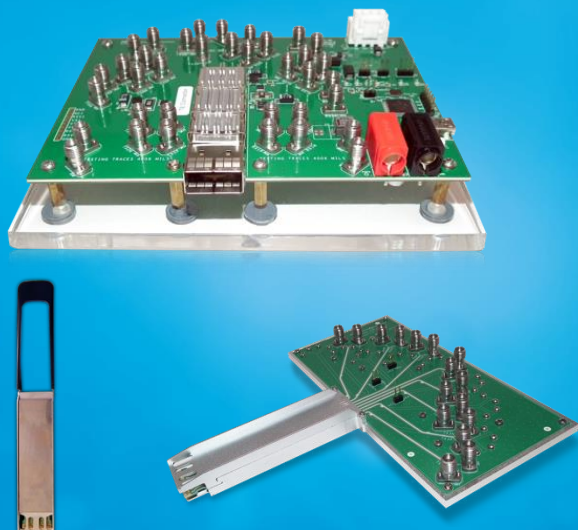


Innovation for the next generation



# 112G OSFP

Compliance Boards | 112/56 Gbps  
(8x56 GBd) Interconnects

ML4064-MCB-112: Module Compliance Board

ML4064-HCB-112: Host Compliance Board

ML4064-LB-112: Loopback Module

## Summary

Due to the ever-increasing bandwidth demand of hyperscale data centers, the transition to 400G Ethernet is now in full swing and the industry is already planning for the next phase of 800G. OSFP is one of the leading multi-source agreements to drive the development of 800G interconnectivity and MultiLane provides an OSFP development kit that includes a module compliance board, host compliance board and loopback module.

The OSFP development kit is an essential tool that enables the testing of 800G OSFP products. The module compliance board (MCB) is used to test transceivers, AOCs, and DACs. The host compliance board (HCB) enables the testing of system host ports, and the loopback modules (LB) provide an economical way to exercise system ports during R&D validation, production testing, and field testing.

## 800G OSFP 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 Sense
- Matched differential trace length
- All 8 channels come with matching trace length
- 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

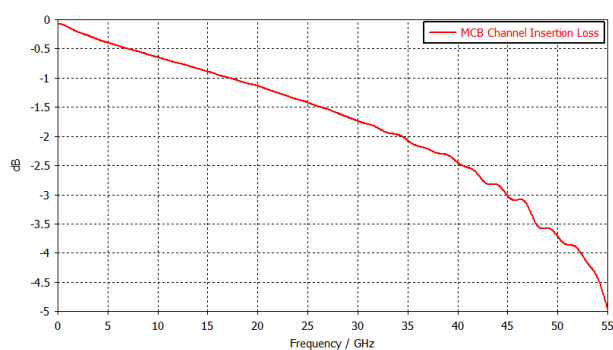


Figure 1: ML4064-MCB-112 Insertion Loss

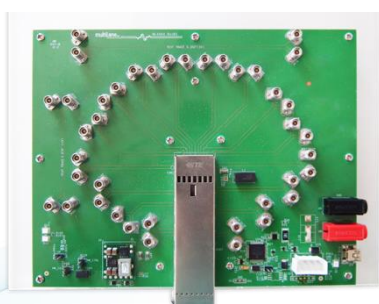


Figure 2: ML4064-MCB-112

## 800G OSFP 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
- Built with high performance PCB Material
- 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

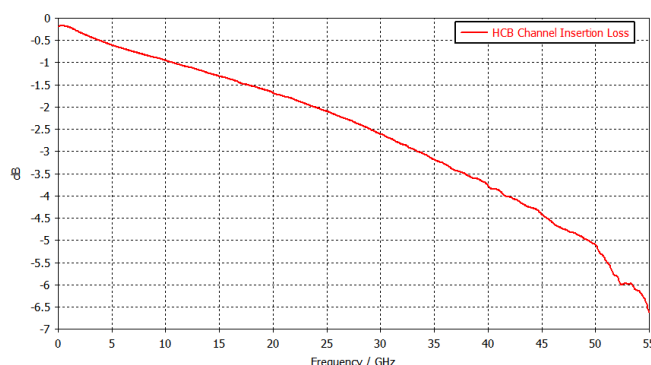


Figure 3: ML4064-HCB-112 Insertion Loss

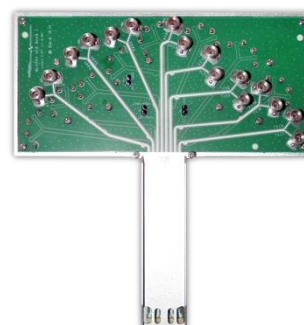


Figure 4: ML4064-HCB-112

## 800G OSFP Loopback

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
- Can emulate all OSFP power classes
- Can dissipate up to 16 W via the thermal loads
- Temp sense
- 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
- Can dissipate up to 17.5 W via the thermal loads (24 or 30 W optional)



Figure 5: ML4064-LB-112

## Ordering Information

Interconnects	Description
<b>ML4064-MCB-112-24</b>	800G OSFP MCB 2.4 mm connector
<b>ML4064-MCB-112-18</b>	800G OSFP MCB 1.85 mm connector
<b>ML4064-HCB-112-24</b>	800G OSFP HCB 2.4 mm connector
<b>ML4064-HCB-112-18</b>	800G OSFP HCB 1.85 mm connector
<b>ML4064-LB-112</b>	800G OSFP Loopback, up to 17.5 W of heat dissipation
<b>ML4064-112-24W</b>	800G OSFP Loopback, up to 24 W of heat dissipation
<b>ML4064-112-30W</b>	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
<b>ML4064-MCB-112-24</b>	16x MLCBPM-2.4-30/60	2x MLCBPM-2.4-30/60-16	2.4 mm connector 2x16 channel 30 or 60 cm
<b>ML4064-MCB-112-18</b>	16x MLCBPM-1.85-30/60	2x MLCBPM-1.85-30/60-16	1.85 mm connector 2x16 channel 30 or 60 cm
<b>ML4064-HCB-112-24</b>	16x MLCBPM-2.4-30/60	2x MLCBPM-2.4-30/60-16	2.4 mm connector 2x16 channel 30 or 60 cm
<b>ML4064-HCB-112-18</b>	16x MLCBPM-1.85-30/60	2x MLCBPM-1.85-30/60-16	1.85 mm connector 2x16 channel 30 or 60 cm

Please contact us at [sales@multilaneinc.com](mailto:sales@multilaneinc.com).

