



DIVISION OF
CORPORATION FINANCE
Mail Stop 3030

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

October 27, 2009

Dr. Craig H. Barratt
President and Chief Executive Officer
Atheros Communications, Inc.
5480 Great America Parkway
Santa Clara, CA 95054

Re: Atheros Communications, Inc.
Registration Statement on Form S-4
Filed October 2, 2009
File No. 333-162321

Dear Mr. Barratt:

We have limited our review of your filing to those issues we have addressed in our 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.

Questions and Answers About the Merger..., page 2

1. We note your disclosure in the last paragraph of page 2 describing the various bases for proration. Please clarify how Intellon's capitalization will factor into the proration determination. Please also disclose the business purposes and objectives for structuring the form of merger consideration to be received as one of three options to be elected by Intellon's stockholders and the reasons for the prorations. For example, what was the business purpose for ensuring that a portion of the merger consideration was payable in cash? Did Atheros negotiate the cash portion in an effort to make the transaction less dilutive, or was Intellon

trying to ensure that it would receive at least a minimum cash amount in consideration for its shares, etc. Please also revise your disclosure so that Intellon's stockholders can more clearly understand the reasons for each of the various prorations.

Material Federal Income Tax Consequences of the Merger, page 46

2. Please revise your disclosure to state that the discussion in this section represents the opinion of tax counsel and identify such counsel.
3. We note your disclosure in the third paragraph in this section that the tax opinion is a condition that can be waived by Intellon. Please confirm that you will file an executed opinion of counsel regarding the tax consequences discussed in this section as an exhibit to your registration statement prior to requesting acceleration of effectiveness and confirm that you will recirculate and resolicit if the condition of receiving the tax opinion is waived and the change in the tax consequences is material.
4. We reference your disclosure in the fourth paragraph which sets forth the tax consequences "assuming the Merger qualifies as a reorganization under Section 368(a) of the Code." Please note that the tax opinion should not assume the tax consequence at issue. Please revise accordingly.

Exhibits

5. Please file all exhibits in your next amendment, including Exhibits 5.1 and 8.1, so that we may review them.

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 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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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.

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 connection with our review of your filing or in response to our comments on your filing.

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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

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 amendment 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.

Dr. Craig H. Barratt
Atheros Communications, Inc.
October 27, 2009
Page 4

Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3635 if you have any questions.

Sincerely,

Tim Buchmiller
Senior Attorney

cc (via fax): Allison Leopold Tilley, Esq.
Davina K. Kaile, Esq.
Pillsbury Winthrop Shaw Pittman LLP