



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

March 24, 2010

Via U.S. Mail and Fax (949)756-2602

Mr. John W. Hohener
Vice President, Chief Financial Officer
Microsemi Corporation
2381 Morse Avenue
Irvine, California 92614

**Re: Microsemi Corporation
Form 10-K for the Fiscal Year Ended September 27, 2009
Filed November 24, 2009
File No. 000-08866**

Dear Mr. Hohener:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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.

Form 10-K for the year ended September 27, 2009

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 31

1. In future filings, please revise your MD&A to provide an overview that includes a balanced, executive-level discussion that identifies the most important themes or other significant matters with which management is concerned primarily in evaluating the company's financial condition and operating results. Currently, your disclosure in the beginning of MD&A focuses on identifying and describing your product lines, your restructuring and your acquisitions. Rather, your overview should discuss material business opportunities, challenges and risks, such as those presented by known material trends and uncertainties, on which the company's executives are most focused, and the actions they are taking in response to them. For further guidance on the content and purpose of the "Overview," see Interpretive Release No. 33-8350 on our website.

Financial Statements, page 55

Note 10. Commitments and Contingencies, page 81

Contingencies, page 81

2. We see from your disclosure regarding a complaint filed by ChriMar Systems, Inc. that you have provided for the estimated potential loss (related to the complaint) based on the application of industry statistics relating to the outcome of patent litigation matters. Please tell us and revise your future filings to disclose whether a loss is probable, how you believe the methodology you disclose reasonably estimates your loss and the amount of the loss accrued in your financial statements. We refer you to FASB ASC 450-20.

Note 14. Acquisitions and Divestiture, page 86

3. We note that in fiscal year 2008 you acquired substantially all of the assets of SEMICOA for approximately \$28.7 million cash, lease consideration and assumption of liabilities and also note that in connection with this acquisition you recorded approximately \$1.8 million of intangible assets and approximately \$22 million of goodwill. Subsequently, in the fourth quarter of fiscal 2009 we see you entered into an agreement which, in substance, resulted in the divestiture of the assets purchased from SEMICOA and sold accounts receivable, inventories, equipment and intangible assets with net book values of \$.5 million, \$2 million, \$1 million and \$1.4 million, respectively. In addition, we see that you reduced goodwill by \$1.4 million for the pro rata amount of goodwill allocable to the sale of the SEMICOA assets, which was based on the ratio of the relative fair value of the

disposed business compared to the total fair value of their reporting unit. Please respond to the following:

- a. Please clarify for us the nature of the business and related assets you purchased as compared to the business and assets that you later sold. Please explain why you retained goodwill on your balance sheet for an acquisition after you sold the business,
- b. Please explain your calculation of the pro rata goodwill allocated to the SEMICOA assets, and why the \$22 million recorded when you originally purchased SEMICOA was not allocated to the divestiture,
- c. Please tell us about each of your reporting units, the amount of goodwill in each reporting unit both before and after the divestiture and what comprises the reporting unit you refer to in your disclosure.

Item 11. Executive Compensation, page 97

Compensation Discussion and Analysis, page 16

4. We note from your discussion under “Base Salaries” on page 17 of the proxy statement that you have incorporated by reference into your Form 10-K that the Compensation Committee assesses the executive’s past performance and expected future contributions to the Company in setting the base salary levels of the named executive officers. In future filings, please describe the specific items of corporate performance that are taken into account in setting base salary and the how base salary is structured and implemented to reflect the named executive officer’s individual performance and/or individual contribution to these items of the registrant’s performance, describing the elements of individual performance and/or contribution that are taken into account. Please see Items 402(b)(2)(v) and 402(b)(2)(vii) of Regulation S-K.
5. We note from your discussion under “Annual Incentive Bonuses” on page 18 of the proxy statement that you have incorporated by reference into your Form 10-K that the Compensation Committee set a threshold operating performance goal of \$50.0 million and a maximum operating performance goal of \$59.7 million for the performance period. In future filings, expand your disclosure to describe how such operating performance goals were set by the committee including the factors the committee used in setting this goal.
6. We refer to your disclosure under the caption “Long-Term Incentive Equity Awards” on page 19 of the proxy statement that you have incorporated by reference into your Form 10-K. We note minimal discussion and analysis as to how the stock option grants and grants of restricted stock were determined. Your disclosure should include substantive analysis and insight into how your Compensation Committee made its stock option and restricted stock grant determinations with respect to each named executive officer. Refer to subparagraphs (b)(1)(iii) and (v) of Item 402 of Regulation S-K. For example, please discuss and analyze how the Compensation Committee determined the actual number of

shares underlying the stock options that were awarded to your named executive officers and how and why those awards varied among the named executive officers.

7. We note from your Current Report on Form 8-K filed on January 29, 2009 that the board of directors assessed financial penalties against Mr. Peterson. Please tell us where you have described the board's assessment of such penalties in your Compensation Discussion and Analysis. Also, tell us how Mr. Peterson's penalties influenced the decisions by the compensation committee in granting him other forms of compensation including the restricted stock grant of \$120,000.
8. We note that your board of directors has "extended by one year each of the five remaining vesting consummation dates of [Mr. Peterson's] two unvested restricted common stock awards" according to the January 29, 2008 Form 8-K. It is unclear how the mechanics of this penalty affects your disclosure of the vesting of Mr. Peterson's Awards. While we note your disclosure in footnotes (5) and (6) to the Outstanding Equity Awards table on page 28, please provide us your analysis and calculations of how these penalties affected Mr. Peterson's compensation.

Form 10-Q for the period ended December 27, 2009

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 17

Capital Resources and Liquidity, page 21

9. We see your discussion that the increase in accounts receivable was primarily due to the higher sales in the first quarter of 2010 compared to the first quarter of 2009. However, it appears from your income statement that sales actually decreased in the first quarter of 2010 as compared to the first quarter of 2009. Please explain.

As appropriate, please amend your filings and respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your amendments 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 amendments 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 Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its

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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.

You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3603 if you have any questions regarding comments on the financial statements and related matters. Please contact Alicia Lam, Staff Attorney, at (202) 551-3316 or Jay Mumford, Reviewing Attorney, at (202) 551-3637 if you have questions on any other comments. In this regard, do not hesitate to contact Jeff Jaramillo, Accounting Branch Chief, at (202) 551-3212.

Sincerely,

Jay Webb
Reviewing Accountant