

Multi-source Agreement (MSA) of 10 Gbit/s Miniature Device (XMD)

General Description of XMD MSA

**Rev. 2.0
January 17, 2006**

Description

The XMD MSA committee established by the following members has drawn up documents about the Electrical & Optical interfaces and the Physical interface specs of 10Gbit/s compact optical sub-assembly (OSA) modules. This document shows general description of MSA and the relations between the documents which the XMD MSA committee drew up.

The OSAs specified by the XMD MSA committee are intended to be applied to pluggable modules. The specifications of OSAs are prescribed by combination of the Electrical & Optical interfaces specs and the Physical interface specs.

The documents of the XMD MSA are offered to both users and suppliers of optical sub-assemblies (OSAs) as a basis for a technical agreement. However, it is not a warranted document. Each OSA supplier will have its own datasheet. If the users wish to find a warranted document, they should consult the datasheet of the chosen OSA supplier.

The MSA committee reserves the rights at any time to add, amend or withdraw technical data contained in this document.

Revision History

Revision	Date of Issue	Purpose/Changes
1.0	October 29, 2004	First Public Issue
2.0	January 17, 2006	Changes document name to identify connector type Adds reference

1 Scope

This document shows the list and the relations between the documents drawn up by the MSA committee.

The specifications of OSAs are prescribed by combination of the Electrical & Optical interfaces and the Physical interface in the listed documents.

2 MSA committee Members

Company	Representative
Avanex Corp.	Pierre Wolkowicz
Eudyna Devices Inc.	Hajime Shoji
CyOptics, Inc.	Len J.P. Ketelsen
Mitsubishi Electric Corp.	Hitoshi Watanabe
Oki Electric Industry Co., Ltd.	Yasunari Mizuguchi
Opnext, Inc.	Atsushi Takai
Sumitomo Electric Industries, Ltd.	Yutaka Matsumura

3 Abbreviations

APD	Avalanche photo diode
DML	Direct modulation laser diode
EMwL	External modulator with laser diode
LD	Laser diode
MSA	Multi source agreement
OSA	Optical sub-assembly
PD	Photo diode
PIN PD	Photo diode with PIN structure
ROSA	Receiver optical sub-assembly
TEC	Thermo-electric cooler
TIA	Trans-impedance amplifier
TOSA	Transmitter optical sub-assembly
XFP	10 gigabit small form factor pluggable

4 MSA Documents List

The XMD MSA documents already published are listed as follows. The document name, title, the latest revision number, and the issue date are in the list.

4.1 Electrical and Optical Specification of TOSA

[XMD 01] MSA_XMD_TOSA_DML: "Electrical & Optical Interfaces of TOSA DML"

Rev.1.2 January 17, 2006

[XMD 02] MSA_XMD_TOSA_EML: "Electrical & Optical Interfaces of TOSA EMwL"

Rev.1.2 January 17, 2006

4.2 Physical Specification of TOSA

[XMD 03] MSA_XMD_LC_TOSA_TYPE1_PKG: "Physical Interface of LC TOSA Type 1 Package"

Rev.2.1 January 17, 2006

[XMD 04] MSA_XMD_LC_TOSA_TYPE2_PKG: "Physical Interface of LC TOSA Type 2 Package"

Rev.1.2 January 17, 2006

[XMD 05] MSA_XMD_SC_TOSA_TYPE1_PKG: "Physical Interface of SC TOSA Type 1 Package"

Rev.1.0 January 17, 2006

[XMD 06] MSA_XMD_SC_TOSA_TYPE2_PKG: "Physical Interface of SC TOSA Type 2 Package"

Rev.1.0 January 17, 2006

4.3 Electrical and Optical Specification of ROSA

[XMD 11] MSA_XMD_ROSA_PIN: "Electrical & Optical Interfaces of ROSA PIN"

Rev.1.2 January 17, 2006

[XMD 12] MSA_XMD_ROSA_APD: "Electrical & Optical Interfaces of ROSA APD"

Rev.1.2 January 17, 2006

4.4 Physical Specification of ROSA

[XMD 13] MSA_XMD_LC_ROSA_TYPE1_PKG: "Physical Interface of LC ROSA Type 1 Package"

Rev.2.1 January 17, 2006

[XMD 14] MSA_XMD_LC_ROSA_TYPE2_PKG: "Physical Interface of LC ROSA Type 2 Package"

Rev.1.2 January 17, 2006

[XMD 15] MSA_XMD_SC_ROSA_TYPE1_PKG: "Physical Interface of SC ROSA Type 1 Package"

Rev.1.0 January 17, 2006

[XMD 16] MSA_XMD_SC_ROSA_TYPE2_PKG: "Physical Interface of SC ROSA Type 2 Package"

Rev.1.0 January 17, 2006

5 Cross Reference

The cross reference tables of TOSA and ROSA documents are shown below.

The specifications of OSAs are prescribed by the combination of the Electrical & Optical interfaces and the Physical interface.

5.1 TOSA

Table 1 Cross reference table of TOSA documents

	XMD 01	XMD 02
XMD 03	√	NA
XMD 04	NA	√
XMD 05	√	NA
XMD 06	NA	√

√ Cross-referenced combination

5.2 ROSA

Table 2 Cross reference table of ROSA documents

	XMD 11	XMD 12
XMD 13	√	√
XMD 14	NA	√
XMD 15	√	√
XMD 16	NA	√

√ Cross-referenced combination