



DIVISION OF  
CORPORATION FINANCE

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

September 15, 2010

Young K. Sohn  
Chief Executive Officer and President  
Inphi Corporation  
1154 Sonora Court  
Sunnyvale, California 94086

**Re: Inphi Corporation  
Registration Statement on Form S-1  
Amended August 31, 2010  
File No. 333-167564**

Dear Mr. Sohn:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Prospectus Summary, page 1

1. Refer to the second paragraph of the prospectus summary. Please balance the disclosure of your revenues with corresponding disclosure of the net income (loss) for the applicable period.

Products, page 75

2. We note your response to prior comment 3. Please make corresponding revisions in this section regarding the launch of your GS02 product.

Legal Proceedings, page 81

3. Please clarify the potential significance to your company of adverse rulings in the Netlist, Inc. litigation proceedings. Your response should address whether damages have

been specified since your last amendment and the materiality to your operations of the patents at issue.

Other Transactions, page 110

4. We note your response to prior comment 7. Please explain how your analysis regarding Mr. Tan is consistent with Instruction 6.a.i to Regulation S-K Item 404(a).

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Andi Boerman at (202) 551-3645 or Jay Webb, Accounting Reviewer, at (202) 551-3603 if you have questions regarding comments on the financial statements and

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related matters. Please contact Celia Soehner at (202) 551-3463 or Daniel Morris, Special Counsel, at (202) 551-3314 with any other questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (via facsimile): Davina K. Kaile, Esq. — Pillsbury Winthrop Shaw Pittman LLP