MFA1A00-C001-LM-V1

NVIDIA Mellanox® Compatible 100GBase QSFP28 Active Optical Cable

1m Length, Commercial Temperature

FEATURES

- Compliant to QSFP28 Electrical MSA SFF-8636 Specification
- 4x25Gbps 850nm VCSEL-based Transmitter
- RoHS compliant
- Case operating temperature 0°C to 70°C

APPLICATIONS

- 100GBASE-SR4 at 25.78125Gbps per lane
- InfiniBand QDR, EDR
- Other optical links

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	TS	-40	-	85	ºC
Relative Humidity (non-condensing)	RH	0	-	85	%

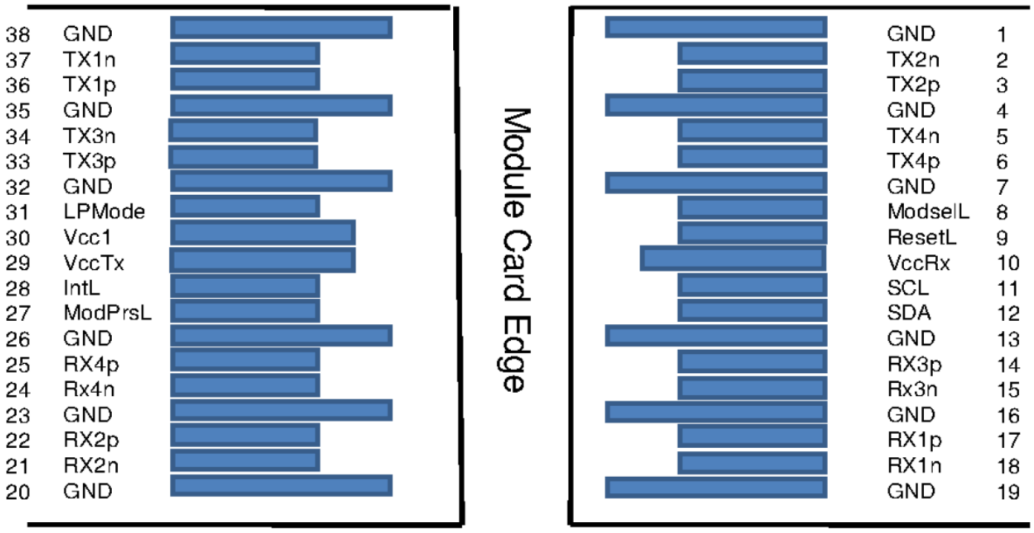
RECOMMENDED OPERATING ENVIRONMENT

Parameter	Symbol	Min.	Typical	Max.	Unit
Case Temperature	TC	0	-	70	°C
Power Supply Voltage	VCC	3.135	3.3	3.465	V
Signaling Rate each Channel		-	25.78125	-	Gbps
Data Rate Accuracy		-100	-	100	ppm
Pre-FEC Bit Error Ratio		-	-	5e-5	
Post-FEC Bit Error Ratio		-	-	1e-12	

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Min.	Typical	Max.	Unit
Power Consumption		-	-	2.5	W
Supply Current	Icc	-	-	750	mA

PIN ASSIGNMENT

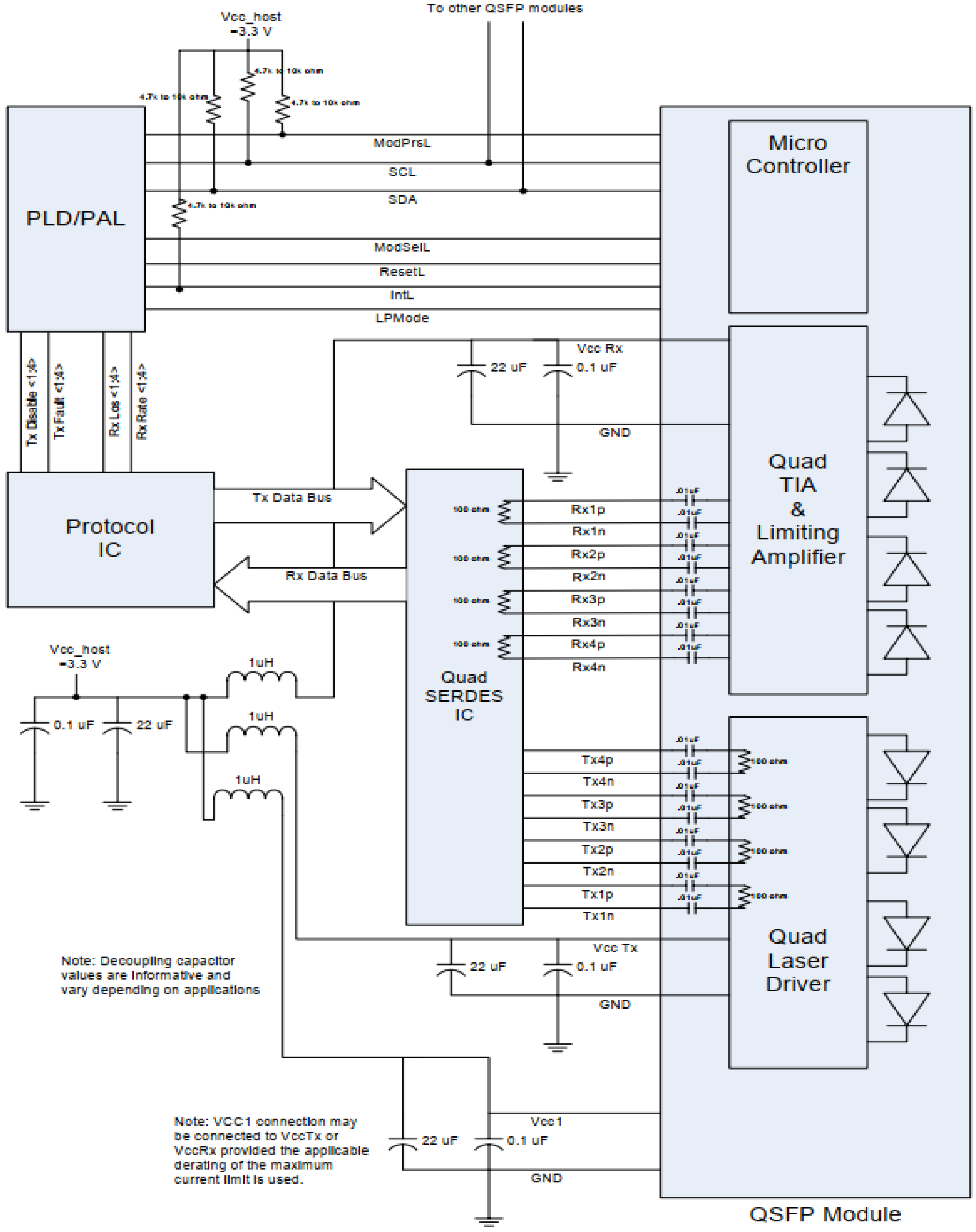


Pin	Logic	Symbol	Definition	Pin	Logic	Symbol	Definition
1		GND	Ground	**20**		GND	Ground
2	CML-I	Tx2n	Transmitter Inverted Data Input	**21**	CML-O	Rx2n	Receiver Inverted Data Output
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	**22**	CML-O	Rx2p	Receiver Non-Inverted Data Output
4		GND	Ground	**23**		GND	Ground
5	CML-I	Tx4n	Transmitter Inverted Data Input	**24**	CML-O	Rx4n	Receiver Inverted Data Output
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	**25**	CML-O	Rx4p	Receiver Non-Inverted Data Output
7		GND	Ground	**26**		GND	Ground
8	LVTTL-I	ModSelL	Module Select	**27**	LVTTL-O	ModPrsL	Module Present
9	LVTTL-I	ResetL	Module Reset	**28**	LVTTL-O	IntL	Interrupt
10		VccRx	+3.3V Power Supply Receiver	**29**		VccTx	+3.3V Power Supply transmitter
11	LVCMOS-I/O	SCL	2-Wire Serial Interface Clock	**30**		Vcc1	+3.3V Power Supply
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data	**31**	LVTTL-I	LPMode	Low Power Mode
13		GND	Ground	**32**		GND	Ground
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	**33**	CML-I	Tx3p	Transmitter Non-Inverted Data Input
15	CML-O	Rx3n	Receiver Inverted Data Output	**34**	CML-I	Tx3n	Transmitter Inverted Data Output
16		GND	Ground	**35**		GND	Ground
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	**36**	CML-I	Tx1p	Transmitter Non-Inverted Data Input
18	CML-O	Rx1n	Receiver Inverted Data Output	**37**	CML-I	Tx1n	Transmitter Inverted Data Output
19		GND	Ground	**38**		GND	Ground

DIGITAL DIAGNOSTIC MONITOR

Parameter	Accuracy	Unit
Internally measured transceiver temperature	+/-3	°C
Internally measured transceiver supply voltage	+/-3	%
Measured Tx bias current	+/-10	%
Measured Tx output power	+/-3	dB
Measured Rx received average optical power	+/-3	dB

ELECTRICAL INTERFACE



MECHANICAL DIMENSIONS (UNITS: mm)