



DIVISION OF
CORPORATION FINANCE

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

April 12, 2007

Jagdeep Singh
President and Chief Executive Officer
Infinera Corporation
169 Java Drive
Sunnyvale, CA 94089

RE: Infinera Corporation
Amendment No. 2 to Form S-1
Filed on April 4, 2007
File No. 333-140876

Dear Mr. Singh:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Prospectus Summary, page 1

1. Please briefly mention here that you have restated your financial statements for particular periods and the reasons for the restatement, that your management and independent registered public accounting firm identified material weaknesses in your internal controls, and the extent to which you have addressed the material weaknesses.
2. We note your response to our prior comment five. Please convey here, and where you discuss this market share in the business section, that it is your belief that you have “the largest market share of 10Gbps long-haul ports shipped worldwide.”

Dilution, page 30

3. We note your response to our prior comment ten but do not see the requested change. Please quantify, on a per share basis, the further dilution to new investors that will occur upon exercise of your outstanding stock options.

Management's Discussion and Analysis, page 34

4. In your next submission, please include a section for trends that discusses and discloses the future impact on revenue, cost of sales, gross margin, operating and net income of the revenue that you have deferred under SOP 97-2.

Overview, page 34

5. We note your revision in response to our prior comment 11. Please also quantify the impact of these additional costs to the extent practicable.

Overview of Consolidated Financial Data, page 35

Gross Margin, page 38

6. Please refer to prior comment 14. Tell us your consideration of EITF 01-9 Issues 4 and 5 for the sale of your common equipment at either low margins or at a loss.

Critical Accounting Policies and Estimates, page 39

Stock-Based Compensation, page 41

7. We note your response to prior comment two of your response letter dated April 4, 2007 in response to our comment letter dated March 26, 2007. Please expand your disclosures to:
 - Discuss how you determined your enterprise value, and then how you allocated such enterprise value to your convertible preferred stock and common stock.
 - Identify and quantify each factor that contributed to the changes in fair value of your common stock. For example, describe what happened between January 4, 2007 and February 7, 2007 that caused the fair value of your common stock to increase from \$4.04 per share to \$7.68 per share.

Management, page 70

Compensation Discussion and Analysis, page 78

8. We note your revisions in response to our prior comment 26. To assist investors in understanding how Mr. Chandler's bonus is determined, also state how the amount of his commission is determined. For example, if it is based on percentage of revenues, then state what percentage of those revenues is his commission. In addition, Mr. Chandler's commission-based bonus plan is not

disclosed in the first two columns of the Grants of Plan-Based Awards table. Since his 2006 non-equity incentive plan compensation is based upon satisfaction of targets based upon revenues, it would appear that this part of his compensation package should be reflected in the Grants of Plan-Based Awards table. Please revise accordingly.

9. Please also include in the narrative following the grants of plan-based awards table your response to prior comment 26 regarding Messrs. Singh's and Williams' August 8, 2006 stock option awards.

Underwriting, page 115

10. Please include in the prospectus your response to our prior comment 29.

Consolidated Financial Statements

Notes to Consolidated Financial Statements

1. Organization and Significant Accounting Policies

Revenue Recognition, page F-11

11. Please refer to prior comment 31. Please expand your discussion in management's discussion and analysis to include your response.

Inventory Valuation, page F-14

12. Please refer to prior comment 34. Please expand your disclosure in discussing inventory write-downs, purchase commitments and business to include your response.

Exhibits

13. You state in your response to our prior comment 43 that "the terms of the written offers of employment with executive officers Chandler and McCarthy have been superseded by certain Change of Control Severance Agreements," forms of which are filed as exhibits. Yet, it is not apparent, based on the current disclosures, as to how the McCarthy and Chandlers offer letters were superseded in full. The forms of severance agreements appear to allow for any existing employment agreements by which salary and other terms are set; in fact, the forms of severance agreements do not discuss salary or some of the other current terms you describe on pages 89 and 90 that have been in the offer letters. Therefore, please file the offer letters or advise.

* * * *

Mr. Singh
Infinera Corporation
April 12, 2007
Page 4

As appropriate, please amend your filing in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

You may contact Sharon Virga, Senior Staff Accountant, at (202) 551-3385 or Kyle Moffatt, Accountant Branch Chief, at (202) 551-3836, if you have any questions regarding comments on the financial statements and related matters. Please contact Cheryl Grant, Senior Staff Attorney, at (202) 551-3359 or me at (202) 551-3810 with any other questions.

Sincerely,

Larry Spigel
Assistant Director

cc: via facsimile (650-493-6811)
Matthew Sonsini/Wilson Sonsini Goodrich & Rosati