



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

May 3, 2010

Leonard Borow
Chief Executive Officer and President
Aeroflex Holding Corp.
35 South Service Road
P.O. Box 6022
Plainview, NY 11803

Re: Aeroflex Holding Corp.
Form S-1
Filed April 6, 2010
File No. 333-165920

Dear Mr. Borow:

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.

General

1. Please note that you may circulate a preliminary prospectus only after you file it as part of your registration statement on EDGAR, and any preliminary prospectus you circulate must include all non-Rule 430A information. This includes the price range and related information based on a *bona fide* estimate of the public

offering within that range. Note that we may have additional comments after you file all exhibits and fill in the blanks currently in the draft.

2. Please submit all artwork that you intend to use as soon as practicable.

Market Ranking and Industry Data; Trademarks and Trade Names; and Naming Conventions Used in this Prospectus, page ii

3. While we do not object to the location of your Table of Contents, your Prospectus Summary and Risk Factors should immediately follow your Prospectus Cover Page. Please relocate the disclosure under these headings to another location in your prospectus.

Market Ranking and Industry Data, page ii

4. Please provide copies of the industry publications, surveys, and other sources of statistics which you cite in this registration statement, clearly marking the relevant sections of these reports. For each report, please also tell us:
 - how you confirmed that the data reflects the most recent available information;
 - whether the data is publicly available;
 - whether the data was prepared for use in the registration statement;
 - whether the authors of the data consented to your use of it in the registration statement; and
 - whether you paid for the compilation of the data and, if you were affiliated with the preparation of the data in these two studies, please ensure that your disclosure clearly indicates the nature of all such affiliations.

Prospectus Summary, page 2

5. Please clarify the basis for your comparison that supports your statements regarding your status as a “leading global provider” and “extensive know-how,” and “top three global position” and provide us objective support for your statements.
6. The disclosure in the summary should be a balanced presentation of your business. Please balance the description of your strengths with an equally prominent description of the challenges you face and the risks and limitations that could harm your business or inhibit your strategic plans.

The Offering – Use of Proceeds, page 7

7. We note that pursuant to the advisory agreement you will pay the designated affiliates of your Sponsors a transaction fee on your offering. Please disclose this payment as a use of proceeds.

We license third-party technologies for the development of certain of our products, page 21

8. Please revise the caption of this risk factor to include a description of the risks that result from your licensing of third-party technologies.

Our senior secured credit facility, our senior subordinated unsecured credit facilities..., page 28

9. Please revise this risk factor to discuss the fact that to the extent that you have consolidated excess cash flow, as defined in your credit agreement governing your senior secured credit facility, you must use specified portions of the excess cash flow to prepay senior secured debt, as you have discussed in the risk factor “To service our indebtedness and other obligations...” on page 28.

Capitalization, page 40

10. Please revise to remove the caption relating to cash and cash equivalents from your presentation of capitalization, since this item is not a component of capitalization for purposes of this disclosure.

Management’s Discussion and Analysis
Results of Operations, page 54

11. We see that you present “Non-GAAP” financial information for the year ended June 30, 2008 that combines the predecessor and successor amounts for this period. Considering the significant change in basis of your assets and liabilities during this period please tell us why it is appropriate to combine information for the pre-and post-transaction with a different basis. Please tell us your consideration of any adjustments necessary to comply with Article 11 of Regulation S-X. In addition, tell us how your presentation complies with Item 303 of Regulation S-K.

Six months Ended December 31, 2009 Compared to Six Months Ended December 31, 2008

12. Please revise to further disclose the reason for variances in sales each period. For example, discuss the reasons for the increases in sales of ICs microelectronic

modules in the AMS segment or the increases in wireless test products or synthetic test products and decrease in sales of PXI-based test equipment in the ATS segment.

Liquidity and Capital Resources, page 67

13. Please revise to further discuss the material debt covenants related to your senior secured credit facility, including the risks of not meeting these covenants and the impact to liquidity if these covenants are not met.

Business, page 73

14. We see that you present “adjusted EBITDA margin” on pages 2, 81, 83 and 84. Please tell us where you have provided the disclosures required by Item 10(e) of Regulation S-K as it relates to this non-GAAP measure.

Manufacturing, page 88

15. Your disclosure in this section implies that you operate under a “fabless semiconductor manufacturing model” while your disclosure on page 74 indicates that you have a fabless model for your AMS segment and utilize your own manufacturing for your ATS segment. Please revise your disclosure so that it is consistent throughout your registration statement.

Intellectual Property, page 89

16. Please disclose information regarding the duration of material patents and licenses as well as the termination provisions of material licenses.

Properties and Facilities, page 94

17. Please revise to include a brief description of the general character and use of the properties listed.

Directors and Executive Officers, page 95

18. Please revise Joe Benavides’s business experience description to clarify that it describes Mr. Benavides’s business experience during the past five years.

Base Salary, page 100

19. We note that the board of directors assesses the executive’s individual performance in setting the base salary levels of the named executive officers. Please revise to describe the specific items of individual 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, describing the elements of individual performance that are taken into account. Please see Items 402(b)(2)(v) and 402(b)(2)(vii) of Regulation S-K.

Incentive Bonus Plan, page 101

20. We note that you have not disclosed the specific targets (minimum acceptable Adjusted EBITDA, target, and maximum target EDITDA) to be achieved in order for your named executive officers to earn their respective annual cash incentive payments. Please revise to include such disclosure. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. To the extent that 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) of Regulation S-K. 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. Additionally, we note that some of your named executive officers receive discretionary annual bonuses based on the Adjusted EBITDA target. Please revise to disclose how the Adjusted EBITDA target is used to determine the amounts of the discretionary bonuses.

Summary Compensation Table, page 103

21. We note that you footnote the "Option Awards" column to footnote 3 for "Non-Equity Incentive Plan Compensation." Please explain or revise.

Principal and Selling Stockholders, page 110

22. Please identify the natural person(s) with voting or investment power over the shares held by VGG Holding LLC, Veritas Capital Partners III, L.L.C. and the entities affiliated with Golden Gate Capital and GS Direct.
23. Given the nature of the selling shareholder's relationship with the registrant, please provide us with your legal analysis that the selling shareholder is not an underwriter.
24. We note that the Limited Liability Company Agreement sets forth forced sale rights, tag-along rights and drag-along rights. Please tell us how you considered

these provisions in determining the beneficial ownership of your principal and selling stockholders.

Certain Relationships and Related Party Transactions, page 112

25. Please revise to disclose the information required by Item 404 of Regulation S-K in regards to the transactions with Goldman, Sachs & Co. and its affiliates. For example, please disclose the approximate dollar values of the amounts involved in the transactions, the approximate dollar values of the amounts of the related person's interest in the transactions and in the case of the senior notes, please disclose the information required by Item 404(a)(5) of Regulation S-K.

Advisory Agreement, page 112

26. We note your disclosure that affiliates of the Sponsors provide "certain" advisory services to you. Please expand your disclosure to clearly describe those services. Include risk factor disclosure if you are substantially dependent upon such services.

Limited Liability Company Agreement, page 112

27. We note that the Limited Liability Company Agreement sets forth provisions relating to the management and ownership of the parent LLC, including the rights of the Sponsors to appoint members to your board of directors. As such, it appears that this agreement is a material agreement for purposes of Item 601(b)(10) of Regulation S-K and should be filed as an exhibit to your registration statement.

Conflict of Interest, page 124

28. Please add a risk factor discussing the risks resulting from your Amended and Restated Certificate of Incorporation and your renunciation of any interest or expectancy that you have in, or right to be offered an opportunity to participate in, specified business opportunities.

Certain U.S. Federal Tax Consequences, page 126

29. Please revise the heading of this section so that it is clear that you are addressing the material U.S. Federal tax consequences and not just "certain" U.S. Federal tax consequences.

Underwriting, page 130

30. Disclose the offering expenses specified in Item 511 of Regulation S-K. See

Instruction 2 to Item 508(e) of Regulation S-K.

31. We note that you state that you and the selling stockholder have agreed to indemnify the several underwriters against certain liabilities. Please provide a brief description of the indemnification provisions.

Financial Statements

32. Please update the financial statements when required by Rule 3-12 of Regulation S-X.

Consolidated Statements of Stockholder's Equity, page F-5

33. Please tell us where you have disclosed the reasons for the adjustments for the effects of the merger in the predecessor section of the statements of stockholder's equity and how the amounts were determined.

Consolidated Statements of Cash Flows, page F-6

34. Please tell us where you have disclosed the nature of the "paid in kind interest" amounts included in fiscal 2009 and 2008 of the statements of cash flows.

Note 1. Long-Lived Assets, page F-10

35. Please revise to disclose the reporting units you use to test goodwill for possible impairment. In addition, revise Note 4 to disclose the events or circumstances that resulted in the significant goodwill impairment charge with the RFMW reporting unit during fiscal 2009.

Note 3. Going Private Transaction, page F-17

36. We note the discussion on page F-17 that independent third-party appraisers were engaged to assist management and perform valuations of certain of the tangible and intangible asset acquired. Please tell us the reliance you placed on the independent third-party appraisers for the valuation of these assets. In addition, please revise to discuss the methodologies and significant assumptions used to determine the fair values of the assets and liabilities.

Note 20. Guarantor/non-Guarantor Financial Information, page F-52

37. Please tell us what section of Rule 3-10 of Regulation S-X you are relying on to provide consolidating financial information rather than separate financial statements of each issuer or guarantor. If you are relying on Rule 3-10 (d) please

tell us where you have disclosed the representations required by paragraphs (d)(1) through (4).

Item 17. Undertakings, page II-5

38. Please do not change the form of undertakings required for Regulation S-K Item 512. For example, we note the change you made to the undertaking required by Regulation S-K Item 512(i)(1).

Exhibit 23.2 Consent of Independent Registered Public Accounting Firm

39. Please include a currently dated and signed consent from your independent auditors with any amendment of the filing.

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.

Leonard Borow
Aeroflex Holding Corp.
May 3, 2010
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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.

You may contact Jeanne Bennett at (202) 551-3606 or Brian Cascio at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Allicia Lam at (202) 551-3316 or me at (202) 551-3635 with any other questions.

Sincerely,

Tim Buchmiller
Senior Attorney

cc (by facsimile): Michael R. Littenberg, Esq
Schulte Roth & Zabel LLP