May 23, 2024

PROSPECTUS SUPPLEMENT NO. 2



MOBIX LABS, INC. 9,500,000 SHARES OF CLASS A COMMON STOCK

This prospectus supplement amends the prospectus (the "Initial Prospectus") dated May 13, 2024 (as supplemented to date, the "Prospectus") of Mobix Labs, Inc. a Delaware corporation (the "Company"), which forms a part of the Company's Registration Statement on Form S-1, as amended (No. 333-278451). This prospectus supplement is being filed to (1) update and supplement the information included or incorporated by reference in the Prospectus with the information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission (the "SEC") on May 23, 2024 as set forth below, and (2) revise on page 13 of the Initial Prospectus the number of shares of Class A Common Stock issuable (a) upon exercise of outstanding options from 4,522,529 to 3,310,990, (b) upon settlement of restricted stock units from 4,087,287 to 4,069,829 and (c) upon exercise of outstanding warrants from 12,295,020 to 12,320,020. This prospectus supplement should be read in conjunction with the Prospectus, which is to be delivered with this prospectus supplement.

Shares of our Class A Common Stock are listed on the Nasdaq Stock Market LLC ("Nasdaq") under the symbol "MOBX". On May 22, 2024, the closing price of our Class A Common Stock was \$2.35.

Investing in the Company's Class A Common Stock involves risks. See "Risk Factors" beginning on page 14 of the Prospectus and under similar headings in any amendments or supplements to the Prospectus.

Neither the SEC nor any other regulatory body has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement No. 2 is May 23, 2024.

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

FORM 8-K

	CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) FHE SECURITIES EXCHANGE ACT OF 1 Report (Date of earliest event reported): May 2	
	MOBIX LABS, INC. xact name of registrant as specified in its charter	
Delaware	001-40621	98-1591717
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)
15420 Laguna Canyon	Road, Suite 100	
Irvine, California		92618
(Address of principal e	xecutive offices)	(Zip Code)
Registrant	s telephone number, including area code: (949)	808-8888
	N/A	
(Former name or former address, if changed since last report)		
Check the appropriate box below if the Form 8-K f following provisions:	iling is intended to simultaneously satisfy the	e filing obligation of the registrant under any of the
□ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)		
□ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)		
□ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))		
□ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13(c))		
Securities registered pursuant to Section 12(b) of the Act:		
Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Class A Common Stock, par value \$0.00001 per share	MOBX	Nasdaq Global Market
Redeemable warrants, each warrant exercisable for one share of Class A Common Stock	MOBXW	Nasdaq Capital Market
Indicate by check mark whether the registrant is an echapter) or Rule 12b-2 of the Securities Exchange Act		405 of the Securities Act of 1933 (§230.405 of this
		Emerging growth company \boxtimes
If an emerging growth company, indicate by check may or revised financial accounting standards provided pure		xtended transition period for complying with any new

Item 3.02 Unregistered Sales of Equity Securities

On May 21, 2024 (the "Closing Date"), Mobix Labs, Inc., a Delaware corporation (the "Company") consummated the previously announced transactions pursuant to the Business Combination Agreement, dated as of May 8, 2024 (the "Business Combination Agreement"), by and among the Company, RaGE Systems, Inc, a Delaware corporation ("RaGE Systems"), and Mobix Merger Sub III, LLC, a Delaware limited liability company to acquire RaGE Systems, a leader in radio frequency joint design and manufacturing services for aggregate consideration of approximately \$12.0 million.

Pursuant to the Business Combination Agreement, the Company will deliver 3,214,045 shares of Class A common stock, par value \$0.00001 per share ("Class A Shares") to the RaGE Systems stockholders. In addition, RaGE Systems stockholders will be paid an aggregate cash amount of \$2.0 million as follows: (a) \$0.2 million was paid on the Closing Date; (b) \$1.0 million will be paid on November 15, 2024 and (c) \$0.8 million will be paid on April 15, 2025. Moreover, subject to achievement of certain milestones, the RaGE Systems stockholders will also be entitled to receive possible earn-out payments of up to \$8.0 million over eight fiscal quarters in a combination of cash and stock.

The Class A Shares will be issued pursuant to and in accordance with the exemption from registration under the Securities Act of 1933, as amended, provided by Section 4(a)(2) thereof as a transaction by an issuer not involving any public offering.

Item 8.01 Other Events

The information regarding the closing of the transactions contemplated by the Business Combination Agreement and the issuance of the Class A Shares contemplated thereunder set forth in Item 3.02 of this Current Report on Form 8-K is incorporated into this Item 8.01 by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Mobix Labs, Inc.

Date: May 23, 2024 By: /s/ Keyvan Samini

Name: Keyvan Samini

Title: President and Chief Financial Officer