

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 Accelerated filer Non-accelerated filer Smaller reporting company
 (Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title 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 Stock, \$0.001 par value	7,500,000 shares	\$12.02 (2)	\$90,150,000.00	\$9,078.10

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of the Registrant’s Common Stock that become issuable under the 2016 Equity Incentive Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration that increases the number of the Registrant’s outstanding shares of Common Stock.

(2) Estimated in accordance with Rules 457(c) and 457(h) solely for the purpose of calculating the registration fee on the basis of \$12.02 per share, which represents the average of the high and low prices of the Registrant’s Common Stock as reported on the NASDAQ Global Select Market on May 18, 2016.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The rules of the Securities and Exchange Commission (the “Commission”) allow the Registrant to incorporate by reference information into this registration statement on Form S-8 (the “Registration Statement”). The information incorporated by reference is considered to be a part of this Registration Statement, and information that the Registrant files later with the Commission will automatically update and supersede this information. This Registration Statement incorporates by reference the documents listed below (other than portions of these documents that are either (1) described in paragraphs (d)(1), (d)(2), (d)(3) or (e)(5) of Item 407 of Regulation S-K promulgated by the Commission or (2) furnished under applicable Commission rules rather than filed and exhibits furnished in connection with such items):

- (1) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 26, 2015, filed with the Commission on February 23, 2016 (the “Annual Report”);
- (2) All other reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), since the end of the fiscal year covered by the Annual Report; and
- (3) The description of the Registrant’s Common Stock contained in the Registrant’s Registration Statement on Form 8-A, filed with the Commission on May 21, 2007, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All reports and other documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement, and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents. However, the Registrant is not incorporating by reference any information provided in these documents that is described in paragraph (d)(1), (d)(2), (d)(3) or (e)(5) of Item 407 of Regulation S-K promulgated by the Commission or furnished under applicable Commission rules rather than filed and exhibits furnished in connection with such items.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

The Registrant’s amended and restated certificate of incorporation contains provisions that limit the liability of the Registrant’s directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, the Registrant’s directors will not be personally liable to the Registrant or the Registrant’s stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director’s duty of loyalty to the Registrant or the Registrant’s stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

The Registrant's amended and restated certificate of incorporation and amended and restated bylaws provide that the Registrant is required to indemnify the Registrant's directors and officers, in each case to the fullest extent permitted by Delaware law. Any repeal of or modification to the Registrant's amended and restated certificate of incorporation or amended and restated bylaws may not adversely affect any right or protection of a director or officer for or with respect to any acts or omissions of that director or officer occurring prior to that amendment or repeal. The Registrant's amended and restated bylaws also provide that the Registrant will advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding, and permit the Registrant to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether the Registrant would otherwise be permitted to indemnify him or her under the provisions of Delaware law. The Registrant has obtained such a directors' and officers' liability insurance policy. The Registrant has entered and expects to continue to enter into agreements to indemnify the Registrant's directors and executive officers. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. The Registrant believes that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers.

The limitation of liability and indemnification provisions in the Registrant's amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against the Registrant's directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against the Registrant's directors and officers, even though an action, if successful, might benefit the Registrant and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that the Registrant pays the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of the Registrant's directors or executive officers for which indemnification is sought, and the Registrant is not aware of any threatened litigation that may result in claims for indemnification. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act"), may be permitted to directors, executive officers or persons controlling the Registrant, the Registrant has been informed that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit No. Description

- | | |
|------|--|
| 4.1 | 2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016) |
| 5.1 | Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation |
| 10.1 | Form of Notice of Grant of Restricted Stock Units (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016) |
| 10.2 | Form of Notice of Grant of Restricted Stock Units for Directors (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016) |
| 10.3 | Form of Notice of Grant of Performance Shares (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016) |
| 23.1 | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm |
| 23.2 | Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1) |
| 24.1 | Power of Attorney (included as part of the signature page of this Registration Statement) |

II-2

Item 9. 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 this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 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) and (A)(1)(ii) 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 Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this 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.

B. 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.

C. 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 Commission 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, 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 Sunnyvale, State of California, on this 20th day of May, 2016.

INFINERA CORPORATION

By: /s/ THOMAS J. FALLON
Thomas J. Fallon
Chief Executive Officer

II-4

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENT, that each person whose signature appears below hereby constitutes and appoints Thomas J. Fallon and James L. Laufman, and each of them, as his true and lawful attorney-in-fact and agent with full power of substitution, for him in any and all capacities, to sign any and all amendments to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Commission, granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each said attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ THOMAS J. FALLON Thomas J. Fallon	Chief Executive Officer and Director (Principal Executive Officer)	May 20, 2016
/s/ DAVID F. WELCH, PH.D. David F. Welch, Ph.D.	Co-founder, President and Director	May 20, 2016
/s/ BRAD D. FELLER Brad D. Feller	Chief Financial Officer (Principal Financial and Accounting Officer)	May 20, 2016
/s/ KAMBIZ Y. HOOSHMAND Kambiz Y. Hooshmand	Chairman of the Board	May 20, 2016
/s/ JOHN P. DAANE John P. Daane	Director	May 20, 2016
/s/ MARCEL GANI Marcel Gani	Director	May 20, 2016
/s/ PAUL J. MILBURY Paul J. Milbury	Director	May 20, 2016
/s/ RAJAL M. PATEL Rajal M. Patel	Director	May 20, 2016
/s/ MARK A. WEGLEITNER Mark A. Wegleitner	Director	May 20, 2016

EXHIBIT INDEX

Exhibit No. Description

4.1	2016 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016)
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation
10.1	Form of Notice of Grant of Restricted Stock Units (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016)
10.2	Form of Notice of Grant of Restricted Stock Units for Directors (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016)
10.3	Form of Notice of Grant of Performance Shares (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K filed with the Commission on May 17, 2016)
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibit 5.1)
24.1	Power of Attorney (included as part of the signature page of this Registration Statement)

II-6