



DIVISION OF  
CORPORATION FINANCE

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

July 27, 2010

Dror Israel  
Chief Financial Officer  
EZchip Semiconductor Ltd.  
1 Hatamar Street  
P.O. Box 527  
Yokneam 20692, Israel

**Re: EZchip Semiconductor Ltd.**  
**Form 20-F for Fiscal Year Ended December 31, 2009**  
**Filed March 25, 2010**  
**File No. 000-20860**

Dear Mr. Israel:

We have reviewed your filing and have the following comment. We may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

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

Item 3. Key Information

D. Risk Factors

“If third-party manufactures and other suppliers terminate our arrangement with them, or amend them in a manner detrimental to us....,” page 11

1. We note that your network processor chips are manufactured by third party subcontractors and that your major subcontractors accounted for approximately 83% of your cost of revenues for the fiscal year ended 2009. We further note that in response to our comment letter dated April 15, 2009, you filed as an exhibit to your Form 20-F your agreement with eSilicon Corporation. Please provide us with your analysis as to whether you are materially dependent on any other supply agreements with third party subcontractors. If your agreement with eSilicon Corporation is the only supply agreement for which you are materially dependent, in your future filings, consider including corresponding risk factor disclosure and revise your Business Overview section

to clarify the extent to which you are dependent on this supplier. Refer to Item 4.B.6 of Form 20-F.

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 Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please direct all questions to Stephani Bouvet at (202) 551-3545 or, in her absence, to me at (202) 551-3462.

Sincerely,

Mark P. Shuman  
Branch Chief – Legal