



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 3030

March 28, 2018

Via E-mail

Robert J. McMullan  
Chief Financial Officer  
MACOM Technology Solutions Holdings, Inc.  
100 Chelmsford Street  
Lowell, MA 01851

**Re: MACOM Technology Solutions Holdings, Inc.  
Form 10-K for the Fiscal Year Ended September 29, 2017  
Filed November 15, 2017  
File No. 001-35451**

Dear Mr. McMullan:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended September 29, 2017

Note 3. Acquisitions

Acquisition of Assets of Picometrix LLC, page 62

1. You disclose that the Picometrix acquisition was accounted for as an asset purchase. Refer to ASC 805-50-30-3 and explain to us how your characterization of this transaction as an asset purchase is consistent with the recording of goodwill. Otherwise, revise this note in future filings to correctly describe the transaction as the acquisition of a business.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures, page 87

2. We note that the report of your Independent Registered Public Accounting Firm on page 88 indicates that management excluded AppliedMicro from its assessment of the effectiveness of internal control over financial reporting. Here you indicate that the scope of your evaluation including the effectiveness of your disclosure controls for fiscal year 2017 excluded internal controls related to financial reporting for periods prior to AppliedMicro integration. Please note that the accommodation provided for excluding newly acquired entities in Question 3 of the Frequently Asked Questions on Management's Report on Internal Control Over Financial Reporting does not apply to your evaluation of disclosure controls and procedures. Please amend the filing to provide management's conclusion on the effectiveness of all of your disclosure controls and procedures as of September 29, 2017. Refer to Exchange Act Rules 13a-15(e) and 15d-15(e).
3. Further, as we note that you concluded that your disclosure controls and procedures were effective at the reasonable assurance level, please revise the disclosure in the requested amendment to indicate, if true, that your disclosure controls and procedures are designed to provide reasonable assurance that controls and procedures will meet their objectives. Otherwise, advise us.

Management's Annual Report on Internal Control over Financial Reporting, page 87

4. Revise this report in the amended Form 10-K to provide the disclosures discussed in Question 3 of the Frequently Asked Questions on Management's Report on Internal Control Over Financial Reporting as they relate to your management excluding the recently acquired business, AppliedMicro, from its assessment of the effectiveness of your internal control over financial reporting. You may find the FAQs at <https://www.sec.gov/info/accountants/controlfaq.htm>.
5. We note that AppliedMicro appears to represent 46% of your total assets at September 29, 2017. Tell us why the balance sheet impact of AppliedMicro has not been quantified in management's report or in the report of your Independent Registered Public Accounting Firm. Otherwise, revise the reports in the requested amendment to disclose the significance the assets excluded from your assessment. Refer to Question 3 of the Frequently Asked Questions on Management's Report on Internal Control over Financial Reporting as well as PCAOB Auditing Standard 2201.B16.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Robert J. McMullan  
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You may contact Eric Atallah at (202) 551-3663 or me at (202) 551-3662 with any questions. You may also reach Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

/s/ Kevin J. Kuhar

Kevin J. Kuhar  
Accounting Branch Chief  
Office of Electronics and Machinery