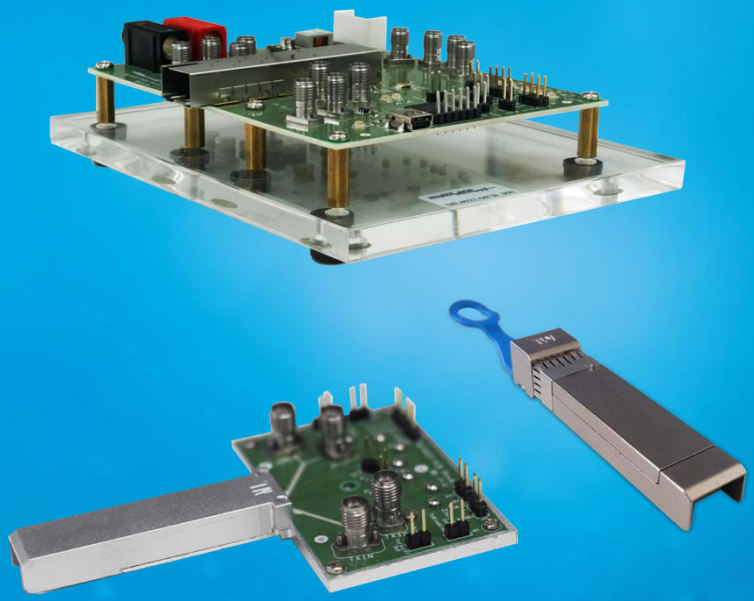
TEST DEVELOPMENT KIT

multiLane

Innovation for the next generation



SFP-DD

Development Platform
Preliminary Specs

Available products: ML4022-MCB | ML4022-HCB | ML4022-LB

Summary

The **MultiLane SFP-DD Development Kit** provides the necessary development tools and reference modules required for the development of SFP-DD based products.
This kit is essential for the development, testing and characterization of SFP-DD based products. It can also be used for testing 100G CDRs, 100G Gearbox devices, 100G SFP-DD ports on routers as well as line-cards, electro-optical modules, and SFP-DD active optical cables.

SFP-DD

SFP-DD Module Compliance Board

ML4022-MCB

Summary

The **ML4022-MCB** is designed to provide an efficient and easy method of programming and testing 100G SFP-DD transceivers and active optical cables. It includes a complete user-friendly GUI supporting all features defined by SFP-DD MSA and simplifying configuration processes to enable intuitive memory map programming and testing. It is designed to simulate an ideal environment for SFP-DD transceivers module testing, characterization and manufacturing.

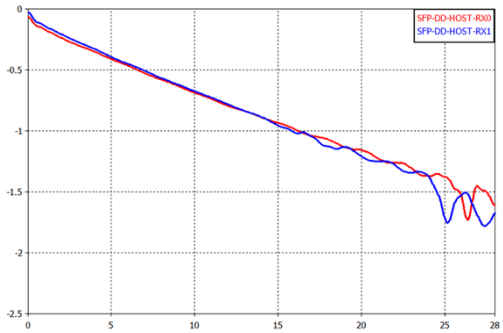


Figure 1: ML4022-MCB Insertion Loss

Figure 2: ML4022-MCB

Key Features

- A Supports 2x50G interfaces
- I2C master driven from both on board microcontroller or external pin headers
- 40 GHz 2.92 mm K Connectors
- Current Sense
- Matched differential trace length
- All channels come with matching trace length
- High performance signal integrity traces through K connectors to SFP-DD host connector
- On-board LEDs display MSA output alarm states
- On-board buttons/jumpers for MSA input control signal
- User friendly GUI for I2C R/W command and loading custom MSA memory map
- Four corner testing capability
- USB Interface
- Includes differential test trace 2x

SFP-DD Host Compliance Board

ML4022-HCB

Key Features

- High Performance Signal integrity traces
- SFP-DD MSA Form Factor
- Low Insertion Loss for both traces
- Built with high performance PCB material
- Production friendly form factor
- Supports 2x50G
- High-speed signals accessible through K connectors

TX1	RX1	TX2	RX2

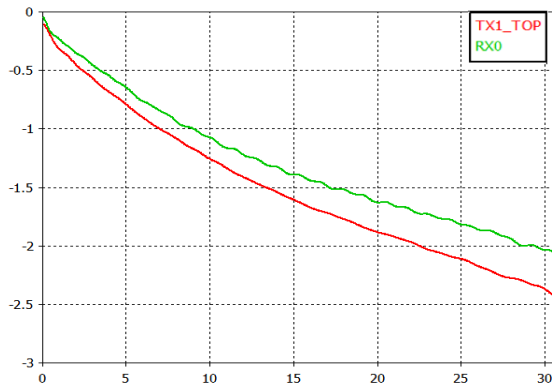


Figure 3: ML4022-HCB Insertion Loss

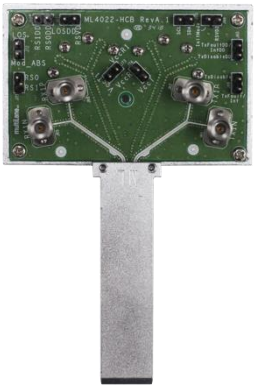


Figure 4: ML4022-HCB

SFP-DD Loopback Module

ML4022-LB

Summary

The **ML4022-LB** is packaged in a standard MSA housing compatible with all SFP-DD ports. Transmitted data from the host is electrically routed, (internal to the loopback module), to the receive data outputs and back to the host. It provides an economical way to exercise SFP-DD ports during R&D validation, production testing, and field testing.

Key Features

- Power consumption up to 4.32 W by default, spread over 4 spots
- Population option to increase power to 4.96 W
- Dual channels, supporting up to 28 GBaud each (56 Gbps)
- LED indicator
- Custom memory maps
- Temperature range from -40 to 125 °C
- I2C interface
- MSA compliant EEPROM
- Voltage sense
- Temperature sense
- Insertion counter
- Micro controller based

Figure 5: ML4022-LB