



DIVISION OF  
CORPORATION FINANCE

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

May 5, 2011

Mr. Arthur Chadwick  
Chief Financial Officer  
Cavium Networks, Inc.  
805 East Middlefield Road  
Mountain View, CA 94043

**Re: Cavium Networks, Inc.**  
**Form 10-K for the fiscal year ended December 31, 2010**  
**Filed February 28, 2011**  
**File No. 001-33435**

Dear Mr. Chadwick:

We have reviewed your filing 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 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 comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the fiscal year ended December 31, 2010

Item 8. Financial Statements

Note 4. Balance Sheet Components, page 71

Inventories, page 71

1. We see your inventory consists of work-in-process and finished goods. Please tell us why your inventory does not also include raw materials.

Note 9. Income Taxes, page 85

2. We see you recorded an income tax benefit of \$28.9 million related to the release of the valuation allowance for U.S. federal income tax assets. It appears that you reported pre-tax losses in the U.S. in both 2010 and 2009 and cumulative pre-tax losses in the three years presented in your filing. We also see disclosure on page 88 that you expect an increasing percentage of pre-tax income will be derived from your Asian operations. Please help us better understand the analysis you performed in reaching the conclusion that it was appropriate to release the valuation allowance. In that regard:
  - Please tell us how you considered and applied the guidance from FASB ASC 740-10-30-16 to 25.
  - Describe the positive and negative evidence you evaluated, including how you considered and weighted that evidence under the requirements of the Codification.
  - Describe to us the extent to which the asset's realization is dependent on material improvements over present levels of consolidated pre-tax income, material changes in the present relationship between income reported for financial and tax purposes, or material asset sales or other non-routine transactions.

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;

Mr. Arthur Chadwick  
Cavium Networks, Inc.  
May 5, 2011  
Page 3

- 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.

You may contact Leigh Ann Schultz at (202) 551-3628 or Gary Todd at (202) 551-3605 if you have questions regarding these comments. You may also contact me at (202) 551-3676 with any other questions.

Sincerely,

for

Brian Cascio  
Accounting Branch Chief