

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

**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
Non-accelerated filer

☐
☒

Accelerated filer
Smaller reporting company
Emerging growth company

☐
☒
☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 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 OCTOBER 7, 2025



Actelis Networks, Inc.

Up to 15,200,000 Shares of Common Stock

This prospectus relates to the offer and sale from time to time of up to 15,200,000 shares of common stock of Actelis Networks, Inc. (“we,” “us,” “our,” the “Company,” or “Actelis”), par value \$0.0001 per share (the “Common Stock”), by White Lion Capital, LLC (“White Lion” or the “Selling Stockholder” or the “selling stockholder”).

The securities included in this prospectus consist of shares of Common Stock that we may, in our discretion, elect to issue and sell to the Selling Stockholder, pursuant to (i) that certain Common Stock Purchase Agreement, dated as of September 27, 2025 and effective as of October 1, 2025, by and between us and White Lion (the “ELOC Purchase Agreement”) establishing an equity line of credit, and (ii) that certain Stock Purchase Agreement, dated as of September 27, 2025, by and between us and White Lion (the “PIPE Purchase Agreement”) entered into in connection with a private placement of the Company’s securities, which took place concurrently with the establishment of the equity line of credit. Such shares of our Common Stock include up to (i) 10,000,000 shares of Common Stock that we may elect, in our sole discretion, to issue and sell to White Lion, from time to time from and after the commencement date under the ELOC Purchase Agreement, and, subject to applicable stock exchange rules, (ii) 1,200,000 shares of Common Stock issuable to White Lion as commitment shares under the ELOC Purchase Agreement (assuming a value of \$0.625 per share, the closing price of our shares of Common Stock on the Nasdaq Capital Market on October 3, 2025), (iii) 871,766 shares of Common Stock issued to the Selling Stockholder pursuant to the PIPE Purchase Agreement and (iv) 3,128,234 shares of Common Stock issuable to the Selling Stockholder upon exercise of Pre-Funded Warrants issued pursuant to the PIPE Purchase Agreement.

The actual number of shares of our Common Stock issuable will vary depending on the then-current market price of shares of our Common Stock sold to the selling stockholder under the ELOC Purchase Agreement, but will not exceed the number set forth in the preceding sentences unless we file an additional registration statement under the Securities Act of 1933, as amended (the “Securities Act”), with the U.S. Securities and Exchange Commission (the “SEC”). See “White Lion Transaction” for a description of the ELOC Purchase Agreement and the PIPE Purchase Agreement and “Selling Stockholder” for additional information regarding White Lion.

We are registering the shares on behalf of the selling stockholder, to be offered and sold by it from time to time. We are not selling any securities under this prospectus, and will not receive any proceeds from the sale of Common Stock by the selling stockholder pursuant to this prospectus. We may receive up to \$30.0 million in aggregate gross proceeds from White Lion under the ELOC Purchase Agreement in connection with sales of the shares of our Common Stock pursuant to the ELOC Purchase Agreement at varying purchase prices after the date of this prospectus. However, the actual proceeds from White Lion may be less than this amount depending on the number of shares of our Common Stock sold and the price at which the shares of our Common Stock are sold. The purchase price per share that White Lion will pay for shares of Common Stock purchased from us under the ELOC Purchase Agreement will fluctuate based on the market price of our shares at the time we elect to sell shares to White Lion and, further, to the extent that the Company sells shares of Common Stock under the ELOC Purchase Agreement, substantial amounts of shares could be issued and resold, which would cause dilution and may impact the Company's stock price.

Sales of a substantial number of our shares of Common Stock in the public market by the selling stockholder and/or by our other existing securityholders, or the perception that those sales might occur, could increase the volatility of and cause a significant decline in the market price of our securities and could impair our ability to raise capital through the sale of additional equity securities. See *"Sales of a substantial number of our securities in the public market by the selling stockholder and/or by our existing securityholders could cause the price of our shares of Common Stock and Warrants to fall."*

All the securities offered in this prospectus by the selling securityholder may be resold for so long as the registration statement, of which this prospectus forms a part, is available for use. The sale of all or a portion of the securities being offered in this prospectus could result in a significant decline in the public trading price of our securities. Despite such a decline in the public trading price, some of the selling securityholder may still experience a positive rate of return on the securities they purchased due to the price at which such selling securityholder initially purchased the securities.

We are registering the securities for resale pursuant to the selling securityholder's registration rights under certain agreements between us, on the one hand, and the selling securityholder, on the other hand, subject to certain exceptions. Our registration of the securities covered by this prospectus does not mean that the selling securityholder will offer or sell any of the securities registered for resale.

We will bear all costs, expenses, and fees in connection with the registration of the shares of Common Stock. The selling securityholder may offer, sell or distribute all or a portion of its shares of Common Stock publicly or through private transactions at prevailing market prices or at negotiated prices. The selling securityholder will bear all commissions and discounts, if any, attributable to its sales of the shares of Common Stock. We provide more information about how the selling securityholder may sell the shares of Common Stock in the section titled *"Plan of Distribution."*

Our Common Stock is traded on the Nasdaq Capital Market under the symbol "ASNS." On October 6, 2025, the closing price of our Common Stock on the Nasdaq Capital Market was \$0.65 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 7 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 _____, 2025.

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ABOUT THIS PROSPECTUS

Unless the context indicates otherwise, references in this prospectus to “Actelis,” “we,” “us,” “our,” “the Company,” “our company” and similar terms refer to Actelis Networks, Inc., a Delaware corporation. Actelis has a wholly-owned subsidiary, Actelis Networks Israel, Ltd, an Israeli company.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”). The selling stockholder 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.

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;
- the success of competing products or technologies that 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 situation 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), Hezbollah (an Islamist militia and political group in Lebanon) and Iran;
- 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 (or incorporated by reference herein) have been adjusted to give retroactive effect to the stock split for all periods presented.

On September 29, 2025, we called for an extraordinary general meeting of shareholders seeking to, among other proposals, approve a reverse share split of our authorized shares of common stock, at a ratio of 1-for-7 to 1-for-12, to be determined at the discretion of our board and included in a public announcement by us before the effectiveness such reverse stock split (the “Proposed Reverse Split”). The extraordinary general meeting of stockholders is set to take place on November 7, 2025. As of the date of this prospectus supplement, our stockholders have not voted on the Proposed Reverse Split, and the Proposed Reverse Split has not been taken effective.

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.”

Actelis Networks, Inc. (“Actelis,” “we,” “us,” “our,” “the Company,” “our company”) is a market leader in cyber-hardened, rapid-deployment networking solutions for wide-area internet of things (“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 software 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 was 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, federal and DoD markets, as well as multi-dwelling units, and introduced, in 2024, our cyber-aware networking solutions for IoT markets as well.

Recent Developments

July 2025 Private Placement

On June 30, 2025, we entered into a securities purchase agreement (the “July 2025 Purchase Agreement”) with certain accredited investors (the “Investors”), pursuant to which we agreed to issue and sell to the Investors in a private placement (the “July 2025 Private Placement” or the “Offering”) (a) 1,626,019 shares of Common Stock, (b) Series A-3 warrants to purchase up to 1,626,019 shares of Common Stock, and (c) Series A-4 Warrants to purchase up to 3,252,038 shares of Common Stock, for a purchase price of \$0.615 per share and related Common Warrants, for a total aggregate gross proceeds of approximately \$1 million. The July 2025 Private Placement closed on July 2, 2025.

The Series A-3 Warrants have an exercise price of \$0.615 per share, are exercisable commencing on the effective date of shareholder approval (the “July 2025 Shareholder Approval Date”) of the issuance of the shares issuable upon exercise of the Common Warrants (“July 2025 Shareholder Approval”) and expire five years following the July 2025 Shareholder Approval Date.

The Series A-4 Warrants have an exercise price of \$0.615 per share, are exercisable commencing on the July 2025 Shareholder Approval Date and expire eighteen months following the July 2025 Shareholder Approval Date.

Under the terms of the Common Warrants, the Investors may not exercise the warrants to the extent such exercise would cause the Investor, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock which would exceed 4.99% (or, at such Investor’s option upon issuance, 9.99%), of the Company’s then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon exercise of such warrants which have not been exercised.

H.C. Wainwright & Co., LLC acted as the Placement Agent for the issuance and sale of the Securities. The Company has agreed to pay up to an aggregate cash fee equal to 7.0% of the gross proceeds received by the Company from the Offering. The Company also agreed to pay the Placement Agent \$35,000 for non-accountable expenses and a management fee equal to 1.0% of the gross proceeds raised in the Offering. The Company also agreed to issue to the Placement Agent, or its designees, Placement Agent Warrants to purchase up to 7.0% of the aggregate number of the shares of Common Stock sold to the Investors (or warrants to purchase up to 113,821 shares of Common Stock) at an exercise price per share of \$0.7688 which will be exercisable commencing on the July 2025 Shareholder Approval Date and have term of five years after the July 2025 Shareholder Approval Date (the “July 2025 Placement Agent Warrants,” and collectively with the Common Warrants, the “July 2025 Warrants”). The July 2025 Placement Agent Warrants and the shares of Common Stock issuable upon exercise thereof, will be issued in reliance on the exemption from registration provided by Section 4(a)(2) of the Securities Act as transactions not involving a public offering and in reliance on similar exemptions under applicable state laws.

Nasdaq Listing Compliance

On August 25, 2023, we received a notification letter from the Listing Qualifications Staff (the “Staff”) of the Nasdaq Stock Market LLC (“Nasdaq”) 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. On March 27, 2024, we received a delist determination letter from Nasdaq advising us that the Staff had determined to delist our securities from Nasdaq due to non-compliance with the Minimum Shareholders’ Equity Requirement, unless we timely request a hearing before the Nasdaq Hearings Panel (the “Panel”). We timely requested a hearing before the Panel.

On August 27, 2024, we received formal written notice from Nasdaq confirming that we have evidenced compliance with all applicable criteria for continued listing on Nasdaq as set forth in Nasdaq Listing Rule 5550, including the Minimum Shareholders’ Equity Requirement. In accordance with Nasdaq Listing Rule 5815(d)(4) (B), we remained subject to a panel monitor for equity compliance through August 27, 2025. On August 19, 2025, we received written notice from Nasdaq stating that, due to the Company’s non-compliance with the Minimum Shareholders’ Equity Requirement as of June 30, 2025, and because, pursuant to Listing Rule 5815(d)(4)(B), the Company remained subject to a mandatory hearing panel monitor through August 27, 2025, the Company’s securities were subject to delisting from Nasdaq unless the Company timely requests a hearing before the Nasdaq Hearing Panel (the “Panel”). The Company had its hearing with the Panel on September 30, 2025.

At the hearing, the Company presented its plan to evidence compliance with the Equity Rule and all other applicable criteria for continued listing on The Nasdaq Capital Market, and requested to remain listed subject to its plan to regain compliance. The Company anticipates receiving a resolution on the outcome of the hearing from the Panel within two weeks of the date of the hearing. There can be no assurance that the Panel will grant the Company’s request for continued listing or that the Company will be able to demonstrate compliance with the Minimum Shareholders’ Equity Requirement and all other applicable Nasdaq listing criteria within any extension of time that may be granted by the Panel.

On May 20, 2024, Nasdaq notified us that we were not in compliance with the minimum bid price requirements set forth in Nasdaq Listing Rule 5550(a)(2), which requires our Common Stock to maintain a minimum bid price of \$1.00 per share. On June 20, 2024, we received a letter from Nasdaq that, for the 10 consecutive business days from June 5, 2024 to June 28, 2024, the closing bid price of the Company’s Common Stock had been at \$1.00 per share or greater. Accordingly, we have regained compliance with Nasdaq Listing Rule 5550(a)(2) and Nasdaq considers the prior bid price deficiency matter now closed.

In addition, on May 12, 2025, Nasdaq notified us (the “Notification Letter”) that we were not in compliance with the minimum bid set forth in Nasdaq Listing Rule 5550(a)(2), which requires our Common Stock to maintain a minimum bid price of \$1.00 per share. The Notification Letter has no immediate effect on the listing or trading of our Common Stock on Nasdaq and, at this time, the Common Stock will continue to trade on Nasdaq under the symbol “ASNS”.

The Notification Letter provides that we have 180 calendar days, or until November 10, 2025, to regain compliance with Nasdaq Listing Rule 5550(a)(2). To regain compliance, our Common Stock must have a closing bid price of at least \$1.00 per share for a minimum of 10 consecutive business days. If we do not regain compliance by November 10, 2025, an additional 180 days may be granted to regain compliance, so long as we meet certain listing criteria. If we do not qualify for the second compliance period or fail to regain compliance during the second 180-day period, then Nasdaq will notify us of its determination to delist our Common Stock, at which point we will have the opportunity to appeal the delisting determination to a Hearings Panel. As a result, we have called for an extraordinary general meeting of stockholders seeking to, effect the Proposed Reverse Split. However, as of the date of this Prospectus Supplement, the Proposed Reverse Split has not yet been approved and even in the event it does, we cannot guarantee that our shares of common stock will maintain the minimum closing bid price of \$1.00 or more for at least 10 consecutive business days thereafter.

September 2025 Warrant Inducement

On September 2, 2025, we entered into an inducement agreement (the “Inducement Letter”) with a certain holder (the “Holder”) of certain of the Company’s existing warrants to purchase an aggregate of 4,270,197 shares of the Company’s Common Stock, consisting of (i) 1,271,187 warrants issued on December 20, 2023 with an expiration date of June 20, 2029 at an exercise price of \$1.18 per share (ii) 999,670 warrants issued on June 6, 2024 with an expiration date of December 6, 2029 at an exercise price of \$2.00 per share and (iii) 1,999,340 warrants issued on July 2, 2024 with an expiration date of July 2, 2026 at an exercise price of \$1.75 per share (the “Existing Warrants”).

Pursuant to the Inducement Letter, the Holder agreed to exercise for cash the Existing Warrants to purchase an aggregate of 4,270,197 shares of the Company’s Common Stock at a reduced exercise price of \$0.37 per share in consideration of the Company’s agreement to issue new Common Stock purchase warrants (the “New Warrants”), as described below, to purchase up to an aggregate of 6,405,296 shares of the Company’s Common Stock (the “New Warrant Shares”) at an exercise price of \$0.37 per share. The Company received aggregate gross proceeds of approximately \$1.6 million from the exercise of the Existing Warrants by the Holder, before deducting financial advisory fees and other offering expenses payable by the Company.

Rodman & Renshaw LLC and H.C. Wainwright & Co., LLC (“Wainwright”) acted as financial advisors to the Company in connection with the transactions contemplated by the Inducement Letter. Pursuant to an engagement letter with Wainwright, the Company has agreed to pay the financial advisors a cash fee equal to 7.0% of the aggregate gross proceeds received from the Holder’s exercise of the Existing Warrants, as well as a management fee equal to 1.0% of the gross proceeds from the exercise of the Existing Warrants. The Company has also agreed to issue to the financial advisors or their designees warrants (the “Inducement Placement Agent Warrants”) to purchase up to 298,914 shares of Common Stock (representing 7.0% of the Existing Warrants being exercised), which will have the same terms as the New Warrants having a term of five years of Stockholder Approval (as defined below) except the Inducement Placement Agent Warrants will have an exercise price equal to \$0.4625 per share (125% of the exercise price of the Existing Warrants).

The New Warrants have an exercise price equal to \$0.37 per share. The New Warrants will be exercisable from the effective date of shareholder approval (“Stockholder Approval”), until (i) the five-year anniversary of such date for 3,406,286 of the New Warrants (the “Series A-1 Warrants”) and (ii) the twenty-four-month anniversary of such date for 2,999,010 of the New Warrants. The exercise price and number of New Warrant Shares issuable upon exercise of the New Warrants is subject to appropriate adjustment in the event of stock dividends, stock splits, subsequent rights offerings, pro rata distributions, reorganizations, or similar events affecting the Company’s Common Stock and the exercise price.

The closing of the transactions contemplated pursuant to the Inducement Letter occurred on September 3, 2025.

Implications of Being a Smaller Reporting Company and Emerging Growth Company

We are a “smaller reporting company” as defined in Item 10(f)(1) of Regulation S-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements and reduced disclosure obligations regarding executive compensation. We will remain a smaller reporting company until the last day of any fiscal year for so long as either (1) the market value of our Common Stock held by non-affiliates does not equal or exceed \$250 million as of the prior June 30th, or (2) our annual revenues did not equal or exceed \$100 million during such completed fiscal year and the market value of our Common Stock held by non-affiliates did not equal or exceed \$700 million as of the prior June 30th. To the extent we take advantage of any reduced disclosure obligations, it may make the comparison of our financial statements with other public companies difficult or impossible.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). As an emerging growth company, we are exempt from certain requirements related to executive compensation, including the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Act.

Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a registration statement under the Securities Act of 1933, as amended (the “Securities Act”) declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt out is irrevocable. We have elected not to opt out of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our financial statements with those of another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

We may remain an “emerging growth company” until as late as December 31, 2027, the fiscal year-end following the fifth anniversary of the completion of our IPO, though we may cease to be an “emerging growth company” earlier under certain circumstances, including if (1) we have more than \$1.07 billion in annual net revenues in any fiscal year, (2) we become a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates as of the end of the second quarter of that fiscal year or (3) we issue more than \$1.0 billion of non-convertible debt over a three-year period. References herein to “emerging growth company” are to its meaning under the Securities Act, as modified by the JOBS Act.

THE OFFERING

Shares of Common Stock currently outstanding	17,477,860 shares of Common Stock.
Securities offered by the selling stockholder	Up to (i) 10,000,000 shares of Common Stock that we may elect, in our sole discretion, to issue and sell to White Lion, from time to time from and after the commencement date under the ELOC Purchase Agreement, and subject to applicable stock exchange rules, (ii) 1,200,000 shares of Common Stock issuable to White Lion as commitment shares under the ELOC Purchase Agreement (assuming a value of \$0.625 per share, the closing price of our shares of Common Stock on the Nasdaq Capital Market on October 3, 2025), (iii) 871,766 shares of Common Stock issued pursuant to the PIPE Purchase Agreement and (iv) 3,128,234 shares of Common Stock issuable upon exercise of Pre-Funded Warrants issued pursuant to the PIPE Purchase Agreement
Selling Stockholder	All of the shares of our Common Stock are being offered by the selling stockholder. See “Selling Stockholder” on page 12 of this prospectus for more information on the selling stockholder.
Plan of Distribution	The selling stockholder 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 are not selling any securities under this prospectus, and will not receive any proceeds from the sale of Common Stock by the selling stockholder pursuant to this prospectus. We may receive up to \$30.0 million in aggregate gross proceeds from White Lion under the ELOC Purchase Agreement in connection with sales of the shares of our Common Stock pursuant to the ELOC Purchase Agreement after the date of this prospectus. However, the actual proceeds from White Lion may be less than this amount depending on the number of shares of our Common Stock sold and the price at which the shares of our Common Stock are sold.
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.
Listings	Our Common Stock is listed on the Nasdaq Capital Market under the symbol “ASNS.”

Unless otherwise indicated, all information in this prospectus (i) assumes no exercise of the outstanding warrants described above, and (ii) gives retroactive effect to the 1-for-10 reverse stock split effected on April 19, 2023.

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.

It is not possible to predict the actual number of Common Stock we will sell under the ELOC Purchase Agreement to the selling stockholder, or the actual gross proceeds resulting from those sales.

Subject to certain limitations in the ELOC Purchase Agreement and compliance with applicable law, we have the discretion to deliver notices to the selling stockholder at any time throughout the term of the ELOC Purchase Agreement. It is anticipated that shares offered to the selling stockholder in this offering will be sold over a period until 36 months from the Commencement Date, at the latest. The number of shares ultimately offered for sale to the Selling Stockholder under this prospectus is dependent upon the number of shares we elect to sell to selling stockholder under the ELOC Purchase Agreement. The actual number of Common Stock that are sold to the selling stockholder may depend based on a number of factors, including the market price of our Common Stock during the sales period. Actual gross proceeds may be less than \$30.0 million, which may impact our future liquidity. Because the price per share of each share sold to the selling stockholder will fluctuate during the sales period, it is not currently possible to predict the number of shares that will be sold or the actual gross proceeds to be raised in connection with those sales, if any.

Furthermore, if we elect to issue and sell to White Lion more than the 10,000,000 shares of Common Stock that are registered for resale by White Lion hereunder pursuant to issuance under the ELOC Purchase Agreement, we must first file with the SEC one or more additional registration statements to register under the Securities Act for resale by White Lion such additional Common Stock we wish to sell from time to time under the ELOC Purchase Agreement, which the SEC must declare effective, in each case before we may elect to sell any additional Common Stock to White Lion under the Purchase Agreement.

The issuance and/or exercisability of certain securities issued under the ELOC Purchase Agreement and the PIPE Purchase Agreement is contingent upon us obtaining the Stockholder Approval. If we do not obtain the Stockholder Approval, these securities may never become issuable and/or exercisable.

If it becomes necessary for us to issue and sell to White Lion Common Stock in excess of the Exchange Cap under the ELOC Purchase Agreement in order to receive aggregate gross proceeds equal to \$30,000,000 under the ELOC Purchase Agreement, then for so long as the Exchange Cap continues to apply to issuances and sales of Common Stock under the Purchase Agreement, we must first obtain White Lion Shareholder Approval. In addition, the exercisability of the number of the Pre-Funded Warrants beyond the Exchange Cap is subject to obtaining shareholder approval. The Company intends to obtain such shareholder approval concurrently with the White Lion Shareholder Approval required for the issuance of shares of Common Stock under the ELOC Purchase Agreement beyond the Exchange Cap. If we are unable to obtain the required shareholder approvals, these securities will not be issuable and/or exercisable, and will have little to no value.

The Company has agreed to call the a special meeting of its stockholders to obtain White Lion Shareholder Approval within 120 days of the Commencement Date. If the Company fails to call a special meeting within this timeframe, it shall pay liquidated damages to White Lion, as more fully described in the ELOC Purchase Agreement. In the event White Lion Shareholder Approval is not obtained at the special meeting, the Company is obligated to call an additional special meeting every ninety (90) days thereafter, for a total period of 360 days, until White Lion Shareholder Approval is obtained.

Investors who buy Common Stock in this offering at different times will likely pay different prices.

The issuance of Common Stock to the Selling Stockholder pursuant to the ELOC Purchase Agreement may cause substantial dilution to our existing shareholders, and the sale of such shares acquired by the Selling Stockholder could cause the price of our Common Stock to decline.

We are registering for resale by the selling stockholder up to 15,200,000 shares of Common Stock which may be sold in the future via Purchase Notice to White Lion under the ELOC Purchase Agreement. The selling stockholder may ultimately purchase all, some or none of the Common Stock issuable pursuant to the ELOC Purchase Agreement that are the subject of this prospectus. After the selling stockholder has acquired shares under the ELOC Purchase Agreement, it may sell all, some or none of those shares. Sales to the selling stockholder by us pursuant to the ELOC Purchase Agreement under this prospectus may result in substantial dilution to the interests of other holders of our Common Stock.

We are registering for resale by the selling stockholder up to 15,200,000 shares of Common Stock. The selling stockholder may ultimately purchase all, some or none of the Common Stock issuable pursuant to the ELOC Purchase Agreement that are the subject of this prospectus. After the selling stockholder has acquired shares under the ELOC Purchase Agreement, it may sell all, some or none of those shares. Sales to the selling stockholder by us pursuant to the ELOC Purchase Agreement under this prospectus may result in substantial dilution to the interests of other holders of our Common Stock.

The sale of a substantial number of shares to the selling stockholder in this offering, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire. The number of Common Stock ultimately offered for resale by the selling stockholder under this prospectus is dependent upon the number of Common Stock issued to the selling stockholder pursuant to the ELOC Purchase Agreement. Depending on a variety of factors, including market liquidity of our Common Stock, the issuance of shares to the selling stockholder may cause the trading price of our Common Stock to decline.

We have broad discretion in the use of the net proceeds we receive from the sale of shares to the Selling Stockholder and may not use them effectively.

Our management will have broad discretion in the application of the proceeds we receive from the selling stockholder pursuant to sales of Common Stock under the ELOC Purchase Agreement, if any, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether our management is using the proceeds appropriately. Because of the number and variability of factors that will determine our use of our proceeds from the selling stockholder, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business and cause the price of our Common Stock to decline. Pending their use, we may invest the proceeds from the selling stockholder in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our shareholders.

USE OF PROCEEDS

We will not receive any proceeds from the sale of Common Stock by the selling stockholder pursuant to this prospectus. We may receive up to \$30.0 million in aggregate gross proceeds from White Lion under the ELOC Purchase Agreement in connection with sales of the shares of our Common Stock pursuant to the ELOC Purchase Agreement after the date of this prospectus. However, the actual proceeds from White Lion may be less than this amount depending on the number of shares of our Common Stock sold and the price at which the shares of our Common Stock are sold.

The selling securityholder will pay any underwriting fees, discounts, selling commissions, stock transfer taxes, and certain legal expenses incurred by it in disposing of its shares of Common Stock, and we will bear all other costs, fees, and expenses incurred in effecting the registration of such securities covered by this prospectus, including, without limitation, all registration and filing fees, Nasdaq listing fees, and fees and expenses of our counsel and our independent registered public accountants.

THE WHITE LION TRANSACTION

Equity Line of Credit Agreement

On September 27, 2025, we entered into the ELOC Purchase Agreement, with an effective date of October 1, 2025 (the “Commencement Date”), and the White Lion RRA with White Lion. Pursuant to the ELOC Purchase Agreement, the Company has the right, but not the obligation to require White Lion to purchase, from time to time, up to the Commitment Amount of \$30,000,000 in aggregate gross purchase price of newly issued shares of the Company’s Common Stock for the 36-month period beginning on the Commencement Date, subject to certain limitations and conditions set forth in the ELOC Purchase Agreement.

The Company is obligated under the ELOC Purchase Agreement and the White Lion RRA to file the Resale Registration Statement with the SEC to register the Common Stock under the Securities Act, for the resale by White Lion of shares of Common Stock that the Company may issue to White Lion under the ELOC Purchase Agreement and to register the Commitment Shares within five business days of the date of the ELOC Purchase Agreement.

The maximum number of shares issuable under the ELOC Purchase Agreement is subject to the Exchange Cap equal to 19.99% of the Company’s outstanding Common Stock as of the Commencement Date.

The Company has agreed to call a special meeting to obtain White Lion Shareholder Approval within 120 days of the Commencement Date. If the Company fails to call the special meeting within this timeframe, it shall pay liquidated damages to White Lion, as more fully described in the ELOC Purchase Agreement. In the event White Lion Shareholder Approval is not obtained at the Special Meeting, the Company is obligated to call an additional special meeting every ninety (90) days thereafter, for a total period of 360 days, until White Lion Shareholder Approval is obtained.

As consideration for White Lion’s irrevocable commitment to purchase the Company’s Common Stock up to the Commitment Amount, the Company agreed to issue Commitment Shares equal to the Commitment Amount of \$750,000 divided by the lowest traded price of the Company’s Common Stock during the 30 business days prior to the issuance of the Commitment Shares.

If at any point during the term of the ELOC Purchase Agreement the Company fails to be listed on the Nasdaq Capital Market, the Commitment Fee Amount will increase to \$1,000,000 if remedied within six months or less, to \$1,250,000 if remedied after six months but before twelve months, and \$1,500,000 if not remedied within twelve months pursuant to the Delisting Penalty Provision. The Delisting Penalty Provision shall automatically be waived on the date that is six (6) months after the later of (A) the date on which White Lion Shareholder Approval is obtained and (B) the date on which the Resale Registration Statement has been declared effective by the SEC.

Subject to the satisfaction of certain customary conditions including, without limitation, the effectiveness of a registration statement registering the shares issuable pursuant to the ELOC Purchase Agreement, the Company’s right to sell shares to White Lion will commence on the Commencement Date and extend until 36 months through the Commitment Period, unless the Company has exercised its right in full to sell shares to White Lion under the ELOC Purchase Agreement prior to such date. During such term, subject to the terms and conditions of the ELOC Purchase Agreement, the Company shall notify White Lion through a Purchase Notice when the Company exercises its right to sell shares (the effective date of such notice, a “Notice Date”). The Purchase Notice may be a Regular Purchase Notice or a Rapid Purchase Notice, each as described below.

The number of shares sold pursuant to any such notice may not exceed 40% of the Average Daily Trading Volume for the Common Stock traded on Nasdaq immediately preceding receipt of the applicable Purchase Notice, and can be increased at any time at the sole discretion of White Lion.

The ELOC Purchase Agreement prohibits the Company from directing White Lion to purchase any shares if those shares, when aggregated with all other shares then beneficially owned by White Lion (as calculated pursuant to Section 13(d) of the Exchange Act) would result in White Lion beneficially owning more than 4.99% of the outstanding Common Stock. The beneficial ownership limitation may be increased or decreased by White Lion to any other percentage not in excess of 9.99% upon notice to the Company.

Under a Regular Purchase Notice, the purchase price to be paid by White Lion for any such shares will equal 97.5% multiplied by the lower of the (i) lowest daily VWAP of the Common Stock during the Regular Purchase Valuation Period (as such term is defined in the ELOC Purchase Agreement) or (ii) the closing price of the Common Stock one business day prior to the delivery of the Regular Purchase Notice.

Under a Rapid Purchase Notice, the purchase price to be paid by White Lion for any such shares will equal (i) the lowest traded price of the Common Stock on the Rapid Purchase Notice Date with respect to Rapid Purchase Price Option 1; or (ii) 99% multiplied by the lowest traded price of the Common Stock two hours following written confirmation of the acceptance of the Rapid Purchase Notice by White Lion with respect to Rapid Purchase Price Option 2.

The Company may terminate the ELOC Purchase Agreement at any time, which shall be effected by written notice being sent by the Company to White Lion. In addition, the ELOC Purchase Agreement shall automatically terminate on the earlier of (i) the end of the Commitment Period or (ii) the date that, pursuant to or within the meaning of any bankruptcy law, the Company commences a voluntary case or any person commences a proceeding against the Company, a custodian is appointed for the Company or for all or substantially all of its property or the Company makes a general assignment for the benefit of its creditors. Certain provisions of the ELOC Purchase Agreement survive termination, as described more fully in the text of the agreement.

Concurrently with the execution of the ELOC Purchase Agreement, the Company entered into the White Lion RRA with White Lion in which the Company has agreed to register the shares of Common Stock purchased by White Lion under the ELOC Purchase Agreement with the SEC for resale within 30 days of the execution date of the White Lion RRA. The White Lion RRA also contains usual and customary damages provisions for failure to have the registration statement declared effective by the SEC within the time periods specified therein.

The ELOC Purchase Agreement and the White Lion RRA contain customary representations, warranties, conditions and indemnification obligations of the parties. The representations, warranties and covenants contained in such agreements were made only for purposes of such agreements and as of specific dates, were solely for the benefit of the parties to such agreements and may be subject to limitations agreed upon by the contracting parties.

Private Placement

On September 27, 2025, the Company entered into the PIPE Purchase Agreement with White Lion, pursuant to which the Company agreed to issue and sell to White Lion in a private placement (the “Offering”) (i) 871,766 shares of Common Stock, and (ii) Pre-Funded Warrants to purchase up to 3,128,234 shares of Common Stock for a purchase price of \$0.2125 per share of Common Stock and \$0.2124 per Pre-Funded Warrant, for a total aggregate gross proceeds of approximately \$850,000. The Offering closed on September 29, 2025.

The Pre-Funded Warrants are immediately exercisable at an exercise price of \$0.0001 per share of Common Stock and will not expire until exercised in full. However, the Company may not issue a number of shares of Common Stock pursuant to exercise of the Pre-Funded Warrants in an amount that will not exceed the Exchange Cap when combined with the number of Shares issued in the Offering, before shareholder approval for further issuance beyond the Exchange Cap is obtained. The Company intends to obtain such shareholder approval concurrently with the White Lion Shareholder Approval required for the issuance of shares of Common Stock under the ELOC Purchase Agreement beyond the Exchange Cap.

The Company may not effect any exercise of the Pre-Funded Warrants, and White Lion does not have the right to exercise any portion of the Pre-Funded Warrants, if such exercise, aggregated with all other shares then beneficially owned by White Lion (as calculated pursuant to Section 13(d) of the Exchange Act) would result in White Lion beneficially owning more than 4.99% of the outstanding Common Stock. The beneficial ownership limitation may be increased or decreased by White Lion to any other percentage not in excess of 9.99% upon notice to the Company.

The obligation to file the Resale Registration Statement described above also covers the registration of the shares of Common Stock and shares underlying the Pre-Funded Warrants issued pursuant to the PIPE Purchase Agreement.

SELLING STOCKHOLDER

The shares of Common Stock being offered by the selling stockholder are those shares of Common Stock issued or issuable in connection with the transactions contemplated under the ELOC Purchase Agreement and the PIPE Purchase Agreement. For additional information regarding the issuance of those shares of Common Stock and warrants, see “Prospectus Summary — Recent Developments — White Lion Transaction” above. We are registering the shares of Common Stock in order to permit the selling stockholder to offer the shares of Common Stock for resale from time to time. The selling stockholder has not had any material relationship with us within the past three years.

White Lion is deemed to be an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act with respect to the shares of Common Stock issued or issuable in connection with the transactions contemplated under the ELOC Purchase Agreement. Any underwriters, broker-dealers, or agents that participate in the sale of the Shares or interests therein may be “underwriters” within the meaning of Section 2(a)(11) of the Securities Act.

The table below lists the selling stockholder and other information regarding the beneficial ownership of the shares of Common Stock by the selling stockholder. The second column lists the number the shares of Common Stock beneficially owned by the selling stockholder, based on its ownership of the shares of Common Stock, including shares underlying the Pre-Funded Warrants, as of October 7, 2025, assuming exercise of the Pre-Funded Warrants held by the selling stockholder on that date, without regard to any limitations on conversions or exercises. The third column lists the maximum number of the shares of Common Stock being offered in this prospectus by the selling stockholder. The fourth and fifth columns list the amount of the shares of Common Stock owned after the offering, by number of the shares of Common Stock and percentage of outstanding the shares of Common Stock (assuming for the purpose of such percentage, 17,470,275 shares outstanding as of October 7, 2025) assuming in both cases the sale of all of the shares of Common Stock offered by the selling stockholder pursuant to this prospectus, and without regard to any limitations on conversions or exercises.

Under the terms of the Pre-Funded Warrants, the selling stockholder may not exercise the warrants to the extent such exercise would cause the selling stockholder, together with its affiliates, to beneficially own a number of shares of Common Stock which would exceed 4.99%, of our then outstanding shares of Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock not yet issuable upon exercise of the warrants which have not been exercised. The number of shares does not reflect this limitation. The selling stockholder may sell all, some or none of their shares of Common Stock in this offering. See “Plan of Distribution.”

Name of selling stockholder	Number of Shares of Common Stock Owned Prior to Offering ⁽²⁾⁽³⁾	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus ⁽³⁾	Shares Beneficially Owned After Offering	
			Number	Percentage
White Lion Capital, LLC ⁽¹⁾	4,000,000	15,200,000	-	-

(1) The business address of White Lion Capital, LLC (“WLC”), is 17631 Ventura Blvd., Suite 1008, Encino, CA 91316. WLC’s principal business is that of a private investor. Dmitriy Slobodskiy Jr., Yash Thukral, Sam Yaffa, and Nathan Yee are the managing principals of WLC. Therefore, each of Slobodskiy Jr., Thukral, Yaffa, and Yee may be deemed to have sole voting control and investment discretion over securities beneficially owned directly by WLC and, indirectly, by WLC. The foregoing should not be construed in and of itself as an admission by Slobodskiy Jr., Thukral, Yaffa, and Yee as to beneficial ownership of the securities beneficially owned directly by WLC and, indirectly, by WLC. Slobodskiy Jr., Thukral, Yaffa, and Yee each disclaim beneficial ownership of these securities except to the extent of each of their respective pecuniary interests therein.

(2) In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares beneficially owned prior to the offering all of the shares that White Lion may be required to purchase under the ELOC Purchase Agreement, including the (i) 1,200,000 Commitment Shares (based on an assumed conversion price of \$0.625 per share of Common Stock, the closing price of our Common Stock on Nasdaq on October 3, 2025) that we may be obligated to issue to White Lion under certain circumstances pursuant to the ELOC Purchase Agreement, for which we would receive no cash proceeds and (ii) 10,000,000 million shares of Common Stock that we may issue and sell to White Lion for cash consideration in purchases under the ELOC Purchase Agreement from time to time, at our sole discretion, during the 36-month period commencing on the Commencement Date, because the issuance of such shares is solely at our discretion and is subject to conditions contained in the Purchase Agreement, the satisfaction of which are entirely outside of White Lion’s control, including the registration statement that includes this prospectus becoming and remaining effective. Furthermore, the purchase of common stock is subject to certain agreed upon maximum amount limitations set forth in the ELOC Purchase Agreement. Also, the ELOC Purchase Agreement prohibits us from issuing and selling any shares of our common stock to White Lion to the extent such shares, when aggregated with all other shares of our common stock then beneficially owned by White Lion, would cause White Lion’s beneficial ownership of our common stock to exceed 4.99% (the “Beneficial Ownership Cap”). The Purchase Agreement also prohibits us from issuing or selling shares of our common stock under the Purchase Agreement in excess of the Exchange Cap unless we obtain stockholder approval to do so, or unless sales of common stock are made at a price equal to or greater than \$0.394 as required under applicable Nasdaq rules. Neither the Beneficial Ownership Cap nor the Exchange Cap (to the extent applicable under Nasdaq rules) may be amended or waived under the Purchase Agreement.

(3) Consists of (i) 871,766 shares of Common Stock and (ii) 3,128,234 shares of Common Stock issuable upon the exercise of the Pre-Funded Warrants.

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.

The selling stockholder may, from time to time, sell, transfer, or otherwise dispose of any or all of their shares of Common Stock or interests in shares of Common Stock on any stock exchange, market, or trading facility on which the shares are traded or in private transactions at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. This prospectus provides you with a general description of the Common Stock the selling stockholder may offer.

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 \$0.0001 per share, 2,803,774 shares of non-voting common stock with a par value of \$0.0001 per share and 10,000,000 shares of preferred stock with a par value of \$0.0001 per share. As of October 7, 2025, there were 52 holders of record of our Common Stock.

Common Stock

The 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

Holders of our Common Stock 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. 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. No shares of preferred stock are currently outstanding.

Charter and Bylaw Provisions

Charter and Bylaw Provisions

Our Charter and our Bylaws 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 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 provide 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 Gideon Marks, are to stand for election at the Annual Meeting to be held in 2026; (ii) directors in Class II, consisting of Joseph Moscovitz, are to stand for election at the annual meeting of stockholders to be held in 2027; 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 2028.

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

Our Common Stock is listed 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.

PLAN OF DISTRIBUTION

The selling stockholder 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 stockholder 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 stockholder 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 stockholder 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 stockholder 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 stockholder 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 stockholder 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).

White Lion is deemed to be an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. White Lion has informed us that it intends to use one or more unaffiliated registered broker-dealers to effectuate all sales, if any, of our Common Stock that it may in the future acquire from us pursuant to the ELOC Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such registered broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. White Lion has informed us that each such broker-dealer will receive commissions from White Lion that will not exceed customary brokerage commissions.

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 stockholder 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 stockholder 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 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, 2024 have been so incorporated 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.

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, 2024, filed with the SEC on March 24, 2025;
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2025 filed with the SEC on [May 13, 2025](#) and for the quarter ended June 30, 2025 filed with the SEC on [August 14, 2025](#);
- our Current Reports on Form 8-K filed with the SEC on [February 4, 2025](#) (as amended on [February 13, 2025](#)); [February 13, 2025](#); [March 4, 2025](#); [March 28, 2025](#); [April 1, 2025](#); [May 13, 2025](#); [May 13, 2025](#); [May 21, 2025](#); [June 16, 2025](#); [July 3, 2025](#); [August 6, 2025](#); [August 11, 2025](#); [August 13, 2025](#); [August 14, 2025](#); [August 21, 2025](#); [August 25, 2025](#); [September 2, 2025](#); [September 3, 2025](#); [September 4, 2025](#); [September 18, 2025](#); [October 1, 2025](#) and [October 2, 2025](#); and.
- 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 and Deputy Chief Executive Officer, 4039 Clipper Court, Fremont, CA 94538 USA, telephone number +1-510-545-1045 or by emailing us at yoave@actelis.com.



Actelis Networks, Inc.

PRELIMINARY PROSPECTUS

, 2025

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	\$	778.77
Printing expenses	\$	2,000
Accounting fees and expenses	\$	6,000
Legal fees and expenses	\$	15,000
Total	\$	23,778.77

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.

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 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. We also agreed to issue to the Placement Agent, 66,127 shares of Common Stock at an exercise price per share of \$4.6313 and a term of five and one-half years.

On November 8, 2023, we issued to the Placement Agent 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.

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. We 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 June 5, 2024, we entered into an inducement letter with the holder of May 2023 Warrants. Pursuant to the inducement letter, the holder agreed to exercise for cash its May 2023 Warrants to purchase an aggregate of 999,670 shares of our Common Stock at an exercise price of \$2.75 per share, in consideration of our agreement to issue the June 2024 Warrants to purchase up to an aggregate of 1,999,340 shares of our Common Stock, at an exercise price of \$2.00 per share. We also agreed to issue to the Placement Agent 69,977 shares of Common Stock at an exercise price per share of \$3.4375 and a term of five and one-half years. Our total aggregate gross proceeds were approximately \$3.0 million, and the transaction closed on June 6, 2024.

On June 30, 2024, we entered into an inducement letter with the holder of June 2024 Warrants. Pursuant to the inducement letter, the holder agreed to exercise for cash 999,670 of its June 2024 Warrants to purchase an aggregate of 999,670 shares of our Common Stock at an exercise price of \$2.00 per share, in consideration of our agreement to issue July 2024 Warrants to purchase up to an aggregate of 1,999,340 shares of our Common Stock, at an exercise price of \$1.75 per share. We also agreed to issue to the Placement Agent 69,977 shares of Common Stock at an exercise price of \$2.50 per share and a term of five and one-half years. Our total aggregate gross proceeds were approximately \$2.25 million, and the transaction closed on July 2, 2024.

On June 30, 2025, we entered into the Purchase Agreement with certain Investors, pursuant to which we agreed to issue and sell to the Investors in the July 2025 Private Placement (a) 1,626,019 shares of Common Stock, (b) Series A-3 warrants to purchase up to 1,626,019 shares of Common Stock, and (c) Series A-4 Warrants to purchase up to 3,252,038 shares of Common Stock, for a purchase price of \$0.615 per share and related Common Warrants, for a total aggregate gross proceeds of approximately \$1 million. The July 2025 Private Placement closed on July 2, 2025.

On September 2, 2025, we entered into the Inducement Letter pursuant to which the holder of the Company exercised warrants to purchase an aggregate of 4,270,197 shares of the Company's Common Stock, at an exercise price of \$0.37 per share in consideration of the Company's agreement to New Warrants to purchase up to an aggregate of 6,405,296 shares of the Company's Common Stock at an exercise price of \$0.37 per share. The Company received aggregate gross proceeds of approximately \$1.6 million from the exercise of the Existing Warrants by the Holder, before deducting financial advisory fees and other offering expenses payable by the Company.

On September 27, 2025, we entered into the ELOC Purchase Agreement, with White Lion, which became effective as of October 1, 2025, pursuant to which the Company has the right, but not the obligation to require White Lion to purchase, from time to time, up to \$30,000,000 in aggregate gross purchase price (the "Commitment Amount") of newly issued shares of the Company's Common Stock, subject to certain limitations and conditions set forth in the ELOC Purchase Agreement.

On September 27, 2025, the Company entered into the PIPE Purchase Agreement with White Lion, pursuant to which the Company agreed to issue and sell to White Lion in a private placement (i) 871,766 shares of Common Stock, and (ii) Pre-Funded Warrants to purchase up to 3,128,234 shares of Common Stock for a purchase price of \$0.2125 per share of Common Stock and \$0.2124 per Pre-Funded Warrant, for a total aggregate gross proceeds of approximately \$850,000. The Offering closed on September 29, 2025.

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	Form of Representative's Warrant (as filed as Exhibit 4.1 to the Company's Form S-1/A, filed on May 2, 2022)
4.2	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)
4.3	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)
4.4	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)
4.5	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)
4.6	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)
4.7	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)
4.8	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)
4.9	Form of Series A-3 Warrant (incorporated by reference to Exhibit 4.1 of our Current Report on Form 8-K filed on July 3, 2025)
4.10	Form of Series A-4 Warrant (incorporated by reference to Exhibit 4.2 of our Current Report on Form 8-K filed on July 3, 2025)
4.11	Form of Placement Agent Warrant (incorporated by reference to Exhibit 4.3 of our Current Report on Form 8-K filed on July 3, 2025)
4.12	Form of New Warrant (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K filed on September 3, 2025)
4.13	Form of Placement Agent Warrant (incorporated by reference to Exhibit 10.3 of our Current Report on Form 8-K filed on September 3, 2025)
5.1*	Opinion of Greenberg Traurig 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	<u>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)</u>
10.7	<u>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)</u>
10.8	<u>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)</u>
10.9	<u>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)</u>
10.10	<u>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)</u>
10.11	<u>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)</u>
10.12	<u>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)</u>
10.13	<u>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)</u>
10.14	<u>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)</u>
10.15	<u>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)</u>
10.16	<u>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)</u>
10.17	<u>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)</u>
10.18	<u>Form of Inducement Letter (as filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on June 6, 2024)</u>
10.19	<u>Form of June 2024 Warrant (as filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed on June 6, 2024)</u>
10.20	<u>Form of June 2024 Placement Agent Warrant (as filed as Exhibit 10.3 to the Company's Current Report on Form 8-K filed on June 6, 2024)</u>
10.21	<u>Form of Inducement Letter (as filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed on July 2, 2024)</u>
10.22	<u>Form of July 2024 New Warrant (as filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed on July 2, 2024)</u>
10.23	<u>Form of July 2024 Placement Agent Warrant (as filed as Exhibit 10.3 to the Company's Current Report on Form 8-K filed on July 2, 2024)</u>
10.24	<u>Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K filed on July 3, 2025)</u>
10.25	<u>Form of Registration Rights Agreement (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K filed on July 3, 2025)</u>
10.26	<u>Form of Inducement Letter (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K filed on September 3, 2025)</u>
10.27	<u>Form of Common Stock Purchase Agreement (incorporated by reference to Exhibit 10.1 of our Current Report on Form 8-K filed on October 2, 2025)</u>
10.28	<u>Form of White Lion RRA (incorporated by reference to Exhibit 10.2 of our Current Report on Form 8-K filed on October 2, 2025)</u>
10.29	<u>Form of PIPE Purchase Agreement (incorporated by reference to Exhibit 10.3 of our Current Report on Form 8-K filed on October 2, 2025)</u>
10.30	<u>Form of Pre-Funded Warrant (incorporated by reference to Exhibit 10.4 of our Current Report on Form 8-K filed on October 2, 2025)</u>
23.1*	<u>Consent of Kesselman & Kesselman, Certified Public Accountants (Isr.) a member firm of PricewaterhouseCoopers International Limited, independent registered public accounting firm for the Company.</u>
24.1*	<u>Power of Attorney.</u>
107*	<u>Filing Fee Table</u>

(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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Freemont, California on October 7, 2025.

ACTELIS NETWORKS, INC.

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

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTED, that each director and officer of Actelis Networks, Inc. whose signature appears below hereby appoints Tuvia Barlev and Yoav Efron, and each of them severally, acting alone and without the other, his/her true and lawful attorney-in-fact with full power of substitution or re-substitution, for such person and in such person's name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective -amendments to this Registration Statement, and to sign any and all additional registration statements relating to the same offering of securities of the Registration Statement that are filed pursuant to Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Tuvia Barlev</u> Tuvia Barlev	Chief Executive Officer and Chairman of the Board of Directors (Principal Executive Officer)	October 7, 2025
<u>/s/ Yoav Efron</u> Yoav Efron	Chief Financial Officer and Deputy Chief Executive Officer (Principal Financial Officer and Principal Accounting Officer)	October 7, 2025
<u>/s/ Niel Ransom</u> Niel Ransom	Director	October 7, 2025
<u>/s/ Gideon Marks</u> Gideon Marks	Director	October 7, 2025
<u>/s/ Julie Kunstler</u> Julie Kunstler	Director	October 7, 2025



October 7, 2025

Actelis Networks, Inc.
4039 Clipper Court
Fremont, CA 94538

Re: Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Actelis Networks, Inc., a Delaware corporation (the “**Company**”), in connection with the Company’s registration of an aggregate of 15,200,000 shares of the Company’s common stock, par value \$0.0001 per share (the “**Shares**”), under the Company’s registration statement on Form S-1, including the prospectus constituting a part thereof (the “**Registration Statement**”), being filed by the Company with the U.S. Securities and Exchange Commission under the Securities Act of 1933, as amended.

Of the Shares, (i) 10,000,000 Shares (the “**Purchase Shares**”) are reserved for future issuance pursuant to the that certain Common Stock Purchase Agreement, dated as of September 27, 2025, by and between the Company and White Lion (the “**ELOC Purchase Agreement**”), (ii) 1,200,000 shares of Shares are issuable to White Lion as commitment shares under the ELOC Purchase Agreement (the “**Commitment Shares**”), (iii) 871,766 shares of Common Stock (the “**PIPE Shares**”), and, together with the Purchase Shares and the Commitment Shares, the “**Shares**”) were issued to White Lion pursuant to a Stock Purchase Agreement, dated as of September 27, 2025, by and between the Company and White Lion (the “**PIPE Purchase Agreement**”) entered into in connection with a private placement of the Company’s securities which took place concurrent to the establishment of the equity line of credit and (iv) 3,128,234 shares of Common Stock issuable upon exercise of Pre-Funded Warrants issued to White Lion pursuant to the PIPE Purchase Agreement (the “**Warrants**”).

You have requested our opinion as to the matters set forth below in connection with the issuance of the Shares. For purposes of rendering this opinion, we have examined the Registration Statement, forms of the Amended and Restated Certificate of Incorporation, as further amended to date (the “**Certificate of Incorporation**”), and the Amended and Restated By-laws of the Company currently in effect, the ELOC Purchase Agreement, the PIPE Purchase Agreement, and the resolutions of the Board of Directors of the Company relating to the authorization and issuance of the Shares, and the authorization and approval of the ELOC Purchase Agreement, the PIPE Purchase Agreement and the transactions contemplated thereby (the “**Resolutions**”), and we have made such other investigations as we have deemed appropriate. We have examined and relied upon certificates of public officials and, as to certain matters of fact that are material to our opinion, we have also relied on a certificate of an officer of the Company. We have not independently verified the matters set forth in such certificates.

We have assumed (i) that the specific sale of the Purchase Shares and the Commitment Shares will be duly authorized by the Board of Directors of the Company, a duly authorized committee thereof or a person or body pursuant to an authorization granted in accordance with Section 152 of the General Corporation Law of the State of Delaware (the “**DGCL**”) and (ii) that the sale and issuance of the Shares will not exceed (a) the authorized number of shares of Common Stock set forth in the Certificate of Incorporation, and (b) the aggregate amount of Shares authorized for offer, sale and issuance by the Resolutions. We express no opinion herein as to the laws of any state or jurisdiction other than the DGCL and the federal laws of the United States of America.

Based upon and subject to the foregoing, we are of the opinion that Shares, when sold and issued against payment therefor in accordance with the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable. Further, we are of the opinion that the Warrant Shares have been duly authorized and, when issued by the Company upon exercise of the Warrants in accordance with the terms thereof, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption “Legal Matters” in the Registration Statement. This opinion is expressed as of the date hereof, and we disclaim any responsibility to advise you of any changes in the facts stated or assumed herein or any changes in applicable law.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to our firm under the caption “Legal Matters” in the prospectus constituting a part of the Registration Statement. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act, or the rules and regulations promulgated thereunder.

Very truly yours,

/s/ Greenberg Traurig, LLP
 GREENBERG TRAURIG, 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 24, 2025 relating to the financial statements, which appears in Actelis Networks, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2024. 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
October 7, 2025

CALCULATION OF FILING FEE TABLES

S-1

Actelis Networks, Inc.

Table 1: Newly Registered and Carry Forward Securities

Line Item Type	Security Type	Security Class Title	Notes	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
<i>Newly Registered Securities</i>									
Fees to be Paid	Equity	Common Stock, \$0.0001 par value per share	(1)	Other	15,200,000	\$ 0.3710	\$ 5,639,200.00	0.0001381	\$ 778.77
Total Offering Amounts:							\$ 5,639,200.00		778.77
Total Fees Previously Paid:									
Total Fee Offsets:									
Net Fee Due:									<u>\$ 778.77</u>

Offering Note(s)

- (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 common stock, par value \$0.0001 per share (“Common Stock”), of Actelis Networks, Inc that may be issued in connection with a stock dividend, stock split, recapitalization or similar transactions.

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 October 2, 2025.

Consists of (i) 10,000,000 shares of Common Stock that we may elect, in our sole discretion, to issue and sell to White Lion Capital LLC (“White Lion”), from time to time from and after the commencement date under the that certain common stock purchase agreement, dated September 27, 2025 (“ELOC Purchase Agreement”), and subject to applicable stock exchange rules, (ii) 1,200,000 shares of Common Stock issuable to White Lion as commitment shares under the ELOC Purchase Agreement (assuming a value of \$0.625 per share, the closing price of our shares of Common Stock on the Nasdaq Capital Market on October 3, 2025), (iii) 871,766 shares of Common Stock issued pursuant to that certain securities purchase agreement, dated September 27, 2025 (the “PIPE Purchase Agreement”) with White Lion and (iv) 3,128,234 shares of Common Stock issuable upon exercise of Pre-Funded Warrants issued pursuant to the PIPE Purchase Agreement.