

CFP MSA

A Cooperation Agreement for 100/40 Gigabit Ethernet Transceiver Package

Operating Rules for the CFP MSA

Issue 1.4

10 April 2014

1. Revision

Rev	Date	By	Purpose/Changes
1.0	19 March 2009		First Issue
1.1	10 April 2009		Modified Sections 8.2, 11.3 and 11.4.
1.2	26 May 2010		Modified Section 2. The name of subsidiary is changed or added under Sumitomo Electric Industries, Ltd. Fujitsu Optical Components newly joins Promoters
1.3	23 July 2013		Modified Section 2. Opnext, Inc. is changed to Oclaro, Inc. and representative name and contact info is changed. Avago representative name and contact info is changed. JDS Uniphase Corporation is added as Promoter.
1.4	10 April 2014		Modified Section 2. NeoPhotonics Corporation is added as Promoter.

2. Summary of MSA Group Promoters and Sponsors

PROMOTERS		
Company	Representative	Contact info
Finisar Corporation	Chris Cole	chris.cole@finisar.com
Oclaro, Inc.	Kiyo Hiramoto	kiyohisa.hiramoto@oclaro.com
Sumitomo Electric Industries, Ltd./ Sumitomo Electric Device Innovations, Inc./Sumitomo Electric Device Innovations U.S.A., Inc.	Eddie Tsumura	tsumura-eiji@sei.co.jp
Avago Technologies	John Petrilla	john.petrilla@avagotech.com
Fujitsu Optical Components	Yasunori Nagakubo	nagakubo.yasuno@jp.fujitsu.com
JDS Uniphase Corporation	Beck Mason	Beck.Mason@jdsu.com
NeoPhotonics Corporation	Winston Way	Winston.way@neophotonics.com
SPONSORS		
Company	Representative	Contact info

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4. Definitions.

- 4.1 “Agreement” means this “Operating Rules for the CFP MSA.”
- 4.2 “CFP Module” means a fiber optic transceiver module that meets the MSA Specification.
- 4.3 “MSA Agreement” means the definitive CFP MSA Agreement, which shall include the MSA Specification, contemplated by this Agreement.
- 4.4 “Party” or “Parties” means the Promoters and the Sponsors party to this Agreement.
- 4.5 “Promoter” mean a promoter of the CFP MSA identified as a “Promoter” in Section 2 of this Agreement.
- 4.6 “MSA Specification” means the specification for CFP Module as contemplated by Section 7 of this Agreement and adopted pursuant to this Agreement.
- 4.7 “Sponsor” means a sponsor of the CFP MSA identified as a “Sponsor” in Section 2 of this Agreement.

5. Purpose of the MSA Agreement.

- 5.1 The Parties desire to establish internationally compatible sources of pluggable fiber optic transceiver modules in support of all approved implementations of the IEEE 802.3ba standard for 100/40 gigabit Ethernet, as well as other potential applications.
- 5.2 Each Party desires to establish uniformity in the areas described in Section 7 of this Agreement and detailed in the MSA Agreement.
- 5.3 Each Party expects that the establishment of multiple compatible sources of front panel pluggable 100/40 gigabit Ethernet modules will allow the entire fiber optic marketplace to grow more rapidly. Such enhanced marketplace growth, customer choice and vigorous competition are the express purposes of this Agreement.

6. Contribution to and Distribution of the MSA Agreement.

- 6.1 The initial Promoters of the CFP MSA are Finisar, Opnext, and Sumitomo Electric Industries, Ltd./ExcelLight Communications, Inc., subject to the addition of additional Promoters pursuant to and in accordance with the terms of Section 9.3 of this Agreement and subject to removal pursuant to and in accordance with the terms of Section 9.6 of this Agreement.
- 6.2 The MSA Agreement shall be made available to all Parties, and to non-Parties of the MSA Agreement who request a copy after the MSA Agreement is completed and approved.

7 Scope of the MSA Agreement.

- 7.1 The Parties agree to cooperate by supporting common product specifications for pluggable fiber optic transceivers, including the “Module Dimensions”, “Railing System”, “Heatsink”, “Customer Board Dimensions”, “Electrical Characteristics”, “Management Interface Description”, and “Pin Assignments” to be detailed in the MSA Agreement. The modules shall conform to the indicated dimensions and tolerances, and the mounting features shall be located such that the products are mechanically interchangeable within the rail and connector system. Additionally, the overall dimensions and mounting requirements for the rail and connector system on a host circuit board shall be defined such that the products are mechanically and electrically interchangeable.

7.2 Each Party acknowledges this Agreement provides a common solution for all (but not limited to) approved PMDs in the IEEE 802.3ba standard but may not provide an optimized solution for applications with different requirements.

7.3 The electrical and optical specifications shall be compatible with those detailed in the appropriate standards (i.e., IEEE 802.3ba for 100/40 gigabit Ethernet). Recommended circuit layouts for electrical input and output terminations, and grounding practices shall be described in the MSA Agreement.

7.4 The specific PMD implementation and internal design of the modules is entirely at the discretion of each Promoter and is not covered by this Agreement or the MSA Agreement. The Promoters recognize that their products may not be identical, but need only meet the criteria shown in the MSA Agreement to ensure interchangeability.

7.5 This Agreement relates to transceivers operating over multimode and/or single mode fiber.

8 Licensing.

8.1 No license is granted under the patents, know-how, trade secrets or any other technology of any Party to this Agreement either expressly or by implication or by estoppel.

8.2 Notwithstanding the foregoing, it is hereby acknowledged that the Parties to this Agreement may have intellectual property which is technically necessary to manufacture a CFP Module conforming to the MSA Specification that is necessarily infringed upon because there is no commercially reasonable non-infringing alternative for implementing the MSA Specification ("Required IP"). Each of the Parties to this Agreement shall be contacted to determine if they have such Required IP. Required IP as provided for in this Section 8.2 does not include know-how and trade secrets of the Parties to the Agreement. In the event that any Party to this Agreement has Required IP it deems to be technically necessary to manufacture a CFP Module conforming to the MSA Specification, such Party shall (i) specify such Required IP for the benefit of all other Parties to this Agreement and (ii) grant, upon reasonable terms and conditions to be agreed among the Parties, to each such other Party to this Agreement a perpetual royalty free license to use such Required IP on a worldwide, non-discriminatory basis exclusively for the purpose of making and selling CFP Modules conforming to the MSA Specification. In the event that any Party to this Agreement with relevant patent rights fails to so notify any other Parties to the Agreement of its Required IP, such Party failing to provide such notice hereby agrees, by its signature hereto, that it shall by such failure be deemed to have waived its right to enforce such Required IP against any Promoter failing to receive notice of such Required IP; provided that such waiver shall only apply to the manufacture and sale of CFP Modules conforming to the MSA Specification. The licensing requirement and waiver set forth above shall not extend to anything other than the CFP Module itself and shall not apply to related items or technology, such as any interconnection technology or items outside of the CFP Module. Each Party is free to seek technology or other exchanges with other firms in order to support its activities under this Agreement and/or the MSA Agreement. For avoidance of doubt, this Agreement does not commit any Party to disclose and/or notify any other Parties of intellectual property, including without limitation Required IP, provided that any such Party failing to disclose or notify any other Party of its Required IP will be subject to the enforcement waiver described in this Section 8.2.

8.3 Each Promoter agrees to be responsible for its own development, manufacturing, marketing and commercialization in order to supply transceivers meeting the specifications set forth in the MSA Agreement.

8.4 This Agreement does not preclude any Promoter from offering other products that may not meet all or part of the MSA Specification.

8.5 Each Promoter retains complete liberty regarding its methods of implementing a supply of product, e.g., by engineering effort or by technology licensing or transfer or combination of these or

other practices.

8.6 Each Promoter also retains sole discretion in its choice of sales channels and distribution.

8.7 Each Promoter affirms its intention to compete freely and openly in the marketplace with the other Promoters as well as other competitors. Each Promoter expects to support products meeting the MSA Specification for as long as marketplace conditions warrant. The determination of market condition suitability is to be made by each Promoter individually and in each Promoter's sole discretion.

8.8 **COMPLIANCE WITH ANTITRUST LAWS.** The Promoters are committed to fostering open competition in the development of products and services based on the final MSA Specification . The Promoters understand that in certain lines of business they are or may be direct competitors and that it is imperative that they and their representatives act in a manner which does not violate any state, federal or international antitrust laws and regulations. Without limiting the generality of the foregoing, the Promoters acknowledge that this Agreement prohibits any communication or action that violates the antitrust laws. Accordingly, each Promoter will make a good faith effort to counsel its representatives who participate in any activities under this Agreement and/or the MSA Agreement on the importance of limiting the scope of their discussions and communications to the topics that relate to the purposes of this Agreement and/or the MSA Agreement, whether or not such discussions and communications take place during formal meetings, informal gatherings, or otherwise.

9. Operating Guidelines.

9.1 Any new action item, design change, MSA Specification, membership action, decision on public information disclosure, or other activity related to this Agreement or the MSA Agreement will require the approval of a minimum of 75% of the Promoters. Promoters abstaining from voting are not to be considered in this percentage. No response will be interpreted as an abstention. Each Promoter will have one vote.

9.2 Each Promoter must identify the person(s) in their organization that has the authority and responsibility to sign the MSA Agreement. At least one such person, or a delegate with full authority to represent a Promoter, must participate in each meeting regarding the terms of the MSA Agreement and will have the single vote for such Promoter. If a Promoter fails to attend an official meeting regarding the terms of the MSA Agreement twice in succession, such Promoter will be subject to a vote of removal from this Agreement.

9.3 If a non-represented optical transceiver company asks to join the MSA Agreement as a Promoter, they may do so if they are willing to agree to become a Party to this Agreement as a Promoter and to accept the then-current MSA Agreement in its entirety. New Promoters will not be allowed to revisit work already established, or to make motions or vote to change existing designs, parameters, or characteristics. Additionally, approval of at least 75% of the then-current Promoters will be required to admit new Promoters.

9.4 There will be no permanent chairperson for the Promoters unless such position is created upon approval of at least 75% of the then-current Promoters.

9.5 Each Promoter's representatives will treat the substance of the MSA Agreement discussions as confidential until such time as it is agreed by the Promoters to make a simultaneous public disclosure. Before making any public disclosure regarding specific MSA Agreement details, a Promoter must first obtain the approval with respect to such specific public disclosure of at least 75% of the then-current Promoters. It is acceptable without such Promoter approval to disclose to the public that discussions to achieve an MSA Agreement are underway without mentioning specific information related to such MSA Agreement, including without limitation, timing, content, number or names of participants, or possible outcomes of the discussions.

9.6 Promoters may be removed from this Agreement and the MSA Agreement by vote of a minimum of 75% of the then-current Promoters. Promoters abstaining from voting and any vote of the Promoter subject to removal are not to be considered in this percentage. The vote will decide whether

loss of voting rights pursuant to this Agreement or complete removal as a party to this Agreement and the MSA Agreement will be imposed.

10. Sponsoring Members

10.1 Sponsors will be equipment manufacturers or service providers in the networking communications industry.

10.2 Sponsors will be recruited by the Promoters to provide design input and validation of the work created by the terms of the MSA Agreement.

10.3 Sponsors will:

- Have full access to all specifications of the MSA Agreement and meeting minutes of the Promoters.
- Be admitted to certain meetings or teleconferences called by the Promoters if approved by 75% of the then-current Promoters; provided, that in such event all Sponsors shall be admitted. Such admission will be limited to one representative per Sponsor to allow for manageable and focused meetings.
- Be encouraged to provide recommendations to add features or functions, to clarify the operation of devices described by the MSA Agreement, or to otherwise suggest modifications the MSA Agreement.
- Not participate in voting to modify this Agreement, the MSA Agreement or any MSA Specification.
- Be admitted or removed from this Agreement and/or the MSA Agreement by action of 75% of the then-current Promoters.

11. Announcing and Promoting this Agreement and the MSA Agreement.

11.1 The MSA Agreement and the form factor that it describes will be known as the "CFP". Examples of how this term would be used include (but are not limited to):

- The "CFP MSA group";
- The "CFP form factor";
- The "CFP transceiver module".

11.2 Each Promoter agrees to announce this Agreement and/or the MSA Agreement in a manner agreed upon by the Promoters, and such announcements will mention all of the Parties who have signed this Agreement.

11.3 Each Promoter agrees to seek public attention by means of such an announcement, and each Sponsor authorizes each Promoter to seek public attention by means of such an announcement.

11.4 Each Promoter agrees to use the CFP name in reference to this Agreement and/or the MSA Agreement in announcements and promotional efforts, and each Sponsor authorizes each Promoter to use the CFP name in reference to this Agreement and/or the MSA Agreement in announcements and promotional efforts.

11.5 Each Party agrees to use any "image" guidelines agreed by at least 75% of the then-current Promoters when referring to the CFP MSA, such as logos or other identity elements that have been defined by the Promoters.

11.6 After this Agreement and/or the MSA Agreement is announced, each Party may advertise or otherwise promote this Agreement and/or the MSA Agreement in any way that it deems appropriate. Other Parties to this Agreement can be mentioned by name when used to discuss the activities of the Parties in connection with this Agreement and/or the MSA Agreement without any other Party's prior consent.

12 Other Vendors

12.1 The Parties recognize that additional vendors may choose to match the product specifications of the MSA Agreement after the MSA Agreement is announced.

12.2 Each Party recognizes it is desirable and keeping with the intent of this Agreement and the MSA Agreement for such additional vendors to support the transceiver mechanical dimensions and functional attributes described in this Agreement and/or the MSA Agreement. Therefore, each Party agrees to encourage other vendors to support such product specifications after this Agreement is announced.

13 Future Direction

13.1 Current Product. In the event that the Parties agree to further explore technical and other exchanges pertaining to the products described in this Agreement or the MSA Agreement, then the terms of such agreement regarding further exploration shall be set forth in an agreement separate from this Agreement and the MSA Agreement.

13.2 Withdrawal. The Parties recognize that at some future time it may become less feasible to offer the products envisioned by this Agreement and the MSA Agreement. A Party may withdraw from its commitment to cooperate with the terms of this Agreement and the MSA Agreement at its own discretion upon a 90-day written notice to each of the other Parties, or upon immediate written notice to each of the other Parties if such withdrawing Party has lost its voting rights pursuant to this Agreement pursuant to and in accordance with the terms of Section 9.6 of this Agreement. Following withdrawal, the licensing obligations set forth in section 8 shall apply only with respect to the MSA Specification in effect and notified to the withdrawing Party at least 30 days prior to the date of the applicable written notice of withdrawal.

14 Limitation of Liability

14.1 With the exception of disputes arising out of intellectual property issues, no Party to this Agreement shall be liable with respect to actions as a Party to this Agreement or as a party to the MSA Agreement for any indirect, incidental, punitive, or consequential damages, including without limitation, lost profits or changes of good will, or similar losses, even if advised of the possibility of such damages. In addition, each Party's liability under this Agreement for direct damages shall be limited to \$10,000.

15 Miscellaneous

15.1 Term of this Agreement. This Agreement shall have a term of seven (7) years following the date upon which each of the initial Promoters described in Section 6.1 hereof have executed this Agreement and shall automatically be extended for additional terms of a period of one (1) year each per term, unless at least 67% of the then-current Promoters shall have otherwise agreed in writing prior to such extension.

15.2 Governing Law. The Parties hereby agree that this Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflict of laws provisions thereof that would result in the applicable of a different state's laws.

15.3 Dispute Settlement. The Parties hereby agree that, except as otherwise provided below in this paragraph, any unresolved dispute, claim or controversy arising out of or relating to or in connection with this Agreement and/or the MSA Agreement, including any question regarding the existence, breach, termination, enforcement, interpretation or validity thereof, including the determination of the

scope or applicability of this agreement to arbitrate, shall be finally settled by binding arbitration in accordance with the rules and procedures for commercial arbitration of the American Arbitration Association (AAA) at the office of the AAA located in San Francisco, California. The Parties agree that the arbitrator's award shall be final, and, pursuant to the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, may be filed with and enforced as a final judgment by any court of competent jurisdiction. Any Party may seek interim measures of protection, including but not limited to interim injunctive relief, in a court of competent jurisdiction located in California. The Parties consent and agree to the jurisdiction of the tribunals mentioned in this paragraph, and waive any and all objections to such forums, including but not limited to objections based on improper venue or inconvenient forum.

15.4 Assignment. No Party may assign its rights and obligations under this Agreement and any attempted assignment in contradiction of this Section 15.4 shall be null and void.

15.5 Severability. If any provision (or portion thereof) of this Agreement conflicts with applicable law or if any provision is held to be null, void or otherwise ineffective or invalid by a court of competent jurisdiction, then (a) such provision (or portion thereof as applicable) will be deemed to be restated to reflect as nearly as possible the original intentions of the Parties in accordance with applicable law, and (b) the remaining terms, provisions, covenants and restrictions of this Agreement will remain in full force and effect.

15.6 Waivers. No forbearance or delay by a Party in enforcing any terms or conditions of this Agreement will prejudice the rights or remedies of that Party. No waiver of any terms or conditions of this Agreement will be valid or binding on a party unless such Party makes the waiver in writing. The failure of one Party to enforce any of the provisions of this Agreement, or the failure to require at any time the performance of any other Party of any of the provisions of this Agreement, will in no way be construed to be a present or future waiver of such provisions, nor in any way affect the ability of a Party to enforce each and every provision thereafter.

15.7 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one single agreement between the Parties.

On behalf of [Company Name]:

Company Address:

Membership Category:
(Check One).

Promoter _____

Sponsor _____

I agree to the terms and conditions of the Operating Rules for the CFP MSA, Issue 1.4,
10 April 2014:

Name

Title

Date

Signature