



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

May 4, 2011

Via E-mail

David A. Flynn  
Chief Executive Officer and President  
Fusion-io, Inc.  
2855 E. Cottonwood Parkway, Suite 100  
Salt Lake City, Utah 84121

**Re: Fusion-io, Inc.  
Amendment No. 1 to Registration Statement on Form S-1  
Filed on April 18, 2011  
File No. 333-172683**

Dear Mr. Flynn:

We have reviewed your amended filing and have the following comments. Prior comments refer to those in our letter dated April 5, 2011.

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 36

Overview, page 36

1. We note your response to prior comment 10 that you have not disclosed the specific revenue levels associated with sales to Facebook, or any particular OEM or end-user customer by name, and that you believe that the overriding material trend is the disclosed large and concentrated purchases by the Company's major customer's, whether via direct sales, distributors or OEMs. We further note your disclosure of the percentage revenue from sales to your two largest OEMs. Tell us why you have also not included disclosure of the percentage revenue from sales to your two largest end users, which include your largest customer. In this regard, given your disclosures that these customers accounted for a substantial portion of your revenue during the six months ended December 31, 2010, and that you expect this revenue will decline significantly going forward, this appears to be a material trend that should be communicated to investors.

Stock Based Compensation, page 53

2. We note your response to prior comment 15. Please expand your disclosures to explain the reasons why you used the March 9, 2009 common stock valuation to value your March 2010 grants, taking into consideration the increases in your revenue during the quarters ended December 31, 2010 and March 31, 2011, and the proximity of these grant dates to the May 2010 common stock valuation date.

Inventory Valuation, page 57

3. We note your response to comment 17 that you do not believe your backlog is meaningful, and that you have not historically evaluated your turnover rates. However, given the significant increase in your inventory balance, your limited operating history, and your disclosures that revenues from two customers that currently account for a substantial portion of your revenue will decline significantly going forward, tell us what consideration you gave to providing investors with qualitative and quantitative insight into the increase in your inventory balance, and the risks associated with this increase. In this regard, tell us what consideration you gave to disclosing the factors you discussed in your response, as well as sales orders shipped in the quarter ended March 31, 2011.

Business, page 59

Case Studies, page 65

4. We note your response to prior comment 19. We continue to believe that the date the companies adopted your solutions is useful information to potential investors evaluating the case studies. Please consider including such dates in your disclosure.

Employment Agreements and Offer Letters, page 90

5. We note your response to prior comment 23 and are unable to concur with your conclusion that the offer letters with Messrs. Wolf, Dawson and Smith are not required to be filed as exhibits. Item 601(b)(10)(iii)(A) of Regulation S-K states that management contracts “shall be deemed material and shall be filed.” You may, if you wish, include an explanatory note before each offer letter stating that the provisions relating to severance agreements upon a change in control have been superseded by such officer’s involuntary termination severance agreement.

Notes to Consolidated Financial Statements, page F-7

1. Description of Business and Summary of Significant Accounting Policies, page F-7

Revenue recognition, page F-8

6. We note your response to prior comment 32 that your multiple element arrangements consist of your ioDrive product, which includes embedded VSL virtualization software, and related support services, and that prior to the adoption of AU 2009-14, you applied the scope exception for incidental software under SOP 97-2. Please revise your disclosure to clarify the specific accounting standards that you applied prior to the adoption of AU 2009-14, and the rationale for applying these standards.

David A. Flynn  
Fusion-io, Inc.  
May 4, 2011  
Page 3

You may contact Laura Veator, Staff Accountant, at (202) 551-3716 or Stephen Krikorian, Accounting Branch Chief, at (202) 551-3488 if you have any questions regarding comments on the financial statements and related matters. Please address questions regarding all other comments to Matthew Crispino, Staff Attorney, at (202) 551-3456 or, in his absence, to me at (202) 551-3735.

Sincerely,

/s/ Barbara C. Jacobs

Barbara C. Jacobs  
Assistant Director

cc: Via E-mail  
Robert G. Day, Esq  
Wilson Sonsini Goodrich & Rosati