



DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

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

December 29, 2009

Jack R. Lazar
Chief Financial Officer
Atheros Communications, Inc.
5480 Great America Parkway
Santa Clara, California 95054-3644

**Re: Atheros Communications, Inc.
Annual Report on Form 10-K
Filed on October 20, 2009
File No. 000-50534**

Dear Mr. Lazar:

We have reviewed your filing and have the following 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.

Item 10. Directors, Executive Officers and Corporate Governance

Director Nominates, page 10

1. We note from your web site that it appears Mr. Mohr is acting as your audit committee financial expert, but we do not see in your proxy the disclosure required pursuant to Regulation S-K Item 407(d)(5). Please provide the disclosure in future filings, or tell us why you believe such disclosure is not required.

Item 11. Executive Compensation

Cash Bonuses, page 16

2. We refer to your disclosure at the bottom of page 16 and note that you have not disclosed the “certain financial corporate performance objectives” including but not limited to “corporate revenue, operating income, gross margins and earnings per share” that your named executive officers must achieve in order to earn cash bonuses. Please confirm that in future filings you will clearly disclose the targets for each performance metric related to executive compensation. Refer to Item 402(b)(2)(v). To the extent that you believe that disclosure of the information would result in competitive harm, on a historical basis, such that you may omit the information under Instruction 4 to Item 402(b) of Regulation S-K, please provide a detailed explanation supporting your conclusion. If it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b). Refer also to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Item 13. Certain Relationships and Related Transactions

Certain Relationships and Related Party Transactions, page 28

3. We note that you have not provided complete disclosure describing your policies and procedures for the review, approval, or ratification of transactions with related persons as required by Regulation S-K Item 404(b)(1). Please provide the required disclosure in future filings including the types of transactions that are covered by your related party policies and procedures, the standards applied by the Audit Committee in reviewing such transactions and how your related party policies and procedures are evidenced.

* * *

Please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter 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 responses to our comments.

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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 Exchange Act of 1934 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.

In connection with responding to our comments, please provide, in writing, a 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Please contact Celia Soehner at (202) 551-3463 or me at (202) 551-3637 with any questions regarding these comments.

Sincerely,

Jay Mumford
Senior Attorney