ML4066-SFPDD

Technical Reference

SFP-DD Diagnostic Adapter

SFP-DD Rev4.2 Compliant

Innovation for the next generation

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1 Overview

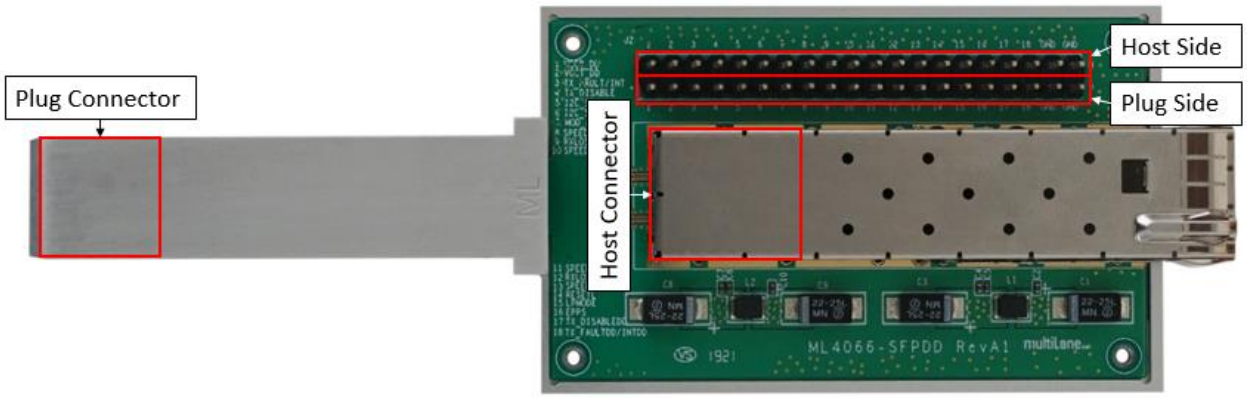
The **ML4066-SFPDD** is a general-purpose diagnostic adapter, which allows the user to access all SFP-DD controls, alarms, I2C signals, and power nets. A pin header connector that breaks the connection between the “Plug connector” and “Host connector” is used to access SFP-DD pins individually, or, when using jumpers, allows to connect the plug connector to the host connector pins. This pin header connector is also used to connect the I2C analyzer.

1.1 ML4066-SFPDD Adapter | Key Features

- All high-speed signals are connected from the SFP-DD Plug to the front SFP-DD host connector with superior SI traces
- Low insertion loss PCB traces
- Power pins are accessible via pin headers and can be jumped to connect them to the plugged SFP-DD transceiver
- All low-speed management signals are accessible via pin headers, and can be jumped to connect them to the plugged SFP-DD transceiver
- I2C SCL and SDA signals accessible via pin headers or can be jumped to connect them to the plugged SFP-DD transceiver
- Ability to drive I2C from external pin headers, or connect I2C packet analyzer
- Ability to drive 3.3 V from external source for power supply margining
- Ability to break 3.3 V power from Host to module allowing voltage and current measurement
- Interface to connect SFF Analyzer board

2 ML4066-SFPDD Pins Allocation

2.1 ML4066-SFPDD RevA



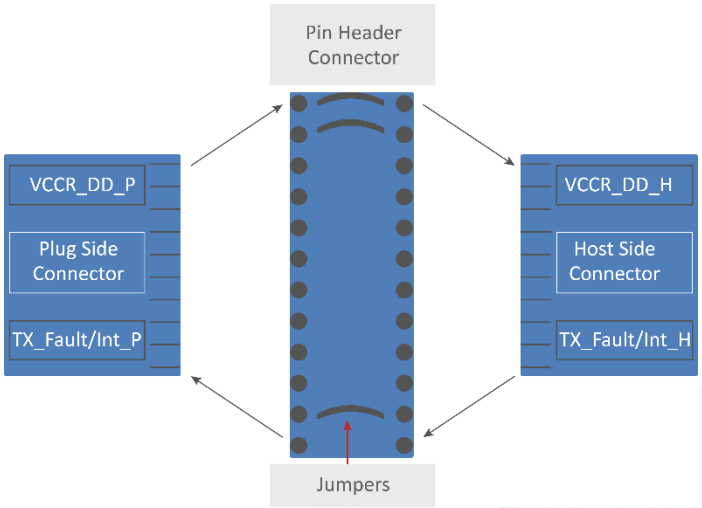
Pin Number (Host Side)	Pin Name (Host Side)	Pin Name (Plug Side)	Pin Number (Plug Side)
1	VCCR_DD	VCCR_DD	1
2	VCCT_DD	VCCT_DD	2
3	TX_FAULT/Int	TX_FAULT/Int	3
4	TX_Disable	TX_Disable	4
5	I2C_SDA	I2C_SDA	5
6	I2C_SCL	I2C_SCL	6
7	MOD_ABS	MOD_ABS	7
8	SPEED1	SPEED1	8
9	RXLOS	RXLOS	9
10	SPEED2	SPEED2	10
11	SPEED2DD	SPEED2DD	11
12	RXLOSDD	RXLOSDD	12
13	SPEED1DD	SPEED1DD	13
14	RESETL	RESETL	14
15	LPMODE	LPMODE	15
16	ePPS	ePPS	16
17	Tx_DisableDD	Tx_DisableDD	17
18	TX_FaultDD/IntDD	TX_FaultDD/IntDD	18
19	GND	GND	19
20	GND	GND	20

2.2 Pins Diagram

The adapter allows the user to make use of the pins to achieve a variety of different measurements as listed below:

- Probe or drive the Host side
- Probe or drive the Plug side
- Place Jumpers to connect the Host side to the Plug side

To benefit from monitoring and diagnostic capabilities available in the GUI, plug the pin header into the ML4066-ANA-SFPDD Analyzer Board.



Revision History

Revision number	Date	Description
0.1	9/1/2021	▪ Preliminary
0.15	10/6/21	▪ Format/language updates