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

washington, D.C. 20349

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

ARTIVION, INC.

(Exact name of registrant as specified in its charter)

Delaware

1-13165

(Commission File Number)

(State or Other Jurisdiction of Incorporation)

> 1655 Roberts Boulevard, N.W., Kennesaw, Georgia 30144 (Address of principal executive office) (zip code)

ARTIVION, INC. 2020 EQUITY AND CASH INCENTIVE PLAN (Full title of the plan)

J. Patrick Mackin Chairman, President, and Chief Executive Officer Artivion, Inc. 1655 Roberts Boulevard, N.W. Kennesaw, Georgia 30144 (Name and address of agent for service)

(312) 750-1234 (Telephone number, including area code, of agent for service)

Copies to:

Jean F. Holloway Senior Vice President, General Counsel, Chief Compliance Officer, and Corporate Secretary Artivion, Inc. 1655 Roberts Boulevard, NW Kennesaw, Georgia 30144 Tel: (770) 419-3355 Andrew M. Nick Fredrikson & Byron, P.A. 60 S. Sixth Street, Suite 1500 Minneapolis, Minnesota 55402 Tel: (612) 492-7000

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 Non-accelerated Filer

х	Accelerated Filer	0
0	Smaller Reporting Company	0
	Emerging Growth Company	0

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. o

59-2417093 (IRS Employer

Identification No.)

EXPLANATORY NOTE

Artivion, Inc. (the "Company") previously registered (i) 2,675,000 shares of its common stock, par value \$0.01 per share ("Common Stock"), for issuance under the 2020 Equity and Cash Incentive Plan (the "Plan") and (ii) 1,430,052 shares that remained available for grant under the 2009 CryoLife, Inc. Equity Cash Incentive Plan by a registration statement on Form S-8 (File No. 333-244319) filed with the Securities and Exchange Commission (the "SEC") on August 11, 2020 (the "Prior Registration Statement"). On March 27, 2023, the Company's Board of Directors increased the number of authorized shares under the Plan by 3,040,000, which the Company's stockholders approved on May 16, 2023. This registration statement (the "Registration Statement") is being filed pursuant to General Instruction E to Form S-8 to register such additional 3,040,000 shares of Common Stock which may be issued under the Plan.

The contents of the Prior Registration Statement are incorporated by reference into this Registration Statement in accordance with General Instruction E to Form S-8 to the extent not modified or superseded by the information included herein or by any subsequently filed document that is incorporated by reference in this Registration Statement or the Prior Registration Statement. Only those items of Form S-8 containing new information not contained in the Prior Registration Statement are presented herein.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Company with the SEC are incorporated by reference to this Registration Statement:

- (a) The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 23, 2023 (File No. 001-13165);
- (b) The Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, filed with the SEC on May 5, 2023;
- (c) The Company's Current Reports on Form 8-K filed with the SEC on February 16, 2023, May 4, 2023, and May 19, 2023;
- (d) The Company's Definitive Proxy Statement on Schedule 14A filed in connection with its 2023 Annual Meeting of Stockholders held on May 16, 2023, filed with the SEC on April 3, 2023; and
- (e) The description of the Company's Common Stock, which is contained in the Company's Registration Statement on Form 8-A, originally filed with the SEC on July 2, 1997, including any amendments or reports filed for the purpose of updating such description, including, without limitation, the description of the Common Stock contained in Exhibit 4.2 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on February 23, 2023.

In addition, all documents subsequently filed by the Company pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the date of filing or furnishing of such documents; provided, however, that information deemed to have been furnished and not filed shall not be deemed to be incorporated by reference into this Registration Statement. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein or in any other subsequently filed or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8.	Exhibits.
<u>Exhibit</u>	
Number	Description
<u>5.1</u> *	Opinion of Fredrikson & Byron, P.A., filed herewith
<u>23.1</u> *	Consent of Fredrikson & Byron, P.A. (included in Exhibit 5.1)
<u>23.2</u> *	Consent of Ernst and Young LLP, filed herewith
<u>24.1</u> *	Power of Attorney (included in the signature pages hereto)
	Artivion, Inc. 2020 Equity and Cash Incentive Plan, (incorporated by reference from Exhibit 10.1 to the Company's Current Report on
<u>99.1</u>	Form 8-K filed with the SEC on May 19, 2023)
<u>107</u> *	Filing Fee Table

* Filed herewith

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Kennesaw, State of Georgia, on June 9, 2023.

ARTIVION, INC.

/s/ D. Ashley Lee

By:

Name:D. Ashley LeeTitle:Executive Vice President and
Chief Financial Officer

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POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below, hereby constitutes and appoints J. Patrick Mackin and D. Ashley Lee, and each acting alone, his or her true and lawful attorneys-in-fact and agents, with full power of resubstitution and substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any or all amendments or supplements 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 full power and authority to do and perform each and every act and thing necessary or appropriate to be done with respect to this Registration Statement or any amendments or supplements hereto in and about the premises, 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, each acting alone, 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, as amended, this Registration Statement has been signed by the following persons in their respective capacities with Artivion, Inc. and on the dates indicated.

Name	Title	Date
/s/ J. Patrick Mackin J. Patrick Mackin	Chairman of the Board, Chief Executive Officer, and President (Principal Executive Officer)	June 9, 2023
/s/ D. Ashley Lee D. Ashley Lee	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	June 9, 2023
/s/ Amy D. Horton Amy D. Horton	Vice President, Chief Accounting Officer (Principal Accounting Officer)	June 9, 2023
/s/ Thomas F. Ackerman Thomas F. Ackerman	Director	June 9, 2023
/s/ Daniel J. Bevevino Daniel J. Bevevino	Director	June 9, 2023
/s/ Marna P. Borgstrom Marna P. Borgstrom	Director	June 9, 2023
/s/ James W. Bullock James W. Bullock	Director	June 9, 2023
/s/ Jeffrey H. Burbank Jeffrey H. Burbank	Director	June 9, 2023
/s/ Elizabeth A. Hoff Elizabeth A. Hoff	Director	June 9, 2023
/s/ Jon W. Salveson Jon W. Salveson	Director	June 9, 2023
/s/ Anthony B. Semedo Anthony B. Semedo	Director	June 9, 2023

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Calculation of Filing Fee Tables

FORM S-8

(Form Type)

ARTIVION, INC.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered (1)	Proposed Maximum Offering Price Per Unit (2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, par value \$0.01 per share	Other	3,040,000	\$14.71	\$44,718,400.00	0.00011020	\$4,927.97
	Total Offering Ar				\$4,927.97		
Total Fee Offsets							_
Net Fee Due							\$4,927.97

(1) The Registration Statement registers 3,040,000 shares of common stock, par value \$0.01 per share (the "Common Stock"), of Artivion, Inc. (the "Company") that are reserved for issuance pursuant to the Artivion, Inc. 2020 Equity and Cash Incentive Plan (the "Plan").

Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "Securities Act"), the Registration Statement also covers any additional shares of the Company's Common Stock that may become issuable under the Plan by reason of any substitutions or adjustments to shares to account for any change in corporate capitalization, such as a merger, consolidation, reorganization, recapitalization, separation, partial or complete liquidation, stock dividend, stock split, reverse stock split, split up, spin-off, or other distribution of stock or property of the Company, combination, or exchange of shares of Common Stock, dividend in kind, or other like change in capital structure.

(2) Pursuant to Rules 457(c) and 457(h) of the Securities Act, the Proposed Maximum Offering Price is estimated solely for the purpose of calculating the registration fee and is based on the average of the high and low market prices for the Common Stock reported on the New York Stock Exchange on June 5, 2023 (\$14.71).

OPINION OF FREDRIKSON & BYRON, P.A.

FREDRIKSON & BYRON, P.A. 60 South Sixth Street, Suite 1500 Minneapolis, Minnesota 55402 Telephone: (612) 492-7000 Facsimile: (612) 492-7077

June 9, 2023

Artivion, Inc. 1655 Roberts Boulevard, N.W. Kennesaw, Georgia 30144

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We are acting as corporate counsel to Artivion, Inc. (the "**Company**") in connection with the filing by the Company of a Registration Statement on Form S-8 (the "**Registration Statement**") under the Securities Act of 1933, as amended (the "**Act**"), to register 3,040,000 additional shares (plus any additional shares as described in footnote (1) to the Calculation of Registration Fee table) of Common Stock, par value \$0.01, of the Company (the "**Shares**"), which we have been advised by the Company may be issued from time to time pursuant to the Artivion, Inc. 2020 Equity and Cash Incentive Plan, as amended to date (the "**Plan**").

In acting as such counsel and for the purpose of rendering this opinion, we have reviewed copies of the following, as presented, and represented as being such, to us by the Company: (i) the Company's Certificate of Incorporation, as amended; (ii) the Company's Amended and Restated Bylaws; (iii) certain corporate resolutions adopted by the Board of Directors and stockholders of the Company pertaining to approval of the Plan; (iv) the Plan; and (v) the Registration Statement. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the original of all documents submitted to us as copies thereof.

Based on, and subject to, the foregoing and upon representations and information provided by the Company or its officers or directors or by public officials or their staffs, it is our opinion as of this date that, the Shares have been duly authorized under the Plan by the Company and upon issuance and delivery of the Shares against receipt by the Company of the consideration for the Shares pursuant to the terms of the Plan, the Shares will be validly issued, fully paid and nonassessable. This opinion is limited to the Delaware General Corporation Law.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission.

Very truly yours,

Fredrikson & Byron, P.A.

By: /s/ Andrew M. Nick Andrew M. Nick Vice President

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2020 Equity and Cash Incentive Plan of Artivion, Inc. of our reports dated February 23, 2023, with respect to the consolidated financial statements of Artivion, Inc. and the effectiveness of internal control over financial reporting of Artivion, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Atlanta, Georgia June 9, 2023