

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

AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

REDWIRE CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

88-1818410

(I.R.S. Employer Identification Number)

8226 Philips Highway, Suite 101
Jacksonville, Florida 32256
(650) 701-7722

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

Peter Cannito
President, Chief Executive Officer and Chairman
8226 Philips Highway, Suite 101
Jacksonville, Florida 32256
(650) 701-7722

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies of all communications, including communications sent to agent for service, should be sent to:

Alexander M. Schwartz
Sheppard, Mullin, Richter & Hampton LLP
321 North Clark Street, 32nd Floor
Chicago, Illinois 60654
(312) 499-6300

Approximate date of commencement of proposed sale to the public: From time to time on or after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

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

Large accelerated filer	☐	Accelerated filer	☒
Non-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 this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This registration statement registers (i) shares of our common stock, par value \$0.0001 per share (“Common Stock”) and (ii) certain of our warrants, each exercisable for one share of Common Stock at a price of \$11.50 per share (the “Warrants”), to be offered for resale by certain selling stockholders and their assignees.

The selling stockholders in this registration statement acquired their securities in the following transactions: (i) 2,000,000 Warrants issued to AE Red Holdings, LLC (“Holdings”) on September 2, 2021; (ii) 2,000,000 shares of Common Stock issuable upon the exercise of the Warrants held by Holdings; (iii) 65,473,983 shares of Common Stock issuable upon the conversion of (a) shares of the Company’s Series A Convertible Preferred Stock, par value \$0.0001 per share (the “Series A Preferred Stock”), issued to AE Industrial Partners Structured Solutions I, L.P. (“AEI Structured”) and AE Industrial Partners Fund II, LP (“AEI Fund II”) (and thereafter distributed, in part, to AE Industrial Partners Fund II-A, LP (“AEI Fund II-A”) and AE Industrial Partners Fund II-B, LP (“AEI Fund II-B” and together with AEI Structured, AEI Fund II and AEI Fund II-A, “AEI”) on October 28, 2022 and BCC Redwire Aggregator, L.P. (“Bain”) on November 3, 2022, and (b) dividends on shares of Series A Preferred Stock previously paid, or to be paid in the future, in kind to AEI and Bain in the form of additional shares of Series A Preferred Stock; (iv) 50,096,632 shares of Common Stock issued to Edge Autonomy Ultimate Holdings, LP (“Edge Seller”) as merger consideration on June 13, 2025 pursuant to the Agreement and Plan of Merger (the “Merger Agreement”), dated January 20, 2025 (as amended on February 3, 2025 and June 8, 2025), by and among Redwire Corporation, Edge Seller, and the other parties named therein (which includes 331,785 shares of Common Stock held back from the merger consideration pursuant to the terms of the Merger Agreement, releasable to Edge Seller net of any shares of Common Stock forfeited to satisfy purchase price adjustments, if any) and (v) 106,771 shares of Common Stock issued upon the vesting of restricted stock units (which includes 11,802 shares of Common Stock issuable upon the vesting of restricted stock units on May 22, 2026) granted to Kirk Michael Konert, Managing Partner of AEI, in his capacity as a member of Redwire Corporation’s Board of Directors, which he holds for the benefit of AEI and disclaims all right, title and interest in such securities.

The information in this prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This 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.

SUBJECT TO COMPLETION DATED AUGUST 1, 2025

PROSPECTUS



REDWIRE CORPORATION

**Up to 117,677,386 Shares of Common Stock by the Selling Stockholders
Up to 2,000,000 Warrants by the Selling Stockholders**

This prospectus relates to (A) the issuance by the Company of up to 2,000,000 shares of its common stock, par value \$0.0001 per share (“Common Stock”), upon the exercise of warrants, each exercisable for one share of Common Stock at a price of \$11.50 per share (“Warrants”) and (B) the resale from time to time by the selling stockholders named in the prospectus (the “Selling Stockholders”) of (i) up to an aggregate of 117,677,386 shares of Common Stock (including (a) 2,000,000 shares of Common Stock issuable upon the exercise of Warrants, (b) 65,473,983 of the shares of Common Stock issuable upon the conversion of shares of the Company’s Series A Convertible Preferred Stock, \$0.0001 par value per share (the “Series A Preferred Stock”), which assumes the Company will elect to pay dividends on the Series A Preferred Stock in kind in the form of additional shares of Series A Preferred Stock (such payment in kind, “PIK”) to the maximum extent possible and that all shares of Series A Preferred Stock are converted based on the specific accrued value and an initial per share conversion price of \$3.05, (c) 11,802 shares of Common Stock issuable upon the vesting of restricted stock units and (d) 331,785 shares of Common Stock held back from merger consideration paid to certain of the Selling Stockholders, releasable net of any shares of Common Stock forfeited to satisfy purchase price adjustments, if any) and (ii) 2,000,000 Warrants by the Selling Stockholders. For additional information, see “Selling Stockholders” in this prospectus.

This prospectus provides you with a general description of such securities and the general manner in which the Selling Stockholders may offer or sell the securities. More specific terms of any securities that the Selling Stockholders may offer or sell may be provided in a prospectus supplement that describes, among other things, the specific amounts and prices of the securities being offered and the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus.

We will bear all costs, expenses and fees in connection with the registration of the Common Stock and Warrants and will not receive any proceeds from the sale of the Common Stock or Warrants. The Selling Stockholders will bear all commissions and discounts, if any, attributable to their respective sales of the Common Stock and Warrants.

We are registering the securities for resale pursuant to the Selling Stockholders’ registration rights under certain agreements between us and the Selling Stockholders. Our registration of the securities covered by this prospectus does not mean that the Selling Stockholders will offer or sell, as applicable, any of the securities. The Selling Stockholders may offer and sell the securities covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the Selling Stockholders may sell the securities in the section entitled “Plan of Distribution.”

You should read this prospectus and any prospectus supplement or amendment carefully before you invest in our securities.

Our Common Stock is listed on the New York Stock Exchange (“NYSE”) under the symbol “RDW”. On July 31, 2025, the closing sale price of our Common Stock was \$14.29.

See the section entitled “[Risk Factors](#)” beginning on page 6 of this prospectus and in the documents incorporated by reference herein to read about factors you should consider before investing in our securities.

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

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using the “shelf” registration process. Under this shelf registration process, the Selling Stockholders may, from time to time, sell the securities offered by them described in this prospectus in one or more offerings. We will not receive any proceeds from the sale by such Selling Stockholders of the securities offered by them described in this prospectus.

Neither we nor the Selling Stockholders have authorized anyone to provide you with any information or to make any representations other than those contained or incorporated by reference in this prospectus or any applicable prospectus supplement. Neither we nor the Selling Stockholders take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor the Selling Stockholders will make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

You should assume that the information appearing in this prospectus is accurate only as of the date on the cover of this prospectus and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since the date indicated on the cover page of such documents.

The distribution of this prospectus may be restricted by law in certain jurisdictions. You should inform yourself about and observe these restrictions. This prospectus does not constitute, and may not be used in connection with, an offer or solicitation by anyone in any jurisdiction in which the offer or solicitation is not authorized, or in which the person making the offer or solicitation is not qualified to do so, or to any person to whom it is unlawful to make the offer or solicitation.

We may also provide a prospectus supplement or post-effective amendment to the registration statement to add information to, or update or change information contained in, this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the information incorporated by reference herein and the additional information to which we refer you in the sections of this prospectus entitled “Where You Can Find More Information” and “Information Incorporated by Reference.”

Unless the context indicates otherwise, references in this prospectus to the “Company,” “Redwire,” “we,” “us,” “our” and similar terms refer to Redwire Corporation and its consolidated subsidiaries. The phrase “this prospectus” refers to this prospectus and any applicable prospectus supplement unless the context otherwise requires.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in or incorporated by reference in this prospectus or any prospectus supplement regarding expectations of our performance or other matters that may affect our business, results of operations, or financial condition are “forward-looking statements” as defined by the “safe harbor” provisions in the Private Securities Litigation Reform Act of 1995. Such statements are made in reliance on the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). All statements, other than statements of historical fact, included or incorporated in this prospectus or any prospectus supplement are forward-looking statements. Words such as “expect,” “anticipate,” “should,” “believe,” “target,” “continued,” “project,” “plan,” “opportunity,” “estimate,” “potential,” “predict,” “demonstrates,” “may,” “will,” “could,” “intend,” “shall,” “possible,” “forecast,” “trends,” “contemplate,” “would,” “approximately,” “likely,” “outlook,” “schedule,” “pipeline,” and variations of these terms or the negative of these terms and similar expressions are intended to identify these forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements are not guarantees of future performance, conditions or results. Forward-looking statements are subject to a number of risks and uncertainties, many of which involve factors or circumstances that are beyond our control, including but not limited to those described from time to time in our reports filed or furnished with the SEC, and in particular those factors set forth in the section entitled “Risk Factors” in our annual, quarterly and current reports filed with the SEC.

While we believe that our assumptions are reasonable, we caution that it is very difficult to predict the impact of known factors, and it is impossible for us to anticipate all factors that could affect our actual results. All forward-looking statements are expressly qualified in their entirety by these cautionary statements as well as other cautionary statements that are made from time to time in our other SEC filings and public communications.

All forward-looking statements speak only as of the date on which they are made. Accordingly, forward-looking statements should not be relied upon as representing our views as of any subsequent date. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update any forward-looking statement, whether as a result of new information, future developments or otherwise. If we do update one or more forward-looking statements, there should be no inference that we will make additional updates with respect to those or other forward-looking statements.

PROSPECTUS SUMMARY

The Company

Redwire Corporation is a global leader in aerospace and defense technology solutions specializing in space infrastructure, autonomous aerial systems, multi-domain operations, and digital engineering and artificial intelligence (“AI”) automation. Our “Heritage plus Innovation” strategy enables us to combine decades of flight heritage with an agile and innovative culture creating new, innovative technologies that are the building blocks of airborne and space infrastructure for government and commercial customers.

Redwire’s capabilities are critical to global national security, civil and commercial customers. These core capabilities include multi-orbit space vehicles; AI-enabled autonomous uncrewed systems (“UAS”); critical subsystems and components, and commercial microgravity development and infrastructure. Many of our projects result in funded technology development and as a result, we benefit from continuous innovation aligned to our four primary focus areas as described below.

Redwire is a purpose-built space and defense technology company that is uniquely positioned to assist our customers in solving their most complex challenges and missions. Redwire has several areas of focus that shape our business: (1) providing critical subsystems to the most critical national security, civil, and commercial missions; (2) providing multi-domain platforms for remote sensing space situational awareness, global reconnaissance and space logistics; (3) providing critical infrastructure for cislunar and deep space exploration; and (4) pursuing breakthrough technologies in the realm of air and space.

With our core space-based infrastructure offerings, Redwire is a leading innovator in space infrastructure, enabling space mission providers with the foundational building blocks and integrated solutions needed for complex space missions. Redwire is developing critical space infrastructure that is impacting our terrestrial economy in areas such as national security, global defense, telecommunications, navigation and timing, and Earth observation. Our core space-based infrastructure offerings include a broad array of modern products and services, which have been enabling space missions since the 1960s and have been flight-proven on over 200 spaceflight missions, including missions such as the National Aeronautics and Space Administration’s Artemis program, New Horizons and Perseverance programs, the Space Force’s Global Positioning System, and the European Space Agency’s Project for On-Board Autonomy programs. We are also a provider of innovative technologies with the potential to help transform the economics of space and create new markets for its exploration and commercialization.

Our field-proven core airborne offerings have decades of innovation and more than 170 thousand flight hours. Key operations include developing and manufacturing UAS for commercial, government, and military applications in areas such as surveillance, logistics, reconnaissance, border security, and emergency response. We design and deploy UAS technology through solutions including autonomous flight systems, AI-powered data processing, and specialized sensors. Redwire is committed to delivering innovative space and airborne platforms to help transform the future of multi-domain operations.

Redwire’s broad portfolio of core airborne and space offerings, plus our domestic and international reach, allows us to participate in national security, civil, and commercial space markets globally. With the increasing importance of space for national security and economic development, international spacefaring allies’ demand for the space-based products and services of a provider like Redwire may increase as they seek to develop their organic space capabilities. Additionally, Redwire’s intelligence, surveillance, and reconnaissance gimbal technology provide stabilization and targeting capabilities, while its fuel cell, power solutions, and remote backup power systems support flight operations and mission-critical operations in diverse environments. Redwire aims to help customers streamline operations, enhance security, and address complex challenges related to aerial surveillance and data collection. We have a unique portfolio of highly synergistic and complementary core airborne and space infrastructure offerings that significantly enhance our access to addressable markets in Europe and the rest of the world.

The Company, in its current form, was founded in 2020 by private equity firm AE Industrial Partners, but the heritage of the various businesses that were brought together to form Redwire stretches back decades.

We have grown organically while also continuing to integrate several acquisitions from a fragmented landscape of airborne- and space-focused technology companies with innovative capabilities and deep flight heritage. Strategic acquisitions that augment our core airborne and space infrastructure offerings are a key part of our growth strategy. We have completed eleven acquisitions since March 2020, which collectively have provided us with a broad portfolio of complementary technologies and solutions to serve our target markets and customers.

We are headquartered in Jacksonville, Florida. Our principal executive offices are located at 8226 Philips Highway, Suite 101, Jacksonville, Florida 32256, and our telephone number is (650) 701-7722. We maintain a website at <https://rdw.com/> where general information about us is available. The information contained in, or that may be accessed through, our website is not part of, and is not incorporated into, this prospectus or the registration statement of which it forms a part. Our common stock trades on the New York Stock Exchange under the symbol “RDW”.

The Offering

Issuer	Redwire Corporation
Shares of Common Stock to be issued upon the exercise of all Warrants	Up to 2,000,000
Shares of Common Stock Offered by the Selling Stockholders	Up to 117,677,386 shares (including 2,000,000 shares issuable upon the exercise of Warrants and 65,473,983 shares issuable upon the conversion of Series A Preferred Stock).
Warrants Offered by the Selling Stockholders	Up to 2,000,000 Warrants
Shares of Common Stock Outstanding	144,039,944 (as of July 30, 2025, without giving effect to the potential exercise of Warrants or conversion of the Series A Preferred Stock).
Warrants Outstanding	2,633,195 (as of July 30, 2025, which number includes the 2,000,000 Warrants held of record by AE Red Holdings, LLC registered pursuant to this registration statement).
Use of Proceeds	We will not receive any proceeds from the sale of shares of Common Stock or Warrants by the Selling Stockholders. See the section entitled “ Use of Proceeds .”
Market for Common Stock	Our Common Stock is currently traded on NYSE under the symbol “RDW”.
Risk Factors	See “ Risk Factors ” and other information incorporated by reference in this prospectus for a discussion of factors you should consider before investing in our securities.

RISK FACTORS

Investing in our securities involves risks. Before you make a decision to buy our securities, in addition to the risks and uncertainties discussed above under “Cautionary Note Regarding Forward-Looking Statements,” you should carefully consider the specific risks incorporated by reference in this prospectus to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, including the Current Report on Form 8-K filed with the SEC on June 18, 2025, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act and the risk factors and other information contained in any applicable prospectus supplement. If any of these risks actually occur, it may materially harm our business, financial condition, liquidity and results of operations. As a result, the market price of our securities could decline, and you could lose all or part of your investment. Additionally, the risks and uncertainties incorporated by reference in this prospectus or any prospectus supplement are not the only risks and uncertainties that we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may become material and adversely affect our business.

USE OF PROCEEDS

All of the Common Stock and Warrants offered by the Selling Stockholders pursuant to this prospectus will be sold by the Selling Stockholders for their respective accounts. We will not receive any of the proceeds from these sales.

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

SELLING STOCKHOLDERS

This prospectus relates to the possible resale by the Selling Stockholders from time to time of up to an aggregate of 117,677,386 shares of Common Stock beneficially owned by the Selling Stockholders (including 2,000,000 shares of Common Stock issuable upon the exercise of Warrants and 65,473,983 shares of Common Stock issuable upon the conversion of Series A Preferred Stock, which assumes the Company will elect to pay dividends on the Series A Preferred Stock in the form of PIK to the maximum extent possible and that all shares of Series A Preferred Stock issued are converted based on the accrued value and an initial conversion price of \$3.05) and up to 2,000,000 Warrants. The Selling Stockholders may from time to time offer and sell any or all of the Common Stock and Warrants set forth below pursuant to this prospectus and any accompanying prospectus supplement.

When we refer to the “Selling Stockholders” in this prospectus, we mean the persons listed in the table below, and the pledgees, donees, assignees, successors, designees, distributees or other transferees who have come or may later come to hold any of the Common Stock or Warrants other than through a public sale, including through a distribution by such Selling Stockholders to their members.

The following table is prepared based on information provided to us by the Selling Stockholders, as updated by the Company, assuming the Company elects to pay dividends on the Series A Preferred Stock in the form of PIK to the maximum extent possible, and that all shares of Series A Preferred Stock issued are converted based on the accrued value and an initial conversion price of \$3.05, and, except as otherwise noted, does not reflect subsequent transactions involving the Selling Stockholders. It sets forth the name of the Selling Stockholders, the maximum aggregate number of shares of Common Stock and Warrants that the Selling Stockholders may offer pursuant to this prospectus, and the beneficial ownership of the Selling Stockholders both before and after the offering. The percentages of beneficial ownership prior to this offering are based on 144,039,944 shares of Common Stock outstanding as of July 30, 2025.

Beneficial ownership is determined according to the rules of the SEC, which generally provide that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power over that security, including options, warrants, restricted stock units (“RSUs”) and shares of preferred stock that are currently exercisable or convertible, or exercisable or convertible within 60 days of July 30, 2025. Shares of Common Stock issuable pursuant to options, warrants, RSUs or shares of Series A Preferred Stock are deemed to be outstanding for purposes of computing the beneficial ownership percentage of Common Stock of the person or group holding such securities but are not deemed to be outstanding for purposes of computing the beneficial ownership percentage of any other person.

We cannot advise you as to whether the Selling Stockholders will in fact sell any or all of such Common Stock or Warrants. In addition, the Selling Stockholders may have sold, transferred or otherwise disposed of the Common Stock or Warrants after the date on which they provided us with the information regarding their Common Stock and Warrants, and may at any time and from time to time sell, transfer or otherwise dispose of the Common Stock and Warrants in transactions exempt from the registration requirements of the Securities Act after the date of this prospectus. For purposes of this table, we have assumed that the Selling Stockholders will have sold all of the securities covered by this prospectus upon the completion of the offering.

Name of Selling Stockholder	Shares Beneficially Owned Prior to the Offering		Shares Being Offered	Warrants Being Offered	Shares Beneficially Owned After the Offering	
	Shares	%			Shares	%
AE Industrial Partners, LP and its affiliates ⁽¹⁾	115,158,576	66.29	79,545,017	2,000,000	35,613,559	24.73
BCC Redwire Aggregator, L.P. ⁽²⁾⁽³⁾	38,132,369	20.93	38,132,369	—	—	—

(1) Represents 35,613,559 shares of Common Stock held of record by AE Red Holdings, LLC (“Holdings”) and the following securities offered hereby: (i) 50,096,632 shares of Common Stock issued as merger consideration pursuant to the Agreement and Plan of Merger (the “Merger Agreement”), dated January 20, 2025 (as amended on February 3, 2025 and June 8, 2025), by and among the Company, Edge Autonomy Ultimate Holdings, LP (“Edge Seller”), and the other parties named therein, and held of record by Edge Seller (which includes 331,785 shares of Common Stock held back from the merger consideration pursuant to the terms of the Merger Agreement, releasable to

Edge Seller net of any shares of Common Stock forfeited to satisfy purchase price adjustments, if any, and ineligible for sale hereunder prior to such time); (ii) 2,000,000 Warrants and 2,000,000 shares of Common Stock issuable upon the exercise of such Warrants held of record by Holdings; (iii) an aggregate of 27,341,614 shares of Common Stock issuable upon the conversion of an aggregate of 83,391.92 shares of Series A Preferred Stock, which includes (a) 43,193.61 shares of Series A Preferred Stock issued and held of record as of the date of this prospectus as set forth below and (b) 40,198.31 shares of Series A Preferred Stock as a result of the payment of dividends in the form of PIK from the date of this prospectus through November 1, 2029, which assumes the Company will elect to pay dividends on the Series A Preferred Stock in the form of PIK to the maximum extent possible and that all shares of Series A Preferred Stock issued are converted based an initial conversion price of \$3.05; and (iv) 106,771 shares of Common Stock held of record by Kirk Michael Konert, Managing Partner of AE Industrial Partners, LP, issued or issuable upon the vesting of restricted stock units (including 11,802 shares of Common Stock issuable upon the vesting of restricted stock units on May 22, 2026) granted to him in his capacity as a member of the Company's Board, which he holds for the benefit of AE Industrial Partners, LP and disclaims all right, title and interest in such securities.

As of the date of this prospectus, the shares of Series A Preferred Stock that have been issued are held of record as follows: 11,223.14 shares held of record by AE Industrial Partners Fund II-A, LP ("AE Fund II-A"), 43.19 shares held of record by AE Industrial Partners Fund II-B, LP ("AE Fund II-B"), 17,529.41 shares held of record by AE Industrial Partners Fund II, LP ("AE Fund II LP") and together with AE Fund II-A and AE Fund II-B, the "AE Funds"), and 14,397.87 shares held of record by AE Industrial Partners Structured Solutions I, L.P. ("AE Structured LP").

Voting and dispositive power with respect to the securities reported herein is exercised by Michael Greene and David H. Rowe, the managing members of AeroEquity GP, LLC, which is the general partner of AE Industrial Partners Fund II GP, LP ("AE Fund II GP") and AE Industrial Partners Structured Solutions I GP, LP ("AE Structured GP"). The AE Funds are the controlling equityholders of Holdings and Edge Seller. AE Fund II GP and AE Structured GP are the general partners of the AE Funds and AE Structured LP, respectively. Each of the entities and individuals named herein disclaims beneficial ownership of the securities held of record by the entities and individuals listed herein, except to the extent of its or their pecuniary interest therein. The business address of each of the foregoing entities and individuals is 6700 Broken Sound Parkway NW, Boca Raton, FL, 33487.

- (2) Represents an aggregate of 38,132,369 shares of Common Stock issuable upon the conversion of an aggregate of 116,303.72 shares of Series A Preferred Stock, which includes (i) 60,228.77 shares of Series A Preferred Stock issued and held of record as of the date of this prospectus and (ii) 56,074.95 shares of Series A Preferred Stock issuable by the Company as a result of the payment of dividends in the form of PIK from the date of this prospectus through November 1, 2029, which assumes the Company will elect to pay additional dividends on the Series A Preferred Stock in the form of PIK to the maximum extent possible and that all shares of Series A Preferred Stock issued are converted based an initial conversion price of \$3.05. Bain Capital Credit Member, LLC, a Delaware limited liability company ("BCCM"), is the general partner of BCC Redwire Aggregator, L.P. As a result of the relationships between BCC Redwire Aggregator, L.P. and BCCM, BCCM may be deemed to possess indirect beneficial ownership of the securities held by BCC Redwire Aggregator, L.P. BCCM disclaims indirect beneficial ownership of the securities reported herein except to the extent of its pecuniary interest in such shares. The business address of each of the foregoing entities is 200 Clarendon Street, Boston, Massachusetts 02116.
- (3) Assumes that all shares are sold.

Investment Agreements and Certificate of Designation

On October 28, 2022, the Company entered into investment agreements with AE Industrial Partners Fund II, L.P. ("AEI Fund II") and AE Industrial Partners Structured Solutions I, L.P. ("AEI Structured," together with AEI Fund II and certain of its affiliates, including AE Industrial Partners Fund II-A, LP and AE Industrial Partners Fund II-B, LP (subsequent distributees of certain shares of Series A Preferred Stock from AEI Fund II), "AEI") (the "AEI Investment Agreement") and with BCC Redwire Aggregator, L.P., ("Bain") (the "Bain Investment Agreement" and, together with the AEI Investment Agreement, the "Investment Agreements"), pursuant to which the Company sold 40,000 shares of Series A Preferred Stock to each of AEI and Bain. Subsequently, Bain purchased 10,000 shares of Series A Preferred Stock from AEI pursuant to a transfer agreement, dated November 3, 2022, by and among Bain, AEI and the Company. The rights, terms and privileges of AEI and Bain with respect to the Series A Preferred Stock are governed by the Investment Agreements and the Certificate of Designation of Series A Convertible Preferred Stock (as amended, the "Certificate of Designation"). The Investment Agreements provide AEI and Bain with customary preemptive rights with respect to the Series A Preferred Stock and, after the seventh anniversary of the closing of the sale and purchase of the shares of Series A Preferred Stock (the "Series A Preferred Stock Closing"), for so long as AEI or Bain have record and beneficial ownership of at least 50% of the shares of Series A Preferred Stock initially issued to them, they may cause us to retain an investment banker to identify and advise the Company regarding opportunities for a sale of the Company and participate on the Company's behalf in negotiations for, and to assist the Company in conducting, such sale. Pursuant to the Certificate of Designation, either AEI or Bain may at their option and at any time, convert their shares of Series A Preferred Stock into shares of our Common Stock. Each share of Series A Preferred Stock will mandatorily convert upon achieving thresholds related to our market capitalization and profitability metrics, and we are required to make an offer to repurchase the outstanding Series A Preferred Stock upon a fundamental change. Dividends on the Series A Preferred Stock held by AEI and Bain accrue from and after the Series A Preferred Stock Closing and compound on a semi-annual basis. Dividends are payable in cash or in the form of PIK at the Company's election, provided that following the date that is seven years and six months after the date of the original issuance, all dividends must be paid in cash, unless

prohibited by applicable law. Additionally, for so long as Bain has record and beneficial ownership of at least 50% of the shares of Series A Preferred Stock initially issued to them, Bain will have the right to designate one (1) member to the Board. AEI and Bain have also been given certain registration rights with respect to their shares of Series A Preferred Stock pursuant to (i) the Registration Rights Agreement, dated October 28, 2022, by and among us, AEI and Bain and (ii) the Registration Rights Coordination Agreement, dated as of June 8, 2025, by and among us, Bain and AEI, pursuant to which this registration statement is being filed. For additional information regarding AEI's and Bain's rights under the Investment Agreement and Certificate of Designation, see the section entitled "Description of Capital Stock."

Amended and Restated Investor Rights Agreement

In connection with the closing (the "Merger Closing") of our acquisition of Edge Autonomy Intermediate Holdings, LLC and its subsidiaries (collectively, "Edge Autonomy"), we entered into the Amended and Restated Investor Rights Agreement (the "A&R Investor Rights Agreement"), dated as of June 13, 2025, by and among AE Red Holdings, LLC ("Holdings") and certain of its affiliates (together with Holdings, the "AEI Stockholders"), Edge Autonomy Ultimate Holdings, LP ("Edge Seller") and Genesis Park Holdings ("GNPK"), which amended and restated that certain Investor Rights Agreement, dated March 25, 2021. Among other things, the A&R Investor Rights Agreement provides that (i) the AEI Stockholders will be permitted to designate four (4) directors for election to the Board, which number will be reduced once the AEI Stockholders no longer hold 50% or more of the Common Stock beneficially owned by the AEI Stockholders (excluding Common Stock beneficially owned by Edge Seller) at the Merger Closing and (ii) Edge Seller will be permitted to designate one (1) director for election to the Board so long as Edge Seller continues to hold 25% or more of the Common Stock beneficially owned by Edge Seller (excluding Common Stock beneficially owned by the AEI Stockholders) at the Merger Closing, provided that so long as the AEI Stockholders and Edge Seller collectively may nominate an aggregate of five (5) directors to the Board, all but one (1) director must be independent under NYSE listing standards and, if less than five (5), a majority must be independent. Additionally, the A&R Investor Rights Agreement provides the AEI Stockholders and Edge Seller with certain registration rights with respect to Common Stock held prior to the Merger Closing and Common Stock issued to Edge Seller at the Merger Closing as consideration for the transactions contemplated thereby, pursuant to which this registration statement is being filed. The A&R Investor Rights Agreement further provides that, subject to certain limited exceptions, none of the AEI Stockholders or Edge Seller will sell or otherwise transfer their Common Stock and Warrants or any shares of Common Stock issuable upon exercise thereof, or other equity securities issued in respect of the foregoing, for 180 days following the Merger Closing.

DESCRIPTION OF CAPITAL STOCK

The following summary of the material terms of the Company's securities is not intended to be a complete summary of the rights and preferences of such securities, and is qualified by reference to the Company's Certificate of Incorporation (the "Certificate of Incorporation") and the Company's Bylaws (the "Bylaws"), which are exhibits to the registration statement of which this prospectus is a part. The Company urges you to read the Certificate of Incorporation, the Bylaws and the applicable provisions of Delaware law.

General

The Company's authorized capital stock consists of 500,000,000 shares of Common Stock, and 100,000,000 shares of preferred stock, par value \$0.0001 per share ("Preferred Stock"), which number includes the currently issued and outstanding shares of Series A Preferred Stock.

Common Stock

Dividend Rights

Subject to applicable law and the rights, if any, of the holders of any outstanding series of the Company's Preferred Stock or any class or series of stock having a preference over or the right to participate with the Company's Common Stock with respect to the payment of dividends, dividends may be declared and paid ratably on the Company's Common Stock out of the assets of the Company that are legally available for this purpose at such times and in such amounts as the Board in its discretion shall determine.

Voting Rights

Each outstanding share of the Company's Common Stock is entitled to one vote on all matters submitted to a vote of stockholders. Holders of shares of Common Stock do not have cumulative voting rights.

Preemptive Rights

The Company's Common Stock is not entitled to preemptive or other similar subscription rights to purchase any of our securities.

Conversion or Redemption Rights

The Company's Common Stock is neither convertible nor redeemable.

Liquidation Rights

Upon liquidation, the holders of the Company's Common Stock are entitled to receive pro rata the Company's assets that are legally available for distribution, after payment of all debts and other liabilities and subject to the prior rights of any holders of the Company's Preferred Stock then outstanding.

Preferred Stock

The Board may, without further action by the Company's stockholders, from time to time, direct the issuance of shares of Preferred Stock in series and may, at the time of issuance, determine the designations, powers, preferences, privileges and relative participating, optional or special rights as well as the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the Company's Common Stock. Satisfaction of any dividend preferences of outstanding shares of the Company's Preferred Stock would reduce the amount of funds available for the payment of dividends on shares of the Company's Common Stock. Holders of shares of the Company's Preferred Stock may be entitled to receive a preference payment in the event of our liquidation before any payment is made to the holders of shares of the Company's Common Stock.

Under certain circumstances, the issuance of shares of the Company's Preferred Stock may render more difficult or tend to discourage a merger, tender offer or proxy contest, the assumption of control by a holder of a

large block of the Company's securities or the removal of incumbent management. Upon the affirmative vote of a majority of the total number of directors then in office, the Company's Board may issue shares of the Company's Preferred Stock with voting and conversion rights which could adversely affect the holders of shares of the Company's Common Stock.

Series A Preferred Stock

On October 27, 2022, the Board authorized the issuance of 88,000 shares of the Company's Series A Preferred Stock. The Series A Preferred Stock is governed by the Certificate of Designation. Bain and AEI have been provided customary preemptive rights with respect to the Series A Preferred Stock for so long as each holder has record and beneficial ownership of at least 25% of the shares of Series A Preferred Stock initially issued to them ("25% Beneficial Ownership Requirement"). After the seventh anniversary of their respective closing dates, for so long as each holder has record and beneficial ownership of at least 50% of the shares of Series A Preferred Stock initially issued to them, Bain and AEI may each cause the Company to retain an investment banker to identify and advise the Company regarding opportunities for a sale of the Company and participate on the Company's behalf in negotiations for, and to assist the Company in conducting, such sale.

The holders of Series A Preferred Stock are entitled to vote with the holders of Common Stock, on an as-converted basis. The holders of Series A Preferred Stock have the right, at their option and at any time, to convert their shares of Series A Preferred Stock into shares of Common Stock. The number of shares of Common Stock received upon such a conversion is determined by dividing the applicable accrued value by the applicable conversion price, which is initially equal to \$3.05, but may be adjusted for certain dilutive events ("Conversion Price"). Each share of Series A Preferred Stock will mandatorily convert if (a) the Company's market capitalization exceeds \$600 million for at least 20 trading days (whether or not consecutive) during the preceding 30 consecutive trading day period, (b) our trailing 12 month adjusted EBITDA (calculated in the same manner as the presentation of "Adjusted EBITDA" in our most recent earnings release filed with the SEC) exceeds \$35 million, (c) the daily volume-weighted average price of the Common Stock exceeds two times the Conversion Price for at least 20 trading days (whether or not consecutive) during the preceding 30 consecutive trading day period and (d) certain liquidity conditions are met with respect to the Common Stock.

The Company is required to make an offer to repurchase the outstanding Series A Preferred Stock upon a fundamental change for an amount in cash equal to the greater of (a) 100% of the applicable accrued value as of the repurchase date plus, if prior to the five year anniversary of the initial issue date, the aggregate amount of all dividends that would have been paid in respect of an outstanding share of such Series A Preferred Stock from the repurchase date through the fifth anniversary of the initial issue date and (b) the amount that such holder would have received in such fundamental change with respect to such share of Series A Preferred Stock if all shares of Series A Preferred Stock had been converted into shares of Common Stock.

The dividend and liquidation rights of the Series A Preferred Stock rank senior to the Common Stock and any other series of Preferred Stock, and each other class or series of capital stock, the terms of which do not expressly provide that such class or series ranks on a parity basis with or senior to the Series A Preferred Stock as to dividend or liquidation rights ("Junior Securities"). Upon a liquidation, prior to any distribution to holders of Junior Securities, holders of the Series A Preferred Stock are entitled to receive the greater of (a) the greater of (i) two times the initial value of the Series A Preferred Stock owned by such holder and (ii) the accrued value of such shares of Series A Preferred Stock as of the date of such liquidation and (b) the amount that such holder would have received with respect to such shares of Series A Preferred Stock if all shares of Series A Preferred Stock had been converted at their accrued value into shares of Common Stock.

Cumulative dividends on each share of Series A Preferred Stock accrue daily on the initial value of each share from and after the applicable issue date and compound on a semi-annual basis on each dividend payment date. Such dividends can be paid in either cash or in the form of PIK, at the Company's option, subject to certain exceptions. If no election is made by the Company, such dividend shall be paid in the form of PIK; provided that for any dividend paid following the seven year and six month anniversary of the initial issue date, such dividend shall be paid in cash. If paid in cash, such dividends will be paid at a rate of 13% per annum, subject to certain adjustments and exceptions or, if the Company issues PIK dividends, at a rate of 15% per annum, subject to certain adjustments and exceptions.

If dividends on any shares of Series A Preferred Stock have not been declared and paid for the equivalent of three or more dividend periods (whether or not consecutive) ending after the seven year and six month anniversary of the initial issue date, the holders of Series A Preferred Stock are entitled to vote for the election of two additional members to the Board at the next special or annual meeting of stockholders.

Each holder of Series A Preferred Stock has been given certain registration rights pursuant to the Registration Rights Agreement, dated October 28, 2022, by and among the Company, Bain, AEI and the other parties thereto.

Warrants

Each whole Warrant entitles the registered holder to purchase one whole share of the Company's Common Stock at a price of \$11.50 per share, subject to adjustment as discussed below. Pursuant to the warrant agreement, dated November 23, 2020, between Genesis Park Acquisition Corp. and Continental Stock Transfer & Trust Company, as warrant agent (as may be amended, supplemented or otherwise modified from time to time, the "Warrant Agreement"), a Warrant holder may exercise its Warrants only for a whole number of shares of Common Stock. The Warrants will expire on September 2, 2026, at 5:00 p.m., New York City time, or earlier upon redemption or liquidation. No Warrant will be exercisable and the Company will not be obligated to issue shares of its Common Stock upon exercise of a Warrant unless the Company's Common Stock issuable upon such Warrant exercise has been registered, qualified or deemed to be exempt from the registration or qualifications requirements of the securities laws of the state of residence of the registered holder of the Warrants.

The Warrants are not redeemable by the Company so long as they are held by GNPK, Jefferies LLC ("Jefferies"), Holdings, or their respective permitted transferees. If the Warrants are held by holders other than the GNPK, Jefferies, Holdings or their respective permitted transferees, the Warrants will be redeemable by the Company and exercisable by the holders as described below.

Subject to the foregoing, the Company may call the Warrants for redemption:

- in whole and not in part;
- at a price of \$0.01 per Warrant;
- upon not less than 30 days' prior written notice of redemption to each Warrant holder; and
- if, and only if, the reported last sale price of the Company's Common Stock (or the closing bid price of the Company's Common Stock in the event shares of the Company's Common Stock are not traded on any specific day) equals or exceeds \$18.00 per share for any 20 trading days within a 30 trading day period ending three business days before we send the notice of redemption to the Warrant holders.

If the Company calls the Warrants for redemption as described above, our management will have the option to require any holder that wishes to exercise its Warrant to do so on a "cashless basis." If the Company's management takes advantage of this option, all holders of Warrants would pay the exercise price by surrendering their Warrants for that number of shares of the Company's Common Stock equal to the quotient obtained by dividing (x) the product of the number of shares of the Company's Common Stock underlying the Warrants, multiplied by the difference between the exercise price of the Warrants and the "fair market value" (defined below) by (y) the fair market value. The "fair market value" shall mean the average reported last sale price of the Company's Common Stock for the 10 trading days ending on the third trading day prior to the date on which the notice of redemption is sent to the holders of Warrants. Notwithstanding the foregoing, GNPK, Jefferies, Holdings and their respective permitted transferees are always entitled to exercise their Warrants for cash or on a cashless basis using the same formula described above.

The number of shares of Common Stock issuable upon the exercise of each Warrant is subject to adjustment for a split-up of shares of our Common Stock, stock dividends, consolidation, combination, reverse stock split or reclassification of shares of our Common Stock, and other similar events. In case of any reclassification or reorganization of the outstanding shares of our Common Stock (other than those described above or that solely affects the par value of such shares of our Common Stock), or in the case of any merger or consolidation of us with

or into another corporation (other than a consolidation or merger in which we are the continuing corporation and that does not result in any reclassification or reorganization of our outstanding shares of our Common Stock), or in the case of any sale or conveyance to another corporation or entity of the assets or other property of us as an entirety or substantially as an entirety in connection with which we are dissolved, the holders of the Warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the Warrants and in lieu of the shares of our Common Stock immediately theretofore purchasable and receivable upon the exercise of the rights represented thereby, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, that the holder of the Warrants would have received if such holder had exercised their Warrants immediately prior to such event. If less than 70% of the consideration receivable by the holders of our Common Stock in such a transaction is payable in the form of our Common Stock in the successor entity that is listed for trading on a national securities exchange or is quoted in an established over-the-counter market, or is to be so listed for trading or quoted immediately following such event, and if the registered holder of the Warrant properly exercises the Warrant within thirty days following public disclosure of such transaction, the Warrant exercise price will be reduced as specified in the Warrant Agreement based on the Black-Scholes Warrant Value (as defined in the Warrant Agreement) of the Warrant.

The Warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price (or on a cashless basis, if applicable), by certified or official bank check payable to us, for the number of Warrants being exercised. The Warrant holders do not have the rights or privileges of holders of our Common Stock and any voting rights until they exercise their Warrants and receive shares of our Common Stock. After the issuance of shares of our Common Stock upon exercise of the Warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by shareholders.

Quorum

The holders of a majority of the voting power of the capital stock issued and outstanding and entitled to vote at the meeting, present in person, or represented by proxy, will constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise required by law, the rules of any stock exchange upon which the Company's securities are listed or provided by the Certificate of Incorporation, Bylaws or the Certificate of Designation; provided, however, that where a separate vote by a class or series or classes or series is required, the holders of a majority in voting power of the shares of such class or classes or series of the capital stock of the Company's issued and outstanding and entitled to vote on such matter, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to the vote on such matter. If, however, such quorum will not be present or represented at any meeting of the stockholders, the chairperson of the meeting or stockholders holding a majority in voting power of the shares of the Company's capital stock, present in person or by proxy and entitled to vote thereon, shall have the power to adjourn the meeting from time to time without notice other than announcement at the meeting until a quorum shall be present. If the adjournment is for more than thirty (30) days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting will be given to each stockholder entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

Anti-Takeover Effects of The Company's Certificate of Incorporation and Bylaws

The Company's Certificate of Incorporation, Bylaws, Certificate of Designation, the Investment Agreements and the Delaware General Corporation Law ("DGCL") contain provisions, which are summarized in the following paragraphs that are intended to enhance the likelihood of continuity and stability in the composition of the Company's Board. These provisions are intended to avoid costly takeover battles, reduce the Company's vulnerability to a hostile change of control and enhance the ability of the Board to maximize stockholder value in connection with any unsolicited offer to acquire the Company. However, these provisions may have an anti-takeover effect and may delay, deter or prevent a merger or acquisition of the Company by means of a tender offer, a proxy contest or other takeover attempt that a stockholder might consider in its best interest, including those attempts that may result in a premium over the prevailing market price for the shares of Common Stock held by stockholders.

These provisions include:

- **Classified Board:** The Company's Certificate of Incorporation provides that its Board be divided into three classes of directors, with the classes as nearly equal in number as possible, and with the directors serving three-year terms. As a result, approximately one-third of the Board will be elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of the Board. The Company's Certificate of Incorporation also provides that, subject to any rights of holders of the Company's Preferred Stock to elect additional directors under specified circumstances, the number of directors will be fixed exclusively pursuant to a resolution adopted by the Board.
- **Stockholder Action by Written Consent:** The Company's Certificate of Incorporation will preclude stockholder action by written consent at any time when Holdings and its permitted transferees beneficially own, in the aggregate, less than 50% in voting power of the Company's stock entitled to vote generally in the election of directors.
- **Special Meetings of Stockholders:** The Company's Certificate of Incorporation and Bylaws provides that, except as required by law, special meetings of the Company's stockholders may be called at any time only by or at the direction of the Board or the chairman of the Board. The Company's Bylaws prohibit the conduct of any business at a special meeting other than as specified in the notice for such meeting. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control or management of the Company.
- **Advance Notice Procedures:** The Company's Bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of the Company's stockholders, including proposed nominations of persons for election to the Board. Stockholders at an annual meeting are only able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the Board or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given the Company's secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the Bylaws do not give the Board the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the Bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.
- **Removal of Directors; Vacancies:** The Company's Certificate of Incorporation provides that directors may be removed with or without cause upon the affirmative vote of a majority in voting power of all outstanding shares of stock entitled to vote thereon, voting together as a single class; provided, however, at any time when Holdings and its permitted transferees beneficially own, in the aggregate, less than 50% in voting power of the Company's stock entitled to vote generally in the election of directors, directors may only be removed for cause, and only by the affirmative vote of holders of at least 66 2/3% in voting power of all the then-outstanding shares of the Company's stock entitled to vote thereon, voting together as a single class. In addition, the Company's Certificate of Incorporation provides that, subject to the rights of any holders of the Company's Common Stock under the A&R Investor Rights Agreement and the rights granted to one or more series of the Company's Preferred Stock then outstanding, at any time when Holdings and its permitted transferees beneficially own, in the aggregate, less than 50% in voting power of the Company's stock, any newly created directorship on the Board that results from an increase in the number of directors and any vacancies on the Board will be filled only by the affirmative vote of a majority of the remaining directors, even if less than a quorum, or by a sole remaining director. If a member of the Board is appointed by Bain pursuant to the Bain Investment Agreement, and there is a vacancy on the Board resulting from the death, disability, resignation or removal of such director, Bain shall be entitled to designate the director to fill such vacancy. Further, the Certificate of Designation provides that if dividends on any shares of Series A Preferred Stock have not been declared and paid for the equivalent of three or more dividend periods (whether or not consecutive) ending after the seven year and six month anniversary

of the initial issue date, the holders of Series A Preferred Stock are entitled to vote for the election of two additional members to the Board at the next special or annual meeting of stockholders.

- **Supermajority Approval Requirements:** The Company's Certificate of Incorporation and Bylaws provide that the Board is expressly authorized to make, alter, amend, change, add to, rescind or repeal, in whole or in part, the Bylaws without a stockholder vote in any matter not inconsistent with the laws of the State of Delaware and the Company's Certificate of Incorporation. The Bylaws may be amended or repealed, and new bylaws may be adopted, by the affirmative vote of the holders of at least 66 2/3% of the voting power of all the then-outstanding shares of stock entitled to vote on such amendment, repeal or adoption, voting together as a single class; provided, however, that if the Board recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of the outstanding shares of stock entitled to vote on such amendment or repeal, voting together as a single class. At any time when Holdings and its permitted transferees beneficially own, in the aggregate, less than 50% in voting power of all outstanding shares of the Company's capital stock entitled to vote generally in the election of directors, any amendment, alteration, rescission or repeal of the Bylaws by the Company's stockholders will require the affirmative vote of the holders of at least 66 2/3% in voting power of all the then-outstanding shares of the Company's stock entitled to vote thereon, voting together as a single class. Notwithstanding the foregoing, so long as AEI or Bain satisfy the 25% Beneficial Ownership Requirement, without the affirmative vote or written consent of the Required Holders (as defined below), the Company may not amend, waive, alter or repeal any provision of the Company's Certificate of Incorporation, Bylaws or comparable organizational documents in a manner that would adversely affect the Series A Preferred Stock or the rights, preferences or privileges of the Series A Preferred Stock. "Required Holders" means all of (a) Bain (as long as the Bain satisfies the 25% Beneficial Ownership Requirement), (b) AEI (as long as AEI satisfies the 25% Beneficial Ownership Requirement) and (c) in the event the Bain does not constitute a Required Holder pursuant to clause (a) and AEI does not constitute a Required Holder pursuant to clause (b), the holders of a majority of the issued and outstanding shares of Series A Preferred Stock.

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote thereon, voting together as a single class, is required to amend a corporation's certificate of incorporation, unless the certificate of incorporation requires a greater percentage.

The Company's Certificate of Incorporation provides that at any time when Holdings and its permitted transferees beneficially own, in the aggregate, less than 50% in voting power of the Company's capital stock entitled to vote generally in the election of directors, the following provisions in the Company's Certificate of Incorporation may be amended, altered, repealed or rescinded only by the affirmative vote of the holders of at least 66 2/3% (as opposed to a majority threshold that would apply if Holdings and its permitted transferees beneficially own, in the aggregate, 50% or more) in voting power of all the then-outstanding shares of the Company's stock entitled to vote thereon, voting together as a single class:

- the provision requiring a 66 2/3% supermajority vote for stockholders to amend the Company's Bylaws;
- the provisions providing for a classified board of directors (the election and term of the Company's directors);
- the provisions regarding resignation and removal of directors;
- the provisions regarding entering into business combinations with interested stockholders;
- the provisions regarding stockholder action by written consent;
- the provisions regarding calling special meetings of stockholders;
- the provisions regarding filling vacancies on the Company's Board and newly created directorships;
- the provisions eliminating monetary damages for breaches of fiduciary duty by a director;

- the provision requiring exclusive forum in Delaware; and
- the amendment provision requiring that the above provisions be amended only with a 66 2/3% supermajority vote.

The combination of the classification of the Board, the lack of cumulative voting and the supermajority voting requirements will make it more difficult for the Company's existing stockholders to replace the Board as well as for another party to obtain control of the Company by replacing the Board. Because the Board has the power to retain and discharge the Company's officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management.

Authorized but Unissued Shares

The Company's authorized but unissued shares of its Common Stock and Preferred Stock will be available for future issuance without stockholder approval, subject to stock exchange rules, at the discretion of the Board. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. One of the effects of the existence of authorized but unissued Common Stock or Preferred Stock may be to enable the Board to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of the Company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of the Company's management and possibly deprive the Company's stockholders of opportunities to sell their shares of the Company's Common Stock at prices higher than prevailing market prices.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, the Company's stockholders have appraisal rights in connection with a merger or consolidation of the Company. Pursuant to the DGCL, stockholders who properly request and perfect appraisal rights in connection with such merger or consolidation have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders' Derivative Actions

Under the DGCL, any of the Company's stockholders may bring an action in the Company's name to procure a judgment in our favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of the Company's shares at the time of the transaction to which the action relates or such stockholder's stock thereafter devolved by operation of law.

Exclusive Forum

The Company's Certificate of Incorporation provides that, unless the Company consents in writing to the selection of an alternative forum, a state court within the State of Delaware (or, if no state court within the State of Delaware has jurisdiction, the United States District Court for the District of Delaware) will be the sole and exclusive forum for (1) any derivative action or proceeding brought on the Company's behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of the Company's directors, officers or other employees to the Company or its stockholders, (3) any action asserting a claim against the Company or any director or officer of the Company arising pursuant to any provision of the DGCL, the Company's Certificate of Incorporation or Bylaws, (4) any other action asserting a claim against the Company or any director or officer of the Company that is governed by the internal affairs doctrine or (5) any action asserting an "internal corporate claim" as that term is defined in Section 115 of the DGCL; provided that for the avoidance of doubt, the forum selection provision that identifies a state court within the State of Delaware as the exclusive forum for certain litigation, including any "derivative action", will not apply to suits to enforce a duty or liability created by the Securities Act, the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Any person or entity purchasing or otherwise acquiring any interest in shares of the Company's capital stock will be deemed to have notice of and to have consented to the provisions of the Company's Certificate of Incorporation described above. Although we believe these provisions benefit the Company by providing increased consistency in the application of

Delaware law for the specified types of actions and proceedings, the provisions may have the effect of discouraging lawsuits against the Company or its directors and officers.

Transfer Agent and Registrar

The transfer agent and registrar for the Company's Common Stock and Warrants is Continental Stock Transfer & Trust Company. The transfer agent's address is 1 State Street, 30th Floor New York, New York 10004.

Listing

Our Common Stock is listed on the NYSE under the symbol "RDW".

PLAN OF DISTRIBUTION

The Selling Stockholders, which, as used herein, includes their pledgees, donees, assignees, successors, designees, distributees or other transferees, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Common Stock on NYSE or any other stock exchange, market or trading facility on which such securities are traded or in private transactions. These dispositions of Common Stock may be 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.

However, there is no established public trading market for the Warrants and we do not intend to apply for listing of the Warrants on any securities exchange or recognized trading system. Sales of the Warrants, if any, will be made in privately negotiated transactions and the price at which the Warrants may be sold will depend, in part, on the manner and timing of such sales, but, in any event, we expect such price will likely be derived from the market price of our Common Stock traded on the NYSE.

The Selling Stockholders may use any one or more of the following methods when disposing of their shares of our Common Stock or Warrants:

- with respect to shares of our Common Stock, market transactions on any national securities exchange or quotation service or over-the-counter market on which the shares may be listed or quoted at the time of sale;
- transactions other than on such exchanges or services or in the over-the-counter market;
- ordinary brokerage transactions and transactions in which the broker-dealer as agent solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent, but may position and resell all or 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;
- underwritten transactions, including through one or more underwriters on a firm commitment or best-efforts basis, including through overnight underwritten offerings or bought deals;
- through the settlement of certain short sales entered into after the date of this prospectus;
- through the writing or settlement of options or other hedging transactions (including the issuance by the Selling Stockholders of derivative securities), whether the options or such other derivative securities are listed on an options exchange or otherwise;
- broker-dealers may agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price;
- in a public auction;
- in-kind distributions to members, limited partners or stockholders of Selling Stockholders;
- with respect to shares of our Common Stock, “at the market” or through market makers or into an existing market for the shares;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of our Common Stock or Warrants owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell their shares, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b) or other applicable provision of the Securities Act amending the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus. The Selling Stockholders also may transfer their shares in other circumstances, in which case the pledgees, donees, assignees, successors, designees, distributees or other transferees will be the selling beneficial owners for purposes of this prospectus.

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

The aggregate proceeds to the Selling Stockholders from the sale of our Common Stock or Warrants offered by them will be the purchase price of our Common Stock or Warrants less discounts or commissions, if any. The Selling Stockholders reserve the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of our Common Stock or Warrants be made directly or through agents. We will not receive any of the proceeds from any offering by the Selling Stockholders.

The Selling Stockholders also may in the future resell a portion of our Common Stock in open market transactions or our Common Stock and Warrants in privately negotiated transactions, in each case in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule, or pursuant to other available exemptions from the registration requirements of the Securities Act.

The Selling Stockholders and any underwriters, broker-dealers or agents that participate in the sale of our Common Stock or Warrants or interests therein may be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of our Common Stock or Warrants may be underwriting discounts and commissions under the Securities Act. If any selling security holder is an “underwriter” within the meaning of Section 2(11) of the Securities Act, then the selling security holder will be subject to the prospectus delivery requirements of the Securities Act. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us and the Selling Stockholders, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

To the extent required, the amount of shares of our Common Stock or Warrants to be sold, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable discounts, commissions, concessions or other compensation with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

To facilitate an offering of the securities, certain persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover the over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to

stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

We have agreed to maintain the effectiveness of this registration statement until all such securities have been sold under this registration statement or Rule 144 under the Securities Act or are no longer outstanding. We are required to pay all fees and expenses incident to the registration of the shares of our Common Stock and Warrants to be offered and sold pursuant to this prospectus. The Selling Stockholders will bear all commissions and discounts, if any, attributable to their sale of shares of our Common Stock or Warrants.

The Selling Stockholders may use this prospectus in connection with resales of our Common Stock and Warrants. This prospectus and any accompanying prospectus supplement will identify the Selling Stockholders, the terms of our Common Stock or Warrants and any material relationships between us and the Selling Stockholders. The Selling Stockholders may be deemed to be underwriters under the Securities Act in connection with our Common Stock or Warrants they resell and any profits on the sales may be deemed to be underwriting discounts and commissions under the Securities Act. Unless otherwise set forth in a prospectus supplement, the Selling Stockholders will receive all the net proceeds from the resale of our Common Stock or Warrants.

A Selling Stockholder that is an entity may elect to make an in-kind distribution of Common Stock or Warrants to its members, partners or stockholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or stockholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable Common Stock or Warrants pursuant to the distribution through a registration statement.

LEGAL MATTERS

Certain legal matters with regard to the validity of the securities offered pursuant to this prospectus and any prospectus supplement will be passed upon for us by Sheppard, Mullin, Richter & Hampton LLP, Chicago, Illinois.

EXPERTS

The consolidated financial statements of Redwire Corporation as of December 31, 2024 and 2023, and for each of the years in the two-year period ended December 31, 2024, have been incorporated by reference in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

The audited historical financial statements of Edge Autonomy Intermediate Holdings, LLC included in Redwire Corporation's Current Report on Form 8-K dated April 3, 2025 incorporated by reference in this prospectus have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent auditors, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth or incorporated by reference in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database.

We file annual, quarterly and current reports, proxy statements and other information with the SEC under the Exchange Act. The SEC maintains a website that contains reports, proxy and information statements and other information regarding issuers, including us, that file electronically with the SEC. You may obtain documents that we file with the SEC at www.sec.gov.

Our website address is <https://rdw.com/>. We do not incorporate the information on or accessible through our website into this prospectus or any prospectus supplement, and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any prospectus supplement. Our website address is included in this prospectus as an inactive textual reference only.

INFORMATION INCORPORATED BY REFERENCE

The registration statement of which this prospectus is a part incorporates by reference important business and financial information about our Company that is not included in or delivered with this document. The information incorporated by reference is considered to be part of this prospectus, and the SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. Any statement contained in any document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in or omitted from this prospectus or any accompanying prospectus supplement, or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. We incorporate by reference:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024, filed on March 11, 2025 (our “Annual Report”) (including the portions of our definitive proxy statement on Schedule 14A filed with the SEC on April 21, 2025 incorporated by reference therein);
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2025, filed on May 12, 2025;
- Our Current Reports on Form 8-K, filed on [January 21, 2025](#), [February 20, 2025](#), [March 26, 2025](#), [April 3, 2025](#), [May 21, 2025](#), [June 9, 2025](#), [June 13, 2025](#), [June 18, 2025](#), [July 2, 2025](#) and [July 15, 2025](#) (excluding any portions of such reports that were “furnished” rather than “filed”); and
- The description of our securities filed as an [Exhibit 4.1](#) to our Annual Report, as amended by any subsequent amendment or any report filed for the purpose of updating such description.

We also incorporate by reference into this prospectus any further filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than portions of those made pursuant to Item 2.02 or Item 7.01 of Form 8-K or other information “furnished” and not filed with the SEC), including all applicable filings filed after the date of the initial registration statement (of which this prospectus forms a part) and prior to its effectiveness and all applicable filings filed after the date of this prospectus and prior to the completion of an offering of securities under this prospectus.

Copies of all documents incorporated by reference in this prospectus, other than exhibits to those documents unless such exhibits are specifically incorporated by reference in this prospectus, will be provided at no cost to each person, including any beneficial owner, who receives a copy of this prospectus on the written or oral request of that person made to:

Redwire Corporation
8226 Philips Highway, Suite 101
Jacksonville, Florida 32256
Attention: Investor Relations
Telephone: (650) 701-7722

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the various expenses expected to be incurred in connection with the sale and distribution of the securities being registered hereby. Unless otherwise stated in any prospectus supplement relating to an offering by the Selling Stockholders, all such expenses, other than underwriting discounts and commissions, will be paid by us. All amounts are estimated except the SEC registration fee.

SEC registration fee	\$	(1)
Accounting fees and expenses		(2)
Legal fees and expenses		(2)
Printing expenses		(2)
Registrar and Transfer Agent's fees		(2)
Miscellaneous fees and expenses		(2)
Total	\$	(1)

(1) To be filed by amendment.

(2) Estimated expenses are not presently known. The foregoing sets forth the general categories of expenses (other than underwriting discounts and commissions) that we anticipate we will incur in connection with the offering of securities under this registration statement on Form S-3.

Item 15. Indemnification of Directors and Officers

Section 145(a) of the DGCL provides, in general, that a corporation may indemnify any person who was or is a party to or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), because he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the DGCL provides, in general, that a corporation may indemnify any person who was or is a party to or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification shall be made with respect to any claim, issue or matter as to which he or she shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, he or she is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or other adjudicating court shall deem proper.

Section 145(g) of the DGCL provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any

such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against such liability under Section 145 of the DGCL.

We have entered into indemnification agreements with each of our directors and executive officers. These agreements provide that we will indemnify each of our directors and such officers to the fullest extent permitted by law and our Certificate of Incorporation and our Bylaws.

We also maintain a general liability insurance policy, which will cover certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 16. Exhibits

Exhibit No.	Description
2.1+	<u>Agreement and Plan of Merger, dated as of January 20, 2025, by and among Redwire Corporation, Edge Autonomy Ultimate Holdings, LP, Edge Autonomy Intermediate Holdings, LLC, Echelon Merger Sub, Inc., and Echelon Purchaser, LLC (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on January 21, 2025).</u>
2.2	<u>Amendment, dated as of June 8, 2025, by and among Redwire Corporation, Edge Autonomy Ultimate Holdings, LP, Edge Autonomy Intermediate Holdings, LLC, Echelon Merger Sub, Inc., and Echelon Purchaser, LLC (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on June 9, 2025).</u>
3.1	<u>Certificate of Incorporation of Redwire Corporation, filed with the Secretary of State of the State of Delaware on September 2, 2021 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on September 10, 2021).</u>
3.2	<u>Bylaws of Redwire Corporation (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on September 10, 2021).</u>
3.3	<u>Certificate of Designation of Series A Convertible Preferred Stock of Redwire Corporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 2, 2022).</u>
3.4	<u>Certificate of Amendment of Certificate of Designation of the Company Series A Convertible Preferred Stock of Redwire Corporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on January 9, 2023).</u>
3.5	<u>Certificate of Amendment of Certificate of Designation of Series A Convertible Preferred Stock of Redwire Corporation (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 1, 2023).</u>
4.1	<u>Amended & Restated Investor Rights Agreement, dated as of June 13, 2025, by and among Redwire Corporation, AE Red Holdings, LLC, Genesis Park Holdings, Edge Autonomy Ultimate Holdings, LP, and each other person who executes a joinder to such agreement (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on June 13, 2025).</u>
4.2	<u>Investment Agreement, dated as of October 28, 2022, by and between Redwire Corporation and AE Industrial Partners Fund II, LP and AE Industrial Partners Structured Solutions I, L.P. (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on November 2, 2022).</u>
4.3	<u>Investment Agreement, dated as of October 28, 2022, by and between Redwire Corporation and BCC Redwire Aggregator, L.P. (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed on November 2, 2022).</u>
4.4	<u>Registration Rights Agreement, dated as of October 28, 2022, by and between Redwire Corporation and BCC Redwire Aggregator, L.P., AE Industrial Partners Fund II, L.P. and AE Industrial Partners Structured Solutions I, L.P. (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed on November 2, 2022).</u>
4.5	<u>Registration Rights Coordination Agreement, dated as of June 8, 2025, by and among Redwire Corporation, BCC Redwire Aggregator, L.P., AE Industrial Partners Fund II, L.P., and AE Industrial Partners Structured Solutions I, L.P. (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on June 9, 2025).</u>

Exhibit No.	Description
5.1**	Opinion of Sheppard Mullin Richter & Hampton LLP
23.1*	Consent of KPMG LLP.
23.2*	Consent of PricewaterhouseCoopers LLP.
23.3**	Consent of Sheppard Mullin Richter & Hampton LLP (included in Exhibit 5.1).
24.1**	Power of attorney (included on signature page hereto).
107*	Filing Fee Table.

+ Certain of the exhibits and the schedules to this Exhibit have been omitted in accordance with Regulation S-K Item 601. The registrant agrees to furnish a copy of all omitted exhibits and schedules to the SEC upon its request.

* To be filed with public filing.

** Filed herewith.

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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(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 Company pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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:
- (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. 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 effective date, 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 effective date; and
- (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 Company;
 - (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.
- (6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement 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.
- (7) 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Jacksonville, State of Florida, on , 2025.

By: REDWIRE CORPORATION
Peter Cannito
President, Chief Executive Officer and Chairman

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears immediately below constitutes and appoints Peter Cannito and Aaron Futch, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement, and to file the same with all exhibits thereto and other documents in connection therewith with the SEC, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>Peter Cannito</u>	President, Chief Executive Officer and Chairman (Principal Executive Officer)	, 2025
<u>Jonathan S. Baliff</u>	Chief Financial Officer and Director (Principal Financial Officer)	, 2025
<u>Chris Edmunds</u>	Chief Accounting Officer (Principal Accounting Officer)	, 2025
<u>John S. Bolton</u>	Director	, 2025
<u>Louis R. Brothers</u>	Director	, 2025
<u>Michael Greene</u>	Director	, 2025
<u>Joanne O. Isham</u>	Director	, 2025
<u>Kirk Konert</u>	Director	, 2025
<u>David Kornblatt</u>	Director	, 2025
<u>Raphael Thomas Wallander</u>	Director	, 2025

Sheppard, Mullin, Richter & Hampton LLP
321 North Clark Street, 32nd Floor
Chicago, Illinois 60654
312.499.6300 main
312.499.6301 fax
www.sheppardmullin.com

August 1, 2025

Redwire Corporation
8226 Philips Highway, Suite 101
Jacksonville, FL 32256

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Redwire Corporation, a Delaware corporation (the “Company”), in connection with the issuance of this opinion that relates to a Registration Statement on Form S-3 (the “Registration Statement”) filed by the Company with the United States Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”). The Registration Statement covers the resale, by the selling stockholders listed therein (the “Selling Stockholders”), from time to time pursuant to Rule 415 under the Securities Act as set forth in the Registration Statement, of up to (i) 117,677,386 shares (the “Shares”) of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”), which includes (a) 2,000,000 shares of Common Stock issuable upon the exercise of warrants (the Common Stock issued upon such exercise, the “Warrant Shares”), each exercisable for one share of Common Stock at a price of \$11.50 per share (the “Warrants”); (b) 65,473,983 shares of Common Stock issuable upon the conversion (the Common Stock issued upon such conversion, the “Series A Shares”) of shares of the Company’s Series A Convertible Preferred Stock, \$0.0001 par value per share (the “Series A Preferred Stock”), which assumes the Company will elect to pay dividends on the Series A Preferred Stock in kind in the form of additional shares of Series A Preferred Stock to the maximum extent possible and that all shares of Series A Preferred Stock are converted based on the specific accrued value and an initial per share conversion price of \$3.05; (c) 11,802 shares of Common Stock issuable upon the vesting (the Common Stock issued upon such vesting, the “RSU Shares”) of restricted stock units (“RSUs”); and (d) 331,785 shares of Common Stock held back from merger consideration paid to certain of the Selling Stockholders, releasable net of any shares of Common Stock forfeited to satisfy purchase price adjustments, if any; and (ii) 2,000,000 Warrants.

This opinion letter is being delivered in accordance with the requirements of Item 601(b)(5)(i) of Regulation S-K under the Securities Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement.

In connection with the issuance of this opinion letter, we have examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinions stated below. As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and of public officials.

In our examination, we have assumed (a) the genuineness of all signatures, including endorsements, (b) the legal capacity and competency of all natural persons, (c) the authenticity of all documents submitted to us as originals, (d) the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photostatic copies, and the authenticity of the originals of such copies; and (e) the accuracy, completeness and authenticity of certificates of public officials.

Based upon the foregoing and subject to the qualifications and assumptions stated herein, we are of the opinion that:

1. The Shares (excluding the Warrant Shares, Series A Shares and RSU Shares) have been duly authorized by all requisite corporate action on the part of the Company under the General Corporation Law of the State of Delaware (the "DGCL") and are validly issued, fully paid, and non-assessable.

2. The Warrant Shares, Series A Shares and RSU Shares have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and, assuming a sufficient number of authorized shares of Common Stock are available for issuance when the Warrants are exercised, the Series A Preferred Stock is converted, and the RSUs become vested, the Warrant Shares, Series A Shares and RSU Shares, when and if issued, delivered and paid for in accordance with their terms, will be validly issued, fully paid, and non-assessable.

3. The Warrants have been duly authorized by all requisite corporate action on the part of the Company under the DGCL and are legal, valid and binding agreements of the Company, enforceable against the Company in accordance with their terms.

Our opinion set forth in paragraph 3 above is subject to (i) the effects of bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, (ii) general equitable principles (whether considered in a proceeding in equity or at law) and (iii) an implied covenant of good faith and fair dealing.

Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Shares, the Warrants or any other agreements or transactions that may be related thereto or contemplated thereby. We are expressing no opinion as to any obligations that parties other than the Company may have under or in respect of the Shares, or the Warrants or as to the effect that their performance of such obligations may have upon any of the matters referred to above. No opinion may be implied or inferred beyond the opinion expressly stated above.

The opinion we render herein is limited to those matters governed by the DGCL as of the date hereof and we disclaim any obligation to revise or supplement the opinion rendered herein should the above-referenced laws be changed by legislative or regulatory action, judicial decision, or otherwise. We express no opinion as to whether, or the extent to which, the laws of any particular jurisdiction apply to the subject matter hereof.

This opinion letter is rendered as of the date first written above, and we disclaim any obligation to advise you of facts, circumstances, events, or developments that hereafter may be brought to our attention or that may alter, affect, or modify the opinion expressed herein.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. We also hereby consent to the reference to our firm under the heading "Legal Matters" in the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the General Rules and Regulations under the Securities Act. It is understood that this opinion is to be used only in connection with the offer and sale of the Shares and the Warrants being registered while the Registration Statement is effective under the Securities Act.

Respectfully submitted,

/s/ Sheppard, Mullin, Richter & Hampton LLP

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP