



DIVISION OF
CORPORATION FINANCE

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

May 17, 2007

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

**RE: Infinera Corporation
Amendment No. 4 to Form S-1
Filed on May 10, 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.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Cost of Revenue, page 39

1. Please revise your cost of revenue discussion to separately detail the inventory write-downs for excess and obsolete inventories.
2. We refer to your response to our prior comment 3. We note your statement that you allow customers "to purchase common equipment at lower prices combined with a limited number of higher margin network products." Tell us how this statement reconciles with your representation that your customers only purchase your common equipment, which is sold by you at a loss, and have no obligation to purchase your higher margin network products.

Gross Margin, page 40

3. Please tell us and revise your disclosures to clarify what you mean by your discussion on page 41 regarding the "reduction in LCM adjustments due to changes in the bill of materials on a number of common equipment components

and continued decline in component pricing.” Furthermore, we note on page 49 that your inventory write-down related to LCM adjustments was \$4.3 million for the first three months of 2006 and \$0.9 million for the first three months of 2007.

4. Please revise to delete your presentation of “operating and net income” in the tabular presentation of your deferred revenue and inventory balances on page 41.

Results of Operations

Cost of Revenue and Gross Margin, page 51

5. For 2005 Compared to 2006 on page 52, tell us how you calculated the increase in LCM adjustments and charges for excess and obsolete inventory of \$11.9 million.

Research and Development Expenses, page 52

Sales and Marketing Expenses, page 53

General and Administrative Expenses, page 53

6. Please revise to make it clear that the percentage of these expenses to recognized revenue may not be the best trend indicator, since your revenue recognition policy requires the deferral of revenues over a period now averaging 1.3 years.

Quarterly Results of Operations, page 56

7. Expand your discussion, including a tabular presentation, of the reasons for the increases in revenues and cost of revenues in the last quarter of 2006 and the first quarter of 2007.

Compensation Discussion and Analysis, page 87

8. We note your response to our prior comment six as well as your statement in the prospectus that you used the Radford High Technology Industry Report as an additional reference in your determination of executive compensation. Therefore, identify the companies from that survey that you considered for purposes of benchmarking the elements of the named executive officers’ compensation. See Regulation S-K Item 402(b)(2)(xiv). Alternatively, please explain to us in your response letter why your utilization of data from the survey is not benchmarking for purposes of Item 402(b)(2)(xiv).
9. We note your response to our prior comment seven. Please provide us with an analysis in your response letter as to why your disclosure of the targets would cause competitive harm so that confidential treatment of the targets is appropriate.

Principal Stockholders, page 115

10. We note your disclosure of recent equity grants to your executive officers and directors that will be effective upon effectiveness of the instant Form S-1. Reflect these changes in management's beneficial ownership in the security ownership table, or tell us why you believe you are not required to do so under Exchange Act Rule 13d-3(d)(1).

Consolidated Financial Statements

Consolidated Statements of Operations, page F-5

11. Please revise to disclose your LCM write-downs of inventory as a separate line item within "cost of ratable product and related support and services revenue." Also revise your notes to the financial statements, as well as any other sections of the filing that refer to inventory, gross profit, and net income to discuss this new line item, the nature of the write-downs and that they relate to your business decision to sell common equipment at low or negative margins.

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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.

Mr. Singh
Infinera Corporation
May 17, 2007
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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