has focused extensively on the behavior of semiconductor materials under pulsed and continuous-wave laser exposure. In the late 1990's, he was involved in the development of melt-annealing methods to fabricate thin-film transistors on glass and flexible substrates. Over the past decade, he helped to develop the use of CW lasers for non-melt laser annealing (LSA – Laser Spike Annealing) of ultra-shallow junctions in advanced VLSI nodes. His group currently is active in exploring new applications for LSA both within and beyond the microelectronics community. Areas of research include dopant activation and deactivation in compound semiconductors (InGaAs, GaN, GaO₂), thin-film amorphous oxide semiconductors (IGZO), metastable phase formation in metallic glasses and complex oxides during LSA quench, mesoscale structuring of organic and inorganic materials in the millisecond timescale, and development of novel processes for EUV and DSA lithography. He is also currently the director of the ACCESS (AFRL Cornell Center for Epitaxial SolutionS) center focused on understanding fundamental materials issues in GaO₂ power devices. We believe that Mr. Thompson's extensive technical experience in the semiconductor industry qualifies him to serve on our board of directors.

Advisory Board Member

Name	Age	Position
Khurram Khan Afridi	55	Advisory Board Member

Khurram Khan Afridi was appointed as an Advisory Board Member of the Company as of June 7, 2021. Mr. Afridi is an Associate Professor of Electrical and Computer Engineering at Cornell University. He received a Bachelor of Science degree in electrical engineering from California Institute of Technology (1989), and Master of Science (1992) and PhD (1998) degrees in electrical engineering and computer science from Massachusetts Institute of Technology (MIT). His research interests are in power electronics and energy systems incorporating power electronic controls. Prior to joining Cornell, he was an Assistant Professor and the Goh Faculty Fellow at the University of Colorado (CU) Boulder (2014-2018), a visiting faculty at MIT's EECS Department (2009-2014), and the Chief Operating Officer (2000-2010) and Chief Technology Officer (1997-2000) of Techlogix, Inc.. From 2004 to 2008 he led the development of LUMS School of Science and Engineering (SSE) as Project Director. He has also worked for the NASA Jet Propulsion Laboratory, Lutron Electronics Co., Koninklijke Philips N.V (Philips), and Schlumberger Limited. He is an associate editor of the IEEE Journal of Emerging and Selected Topics in Power Electronics, and was the Technical Program Committee (TPC) chair for the IEEE Wireless Power Transfer Conference (WPTC) in 2015. He received the Carnation Merit Award from Caltech (1988), the BMW Scientific Award from BMW AG (1999), the Werner-von-Siemens Chair for Power Electronics from LUMS SSE (2008), the Dean's Professional Progress Award from CU Boulder (2015), the ECEE Department Outstanding Overall Performance Award from CU Boulder (2016), and the National Science Foundation CAREER Award from NSF (2016). He is co-author of five IEEE prize papers.

Significant Employee

In addition to the officers, directors and an advisory board member disclosed above, the Company also has the following significant employee:

Name	Age	Position
Alfred Schremer	64	Vice President of Research and Development

Alfred Schremer has 40 years of experience working in the field III-V semiconductors with applications in RF- and opto-electronics. He earned his PhD in Electrical Engineering from Cornell University, investigating various aspects of semiconductor laser physics, using lasers he fabricated from epitaxial materials he grew using facilities within the School of Electrical Engineering. He joined BinOptics Corporation at its inception in 2001, serving in various roles from Lab Manager to Director of Research, refining the etched facet laser processes which led to the enabling of low-cost wafer scale manufacturing of Fabry-Perot and distributed feedback lasers for the data and telecom markets. In December 2014, BinOptics was acquired by MACOM Technology Solutions Inc., where Mr. Schremer served as a Director of Engineering, supporting manufacturing and development of etched facet lasers.

Employment and Consulting Agreements

On July 1, 2019, through its wholly-owned subsidiary, Odyssey Semiconductor, the Company entered into an agreement with Al Schremer as Vice President of Research and Development. Pursuant to the agreement, the Company agreed to pay Mr. Schremer an annual salary of \$100,000 and a one-time grant of options to purchase 100,000 shares of the Company's Common Stock.

Other than Al Schremer, we have not entered into any other employment agreement with our management or significant employees.

On April 1, 2019, JR2J, our indirect wholly-owned subsidiary, entered into a one-year independent contractor agreement with Richard Ogawa, pursuant to which Mr. Ogawa agreed to serve as a director of the Company post-Share Exchange, and provide services related to intellectual property development, intellectual property strategies and licensing of intellectual property. This Agreement automatically renews for additional terms of one-year unless terminated in accordance with the Agreement. In consideration for Mr. Ogawa's services to the Company, on September 25, 2019, the Company granted Mr. Ogawa a 10-year option under the 2019 Plan to purchase 275,000 shares of Common Stock at a price of \$1.50 per share, half of which vested on September 25, 2020 and the balance of which vested on September 25, 2021.

On May 16, 2019, Odyssey Semiconductor, our wholly-owned subsidiary, entered into a one-year independent contractor agreement with Alex Behfar, pursuant to which Mr. Behfar agreed to serve as a director of the Company post-Share Exchange, and provide services related to corporate development and business strategy, and intellectual property strategies. In consideration for Mr. Behfar's services to the Company, on September 25, 2019, the Company granted Mr. Behfar a 10-year option under the 2019 Plan to purchase 50,000 shares of Common Stock at a price of \$1.50 per share, half of which vested on September 25, 2020 and the balance of which vested on September 22, 2021. Mr. Behar was appointed Chief Executive Officer on September 16, 2020. Mr. Behfar tendered his resignation as Chief Executive Officer, Chairman of the Board of Directors and Director of the Company, effective as of September 22, 2021.

On June 7, 2021, Khurram Khan Afridi was appointed as an Advisory Board Member to bring his extensive expertise in power systems to the Company and work with the Company in setting up the expectations from customers in areas such as electric vehicles and solar energy. Mr. Afridi agreed to be at the facility of the Company for one hour per week. In connection with such appointment, Mr. Afridi was granted 10-year options to purchase 50,000 shares of Common Stock at a price of \$3.55 per share.

In connection with John Edmunds's appointment as a Director and Chairman of Audit Committee of the Company on June 22, 2021, the Company agreed to pay Mr. Edmunds (i) an annual cash compensation of \$20,000; (ii) a one-time grant on June 22, 2021 of non-qualified stock options under the Company 2019 Equity Compensation Plan to purchase 70,246 shares of Common Stock of the Company at \$2.90 per share; (iii) an annual grant of non-qualified stock options under the 2019 Plan to purchase a number of shares of common stock of the Corporation that have a value of \$60,000, calculated using the fair market value of Common Stock of the Company as determined by the Board as of the date of grant, with an exercise price equal to the closing bid price of Common Stock of the Company as of the date of grant; provided that Mr. Edmunds shall have served on the Board for at least six months prior to the date of grant; and (iv) reimbursement for reasonable out-of-pocket costs and travel expenses in connection with his attendance at meetings of the Board and Audit Committee.

Involvement in Certain Legal Proceedings

To our knowledge, during the past ten years, none of our directors, executive officers, promoters, control persons, or nominees has:

- been convicted in a criminal proceeding or been subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);
- had any bankruptcy petition filed by or against the business or property of the person, or of any partnership, corporation or business association of which he was a general partner or executive officer, either at the time of the bankruptcy filing or within two years prior to that time;
- been subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction or federal or state authority, permanently or temporarily enjoining, barring, suspending or otherwise limiting, his involvement in any type of business, securities, futures, commodities, investment, banking, savings and loan, or insurance activities, or to be associated with persons engaged in any such activity;
- been found by a court of competent jurisdiction in a civil action or by the SEC or the Commodity Futures Trading Commission to have violated a federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated;
- been the subject of, or a party to, any federal or state judicial or administrative order, judgment, decree, or finding, not subsequently reversed, suspended or vacated (not including any settlement of a civil proceeding among private litigants), relating to an alleged violation of any federal or state securities or commodities law or regulation, any law or regulation respecting financial institutions or insurance companies including, but not limited to, a temporary or permanent injunction, order of disgorgement or restitution, civil money penalty or temporary or permanent cease-and-desist order, or removal or prohibition order, or any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity; or
- been the subject of, or a party to, any sanction or order, not subsequently reversed, suspended or vacated, of any self-regulatory organization (as defined in Section 3(a)(26) of the Exchange Act), any registered entity (as defined in Section 1(a)(29) of the Commodity Exchange Act), or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member.

Board Committees

Our board has established an audit committee with its own charter approved by the board. The board has also approved the establishment of a compensation committee and a nominating and corporate governance committee, each with its own charter approved by the board, to be effective as of the effective date of a Registration Statement on Form S-1 filed by the Company on February 11, 2022 (File No. 333-262640) (the “2022 Registration Statement”). The committee charters have been filed as exhibits to the 2022 Registration Statement. We intend to make each committee’s charter available on our website at <https://www.odysseyssemi.com/>.

In addition, our board of directors may, from time to time, designate one or more additional committees, which shall have the duties and powers granted to it by our board of directors.

Audit Committee

John Edmunds and Michael Thompson, each of whom satisfies the “independence” requirements of Rule 10A-3 under the Exchange Act. Mr. Edmunds currently serves on our audit committee as a member and the chairman. The board has also approved the appointment of Mr. Thompson on our audit committee, to be effective as of the effective date of the 2022 Registration Statement. Our board has determined that Mr. Edmunds qualifies as an “audit committee financial expert.” The audit committee oversees our accounting and financial reporting processes and the audits of the financial statements of our company.

The audit committee is responsible for, among other things: (i) retaining and overseeing our independent accountants; (ii) assisting the board in its oversight of the integrity of our financial statements, the qualifications, independence and performance of our independent auditors and our compliance with legal and regulatory requirements; (iii) reviewing and approving the plan and scope of the internal and external audit; (iv) pre-approving any audit and non-audit services provided by our independent auditors; (v) approving the fees to be paid to our independent auditors; (vi) reviewing with our chief executive officer and principal financial officer and independent auditors the adequacy and effectiveness of our internal controls; (vii) reviewing hedging transactions; and (viii) reviewing and assessing annually the audit committee’s performance and the adequacy of its charter.

Compensation Committee

John Edmunds and Michael Thompson, each of whom satisfies the “independence” requirements of Rule 10C-1 under the Exchange Act, will serve on our compensation committee to be effective as of the effective date of the 2022 Registration Statement, with Mr. Edmunds serving as the chairman. The members of the compensation committee are also “outside directors” as defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, and “non-employee directors” within the meaning of Section 16 of the Exchange Act. The compensation committee assists the board in reviewing and approving the compensation structure, including all forms of compensation, relating to our directors and executive officers.

The compensation committee is responsible for, among other things: (i) reviewing and approving the remuneration of our executive officers; (ii) making recommendations to the board regarding the compensation of our independent directors; (iii) making recommendations to the board regarding equity-based and incentive compensation plans, policies and programs; and (iv) reviewing and assessing annually the compensation committee’s performance and the adequacy of its charter.

The charter of the compensation committee has been adopted by the board, to be effective as of the effective date of the 2022 Registration Statement.

Nominating and Corporate Governance Committee

Richard Ogawa and John Edmunds, each of whom satisfies the “independence” requirements, will serve on our nominating and corporate governance committee to be effective as of the effective date of the 2022 Registration Statement, with Mr. Ogawa serving as the chairman. The nominating and corporate governance committee assists the board of directors in selecting individuals qualified to become our directors and in determining the composition of the board and its committees.

The nominating and corporate governance committee will be responsible for, among other things: (i) identifying and evaluating individuals qualified to become members of the board by reviewing nominees for election to the board submitted by shareholders and recommending to the board director nominees for each annual meeting of shareholders and for election to fill any vacancies on the board; (ii) advising the board with respect to board organization, desired qualifications of board members, the membership, function, operation, structure and composition of committees (including any committee authority to delegate to subcommittees), and self-evaluation and policies; (iii) advising on matters relating to corporate governance and monitoring developments in the law and practice of corporate governance; (iv) overseeing compliance with the our code of business conduct; and (v) approving any related party transactions.

The charter of the nominating and corporate governance committee has been adopted by the board, to be effective as of the effective date of the 2022 Registration Statement.

The nominating and corporate governance committee’s methods for identifying candidates for election to our board of directors (other than those proposed by our shareholders, as discussed below) will include the solicitation of ideas for possible candidates from a number of sources - members of our board of directors, our executives, individuals personally known to the members of our board of directors, and other research. The nominating and corporate governance committee may also, from time-to-time, retain one or more third-party search firms to identify suitable candidates.

In making director recommendations, the nominating and corporate governance committee may consider some or all of the following factors: (i) the candidate’s judgment, skill, experience with other organizations of comparable purpose, complexity and size, and subject to similar legal restrictions and oversight; (ii) the interplay of the candidate’s experience with the experience of other board members; (iii) the extent to which the candidate would be a desirable addition to the board and any committee thereof; (iv) whether or not the person has any relationships that might impair his or her independence; and (v) the candidate’s ability to contribute to the effective management of our company, taking into account the needs of our company and such factors as the individual’s experience, perspective, skills and knowledge of the industry in which we operate.

A shareholder may nominate one or more persons for election as a director at an annual meeting of shareholders if the shareholder complies with the notice and information provisions contained in our bylaws. Such notice must be in writing to our Company not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one-hundred-twentieth (120th) day prior to the first anniversary of the preceding year’s annual meeting; provided, however, that in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year’s annual meeting, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made or as otherwise required by the Exchange Act. In addition, shareholders furnishing such notice must be a holder of record on both (i) the date of delivering such notice and (ii) the record date for the determination of shareholders entitled to vote at such meeting.

Code of Business Conduct and Ethics

We have adopted a code of business conduct that applies to all of our directors, officers and employees. Such code of business conduct addresses, among other things, honesty and ethical conduct, conflicts of interest, compliance with laws, regulations and policies, including disclosure requirements under the federal securities laws, and reporting of violations of the code.

A copy of the code of business conduct has been filed as an exhibit to the 2022 Registration Statement. We are required to disclose any amendment to, or waiver from, a provision of our code of business conduct applicable to our principal executive officer, principal financial officer, principal accounting officer, controller, or persons performing similar functions. We intend to use our website as a method of disseminating this disclosure as well as by SEC filings, as permitted or required by applicable SEC rules. Any such disclosure will be posted to our website within four (4) business days following the date of any such amendment to, or waiver from, a provision of our code of business conduct.

Limitation of Directors Liability and Indemnification

The Company is a corporation organized under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a corporation may indemnify any person who was or is a party or is threatened to be made a party to an action by reason of the fact that he or she was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action if he or she acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of an action by or in right of the corporation, no indemnification may generally be made in respect of any claim as to which such person is adjudged to be liable to the corporation. The Company's Bylaws provide that it will indemnify its directors and officers against expenses actually and necessarily incurred in connection with the defense of any action, suit, or proceeding in which they, or any of them, were made parties, or a party, by reason of being or having been directors or officers or a director or officer of the Company, or of such other corporation, except in relation to matters as to which any such director or officer or person shall have been adjudged in such action, suit, or proceeding to be liable for negligence or misconduct in the performance of any duty owed to the Company.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any: (i) breach of a director's duty of loyalty to the corporation or its stockholders; (ii) act or omission not in good faith or that involves intentional misconduct or a knowing violation of law; (iii) unlawful payment of dividends or redemption of shares; or (iv) transaction from which the director derives an improper personal benefit. The Company's Certificate of Incorporation provides that its directors are not personally liable to the Company or its stockholders for monetary damages for breaches of fiduciary duties to the fullest extent permitted by the Delaware General Corporation Law. These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Section 145(g) of the Delaware General Corporation Law permits a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation. At present, the Company has purchased director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us for up to \$2 million.

Indemnification Agreements

The Company has not entered into any indemnity agreements with its officers or directors. There is no pending litigation or proceeding involving any of our directors, officers, employees or agents in which indemnification will be required or permitted. We are not aware of any threatened litigation or proceeding that may result in a claim for such indemnification.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following table presents information regarding the total compensation awarded to, earned by, or paid to our chief executive officer and the other most highly-compensated executive officers (other than the chief executive officer) who were serving as executive officers during the years ended December 31, 2021 and 2020.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$)(3)	Non-equity incentive plan compensation (\$)	Nonqualified deferred compensation earnings (\$)	All Other Compensation (\$)	Total (\$)
Alex Behfar (1) <i>Former Chairman and Former Chief Executive Officer</i>	2021	10	0	0	0	0	0	20
	2020	10	0	4,406,125	0	0	0	4,406,125
Richard J. Brown (2) <i>Interim Chief Executive Officer and Chief Technical Officer</i>	2021	150,000	0	137,295	0	0	0	287,295
	2020	150,000	0	0	0	0	0	150,000
James R. Shealy <i>Secretary and Treasurer</i>	2021	60,000	0	109,836	0	0	0	169,836
	2020	55,625	0	0	0	0	0	55,625

- (1) Mr. Behfar was appointed as the Company's Acting Chief Executive Officer and Executive Chairman on March 11, 2020, and as Chief Executive Officer and Chairman on September 16, 2020. Mr. Behfar tendered his resignation as Chief Executive Officer, Chairman of the Board of Directors and Director of the Company, effective as of September 22, 2021. This table includes compensation paid to Mr. Behfar from January 1, 2020 to March 11, 2020 as a non-employee director, and for the remainder of 2020 as an executive officer and director. Mr. Behfar received \$10.00 cash compensation earned in 2020. Starting January 1, 2021 until his resignation on September 22, 2021, he received a cash compensation of \$1.00 per month.
- (2) Mr. Brown was Chief Executive Officer and Chairman of the Company from June 21, 2019 to March 11, 2020, Chief Technical Officer since March 11, 2020, and also Interim Chief Executive Officer since September 13, 2021.
- (3) The amounts reported in the "Option Awards" column reflect the aggregate fair value of stock-based compensation awarded during the year computed in accordance with the provisions of FASB ASC Topic 718.

Employment and Consulting Agreements

See "Part III. Item 10. Directors, Executive Officers and Corporate Governance - Employment and Consulting Agreements" at pages 41-42.

Outstanding Equity Awards

The following table presents information regarding the outstanding options held by each of our directors and named executive officers as of December 31, 2021. None of our directors or named executive officers held any outstanding restricted stock unit or other equity awards as of December 31, 2021.

Option Awards					
Number of Securities					
Underlying Unexercised Options					
Name	Grant Date	Exercisable (#)	Unexercisable (#)	Exercise price (\$)	Expiration Date
Richard Ogawa	9/25/2019	275,000		\$ 1.50	9/25/2029
Michael Thompson	11/5/2019	25,000		\$ 1.50	11/5/2029
James Shealy	11/5/2019	11,583	18,417	\$ 1.50	11/5/2024
Richard Ogawa	5/30/2021	—	50,000	\$ 3.93	5/30/2031
Michael Thompson	5/30/2021	—	50,000	\$ 3.93	5/30/2031
John Edmunds	6/16/2021	—	70,246	\$ 2.90	6/16/2031
Richard Ogawa	12/30/2021	2,500	17,500	\$ 1.77	12/30/2031
Michael Thompson	12/30/2021	2,500	17,500	\$ 1.77	12/30/2031
John Edmunds	12/30/2021	2,500	17,500	\$ 1.77	12/30/2031
Richard Ogawa	12/30/2021	2,917	32,083	\$ 1.77	12/30/2031
John Edmunds	12/30/2021	1,667	18,333	\$ 1.77	12/30/2031
Richard Brown	12/30/2021	—	100,000	\$ 1.77	12/30/2026
James Shealy	12/30/2021	—	80,000	\$ 1.77	12/30/2026
total		323,667	471,579		

2019 Equity Compensation Plan

General

On June 18, 2019, our Board of Directors adopted an Equity Compensation Plan (the “2019 Plan”). The 2019 Plan was approved by the stockholders on the same day. On May 26, 2020, the Board of Directors and a majority of the Company’s shareholders approved an amendment to the 2019 Plan to (i) increase the number of shares of Common Stock authorized for issuance under the 2019 Plan from 1,326,000 to 2,500,000 shares; (ii) increase the maximum aggregate number of shares, options and/or other awards that may be granted to any one person during any calendar year from 500,000 to 1,300,000; and (iii) clarify the availability of cashless exercise as a form of consideration. On September 16, 2020, the Board of Directors and a majority of the Company’s shareholders approved the second amendment to the 2019 Plan to (i) increase the number of shares of Common Stock authorized for issuance under the 2019 Plan from 2,500,000 to 4,600,000; (ii) increase the maximum aggregate number of shares, options and/or other awards that may be granted to any one person during any calendar year from 1,300,000 to 2,950,000. On February 9, 2022, subject to the shareholders’ approval, our Board of Directors approved that the aggregate number of shares authorized for issuance as awards under the 2019 Plan shall be 4,600,000 shares plus an annual increase on the first day of each fiscal year for the rest of the term of the Plan in an amount equal to the lesser of (i) 5% of the outstanding shares of common stock of the Company on the last day of the immediately preceding year or (iii) an amount determined by the Board.

As of the date hereof, a total of 4,360,656 options have been granted under the 2019 Plan, of which 1,398,246 options are outstanding, 315,625 options have been exercised. There are 2,886,129 shares available to be issued in the future under the 2019 Plan.

The general purpose of the 2019 Plan is to provide an incentive to our employees, directors, consultants and advisors by enabling them to share in the future growth of our business. Our Board of Directors believes that the granting of stock options, restricted stock awards, unrestricted stock awards and similar kinds of equity-based compensation promotes continuity of management and increases incentive and personal interest in the welfare of our Company by those who are primarily responsible for shaping and carrying out our long range plans and securing our growth and financial success.

Our Board of Directors believes that the 2019 Plan will advance our interests by enhancing our ability to (a) attract and retain employees, consultants, directors and advisors who are in a position to make significant contributions to our success; (b) reward our employees, consultants, directors and advisors for these contributions; and (c) encourage employees, consultants, directors and advisors to take into account our long-term interests through ownership of our shares.

Description of the 2019 Equity Compensation Plan

The following description of the principal terms of the 2019 Plan, as amended, is a summary and is qualified in its entirety by the full text of the amended 2019 Plan, which was filed as an exhibit to our Annual Report on Form 10-K for the year ended December 31, 2020 filed on April 8, 2021.

Administration. The 2019 Plan will be administered by our Board of Directors. Our Board of Directors may grant options to purchase shares of our Common Stock, stock appreciation rights, restricted stock units, restricted or unrestricted shares of our Common Stock, performance shares, performance units, other cash-based awards and other stock-based awards. The Board of Directors also has broad authority to determine the terms and conditions of each option or other kind of equity award, adopt, amend and rescind rules and regulations for the administration of the 2019 Plan and amend or modify outstanding options, grants and awards.

Eligibility. Persons eligible to receive options, stock appreciation rights or other awards under the 2019 Plan are employees, consultants, advisors and directors of our Company and our subsidiaries. As of the date hereof, 12 full-time employees, one part-time employee, and two non-employee directors are eligible to participate in the 2019 Plan. The Board of Directors may at any time and from time to time grant awards under the 2019 Plan to eligible persons on a discretionary basis.

Shares Subject to the 2019 Plan. The aggregate number of shares of Common Stock available for issuance in connection with options and awards granted under the 2019 Plan, as amended, is 4,600,000, subject to customary adjustments for stock splits, stock dividends or similar transactions. Incentive Stock Options may be granted under the 2019 Plan with respect to all of those shares. If any option or stock appreciation right granted under the 2019 Plan terminates without having been exercised in full or if any award is forfeited, or if shares of Common Stock are withheld to cover withholding taxes on options or other awards, the number of shares of Common Stock as to which such option or award was forfeited, or which were withheld, will be available for future grants under the 2019 Plan. The maximum aggregate number of shares of Common Stock with respect to one or more awards that may be granted to any employee, director or consultant during any calendar year shall be 2,950,000 and the maximum aggregate amount of cash that may be paid in cash during any calendar year with respect to one or more awards payable in cash shall be \$200,000.

Terms and Conditions of Options. Options granted under the 2019 Plan may be either “incentive stock options” that are intended to meet the requirements of Section 422 of the Internal Revenue Code of 1986, as amended (the “Code”) or “nonstatutory stock options” that do not meet the requirements of Section 422 of the Code. Incentive stock options may be granted only to employees. Each option grant will be evidenced by an award agreement that will specify the terms and conditions as determined by the Board of Directors. The Board of Directors will determine the exercise price of options granted under the 2019 Plan. The exercise price of stock options may not be less than the fair market value, on the date of grant, per share of our Common Stock issuable upon exercise of the option (or 110% of fair market value in the case of incentive options granted to a ten-percent stockholder).

If on the date of grant the Common Stock is listed on a stock exchange, the fair market value shall generally be the closing sale price on the last trading day before the date of grant. If no such prices are available, the fair market value shall be determined in good faith by the Board of Directors based on the advice of a qualified valuation expert.

No option may be exercisable for more than ten years (five years in the case of an incentive stock option granted to a ten-percent stockholder) from the date of grant. Options granted under the 2019 Plan will be exercisable at such time or times as the Board of Directors prescribes at the time of grant. No employee may receive incentive stock options that first become exercisable in any calendar year in an amount exceeding \$100,000.

Generally, the option price may be paid (a) in cash or by bank check, (b) through delivery of shares of our Common Stock having a fair market value equal to the purchase price, (c) through cashless exercise, or (d) a combination of these methods.

No option may be transferred other than by will or by the laws of descent and distribution, and during a recipient’s lifetime an option may be exercised only by the recipient. Options granted under the 2019 Plan will be exercisable at such time or times as the Board of Directors prescribes at the time of grant. No employee may receive incentive stock options that first become exercisable in any calendar year in an amount exceeding \$100,000.

Stock Appreciation Rights. The Board of Directors may grant stock appreciation rights under the 2019 Plan in such amounts as the Board of Directors in its sole discretion will determine. Each stock appreciation right grant will be evidenced by an award agreement that will specify the terms and conditions as determined by the Board of Directors. The exercise price per share of a stock appreciation right will be determined by the Board of Directors, but will not be less than 100% of the fair market value of a share of our Common Stock on the date of grant. The maximum term of any SAR granted under the 2019 Plan is ten years from the date of grant. Generally, each SAR stock appreciation right will entitle a participant upon exercise to an amount equal to:

- the excess of the fair market value on the exercise date of one share of our Common Stock over the exercise price, *multiplied by*
- the number of shares of Common Stock covered by the stock appreciation right.

Payment may be made in shares of our Common Stock, in cash, or partly in Common Stock and partly in cash, all as determined by the Board of Directors.

Restricted Stock and Restricted Stock Units. The Board of Directors may award restricted common stock and/or restricted stock units under the 2019 Plan in such amounts as the Board of Directors in its sole discretion will determine. The Board of Directors will determine the restrictions and conditions applicable to each award of restricted stock or restricted stock units, as evidenced in an award agreement, which may include performance-based conditions. Dividends and other distributions with respect to restricted stock may be paid to the holder of the shares as and when dividends are paid to stockholders, unless otherwise provided in the award agreement. Unless the Board of Directors determines otherwise, holders of restricted stock will have the right to vote the shares.

Performance Shares and Performance Units. The Board of Directors may award performance shares and/or performance units under the 2019 Plan in such amounts as the Board of Directors in its sole discretion will determine. Each performance unit will have an initial value that is established by the Board of Directors on or before the date of grant. Each performance share will have an initial value equal to the fair market value of a share on the date of grant. The Board of Directors at its discretion will set performance objectives or other vesting provisions. The Board of Directors will determine the restrictions and conditions applicable to each award of performance shares and performance units, as evidenced in an award agreement.

Effect of Certain Corporate Transactions. In the event of a change in control (as defined in the 2019 Plan), the Board of Directors has the discretion and without the need for the consent of any recipient of an award to take the following actions as to an outstanding award: (i) awards will be assumed, or substantially equivalent awards will be substituted, by the acquiring or succeeding corporation; (ii) awards will terminate upon or immediately prior to the consummation of such change in control; (iii) outstanding awards will vest and become exercisable, or restrictions applicable to an award will lapse, in whole or in part prior to or upon consummation of such change in control, and terminate upon or immediately prior to the effectiveness of such change in control; (iv) an award is terminated in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of such award; (v) an award is replaced with other rights or property selected by the Board of Directors in its sole discretion; or (vi) any combination of the foregoing.

Amendment, Termination. The Board of Directors may at any time amend, alter, amend the terms of awards in any manner not inconsistent with the 2019 Plan, provided that no amendment shall adversely affect the rights of a participant with respect to an outstanding award without the participant's consent. In addition, our board of directors may at any time amend, suspend, or terminate the 2019 Plan, provided that (i) no such amendment, suspension or termination shall materially and adversely affect the rights of any participant under any outstanding award without the consent of such participant and (ii) to the extent necessary to comply with any applicable law or stock exchange rule, the Company will obtain stockholder consent of amendment to the plan.

Tax Withholding

As and when appropriate, we have the right to require each optionee purchasing shares of Common Stock and each grantee receiving an award of shares of Common Stock under the 2019 Plan to pay any federal, state or local taxes required by law to be withheld.

Option Grants and Stock Awards

The grant of options and other awards under the 2019 Plan is discretionary, and we cannot determine now the specific number or type of options or awards to be granted in the future to any particular person or group.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth the number of shares of Common Stock beneficially owned as of the date hereof by:

- each of each of our named executive officers;
- each of our directors;
- all of our directors and current executive officers as a group; and
- each of our stockholders who is known by us to beneficially own more than 5% of our Common Stock.

Beneficial ownership is determined based on the rules and regulations of the Commission. A person has beneficial ownership of shares if such individual has the power to vote and/or dispose of shares. This power may be sole or shared and direct or indirect. Applicable percentage ownership in the following table is based on the total of 12,726,911 shares of Common Stock issued and outstanding as of the date hereof. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, shares of Common Stock that are subject to options or warrants held by that person and exercisable as of March 31, 2022. These shares, however, are not counted as outstanding for the purposes of computing the percentage ownership of any other person(s). Except as may be indicated in the footnotes to this table and pursuant to applicable community property laws, each person named in the table has sole voting and dispositive power with respect to the shares of Common Stock set forth opposite that person's name. Unless indicated below, the address of each individual listed below is c/o Odyssey Semiconductor Technologies, Inc., 9 Brown Road, Ithaca, NY 14850.

Name and Address of Beneficial Owner	Common Stock Beneficially Owned ⁽¹⁾	
	Amount and Nature of Beneficial Ownership	Percent of class
Richard J. Brown, Interim Chief Executive Officer, Chief Technical Officer and Director	2,731,251(1)	21.46%
James R. Shealy, Secretary and Treasurer	2,743,750(2)	21.56%
John Edmunds, Chairman of the Board and Director	142,085(3)	1.11%
Richard Ogawa, Director	328,335(4)	2.52%
Michael Thompson, Director	30,000(5)	*
All Executive Officers and Directors (5 persons)	5,975,421	46.95%
Greater than 5% Stockholders		
Mark Tompkins	2,816,033(6)	22.13%

* Less than 1%.

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- (1) Includes (i) 2,658,334 shares of Common Stock issued in connection with the Share Exchange; (ii) 66,667 shares of Common Stock purchased at a private placement in June 2019; and (iii) 6,250 shares of Common Stock purchased at a private placement in March 2021.
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- (2) Includes (i) 2,658,333 shares of Common Stock issued in connection with the Share Exchange; (ii) 66,667 shares of Common Stock purchased at a private placement in June 2019; and (iii) 18,750 shares of Common Stock purchased at a private placement in March 2021.
-
- (3) Includes (i) 125,000 shares of Common Stock purchased on the open market in October 2021; (ii) options exercisable within 60 days to purchase an aggregate of 5,000 shares of Common Stock at the price of \$1.77 per share; and (iii) options exercisable within 60 days to purchase an aggregate of 6,667 shares of Common Stock at the price of \$1.77 per share. In addition, Mr. Edmunds also owns the following: (i) options to purchase 70,246 shares of Common Stock at the price of \$2.90 per share, which will vest over 4 years in equal annual installments starting from June 22, 2022; (ii) options to purchase 15,000 shares of Common Stock at the price of \$1.77 per share, which will vest quarterly in 6 equal installments starting from June 30, 2022; and (iii) options to purchase 13,333 shares of Common Stock at the price of \$1.77 per share, which will vest quarterly in 8 equal installments starting from April 30, 2022.
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- (4) Includes (i) 16,667 shares of Common Stock purchased at a private placement in August 2019; (ii) 20,000 shares of Common Stock purchased at a private placement in March 2021; (iii) vested options to purchase 275,000 shares of Common Stock at the price of \$1.50 per share, granted under the Company's 2019 Plan; (iv) vested options to purchase 5,000 shares of Common Stock at the price of \$1.77 per share; and (v) vested options to purchase 11,667 shares of Common Stock at the price of \$1.77 per share. In addition, Mr. Ogawa also owns (i) options to purchase 50,000 shares of Common Stock at \$3.93 per share, half of which will vest as of June 2, 2022 and the other half June 2, 2023; (ii) options to purchase 15,000 shares of Common Stock at the price of \$1.77 per share, which will vest quarterly in 6 equal installments starting from June 30, 2022; and (iii) options to purchase 23,333 shares of Common Stock at the price of \$1.77 per share, which will vest quarterly in 8 equal installments starting from April 30, 2022.
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- (5) Includes (i) vested options to purchase 25,000 shares of Common Stock at the price of \$1.50 per share, granted under the Company's 2019 Plan; and (ii) vested options to purchase 5,000 shares of Common Stock at the price of \$1.77 per share. Mr. Thompson also owns (i) options to purchase 50,000 shares of Common Stock at \$3.93 per share, half of which will vest as of June 2, 2022 and the other half June 2, 2023; and (ii) options to purchase 15,000 shares of Common Stock at the price of \$1.77 per share, which will vest quarterly in 6 equal installments starting from June 30, 2022.
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- (6) Includes (i) 2,741,033 shares of Common Stock; and (ii) 75,000 shares of Common Stock held by Montrose Capital Partners Limited, over which Mr. Tompkins has voting, dispositive or investment powers. Mr. Tompkins' address is Apt. 1, Via Guidino 23, 6900 Lugano-Paradiso, Switzerland.
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ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Unless described below, during the last two fiscal years, there are no transactions or series of similar transactions to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of \$120,000 or 1% of the average of the Company's total assets at year-end for the last two completed fiscal years; and
- any of our directors, executive officers or holders of more than 5% of our capital stock, or any member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest.

On March 11, 2020, in connection with his appointment as the Company's then Acting Chief Executive Officer and Executive Chairman, Mr. Alex Behfar was granted options to purchase 375,000 shares of Common Stock at the price of \$1.50 per share, that vest ratably on a monthly basis over two years and options to purchase 125,000 shares of Common Stock at the price of \$1.50 per share, which vested in March 2021. On July 17, 2020, Mr. Behfar was granted options to purchase 600,000 shares of Common Stock at the price of \$1.50 per share that vest ratably on a monthly basis over 20 months and options to purchase 200,000 shares of Common Stock at the price of \$1.50 per share which vested on March 30, 2021. On September 16, 2020, in connection with his appointment as the Company's then Chief Executive Officer and Chairman, Mr. Behfar was granted options to purchase 1,637,410 shares of Common Stock at the price of \$1.50 per share that will vest ratably on a monthly basis over 24 months starting from March 11, 2022. Upon Mr. Behfar's resignation as Chief Executive Officer, Chairman of the Board of Directors and Director of the Company, effective as of September 22, 2021, a total of 1,911,160 unvested options were forfeited.

In connection with Mr. John Edmunds's appointment as a Director and Chairman of Audit Committee of the Company, the Company agreed to pay Mr. Edmunds (i) an annual cash compensation of \$20,000; (ii) a one-time grant on June 22, 2021 of non-qualified stock options under the Company 2019 Equity Compensation Plan to purchase 70,246 shares of Common Stock of the Company at \$2.90 per share; (iii) an annual grant of non-qualified stock options under the 2019 Plan to purchase a number of shares of Common Stock of the Company that have a value of \$60,000, calculated using the fair market value of Common Stock of the Company as determined by the Board as of the date of grant, with an exercise price equal to the closing bid price of Common Stock of the Company as of the date of grant; provided that Mr. Edmunds shall have served on the Board for at least six months prior to the date of grant; and (iv) reimbursement for reasonable out-of-pocket costs and travel expenses in connection with his attendance at meetings of the Board and Audit Committee.

On December 30, 2021, the board of directors approved the following grants to our officers and directors under the 2019 Plan: (i) 10-year non-qualified stock options to purchase 20,000 shares of Common Stock at a price of \$1.77 per share to each of John Edmunds, Richard Ogawa and Michael Thompson, non-employee directors of the Company; (ii) 10-year non-qualified stock options to purchase 20,000 shares and 35,000 shares of Common Stock at a price of \$1.77 per share to John Edmunds (for providing service to the Company as Chairman of the Board) and Richard Ogawa, respectively; and (iii) 5-year options to purchase 100,000 shares and 80,000 shares of Common Stock at a price of \$1.77 per share to Richard Brown and James Shealy, respectively.

In March 2021, the Company sold 1,251,625 shares of common stock at \$4.00 per share for gross proceeds of \$5,006,500 in connection with a private placement of securities. The costs associated with such issuance were \$407,445 in cash and warrants to purchase 89,730 shares of Common Stock of the Company with a term of 5 years and an exercise price of \$4.00 per share. An aggregate of \$480,000 of proceeds were raised from related parties (including an aggregate of \$430,000 from Alex Behfar’s family member, Richard Brown, Richard Ogawa and James Shealy), representing approximately 10% of the total gross proceeds.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Marcum LLP served as the Company’s independent registered public accounting firm for the last two fiscal years. The following table shows the fees that were billed for the audit and other services provided to the Company for 2021 and 2020.

	2021	2020
Audit Fees	\$ 111,240	\$ 103,045
Audit-Related Fees	\$ 10,300	\$ 23,690
Tax Fees	\$ —	\$ —
All Other Fees	\$ —	\$ —
Total	\$ 121,540	\$ 157,693

Audit Fees — This category includes the audit of our annual financial statements, review of financial statements included in our Quarterly Reports on Form 10-Q and services that are normally provided by the independent registered public accounting firm in connection with engagements for those fiscal years. This category also includes advice on audit and accounting matters that arose during, or as a result of, the audit or the review of interim financial statements.

Audit-Related Fees — This category consists of assurance and related services by the independent registered public accounting firm that are reasonably related to the performance of the audit or review of our financial statements and are not reported above under “Audit Fees.” The services for the fees disclosed under this category include consultation regarding the Company’s correspondence with the SEC and other accounting consulting.

Tax Fees — This category consists of professional services rendered by our independent registered public accounting firm for tax compliance and tax advice. The services for the fees disclosed under this category include tax return preparation and technical tax advice.

All Other Fees — This category consists of fees for other miscellaneous items.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Exhibit No.	Description
3.1	Certificate of Incorporation of Odyssey Semiconductor Technologies, Inc. (Incorporated by reference to Exhibit 3.1 to Registration Statement on Form S-1 filed on November 15, 2019, File No. 333-234741)
3.2	Bylaws of Odyssey Semiconductor Technologies, Inc. (Incorporated by reference to Exhibit 3.2 to Registration Statement on Form S-1 filed on November 15, 2019, File No. 333-234741)
10.1	Odyssey Semiconductor Technologies, Inc. Second Amended and Restated 2019 Equity Compensation Plan (Incorporated by reference to Exhibit 10.1 to the Annual Report on Form 10-K filed on April 8, 2021, File No. 333-234741)
10.2	Form of Odyssey Semiconductor Technologies, Inc. Stock Option Agreement (Employee) (Incorporated by reference to Exhibit 10.10 to Registration Statement on Form S-1 filed on November 15, 2019, File No. 333-234741)
10.3	Form of Odyssey Semiconductor Technologies, Inc. Stock Option Agreement (Director) (Incorporated by reference to Exhibit 10.10a to Registration Statement on Form S-1 filed on November 15, 2019, File No. 333-234741)
10.2	Form of Subscription Agreement for March 2021 Private Placement (Incorporated by reference to Exhibit 10.2 to the Annual Report on Form 10-K filed on April 8, 2021, File No. 333-234741)
10.3	Form of Registration Rights Agreement for March 2021 Private Placement (Incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K filed on April 8, 2021, File No. 333-234741)
21.1	List of Subsidiaries (Incorporated by reference to Exhibit 21.1 to Registration Statement on Form S-1 filed on November 15, 2019, File No. 333-234741)
23.1	Consent of Marcum LLP (filed herewith)
31.1	Certification by Principal Executive Officer and Principal Financial Officer pursuant to Rule 13a-14(a) and Rule 15d-14(a)
32.1	Certification by Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.1	Code of Business Conduct and Ethics of the Registrant (Incorporated by reference to Exhibit 99.1 to the Registration Statement on Form S-1 filed on February 11, 2022, File No. 333-262640)
99.2	Charter of Audit Committee (Incorporated by reference to Exhibit 99.2 to the Registration Statement on Form S-1 filed on February 11, 2022, File No. 333-262640)
99.3	Charter of Compensation Committee (Incorporated by reference to Exhibit 99.3 to the Registration Statement on Form S-1 filed on February 11, 2022, File No. 333-262640)
99.4	Charter of Nominating and Corporate Governance Committee (Incorporated by reference to Exhibit 99.4 to the Registration Statement on Form S-1 filed on February 11, 2022, File No. 333-262640)
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned thereunto duly authorized on March 31, 2022.

ODYSSEY SEMICONDUCTOR TECHNOLOGIES, INC.

By: /s/ Richard Brown
Name: Richard Brown
Title: Interim Chief Executive Officer
(Principal Executive Officer and Principal Financial and Accounting Officer)

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned officers and directors Odyssey Semiconductor Technologies, Inc., a Delaware corporation (the "Registrant"), do hereby constitute and appoint Richard Brown as his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming that the said attorneys-in-fact and agent, or any of his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Person</u>	<u>Capacity</u>	<u>Date</u>
<u>/s/ Richard Brown</u> Richard Brown	Interim Chief Executive Officer (Principal Executive Officer and Principal Financial and Accounting Officer)	March 31, 2022
<u>/s/ John Edmunds</u> John Edmunds	Chairman of the Board and Director	March 31, 2022
<u>/s/ Richard Ogawa</u> Richard Ogawa	Director	March 31, 2022
<u>/s/ Michael Thompson</u> Michael Thompson	Director	March 31, 2022

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statements of Odyssey Semiconductor Technologies, Inc. on Form S-1 (File no. 333-234741, filed on November 15, 2019, declared effective on February 14, 2020, and subsequently amended on July 20, 2020 and May 7, 2021) and Form S-1 (File no. 333-257178, filed on June 17, 2021, and declared effective on June 24, 2021) of our report dated March 31, 2022, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, with respect to our audits of the consolidated financial statements of Odyssey Semiconductor Technologies, Inc. as of December 31, 2021 and 2020 and for each of the two years in the period ended December 31, 2021, which report is included in this Annual Report on Form 10-K of Odyssey Semiconductor Technologies, Inc. for the year ended December 31, 2021.

/s/ Marcum LLP

Marcum LLP
Melville, NY
March 31, 2022

CERTIFICATION PURSUANT TO RULE 13A-14(A) OR RULE 15D-14(A) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Richard Brown, Interim Chief Executive Officer of Odyssey Semiconductor Technologies, Inc. (the "Company"), certify that:

1. I have reviewed this Annual Report on Form 10-K of the Company for the year ended December 31, 2021;
2. Based on my knowledge, this report does not contain any untrue statement of a 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 report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. I am 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) and 15d-15(f)) for the Company and 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 Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this 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 Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the Company's internal control over financial reporting that occurred during the Company's most recent fiscal quarter (the Company's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. I have disclosed, based on my most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company'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 Company'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 Company's internal control over financial reporting.

Dated: March 31, 2022

By: /s/ Richard Brown
Richard Brown
Interim Chief Executive Officer
(Principal Executive Officer and Principal Financial and Accounting Officer)

**CERTIFICATION 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 Odyssey Semiconductor Technologies, Inc. (the "Company") on Form 10-K for the year ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard Brown, Interim Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. ss.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.

A signed original of this written statement required by Section 906 has been provided to the undersigned and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: March 31, 2022

By: /s/ Richard Brown
Richard Brown
Interim Chief Executive Officer
*(Principal Executive Officer and Principal Financial and
Accounting Officer)*
