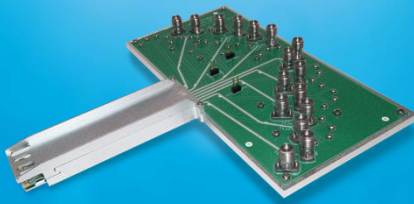


Innovation for the next generation



OSFP800

Module Compliance Boards | Host
Compliance Boards | Loopbacks |
8x112G

ML4064-MCB-112: Module Compliance Board

ML4064-HCB-112: Host Compliance Board

ML4064-LB-112: Loopback Module

ML4064-LB-112-24W: Loopback Module

ML4064-LB-112-30W: Loopback Module

Summary

As 400G claims more and more of the data center market share, the industry is already planning for still greater speeds in 800G. Increased speeds bring with them new form factors, of which OSFP800 has emerged as a leading standard to drive the development of 800G interconnectivity. To guarantee that our customers can navigate this new frontier with ease, MultiLane provides an OSFP800 development kit that includes a module compliance board, a host compliance board and a variety of loopback modules.

The OSFP800 development kit is an essential tool to ensure the validity of your OSFP800 products. The module compliance board (MCB) is used to test transceivers, AOCs, active cables and DACs, while the host compliance board (HCB) enables the testing of system host ports. The loopback modules (LB) provide an economical way to test thermal capacity and signal integrity of system host ports at every stage of the process: R&D validation, production testing, and field testing.

OSFP800 MCB

ML4064-MCB-112

Key Features

- Supports 8x112G interfaces
- Compliant with CEI-112G-VSR-PAM4 and CEI-56G-VSR-NRZ
- I2C master driven from both on board microcontroller or external pin headers
- 2.4 or 1.85 mm connectors
- Current sensor
- Matched differential trace length for all 8 channels
- High performance signal integrity traces from 2.4 or 1.85 mm connectors to OSFP host connector
- On-board LEDs display MSA output alarm states
- Built with high performance PCB material
- On-board buttons/jumpers for MSA input control signals
- User friendly GUI for I2C R/W commands and loading custom MSA memory maps
- Four corner testing capability
- USB interface

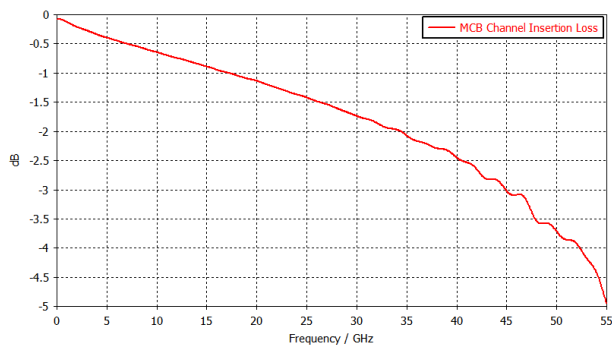


Figure 1: ML4064-MCB-112 Insertion Loss

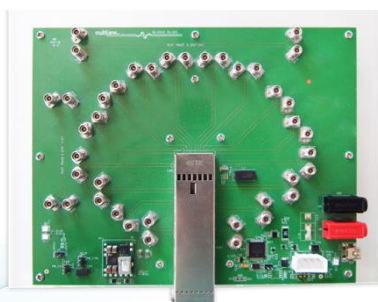


Figure 2: ML4064-MCB-112

OSFP800 HCB

ML4064-HCB-112

Key Features

- High performance signal integrity traces
- Compliant with CEI-112G-VSR-PAM4 and CEI-56G-VSR-NRZ
- OSFP MSA Form Factor
- Same low Insertion Loss for all traces
- Built with high performance PCB material
- Supports 8x112G
- High speed signals accessible through 2.4 or 1.85 mm connectors
- 8 channels: 8 TX and the corresponding 8 RX
- Matched trace length 5972.48 mils

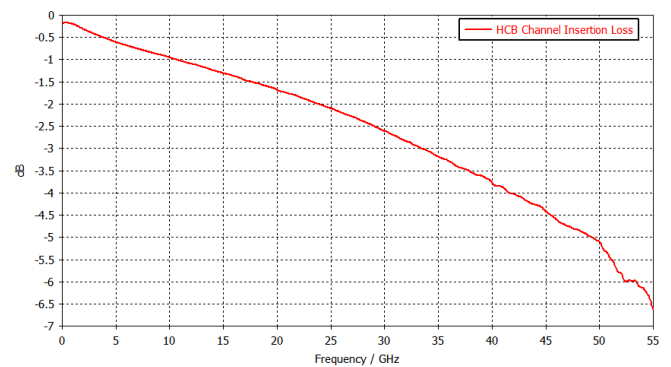


Figure 3: ML4064-HCB-112 Insertion Loss

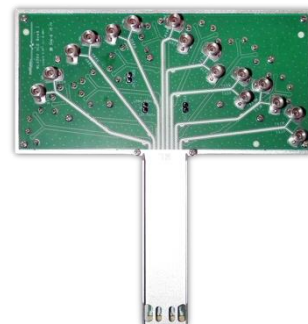


Figure 4: ML4064-HCB-112

OSFP800 Loopbacks

ML4064-LB-112

Key Features

- Loops back TX & RX with good performance SI Traces
- Built with advanced PCB Material
- MSA Compliant Shell with latching mechanism
- Four thermal spots
- Emulation of all OSFP power classes
- Programmable power dissipation up to 17.4 W via the thermal loads
- Temperature sensor
- I2C Terminated by microcontroller, I2C slave compliant with MSA
- Implements MSA Memory Map with programmable new pages
- Ability to control/monitor all low speed signals
- Insertion Counter
- Front LED Indicator
- Hot Pluggable
- Cut-off temperature preventing module overheating
- AC-coupled High-Speed Interface



Figure 5: ML4064-LB-112

ML4064-LB-112-24W

Key Features

- Loops back TX & RX with good performance SI Traces
- Built with advanced PCB Material
- MSA Compliant Shell with latching mechanism
- Four thermal spots
- Emulation of all OSFP power classes
- Programmable power dissipation up to 24 W via the thermal loads
- Temperature sensor
- I2C Terminated by microcontroller, I2C slave compliant with MSA
- Implements MSA Memory Map with programmable new pages
- Ability to control/monitor all low speed signals
- Insertion Counter
- Front LED Indicator
- Hot Pluggable
- Cut-off temperature preventing module overheating
- AC-coupled High-Speed Interface



Figure 6: ML4064-LB-112-24W

ML4064-LB-112-30W

Key Features

- Loops back TX & RX with good performance SI Traces
- Built with advanced PCB Material
- MSA Compliant Shell with latching mechanism
- Four thermal spots
- Emulation of all OSFP power classes
- Programmable power dissipation up to 30 W via the thermal loads
- Temperature sensor
- I2C Terminated by microcontroller, I2C slave compliant with MSA
- Implements MSA Memory Map with programmable new pages
- Ability to control/monitor all low speed signals
- Insertion Counter
- Front LED Indicator
- Hot Pluggable
- Cut-off temperature preventing module overheating
- AC-coupled High-Speed Interface



Figure 7: ML4064-LB-112-30W

Ordering Information

Interconnects	Description
ML4064-MCB-112-24	800G OSFP MCB 2.4 mm connector
ML4064-MCB-112-18	800G OSFP MCB 1.85 mm connector
ML4064-HCB-112-24	800G OSFP HCB 2.4 mm connector
ML4064-HCB-112-18	800G OSFP HCB 1.85 mm connector
ML4064-LB-112	800G OSFP Loopback, up to 17.4 W of heat dissipation
ML4064-LB-112-24W	800G OSFP Loopback, up to 24 W of heat dissipation
ML4064-LB-112-30W	800G OSFP Loopback, up to 30 W of heat dissipation

Recommended Accessories

Interconnects	Recommended <i>Phase matched cable pairs</i>	Alternative <i>Phase matched cable sets</i>	Comments
ML4064-MCB-112-24	16x MLCBPM-2.4-30/60	2x MLCBPM-2.4-30/60-16	2.4 mm connector 2x16 channel 30 or 60 cm
ML4064-MCB-112-18	16x MLCBPM-1.85-30/60	2x MLCBPM-1.85-30/60-16	1.85 mm connector 2x16 channel 30 or 60 cm
ML4064-HCB-112-24	16x MLCBPM-2.4-30/60	2x MLCBPM-2.4-30/60-16	2.4 mm connector 2x16 channel 30 or 60 cm
ML4064-HCB-112-18	16x MLCBPM-1.85-30/60	2x MLCBPM-1.85-30/60-16	1.85 mm connector 2x16 channel 30 or 60 cm

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