

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

AMENDMENT NO. 2
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Actelis Networks, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware
*(State or Other Jurisdiction of
Incorporation or Organization)*

3669
*(Primary Standard Industrial
Classification Code Number)*

52-2160309
*(I.R.S. Employer
Identification Number)*

Actelis Networks, Inc.
4039 Clipper Court
Fremont, CA 94538
(510) 545-1045
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Tuvia Barlev
Chief Executive Officer and Chairman of the Board of Directors
Actelis Networks, Inc.
4039 Clipper Court
Fremont, CA 94538
(510) 545-1045
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

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

Large accelerated filer	<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 7(a)(2)(B) of the Securities Act. ☐

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION DATED MARCH 26, 2024



Actelis Networks, Inc.

3,697,154 Shares of Common Stock

This prospectus relates to the resale, by the selling stockholders identified in this prospectus, of up to an aggregate of up to 3,697,154 shares of common stock, \$0.0001 par value of Actelis Networks, Inc., consisting of (i) 301,000 shares of common stock issued in a private placement in December 2023, or the December 2023 Private Placement, (ii) 1,271,187 shares of common stock issuable upon the exercise of warrants issued in the December 2023 Private Placement, (iii) 970,187 shares of common stock issuable upon the exercise of pre-funded warrants issued in the December 2023 Private Placement, (iv) 55,000 shares of common stock issuable upon the exercise of warrants issued in September 2023, (v) 944,670 shares of common stock issuable upon the exercise of warrants issued in a private placement in May 2023, or the May 2023 Private Placement, (vi) 88,983 shares of common stock issuable upon the exercise of placement agent warrants issued in connection with the December 2023 Private Placement, and (vii) 66,127 shares of common stock issuable upon the exercise of placement agent warrants issued in connection with the May 2023 Private Placement.

We are not selling any common stock under this prospectus and will not receive any of the proceeds from the sale or other disposition of shares by any of the selling stockholders, however, we will receive proceeds from the exercise of any Warrants for cash.

The selling stockholders or its transferees, pledgees, assignees, or successors-in-interest may offer and sell or otherwise dispose of the shares of common stock described in this prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholder will bear all commissions and discounts, if any, attributable to the sales of shares. We will bear all other costs, expenses, and fees in connection with the registration of the shares. See "Plan of Distribution" beginning on page 15 for more information about how a selling stockholder may sell or dispose of the shares of Common Stock.

Our common stock is traded on the Nasdaq Capital Market under the symbol "ASNS." On March 22, 2024, the closing price of our common stock on the Nasdaq Capital Market was \$1.06 per share.

Investing in our securities involves a high degree of risk. You should read this prospectus supplement and the accompanying prospectus as well as the information incorporated herein and therein by reference carefully before you make your investment decision. See "Risk Factors" beginning on page 6 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is March , 2024.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the "SEC"). The selling stockholders named in this prospectus may from time to time sell the securities described in the prospectus. You should read this prospectus together with the more detailed information regarding our company, our Common stock, and our financial statements and notes to those statements that appear elsewhere in this prospectus and any applicable prospectus supplement together with the additional information that we incorporate in this prospectus by reference, which we describe under the heading "Where You Can Find More Information."

You should rely only on the information contained in, or incorporated by reference in, this prospectus and in any accompanying prospectus supplement. We have not authorized anyone to provide you with different information from that contained in, or incorporated by reference in, this prospectus. You should not assume that the

information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents or that any document incorporated by reference is accurate as of any date other than its filing date. You should not consider this prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

In this prospectus, we frequently use the terms “we,” “our,” “us,” “our company,” and the “Company” to refer to Actelis Networks, Inc.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain certain “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). We have tried, whenever possible, to identify these forward-looking statements using words such as “may,” “will,” “expect,” “believe,” “estimate,” “anticipate,” “intend,” “continue,” “plan,” “predict,” “seek,” “should,” “would,” “could,” “potential,” “ongoing,” and similar expressions to identify forward-looking statements, whether in the negative or the affirmative. These statements reflect our current beliefs and are based on information currently available to us. Accordingly, such forward-looking statements involve known and unknown risks, uncertainties and other factors which could cause our actual results, performance or achievements to differ materially from those expressed in, or implied by, such statements. Forward-looking statements contained herein include, but are not limited to, statements about:

- our history of losses and need for additional capital to fund our operations and our ability to obtain additional capital on acceptable terms, or at all;
- our ability to protect our intellectual property and continue to innovate;
- our success in retaining or recruiting, or changes required in, our officers, key employees or directors;
- the potential insufficiency of our disclosure controls and procedures to detect errors or acts of fraud;
- the accuracy of our estimates regarding expenses, future revenues, and capital requirements;
- the success of competing products or technologies that are or may become available;
- our ability to grow the business due to the uncertainty resulting from the COVID-19 pandemic or any future pandemic;
- our ability to comply with complex and increasing regulations by governmental authorities;
- our ability to regain and maintain compliance with continued listing requirements of the Nasdaq Capital Market;
- our ability to continue as a going concern;
- statements as to the impact of the political and security situations in Israel on our business, including due to the number of armed conflicts between Israel and Hamas (an Islamist militia and political group in the Gaza Strip) and Hezbollah (an Islamist militia and political group in Lebanon);
- our public securities’ potential liquidity and trading; and
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act.

Forward-looking statements are based on our management’s current expectations, estimates, forecasts and projections about our business and the industry in which we operate and our management’s beliefs and assumptions, and are not guarantees of future performance or development and involve known and unknown risks, uncertainties and other factors that are in some cases beyond our control. As a result, any or all of our forward-looking statements herein may turn out to be inaccurate. Important factors that may cause actual results to differ materially from current expectations include, among other things, those listed under “Risk Factors,” “Use of Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere herein or by incorporation by reference. Potential investors are urged to consider these factors carefully in evaluating the forward-looking statements. You should read thoroughly this prospectus and the documents that we refer to with the understanding that our actual future results may be materially different from and worse than what we expect. We qualify all of our forward-looking statements by these cautionary statements.

The forward-looking statements included in this prospectus speak only as of the date of this prospectus. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that future results, levels of activity, performance and events and circumstances reflected in the forward-looking statements will be achieved or will occur. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future. You should, however, review the factors and risks we describe in the reports we will file from time to time with the SEC after the date of this prospectus. See “Where You Can Find More Information.”

On April 19, 2023, we effected a reverse stock split of our shares of common stock at the ratio of 1-for-10. Unless indicated otherwise by the context, all common stock, option, warrant and per share amounts, as well as share prices appearing in this prospectus have been adjusted to give retroactive effect to the stock split for all periods presented.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. Because this is only a summary, it does not contain all of the information that may be important to you. You should read this entire prospectus and should consider, among other things, the matters set forth under “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes thereto appearing elsewhere in this prospectus before making your investment decision. This prospectus contains forward-looking statements and information relating to Actelis Networks, Inc. See “Cautionary Note Regarding Forward-Looking Statements” on page iii.

Actelis Networks, Inc. (“we”, “the Company”, “Actelis”, “us”, “our”) is a market leader in cyber-hardened, rapid-deployment networking solutions for wide-area IoT applications including federal, state and local government, intelligent traffic systems (“ITS”), military, utility, rail, telecom and campus applications. Our unique

portfolio of hybrid fiber, environmentally hardened aggregation switches, high density Ethernet devices, advanced management software and cyber-protection capabilities, unlocks the hidden value of essential networks, delivering safer connectivity for rapid, cost-effective deployment.

Our networking solutions use a combination of newly deployed fiber infrastructure and existing copper and coaxial lines which our patented technology can upgrade to Fiber-grade to jointly create what we believe to be a highly cost-effective, secure, and quick-to-deploy network. Our patent protected hybrid fiber networking solutions deliver excellent communication over fiber to locations that may be easy to reach with new fiber. However, for locations that are difficult, or too costly to reach with fiber, we can upgrade existing copper lines to deliver cyber-hardened, high-speed connectivity without needing to replace the existing copper infrastructure with new fiber. We believe that such hybrid fiber copper networking solution has distinct advantages in most real-life installations, while providing significant budget savings and accelerating deployment of modern IoT networks, as based on our experience, most IoT projects have challenging, hard to reach with fiber locations which may explode such projects' timeline and budgets. We believe that our solutions can provide connectivity over either fiber or copper with speeds of up to multi-Gigabit communication, while supporting Fiber-grade reliability and quality.

A primary focus of ours is to provide our customers with a cyber-secure network solution. We currently offer Triple-Shield protection of data delivered with coding, scrambling and encryption of the network traffic. We also provide secure, encrypted access to our network management software, and are working to further enhance system-level and device-level software protection. We are also working to introduce additional capabilities for network-wide cyber protection software as an additional SW and license-based services.

When high speed, long reach, reliable and secure connectivity is required, network operators usually resort to using wireline communication over physical communication lines such as fiber, coax, and copper, rather than wireless communication that is more limited in performance, reliability, reach and security. However, new fiber wireline infrastructure is costly to deploy, involves lengthy civil works to install, and, based on our internal calculations, often accounts for more than 50% of total cost of ownership (ToC) and time to deploy wide-area IoT projects.

Providing new fiber connectivity to hard-to-reach locations is especially costly and time-consuming, often requiring permits for boring, trenching, and right-of-way, sometimes done over many miles. Connecting such hard-to-reach locations may cause significant delays and budget overruns in IoT projects. Our solutions aim to solve these challenges by instantly enhancing performance of such existing copper and coax infrastructure to fiber-grade performance, through the use of advanced signal processing and unique, patented network architecture, without the need to run new fiber to hard-to-reach locations; thus, effectively accelerating deployment of many IoT projects, as we estimate, sometimes from many months to only days. The result for the network owner is a hybrid network that optimizes the use of both new Fiber (where available) as well as upgraded, fiber-grade copper and coax that is now modernized, digitized and cyber-hardened. This unique hybrid network approach is making IoT projects often significantly more affordable, fast to deploy and predictable to plan and budget.

In addition, our solutions can also provide power over existing copper and coax lines to remotely power up network elements and IoT components connected to them (like cameras, small cell and Wi-Fi base stations sensors etc.). Connecting power lines to millions of IoT locations can be costly and very time consuming as well (similar to data connectivity, for the same reason — need for civil works). By offering the ability to combine power delivery over the same existing copper and coax lines that we use for high-speed data, we believe our solutions are solving yet another important challenge in connecting hard-to-reach locations. We believe that combining communication and power over the same existing lines is particularly important to help connect many fifth generation, or 5G, small cells and Wi-Fi base stations, as high cost of connectivity and power is often slowing their deployment.

Since our inception, our business has been focused on serving telecommunication service providers, also known as Telcos, to provide connectivity for enterprises and residential customers. Our products and solutions have been deployed with more than 100 telecommunication service providers worldwide, in enterprise, residential and mobile base station connectivity applications. In recent years, as we have further developed our technology and introduced additional products, we turned our focus on serving the wide-area IoT markets. Our operations are focused on our fast-growing IoT business, while maintaining our commitment to our existing Telco customers. In 2023, we introduced new product offerings, some of which could serve both the IoT markets and our Telco customers.

May 2023 Private Placement

On May 4, 2023, we entered into a securities purchase agreement with an accredited investor (the "Investor"), pursuant to which we sold to the Investor in a private placement (i) 190,000 shares of common stock, (ii) 754,670 pre-funded warrants to purchase up to 754,670 shares of common stock and (iii) warrants to purchase up to 944,670 shares of common stock, for a purchase price of \$3.705 per share of common stock and related Common Warrant, or \$3.7049 per pre-funded warrant and related common warrant, for a total aggregate gross proceeds of approximately \$3.5 million. The May 2023 Private Placement closed on May 8, 2023. The common warrants had an exercise price of \$3.58 per share, are exercisable immediately upon issuance and expire five and one-half years following the issuance. The pre-funded warrants are exercisable immediately upon issuance, have an exercise price of \$0.0001 per share and expire when exercised in full.

We paid to H.C. Wainwright & Co., LLC, the placement agent, an aggregate cash fee equal to 7.0% of the gross proceeds received by us from the offering in placement agent fees, a management fee equal to 1.0% of the gross proceeds raised in the offering, a non-accountable expense allowance of \$65,000 and a management fee equal to 1.0% of the gross proceeds raised in the offering. We also issued unregistered placement agent warrants to purchase up to an aggregate of 88,983 ordinary shares at an exercise price per share of \$1.475 and a term of five and one-half years.

In connection with the May 2023 Private Placement, the selling shareholders named in this prospectus may offer and sell up to an aggregate of 1,010,797 shares of common stock, including shares issuable upon exercise of warrants and pre-funded warrants.

September 2023 Warrant Amendment

On September 30, 2023, we entered into a common warrants amendment agreement (the "September 2023 Amendment") with the Investor to amend those common warrants to purchase up to 944,670 shares issued to the Investor as part of the May 2023 Private Placement. The Amendment reduced the exercise price of the common warrants to \$2.75 per share, and made certain adjustment to the definition of a "Fundamental Transaction" in the common warrants. In addition, the Amendment resulted in the issuance of an additional 55,000 common warrants to the Investor.

In connection with the September 2023 Amendment, the selling shareholders named in this prospectus may offer and sell up to an aggregate of 55,000 shares of common stock issuable upon exercise of warrants.

December 2023 Private Placement

On December 17, 2023, we entered into a securities purchase agreement with the Investor, pursuant to which we sold to the Investor in a private placement (i) 301,000 shares of common stock, (ii) 970,187 pre-funded warrants to purchase up to 970,187 shares of common stock and (iii) common warrants to purchase up to 1,271,187 shares of common stock, for a purchase price of \$1.18 per share of common stock and related common warrant, or \$1.1799 per pre-funded warrant and related common warrant, for a total aggregate gross proceeds of approximately \$1.5 million. The December 2023 Private Placement closed on December 20, 2023.

The common warrants have an exercise price of \$1.18 per share, are exercisable commencing on the effective date of shareholder approval of the issuance of the shares issuable upon exercise of the common warrants and expire five and one-half years following the issuance. The pre-funded warrants are exercisable immediately upon issuance, have an exercise price of \$0.0001 per share, and expire when exercised in full.

We paid to H.C. Wainwright & Co., LLC, the placement agent, an aggregate cash fee equal to 7.0% of the gross proceeds received by us from the offering in placement agent fees, a management fee equal to 1.0% of the gross proceeds raised in the offering, a non-accountable expense allowance of \$35,000 and a management fee equal to 1.0% of the gross proceeds raised in the offering. We also issued unregistered placement agent warrants to purchase up to an aggregate of 88,983 ordinary shares at an exercise price per share of \$1.475 and a term of five and one-half years.

In connection with the December 2023 Private Placement, the selling shareholders named in this prospectus may offer and sell up to an aggregate of 2,631,357 shares of common stock, including shares issuable upon exercise of warrants and pre-funded warrants.

Recent Developments

Nasdaq Listing Compliance

On August 25, 2023, we received a notification letter from the Listing Qualifications Department of the Nasdaq Stock Market LLC indicating that we are not in compliance with Nasdaq Listing Rule 5550(b)(1) due to our failure to maintain a minimum of \$2,500,000 in shareholders' equity (the "Minimum Shareholders' Equity Requirement") or any alternatives to such requirement. In order to maintain our listing on the Nasdaq Capital Market, we submitted a plan of compliance addressing how we intended to regain compliance. We had until February 21, 2024 to evidence compliance with the Minimum Shareholders' Equity Requirement. As of the date of this Annual Report, we have not provided such evidence. In the event that our shares of common stock would be subject to delisting, we intend to timely request a hearing before the Nasdaq Hearings Panel.

JOBS Act and the Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or the JOBS Act. As an "emerging growth company," we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include, but are not limited to:

- requiring only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced "Management's discussion and analysis of financial condition and results of operations" in our Securities Act of 1933, as amended, or the Securities Act, filings;
- reduced disclosure about our executive compensation arrangements;
- no non-binding advisory votes on executive compensation or golden parachute arrangements; and
- exemption from compliance with the auditor attestation requirement in the assessment of our internal control over financial reporting pursuant to Section 404(b) of the Sarbanes Oxley Act of 2002, or SOX.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an "emerging growth company." We will continue to remain an "emerging growth company" until the earliest of the following: (i) the last day of the fiscal year following the fifth anniversary of our first sale of our common equity securities pursuant to an effective registration statement (i.e. December 31, 2027); (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.235 billion; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC.

We are also a "smaller reporting company" as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act, and have elected to take advantage of certain of the scaled disclosures available to smaller reporting companies. To the extent that we continue to qualify as a "smaller reporting company" as such term is defined in Rule 12b-2 the Exchange Act, after we cease to qualify as an emerging growth company, certain of the exemptions available to us as an "emerging growth company" may continue to be available to us as a "smaller reporting company," including exemption from compliance with the auditor attestation requirements pursuant to SOX and reduced disclosure about our executive compensation arrangements. We will continue to be a "smaller reporting company" until we have \$250 million or more in public float (based on our common stock) measured as of the last business day of our most recently completed second fiscal quarter or, in the event we have no public float (based on our common stock) or a public float (based on our common stock) that is less than \$700 million, annual revenues of \$100 million or more during the most recently completed fiscal year.

We may choose to take advantage of some, but not all, of these exemptions. We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock. In addition, the JOBS Act provides that an emerging growth company may take advantage of an extended transition period for complying with new or revised accounting standards, delaying the adoption of these accounting standards until they would apply to private companies. We have elected to avail ourselves of the extended transition period for complying with new or revised financial accounting standards. As a result of this accounting standards election, we will not be subject to the same implementation timing for new or revised accounting standards as other public companies that are not emerging growth companies which may make comparison of our financials to those of other public companies more difficult.

Common stock by the Selling Stockholders	3,697,154 shares of Common Stock, consisting of (i) 301,000 shares of common stock issued in the December 2023 Private Placement, (ii) 1,271,187 shares of common stock issuable upon the exercise of warrants issued in the December 2023 Private Placement, (iii) 970,187 shares of common stock issuable upon the exercise of pre-funded warrants issued in the December 2023 Private Placement, (iv) 55,000 shares of common stock issuable upon the exercise of warrants issued in September 2023, (v) 944,670 shares of common stock issuable upon the exercise of warrants issued in a private placement in the May 2023 Private Placement, (vi) 88,983 shares of common stock issuable upon the exercise of placement agent warrants issued in connection with the December 2023 Private Placement, and (vii) 66,127 shares of common stock issuable upon the exercise of placement agent warrants issued in connection with the May 2023 Private Placement.
Plan of Distribution	The selling stockholders will determine when and how they will sell the common stock covered by this prospectus. See the “Plan of Distribution” section of this prospectus.
Use of Proceeds	We will not receive any proceeds from the sale of the Common Stock by the selling stockholders. All net proceeds from the sale of the Common Stock covered by this prospectus will go to the selling stockholders. However, we may receive the proceeds from any exercise of warrants if the selling stockholders do not exercise their warrants on a cashless basis, if and when exercised. See the section of this prospectus titled “Use of Proceeds.”
Risk factors	See “Risk Factors” and other information appearing elsewhere in this prospectus for a discussion of factors you should carefully consider before deciding whether to invest in our securities.
Listing	Our common stock is listed on the Nasdaq Capital Market under the symbol “ASNS.”
Corporate Information	
We were incorporated in Delaware in 1998. We completed our initial public offering on May 17, 2022 and our common stock is currently listed on the Nasdaq Global Select Market under the symbol “ASNS.” Our principal executive offices are located at 4039 Clipper Court, Fremont, CA 94538, and our telephone number is (510)-545-1040. The information contained on our website and available through our website is not incorporated by reference into and should not be considered a part of this prospectus, and the reference to our website in this prospectus is an inactive textual reference only.	

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the risk factors set forth in our most recent Annual Report on Form 10-K on file with the SEC, which is incorporated by reference into this prospectus, as well as the following risk factors, which supplement or augment the risk factors set forth in our Annual Report on Form 10-K. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus. The risks and uncertainties not presently known to us or that we currently deem immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment.

Sales of substantial amounts of our Common Stock by a selling stockholder, or the perception that these sales could occur, could adversely affect the price of our Common Stock.

The sale by the selling stockholders of a significant number of shares of Common Stock could have a material adverse effect on the market price of our Common Stock. In addition, the perception in the public markets that the selling stockholder may sell all or a portion of its shares as a result of the registration of such shares for resale pursuant to this prospectus could also in and of itself have a material adverse effect on the market price of our Common Stock. We cannot predict the effect, if any, that market sales of those shares of Common Stock or the availability of those shares of Common Stock for sale will have on the market price of our Common Stock.

USE OF PROCEEDS

We are not selling any Common Stock under this Prospectus and we will not receive any proceeds from the sale of the Common Stock by the selling stockholders. All net proceeds from the sale of the Common Stock covered by this prospectus will go to the selling stockholders. We expect that the selling stockholders will sell their Common Stock as described under “Plan of Distribution.”

We may receive proceeds from the exercise of the warrants to the extent that these warrants are exercised for cash by the selling stockholders. Warrants, however, are exercisable on a cashless basis under certain circumstances. If all of the warrants mentioned above were exercised for cash in full, the gross proceeds would be approximately \$2.7 million. We intend to use the net proceeds of such warrant exercise, if any, for general corporate purposes. Pending such uses, we intend to invest the net proceeds in bank deposits. We can make no assurances that any of the warrants will be exercised, or if exercised, that they will be exercised for cash, the quantity which will be exercised or in the period in which they will be exercised.

SELLING STOCKHOLDERS

The Common Stock being offered by each of the selling stockholders are those previously issued to the selling stockholders, and those issuable to the selling stockholders, upon exercise of either the Placement Agent Warrants, Common Warrants or Pre-Funded Warrants. For additional information regarding the issuances of those shares of Common Stock and Placement Agent Warrants, Common Stock Warrants and Pre-Funded Warrants, see the description of the Private Placement in “*Prospectus Summary — Private Placement*” above. We are registering the shares of Shares in order to permit the selling stockholders to offer the shares for resale from time to time. None of the selling stockholders have had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of Common Stock by each of the selling stockholders. The second column lists the number of shares of Common Stock beneficially owned by each selling stockholder, based on its ownership of the shares of Common Stock and the warrants, as of March 22, 2024, assuming exercise of the warrants (either the Common Stock Warrants or the Placement Agent Warrants) held by the selling stockholders on that date, without regard to any limitations on exercises.

The third column lists the shares of Common Stock being offered by this prospectus by each of the selling stockholders.

In accordance with the terms of a Registration Rights Agreement with the Investor, this prospectus generally covers the resale of the sum of (i) Shares; (ii) Pre-Funded Warrant Shares and (iii) Common Warrant Shares. The table below assumes that the outstanding Pre-Funded Warrants, Common Warrants and the Placement Agent Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination, without regard to any limitations on the exercise thereof. The fourth column assumes the sale of all of the shares of common stock offered by the selling stockholders pursuant to this prospectus. The fifth column lists the percentages of shares of common stock owned by each selling stockholders after this offering, taking account of any limitations on exercise set forth in the applicable Securities.

Under the terms of the Private Placement Warrants, a selling stockholder may not exercise the Private Placement Warrants to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 4.99% or 9.99% of our then outstanding common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the Private Placement Warrants which have not been exercised. The number of shares in the second column does not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See “*Plan of Distribution*.” The total number of outstanding shares of common stock as of March 20, 2024 was 3,020,268, including treasury shares.

Name of selling stockholder	Number of Shares of Common Stock Owned Prior to Offering	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Shares Beneficially Owned After Offering	
			Number	Percentage
Armistice Capital, LLC ⁽¹⁾	3,542,044 ⁽²⁾	3,542,044	—	—
H.C. Wainwright & Co., LLC ⁽³⁾	66,127 ⁽⁴⁾	66,127	—	—
Charles Worthman ⁽⁵⁾	890 ⁽⁶⁾	890	—	—
Craig Schwabe ⁽⁵⁾	3,003 ⁽⁷⁾	3,003	—	—
Michael Vasinkevich ⁽⁵⁾	57,060 ⁽⁸⁾	57,060	—	—
Noam Rubinstein ⁽⁵⁾	28,030 ⁽⁹⁾	28,030	—	—

(1) The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. The warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the warrants that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.

(2) Consists of (i) 301,000 shares of common stock issued in the December 2023 Private Placement, (ii) 970,187 shares of common stock issuable upon the exercise of pre-funded warrants in the December 2023 Private Placement, and (iii) 1,271,187 shares of common stock issuable upon the exercise of warrants issued in the December 2023 Private Placement, (iv) 944,670 shares of common stock issuable upon the exercise of warrants issued in the May 2023 Private Placement, and (v) 55,000 shares of common stock issuable upon the exercise of warrants issued in September 2023. All of these warrants are subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Master Fund from exercising that portion of the warrants that would result in the Master Fund and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation.

(3) H.C. Wainwright & Co., LLC is a registered broker dealer and has a registered address of c/o H.C. Wainwright & Co., LLC 430 Park Ave, 3rd Floor, New York, NY 10022. H.C. Wainwright & Co., LLC has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of common stock issuable upon exercise of Placement Agent Warrants, which were received as compensation for the Offering. H.C. Wainwright & Co., LLC acquired the Placement Agent Warrants in the ordinary course of business and, at the time the Placement Agent Warrants were acquired, H.C. Wainwright & Co., LLC had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

(4) Consists of 66,127 shares of common stock issuable upon exercise of Placement Agent Warrants issued in connection with the May 2023 Private Placement.

(5) Each of the selling stockholders is affiliated with H.C. Wainwright & Co., LLC, a registered broker dealer with a registered address of H.C. Wainwright & Co., LLC, 430 Park Ave, 3rd Floor, New York, NY 10022, and has sole voting and dispositive power over the securities held. The number of shares beneficially owned prior to this offering consist of shares of common stock issuable upon exercise of placement agent warrants, which were received as compensation. The selling stockholder acquired the placement agent warrants in the ordinary course of business and, at the time the placement agent warrants were acquired, the selling stockholder had no agreement or understanding, directly or indirectly, with any person to distribute such securities.

(6) Consists of 890 shares of common stock issuable upon exercise of Placement Agent Warrants issued in connection with the December 2023 Private Placement.

(7) Consists of 3,003 shares of common stock issuable upon exercise of Placement Agent Warrants issued in connection with the December 2023 Private Placement.

(8) Consists of 57,060 shares of common stock issuable upon exercise of Placement Agent Warrants issued in connection with the December 2023 Private Placement.

(9) Consists of 28,030 shares of common stock issuable upon exercise of Placement Agent Warrants issued in connection with the December 2023 Private Placement.

DESCRIPTION OF OFFERED SECURITIES

The following description is intended as a summary of our Charter and our Bylaws, each of which will become effective prior to the effectiveness of the registration statement of which this prospectus forms a part, and which will be filed as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of the DGCL. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our Charter and Bylaws.

Authorized Capital Stock

Our Charter authorizes us to issue up to 42,803,774 shares consisting of 30,000,000 shares of common stock with a par value of US\$0.0001 per share, 2,803,774 shares of non-voting common stock with a par value of US\$0.0001 per share and 10,000,000 shares of preferred stock with a par value of US\$0.0001 per share. As of March 20, 2024, there were 54 holders of record of our common stock.

Common Stock

Upon the closing of this offering, shares of our common stock have the following rights, preferences and privileges:

Voting Rights

Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. Any action at a meeting at which a quorum is present will be decided by a majority of the voting power present in person or represented by proxy, except in the case of any election of directors, which will be decided by a plurality of votes cast. There is no cumulative voting.

Dividend Rights

Holders of our common stock are entitled to receive dividends when, as and if declared by our board of directors out of funds legally available for payment, subject to the rights of holders, if any, of any class of stock having preference over the common stock. Any decision to pay dividends on our common stock will be at the discretion of our board of directors. Our board of directors may or may not determine to declare dividends in the future. See “Dividend Policy.” The board’s determination to issue dividends will depend upon our profitability and financial condition any contractual restrictions, restrictions imposed by applicable law and the SEC, and other factors that our board of directors deems relevant.

Liquidation Rights

In the event of a voluntary or involuntary liquidation, dissolution or winding up of the Company, the holders of our common stock will be entitled to share ratably on the basis of the number of shares held in any of the assets available for distribution after we have paid in full, or provided for payment of, all of our debts and after the holders of all outstanding series of any class of stock have preference over the common stock, if any, have received their liquidation preferences in full.

Other Rights and Preferences

Upon the closing of this offering, holders of our common stock will have no pre-emptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future. Upon the closing of this offering, shares of our common stock are not convertible into shares of any other class of capital stock, nor are they subject to any redemption or sinking fund provisions.

Fully paid and nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering will be, fully paid and nonassessable.

Preferred stock

We are authorized to issue up to 10,000,000 shares of preferred stock. Our Charter authorizes the board to issue these shares in one or more series, to determine the designations and the powers, preferences and relative, participating, optional or other special rights and the qualifications, limitations and restrictions thereof, including the dividend rights, conversion or exchange rights, voting rights (including the number of votes per share), redemption rights and terms, liquidation preferences, sinking fund provisions and the number of shares constituting the series. Our board of directors could, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of common stock and which could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, a majority of our outstanding voting stock. Upon the closing of this offering, no shares of preferred stock will be outstanding.

Charter and Bylaw Provisions

Charter and Bylaw Provisions

Our Charter and our Bylaws to be effective upon the closing of this offering, include a number of provisions that could deter hostile takeovers or delay or prevent changes in control of our management team, including the following:

- *Board of Directors vacancies.* Our Charter to be effective upon the closing of this offering, provides that vacancies on the board of directors may be filled only by the affirmative vote of a majority of the directors then in office, irrespective of whether there is a quorum, or by a sole remaining director. Additionally, the number of directors to serve on our board of directors is fixed solely and exclusively by resolution duly adopted by our board of directors. This would prevent a stockholder from increasing the size of our board of directors and then gaining control of our board of directors by filling the resulting vacancies with its own nominees. This makes it more difficult to change the composition of our board of directors but promotes continuity of management.
- *Classified Board of Directors.* In accordance with our Charter, as it will be in effect following the effectiveness of the registration statement of which this prospectus forms a part, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes. We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

- *Special Meetings of Stockholders.* Our Bylaws to be effective upon the closing of this offering, provides that special meetings of our stockholders may be called by the board of directors acting pursuant to a resolution approved by the affirmative vote of a majority of the directors then in office, and special meetings of stockholders may not be called by any other person or persons.
- *No Cumulative Voting.* The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless the corporation's certificate of incorporation provides otherwise. Our Charter does not provide for cumulative voting.
- *Amendment of Charter and Bylaw Provisions.* Any amendment of our Charter requires the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote on such amendment, and the affirmative vote of the majority of the outstanding shares of each class entitled to vote thereon as a class, except that the provision in the Charter regarding the staggered board may not be repealed or amended without the vote of the holders of not less than 80% of the Company's voting stock, voting as a single class. Amendments to our Bylaws may be executed pursuant to a resolution by the Board of Directors pursuant to an affirmative vote of a majority of the directors then in office, or by the affirmative vote of at least 75% of the outstanding shares of capital stock entitled to vote.

- *Delaware Business Combination Statute.* The Company is subject to the "business combination" provisions of Section 203 of the DGCL. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date such person becomes an interested stockholder, unless the business

combination or the transaction in which such person becomes an interested stockholder is approved in a prescribed manner. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is a person that, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by our Board of Directors, and the anti-takeover effect includes discouraging attempts that might result in a premium over the market price for the shares of our common stock.

- *Exclusive Forum.* Unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware is the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our current or former directors, officers, stockholder or other employees to us or our stockholders, (iii) any action asserting a claim against the Corporation or any current or former director, officer, stockholder, employee or agent of the Corporation arising pursuant to any provision of the DGCL, our Charter or our Bylaws, (iv) any action to interpret, apply, enforce or determine the validity of the Company's Charter or Bylaws, (v) any action asserting a claim against us governed by the internal affairs doctrine or (vi) any action asserting an "internal corporate claim" as that term is defined in Section 115 of the General Corporation Law. The federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint, claim or proceeding asserting a cause of action arising under the Exchange Act or the Securities Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Stockholders cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring or holding any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provision in our Charter. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees.

Anti-Takeover Provisions

The provisions of the DGCL, our Charter and our Bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company. These provisions, which are summarized below, may have the effect of discouraging takeover bids. They are also designed, in part, to encourage persons seeking to acquire control of us to negotiate first with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging a proposal to acquire us because negotiation of these proposals could result in an improvement of their terms.

Our Charter established a classified board of directors, divided in three classes with staggered three-year terms. Under the classified board of directors structure, only one class of directors would be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder for their respective three-year terms. Under the classified board of directors structure: (i) directors in Class I, consisting of Noemi Schmayr, are to stand for election at the Annual Meeting to be held in 2026; (ii) directors in Class II, consisting of Joseph Moscovitz and Naama Halevi-Davidov, are to stand for election at the annual meeting of stockholders to be held in 2024; and (iii) directors in Class III, consisting of Israel Niv and Tuvia Barlev, are to stand for election at the annual meeting of stockholders to be held in 2025.

Limitations on Liability, Indemnification of officers and directors and insurance

Our Charter and Bylaws contain provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by the DGCL. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases, or redemptions as provided in Section 174 of the DGCL; or
- any transaction from which the director derived an improper personal benefit.

Listing

We have applied to list our common stock on the Nasdaq Capital Market under the symbol "ASNS".

Transfer Agent and Registrar

The transfer agent and registrar for our common stock will be VStock Transfer, LLC. The transfer agent and registrar's address is 18 Lafayette Place, Woodmere, NY 11598.

Exclusive Forum

Our Charter provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for any stockholder for (a) any derivative action or proceeding brought on our behalf, (b) any action asserting a claim of breach of a fiduciary duty owed by, or other wrongdoing by, any current or former director, officer, stockholder, employee or agent of the Company to the Company or the Company's stockholders, (c) any action asserting a claim against the Corporation or any current or former director, officer, stockholder, employee or agent of the Corporation arising pursuant to any provision of the DGCL or the Company's Certificate of Incorporation or Bylaws, (d) any action to interpret, apply, enforce or determine the validity of the Company's Certificate of Incorporation or Bylaws, or (e) any action asserting a claim governed by the internal affairs doctrine or (f) any action asserting an "internal corporate claim" as that term is defined in Section 115 of the General Corporation Law. The federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint, claim or proceeding asserting a cause of action arising under the Exchange Act or the Securities Act. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

Stockholders cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Any person or entity purchasing or otherwise acquiring or holding any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provision in our Charter.

The choice-of-forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with the Company or its directors, officers or other employees, and may result in increased costs to a stockholder who has to bring a claim in a forum that is not convenient to the stockholder, which may discourage such lawsuits. Although under Section 115 of the DGCL, exclusive forum provisions may be included in a company's certificate of incorporation, the enforceability of similar forum provisions in other companies' certificates or incorporation or bylaws has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. If a court were to find the exclusive forum provision of our Charter inapplicable or unenforceable with respect to one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could materially and adversely affect our business, financial condition and results of operations and result in a diversion of the time and resources of our management and board of directors.

Anti-Takeover Provisions of the DGCL and Charter Provisions

Certain provisions of the DGCL and certain provisions included in our Charter and Bylaws summarized below may be deemed to have an anti-takeover effect and may delay, deter, or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Removal of Directors

Our Bylaws provide that stockholders may only remove a director with or without cause by a vote of no less than a majority of the shares present in person or by proxy at the meeting and entitled to vote, voting together as a single class.

Amendments to Certificate of Incorporation

Certain sections of our Certificate of Incorporation require the affirmative vote of the holders of a majority of the voting power of the then outstanding shares of capital stock of the Company entitled to vote, voting together as a single class, except that the provision in the Charter regarding the staggered board may not be repealed or amended without the vote of the holders of not less than 80% of the Company's voting stock, voting as a single class.

Staggered Board

The board of directors is divided into three classes, with regular three-year staggered terms. This classification system increases the difficulty of replacing a majority of the directors and may tend to discourage a third-party from making a tender offer or otherwise attempting to gain control of the Company. In addition, under Delaware law, the Certificate and the By-Laws, the Company's directors may be removed from office by the stockholders only for cause and only in the manner provided for in the Certificate. These factors may maintain the incumbency of the board of directors.

Amendments to Bylaws

Our Charter limits the abilities of the directors and stockholders to amend our Bylaws in certain circumstances. In particular, the Bylaws may be amended only by the vote of a majority of all of the directors then in office, or by the affirmative vote of the stockholders holding at least 75% of the outstanding shares of capital stock entitled to vote in accordance with the provisions of the Charter, Bylaws, and the DGCL.

No Cumulative Voting

Our Charter does not provide for cumulative voting.

Special Meetings of Stockholders

Our Bylaws provide that, except as otherwise required by law, special meetings of the stockholders may be called only by an officer at the request of a majority of our board of directors, by our Chief Executive Officer or President or by the holders of not less than 25% of the holders of stock entitled to vote at the meeting.

Stockholders Agreement

We are party to the Amended and Restated Stockholders Agreement, dated February 2, 2016, or the Stockholders Agreement, pursuant to which certain holders of our common stock have the right to demand that we file a registration statement or request that their common stock be covered by a registration statement that we are otherwise filing. All rights under the Stockholders Agreement will terminate upon the closing of this offering.

PLAN OF DISTRIBUTION

The selling stockholders of the Shares and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholder to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from each selling stockholder (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholder or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the shares of the common stock offered by this prospectus will be passed upon for us by Pearl Cohen Zedek Latzer Baratz LLP, New York, NY. Certain legal matters in connection with this offering relating to U.S. law will be passed upon for us by Greenberg Traurig, LLP, New York, NY.

EXPERTS

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2023 have been so included in reliance on the report (which contains an explanatory paragraph relating to the Company’s ability to continue as a going concern as described in Note 1b to the financial statements) of Kesselman & Kesselman, Certified Public Accountants (Isr.), a member firm of PricewaterhouseCoopers International Limited, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with the SEC under the Securities Act with respect to the securities offered in this prospectus. This prospectus, which is filed as part of a registration statement, does not contain all of the information set forth in the registration statement, some portions of which have been omitted in accordance with the SEC’s rules and regulations. Statements made in this prospectus as to the contents of any contract, agreement or other document referred to in this prospectus are not necessarily complete and are qualified in their entirety by reference to each such contract, agreement or other document that is filed as an exhibit to the registration statement.

You can read our SEC filings, including the registration statement, over the internet at the SEC’s website. Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. The SEC’s website contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of that site is <http://www.sec.gov>.

We also maintain a website at www.Actelis.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC.

However, the information contained in or accessible through our website is not part of this prospectus or the registration statement of which this prospectus forms a part, and investors should not rely on such information in making a decision to purchase our common stock in this offering.

PLAN OF DISTRIBUTION

The selling stockholders of the Shares and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Capital Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholder to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from each selling stockholder (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholder or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information that we incorporate by reference is considered to be part of this prospectus. Because we are incorporating by reference our future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some or all of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded.

This prospectus incorporates by reference the documents listed below that have been previously filed with the SEC:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on March 26, 2024;

- our Current Reports on Form 8-K filed with the SEC on [January 8, 2024](#), [February 12, 2024](#), [February 14, 2024](#) and [March 14, 2024](#);
- the description of our common stock, which is contained in the registration statement on [Form 8-A](#) filed with the SEC on May 4, 2022 (File No. 001-41375).

We also incorporate by reference all future documents (excluding information furnished pursuant to Items 2.02 and 7.01 of Form 8-K) we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act, subsequent to the date of this prospectus and prior to the termination of the offering.

You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. Any statement contained in a document incorporated by reference into this prospectus will be deemed to be modified or superseded for the purposes of this prospectus to the extent that a later statement contained in this prospectus or in any other document incorporated by reference into this prospectus modifies or supersedes the earlier statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

The information about us contained in this prospectus should be read together with the information in the documents incorporated by reference. You may request a copy of any or all of these filings, at no cost, by writing or telephoning us at Yoav Efron, Chief Financial Officer, 4039 Clipper Court, Fremont, CA 94538, Israel, telephone number 908-242-6463 or by emailing us at yoave@actelis.com.



Actelis Networks, Inc.

PRELIMINARY PROSPECTUS

, 2024

Through and including 2024 (the 25th day after the date of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the costs and expenses payable by the Company in connection with this offering. All expenses incurred with respect to the registration of the common stock will be borne by the Company. All amounts are estimates, except the SEC registration fee.

SEC registration fee	\$	570.26
Printing expenses	\$	5,000
Accounting fees and expenses	\$	12,000
Legal fees and expenses	\$	50,000
Total	\$	67,570.26

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 102(b)(7) of the Delaware General Corporation Law (the "Delaware Law") enables a corporation, in its original certificate of incorporation or an amendment thereto, to eliminate or limit the personal liability of a director for monetary damages for breach of the director's fiduciary duty, except (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the Delaware Law (providing for liability of directors for unlawful payment of dividends or unlawful stock purchases or redemptions), or (iv) for any transaction from which the director derived an improper personal benefit. The Company's Sixth Amended and Restated Certificate of Incorporation, as amended ("Certificate of Incorporation"), contains such a provision.

In addition, Section 145 of the Delaware Law provides that a corporation may indemnify any persons, including officers and directors, who are, or are threatened to be made, party to any threatened, pending or completed legal action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), by reason of the fact that such person is or was an officer, director, employee or agent of the corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such officer, director, employee or agent acted in good faith and in a manner the person reasonably believed to be in or not opposed to the corporation's best interests and, with respect to criminal

proceedings, had no reasonable cause to believe that the person's conduct was unlawful. A Delaware corporation may indemnify officers or directors in an action by or in the right of the corporation under the same conditions, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against expenses (including attorneys' fees) that he or she actually and reasonably incurred.

The Company's Certificate of Incorporation and Restated Bylaws provide for indemnification of directors and officers to the fullest extent permitted by the Delaware Law.

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ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

The following information represents securities sold by the Company within the past three years which were not registered under the Securities Act.

On December 17, 2023, we entered into a securities purchase agreement with an Investor, pursuant to which we agreed to issue and sell to the Investor in a private placement (i) 301,000 shares of our common stock, (ii) 970,187 pre-funded warrants to purchase up to 970,187 shares of our common stock and (iii) 1,271,187 shares of common stock issuable upon the exercise of common warrants, at a purchase price of \$1.18 per share of common stock and related common warrant, or \$1.1799 per pre-funded warrant and related common warrant, for a total aggregate gross proceeds of approximately \$1.5 million. The offering closed on December 20, 2023. The common warrants have an exercise price of \$1.18 per share, are exercisable immediately upon issuance and expire five and one-half years following the issuance. The pre-funded warrants were sold in lieu of shares of common stock, are exercisable immediately upon issuance, have an exercise price of \$0.0001 per share and expire when exercised in full. The Company also agreed to issue to H.C. Wainwright & Co., LLC, the Placement Agent, 88,983 shares of common stock at an exercise price per share of \$1.475 and a term of five and one-half years.

On May 4, 2023, we entered into a securities purchase agreement with an Investor, pursuant to which we agreed to issue and sell to the Investor in a private placement (i) 190,000 shares of our common stock, (ii) 754,670 pre-funded warrants to purchase up to 754,670 shares of our common stock and (iii) 944,670 shares of common stock issuable upon the exercise of common warrants, at a purchase price of \$3.705 per share of common stock and related common warrant, or \$3.7049 per pre-funded warrant and related common warrant, for a total aggregate gross proceeds of approximately \$3.5 million. The Offering closed on May 8, 2023. Following an amendment in September 2023, the common warrants now have an exercise price of \$2.75 per share, are exercisable immediately upon issuance and expire five and one-half years following the issuance. The pre-funded warrants were sold in lieu of shares of common stock, are exercisable immediately upon issuance, have an exercise price of \$0.0001 per share and expire when exercised in full. The Company also agreed to issue to H.C. Wainwright & Co., LLC, the Placement Agent, 66,127 shares of common stock at an exercise price per share of \$4.613 and a term of five and one-half years.

On November 8, 2023, we issued to H.C. Wainwright & Co., LLC an additional 55,000 shares of common stock issuable upon the exercise of common warrants, at a purchase price of \$2.75 per share. As part of the December 2023 Private Placement, we agreed, subject to our shareholders approval, which has not yet been obtained, to amend the exercise price of the warrants to \$1.18 per share.

The securities above were offered and sold pursuant to an exemption from the registration requirements under Section 4(a)(2) of the Securities Act since, among other things, the transactions did not involve a public offering.

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ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Exhibits.

Exhibit No.	Description
3.1	Form of the Twenty-Fourth Amended and Restated Certificate of Incorporation of the Registrant, dated May 2, 2022 (as filed as Exhibit 3.5 to the Company's Form S-1/A, filed on May 10, 2022)
3.2	Amended and Restated Bylaws of Actelis Networks, Inc. (as filed as Exhibit 3.4 to the Company's Form S-1/A, filed on May 10, 2022)
4.1	Description of Securities (filed as Exhibit 4.1 to the Company's Form 10-K for the fiscal year ended December 31, 2022, filed on March 29, 2023)
4.2	Form of Representative's Warrant (as filed as Exhibit 4.1 to the Company's Form S-1/A, filed on May 2, 2022)
4.3	Form of Common Warrant (as filed as Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on May 8, 2023)
4.4	Form of Pre-Funded Warrant (as filed as Exhibit 4.2 to the Company's Current Report on Form 8-K, filed on May 8, 2023)
4.5	Form of Placement Agent Warrant (as filed as Exhibit 4.3 to the Company's Current Report on Form 8-K, filed on May 8, 2023)
4.6	Form of Common Warrant (as filed as Exhibit 4.1 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
4.7	Form of Pre-Funded Warrant (as filed as Exhibit 4.2 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
4.8	Form of Placement Agent Warrant (as filed as Exhibit 4.3 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
4.9	Form of Credit Agreement (as filed as Exhibit 4.1 to the Company's Current Report on Form 8-K, as filed on February 14, 2024).
5.1*	Opinion of Pearl Cohen Latzer Zedek Baratz LLP
10.1	Lease by and between Actelis Networks Israel, Ltd. and Moshe Smucha, dated January 13, 2000 (as filed as Exhibit 10.2 to the Company's Form S-1/A, filed on May 2, 2022)
10.2	First Amendment to the Lease and Management Agreements from October 22, 2017, by and between Homerton Investments, Ltd. and Actelis Networks Israel Ltd., dated April 14, 2021 (as filed as Exhibit 10.3 to the Company's Form S-1/A, filed on May 2, 2022)
10.3	Employment Agreement between Actelis Networks, Inc. and Mr. Tuvia Barlev dated February 15, 2015 (as filed as Exhibit 10.9 to the Company's Form S-1/A, filed on May 2, 2022)
10.4	Offer letter between Actelis Networks, Inc. and Mr. Yoav Efron dated November 30, 2017 (as furnished as Exhibit 10.10 to the Company's Form S-1/A, filed on May 10, 2022)
10.5	Employment Agreement between Actelis Networks Israel, Ltd. And Mr. Yoav Efron dated November 30, 2017 (as furnished as Exhibit 10.11 to the Company's Form S-1/A, filed on May 10, 2022)
10.6	Consulting Agreement between Actelis Networks, Inc. and Barlev Enterprises dated February 20, 2015 (as furnished as Exhibit 10.12 to the Company's Form S-1/A, filed on May 10, 2022)
10.7	Actelis Networks, Inc. 2015 Equity Incentive Plan (as filed as Exhibit 10.13 to the Company's Form S-1, filed on April 15, 2022)
10.8	Amendment No. 1 to 2015 Equity Incentive Plan (as filed as Exhibit 10.14 to the Company's Form S-1, filed on April 15, 2022)

10.9	Senior Loan Agreement between Migdalor Business Investment Fund and Actelis Networks Israel, Ltd., dated December 2, 2020 (as filed as Exhibit 10.16 to the Company's Form S-1, filed on April 15, 2022)
10.10	Amendment Number 1 to Senior Loan Agreement between Migdalor Business Investment Fund and Actelis Networks Israel, Ltd., dated November 17, 2021 (as filed as Exhibit 10.17 to the Company's Form S-1, filed on April 15, 2022)
<hr/>	
10.11	Securities Purchase and Loan Repayment Agreement between Actelis Networks, Inc. and Mr. Tuvia Barlev dated April 15, 2022 (as filed as Exhibit 10.18 to the Company's Form S-1, filed on April 15, 2022)
10.12	Form of Securities Purchase Agreement (as filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on May 8, 2023)
10.13	Form of Registration Rights Agreement (as filed as Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on May 8, 2023)
10.14	Form of Warrant Amendment (as filed as Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
10.15	Form of Securities Purchase Agreement (as filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
10.16	Form of Warrant Amendment (as filed as Exhibit 10.2 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
10.17	Form of Registration Rights Agreement (as filed as Exhibit 10.3 to the Company's Current Report on Form 8-K, filed on December 20, 2023)
21.1	Subsidiaries of the Registrant (as filed as Exhibit 21.1 to the Company's Form S-1, filed on April 15, 2022)
23.1*	Consent of Kesselman & Kesselman, Certified Public Accountants (Isr.) a member firm of PricewaterhouseCoopers International Limited, independent registered accounting firm for the Company
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).
107*	Filing Fee Table

* Filed herewith
** Previously filed.

(b) Financial Statement Schedules

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is included in the consolidated financial statements or related notes incorporated herein by reference.

ITEM 17. UNDERTAKINGS

(a) The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; *provided, however*, that paragraphs (a)(1)(i), (a)(1)(ii), and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- (4) That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) That, insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.
- (c) The undersigned registrant hereby undertakes:
- (1) That, for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (2) That, for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement on Form S-1/A to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Fremont, California on March 26, 2024.

ACTELIS NETWORKS, INC.

By: /s/ Tuvia Barlev
Tuvia Barlev
Chief Executive Officer and Secretary

Pursuant to the requirements of the Securities Act of 1933, this amendment to the registration statement on Form S-1/A has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Tuvia Barlev</u> Tuvia Barlev	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	March 26, 2024
* <u>Yoav Efron</u>	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 26, 2024
* <u>Joseph Moscovitz</u>	Director	March 26, 2024
* <u>Dr. Naama Halevi-Davidov</u>	Director	March 26, 2024
* <u>Israel Niv</u>	Director	March 26, 2024
* <u>Noemi Schmayer</u>	Director	March 26, 2024

By: /s/ Tuvia Barlev
Tuvia Barlev
Attorney-in-fact*

March 26, 2024

Actelis Networks, Inc.
4039 Clipper Court
Fremont, CA 94583

Re: Registration Statement on Form S-1/A

Ladies and Gentlemen:

We have acted as counsel to Actelis Networks, Inc., a Delaware corporation (the “**Company**”), in connection with the Registration Statement on Form S-1/A filed by the Company under the Securities Act of 1933, as amended (the “**Securities Act**”), with the United States Securities and Exchange Commission (the “**Commission**”) on the date hereof (the “**Registration Statement**”). The Registration Statement relates to the offering and sale from time to time of up to 3,697,154 shares of the Company’s common stock, \$0.0001 par value per share (“**Common Stock**”), by the selling stockholders identified in the Registration Statement (the “**Selling Stockholders**”) consisting of (i) 301,000 shares of Common Stock (the “**December 2023 Shares**”) issued in a private placement in December 2023 (the “**December 2023 Private Placement**”), (ii) 1,271,187 shares of Common Stock issuable upon the exercise of warrants (“**December 2023 Warrants**”) issued in the December 2023 Private Placement (the “**December 2023 Warrant Shares**”), (iii) 970,187 shares of Common Stock issuable upon the exercise of pre-funded warrants (“**December 2023 Pre-Funded Warrants**”) issued in the December 2023 Private Placement (the “**December 2023 Pre-Funded Warrant Shares**”), (iv) 55,000 shares of Common Stock issuable upon the exercise of warrants (“**September 2023 Warrants**”) issued in September 2023 (the “**September 2023 Warrant Shares**”), (v) 944,670 shares of Common Stock (“**May 2023 Warrant Shares**”) issuable upon the exercise of warrants (“**May 2023 Warrants**”) issued in a private placement in May 2023 (the “**May 2023 Private Placement**”), (vi) 88,983 shares of Common Stock issuable upon the exercise of placement agent warrants (“**December 2023 PA Warrants**”) issued in connection with the December 2023 Private Placement (the “**December 2023 PA Warrant Shares**”), and (vii) 66,127 shares of Common Stock issuable upon the exercise of placement agent warrants (the “**May 2023 PA Warrants**”), and together with the May 2023 Warrants, September 2023 Warrants, December 2023 Pre-Funded Warrants, December PA Warrants and December 2023 Warrants, the “**Warrants**”) issued in connection with the May 2023 Private Placement (the “**May 2023 PA Shares**”), and together with the December 2023 PA Warrant Shares, September 2023 Warrant Shares, December 2023 Pre-Funded Warrant Shares, the May 2023 Warrant Shares, and December 2023 Warrant Shares, the “**Warrant Shares**”) and together with the December 2023 Shares, the “**Shares**”, and together with the Warrant Shares, the “**Securities**”).

In connection with this opinion, we have examined and relied upon the Registration Statement; the Company’s certificate of incorporation, as amended and restated to date; the Company’s Bylaws as in effect on the date hereof; the Warrants; and certain resolutions and minutes of meetings of the Board of Directors of the Company relating to the issuance of the Securities and the Registration Statement. We have considered such matters of law and of fact, including the examination of originals or copies, certified or otherwise identified to our satisfaction, of such records, documents, certificates, and other instruments of the Company, certificates of officers, directors and representatives of the Company, certificates of public officials, and such other documents as in our judgment are necessary or appropriate to enable us to render the opinion expressed below.

As to matters of fact material to our opinions, we have relied, without independent verification, on certificates and other inquiries of officers of the Company. We have assumed without investigation the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof, the accuracy and completeness of all records made available to us by the Company, and that all offers and sales of the Securities will be made in compliance with the securities laws of the states having jurisdiction thereof. We have also assumed that (i) the Registration Statement and any amendments thereto (including post-effective amendments) have become effective and will continue to be effective at the time of the resale of any Securities, (ii) if necessary, a prospectus supplement will have been prepared and filed with the Commission describing any Securities offered thereby or any Selling Stockholders, (iii) all Securities will be sold in the manner stated in the Registration Statement and, if necessary, the applicable prospectus supplement, and (iv) at the time of the offering, there will not have occurred any changes in the law affecting the authorization, execution, delivery, validity or enforceability of the Securities.

The opinions set forth in this letter are limited solely to the federal laws of the United States of America and the State of Delaware, and we express no opinion as to the laws of any other jurisdiction.

Based upon the foregoing, and in reliance thereon, we are of the opinion that:

- (i) the Shares are validly issued, fully paid and non-assessable;
- (ii) The Warrants have been duly authorized by all necessary corporate action on the part of the Company and constitute the legally valid and binding obligation of the Company, enforceable against the Company in accordance with their terms, except as may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting creditors’ rights generally (including, without limitation, fraudulent conveyance laws) and by general principles of equity, including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance or injunctive relief, regardless of whether considered in a proceeding in equity or at law.
- (iii) Upon the issuance, payment for and delivery of the Warrant Shares in accordance with the applicable Warrants, the Warrant Shares will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement. In giving our consent, we do not admit that we are “experts” within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Pearl Cohen Zedek Latzer Baratz LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-1 of Actelis Networks, Inc. of our report dated March 26, 2024 relating to the financial statements, which appears in Actelis Networks, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2023. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Kesselman & Kesselman

Certified Public Accountants (Isr.)

A member firm of PricewaterhouseCoopers International Limited

Tel-Aviv, Israel

March 26, 2024

Calculation of Filing Fee Tables

Form S-1
(Form Type)Actelis Networks, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation Or Carry Forward Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share ⁽²⁾	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, \$0.0001 par value per share (3)	457(c)					
				3,697,154 ⁽³⁾	\$ 1.05	\$ 3,863,525.93	\$ 0.00014760	\$ 570.26
Total Offering Amounts						\$ 3,863,525.93		\$ 570.26
Total Fees Previously Paid								—
Total Fee Offsets								—
Net Fees Due								\$ 570.26

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement shall also cover any additional shares of the Registrant’s common stock that may be issued in connection with a stock dividend, stock split, recapitalization or similar transactions.
- (2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457 under the Securities Act, based on the average of the high and low prices of the Common Stock on the Nasdaq Capital market on March 22, 2024.
- (3) Consists of an aggregate of 3,396,154 that are issuable upon exercise of warrants. All 3,697,154 ordinary shares are to be offered for resale by the selling stockholders named in the prospectus contained in this Registration Statement on Form S-1.