

Mail Stop 6010

April 27, 2007

Syed B. Ali  
President and Chief Executive Officer  
Cavium Networks, Inc.  
805 East Middlefield Road  
Mountain View, CA 94043

**Re: Cavium Networks, Inc.  
Amendment Nos. 4, 5 and 6 to Registration Statement on Form S-1  
Filed April 13, 16 and 24, 2007, respectively  
Registration No. 333-140660**

Dear Mr. Ali:

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.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Exhibit 5.1

1. Given the limitation in the second paragraph on page 1 that your counsel is opining "only with respect to the general corporation laws of the State of Delaware," please have your counsel confirm to us in writing, and submit their written confirmation as correspondence on EDGAR, that they concur with our understanding that the reference and limitation to "the general corporation laws of the State of Delaware" includes the statutory provisions and also all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws. Please see Section VIII.A.14 of the Current Issues Outline available at <http://www.sec.gov/pdf/cfcr112k.pdf>.

Syed B. Ali  
Cavium Networks, Inc.  
April 27, 2007  
Page 2

\* \* \* \* \*

As appropriate, please amend your registration statement 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 direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any registration statement for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kristin Lochhead at (202) 551-3664 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (via fax): Vincent P. Pangrazio, Esq.