As filed with the Securities and Exchange Commission on May 11, 2010

Registration No. 333-

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

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

DATA I/O CORPORATION (Exact name of registrant as specified in its charter)

Washington (State or other jurisdiction of incorporation or organization) 91-0864123 (I.R.S. Employer Identification No.)

6464 185th Ave N.E. Redmond, Washington 98052 Address of Principal Executive Offices

DATA I/O CORPORATION 2000 STOCK COMPENSATION INCENTIVE PLAN, AS AMENDED (Full title of the plan)

Joel S. Hatlen Vice President, Chief Financial Officer, Secretary and Treasurer 6464 185th Ave N.E. Redmond, Washington 98052 (Name and address of agent for service)

(425) 881-6444 (Telephone number, including area code, of agent for service)

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

Large accelerated filer oAccelerated filer oNon-accelerated filer o (Do not check if a smaller reporting
company)Smaller reporting company þ

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CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Shares available for issuance under the 2000 Stock Compensation Incentive Plan	300,000	\$4.255(3)	\$1,276,500	\$90.91(3)

- (1)Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement covers any securities that may be offered or issued pursuant to the 2000 Stock Compensation Incentive Plan, as amended, as a result of adjustments for stock dividends, stock splits and similar changes.
- (2) Based on the average exercise price of options granted under the 2000 Stock Compensation Incentive Plan, as amended, outstanding as of the date of the filing of this registration statement.
- (3) The proposed maximum offering price per share and the registration fee were calculated in accordance with Rule 457(c) and (h) based on the average of the high and low prices for shares of the registrant's common stock on May 7, 2010, as quoted by Nasdaq Capital Market. The closing price for shares of the registrant's common stock on May 7, 2010, as quoted by Nasdaq Capital Market, was \$4.11.

Page 1 of 5 pages.

Exhibit Index begins at page 5.

Explanatory Note

This Registration Statement on Form S-8 is filed pursuant to General Instruction E to Form S-8 for the purpose of registering an additional 300,000 common shares of Data I/O Corporation (the "Company"), which may be issued pursuant to awards under the 2000 Stock Compensation Incentive Plan, as amended (the "Plan"). In accordance with General Instruction E to Form S-8, the Company incorporates herein by reference the contents of the Form S-8 filed by the Company with respect to the Plan on May 19, 2008 (Registration No. 333-151006), together with all exhibits filed therewith or incorporated therein by reference to the extent not otherwise amended or superseded by the contents hereof.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

Exhibit Number Exhibit

- 4.1 Data I/O Corporation 2000 Stock Compensation Incentive Plan, as amended *
- 5.1 Opinion of Dorsey & Whitney LLP
- 23.1 Consent of Grant Thornton, an independent registered public accounting firm
- 23.2 Consent of Dorsey & Whitney LLP (Included in Exhibit 5.1)
- 24.1 Power of Attorney (See signature pages of this Registration Statement)

* Incorporated by reference to Data I/O's 2009 Proxy Statement dated April 3, 2009

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SIGNATURES

The Registrant. 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-8 and has duly caused this Registration Statement or amendment to be signed on its behalf by the undersigned, thereunto duly authorized, in Redmond, Washington, on May 10, 2010.

DATA I/O CORPORATION

By: /s/ Joel S. Hatlen Joel S. Hatlen Vice President, Chief Financial Officer, Secretary and Treasurer

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POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints each of Fredrick R. Hume and Joel S. Hatlen as his or her attorney-in-fact and agent, with the full power of substitution and resubstitution, for them 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 exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may 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 the capacities and on the date indicated.

Signature	Title	Date
/s/ Fredrick R. Hume Fredrick R. Hume	Chief Executive Officer, President and a director (Principal Executive Officer)	April 22, 2010
/s/ Joel S. Hatlen Joel S. Hatlen	Vice President of Finance, Chief Financial Officer, Secretary and Treasurer (Principal Financial Officer and Accounting Officer	•
/s/ Paul A. Gary Paul A. Gary	Director	April 22, 2010
/s/ Steven M. Quist Steven M. Quist	Director	April 22, 2010
William R. Walker	Director	

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