GL40-AY1M3xxM

40Gbps QSFP+ Active Optical Cable

Features

- Hot-plug gable QSFP+ footprint
- Operates at 10.3Gbps per channel
- 4x10.3Gbps 850nm VCSEL transmitter
- 4x10.3Gpbs electrical interface
- Maximum link length of 300m on OM3 MMF
- Power Dissipation <1.5W
- Single +3.3V power supply
- Single MPO12 receptacle
- Operating Case temperature range
  0°C to 70°C
- RoHS-6 compliant
- Compliant with SFF-8679
- Compliant with SFF-8636

Applications

- 40G-Ethernet
- Date Center
- Other Optical Links

Ordering information

Part No.	Reach	Data Rate	Temp.
GL40-AY1M303M	3m	41.25Gpbs	0°C to 70°C
GL40-AY1M305M	5m	41.25Gpbs	0°C to 70°C
GL40-AY1M307M	7m	41.25Gpbs	0°C to 70°C
GL40-AY1M310M	10m	41.25Gpbs	0°C to 70°C
GL40-AY1M315M	15m	41.25Gpbs	0°C to 70°C
GL40-AY1M320M	20m	41.25Gpbs	0°C to 70°C
GL40-AY1M3100M	100m	41.25Gpbs	0°C to 70°C

More detail product selection and cable lengths, please contact FIBRECROSS.

Description

GL40-AY1M3xxMxxM transceiver is designed for using in 41.2Gbps data rate over multi-mode fiber. The transceiver is compliant with SFF-8436, and the mechanical QSFP+ plug is compatible with SFF-8661. Digital diagnostics functions are available via a 2-wire serial interface, as specified in SFF-8636.

Absolute Maximum Ratings

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Power Supply Voltage	V_{CC}	0		3.6	V	
Storage Temperature	Ts	-40		+85	°C	
Relative Humidity	RH	5		85	%	Non-condensing
Case Operating Temperature	Tc	0		+70	°C	

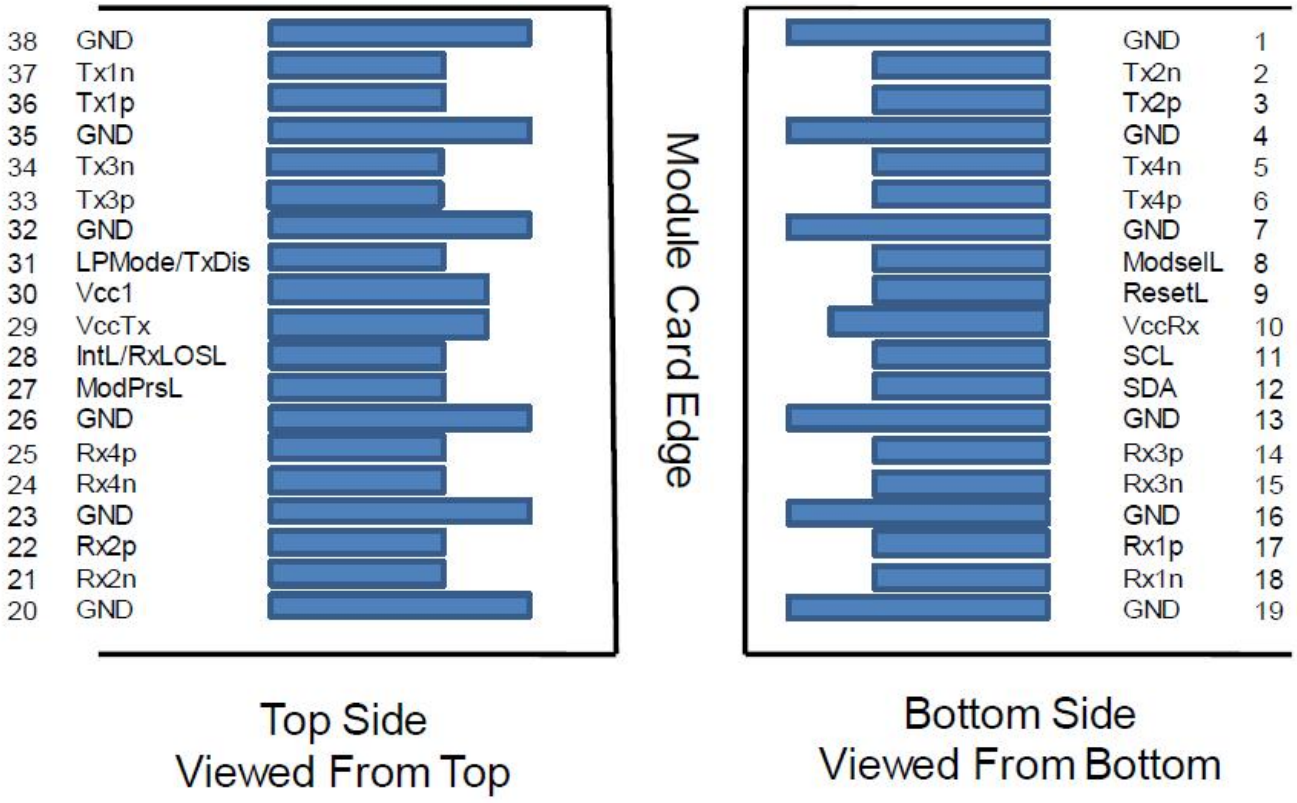
Electrical Characteristics

Parameter	Symbol	Min.	Typical	Max.	Unit	Note
Power Supply Voltage	V_{CC}	3.135	3.3	3.465	V	
Power Dissipation	P_D			1.5	W	
Power Supply Current	Icc			450	mA	
Aggregate Data Rate			41.25		Gbps	
Signaling rate per lane			10.3125		Gbps	
Clock Rate-I2C				400	kHz	
Transmitter						
Input Differential impedance	Z_{IN}		100		ohm	
Differential data input swing	V_{IN}	180		900	mV	
Single-ended voltage tolerance		-0.3		3.3	V	
Receiver						
Output Differential impedance	Zout		100		ohm	
Differential data Output Swing	Vout	300		850	mV	

General Specifications

Parameter		Symbol	Min.	Typical	Max.	Unit	Note
Aggregate Data Rate				41.25		Gbps	
Signaling rate per lane				10.3125		Gbps	
Bit Error Ratio (pre-FEC)		BER			1E-12		PRBS31
Maximum Supported Distances							
Fiber Type	Bandwidth (850nm)						
50um	2000MHz*km				300	m	OM3
50um	4700MHz*km				400	m	OM4

Pin Assignment:



Pin Descriptions

PIN	Symbol	Name / Description	Note
1	GND	Ground	1
2	Tx2n	Transmitter Inverted Data Input	
3	Tx2p	Transmitter Non-Inverted Data Input	
4	GND	Ground	1
5	Tx4n	Transmitter Inverted Data Input	
6	Tx4p	Transmitter Non-Inverted Data Input	
7	GND	Ground	1
8	ModSelL	Module Select	2
9	ResetL	Module Reset	
10	Vcc Rx	3.3V Power Supply Receiver	
11	SCL	2-wire serial interface clock	3
12	SDA	2-wire serial interface data	3
13	GND	Ground	1

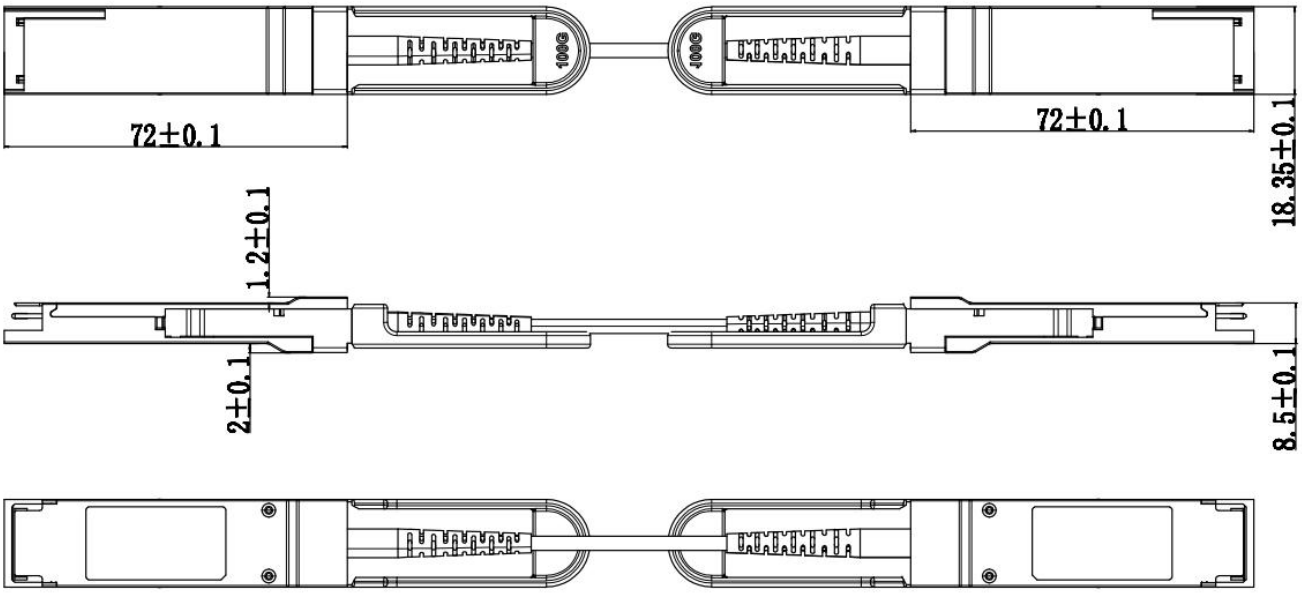
14	Rx3p	Receiver Non-Inverted Data Output	
15	Rx3n	Receiver Inverted Data Output	
16	GND	Ground	1
17	Rx1p	Receiver Non-Inverted Data Output	
18	Rx1n	Receiver Inverted Data Output	
19	GND	Ground	1
20	GND	Ground	1
21	Rx2n	Receiver Inverted Data Output	
22	Rx2p	Receiver Non-Inverted Data Output	
23	GND	Ground	1
24	Rx4n	Receiver Inverted Data Output	
25	Rx4p	Receiver Non-Inverted Data Output	
26	GND	Ground	1
27	ModPrsL	Module Present	3
28	IntL	Interrupt	3
29	Vcc Tx	3.3V power supply transmitter	
30	Vcc1	3.3V power supply	
31	LPMode	Low Power Mode	
32	GND	Ground	1
33	Tx3p	Transmitter Non-Inverted Data Input	
34	Tx3n	Transmitter Inverted Data Input	
35	GND	Ground	1
36	Tx1p	Transmitter Non-Inverted Data Input	
37	Tx1n	Transmitter Inverted Data Input	
38	GND	Ground	1

Note1: Module ground pins GND are isolated from the module case.

Note2: ModSelL is an input signal. When held low by the host, the module responds to two-wire serial communication commands. The ModSelL signal allows the use of multiple modules on a single two-wire interface. When ModSelL is high, the module shall not respond to or acknowledge any two-wire interface communication from the host.

Note3: Shall be pulled up with 4.7K-10Kohms to a voltage between 3.15V and 3.45V on the host board.

Mechanical Dimensions



Revision History

Revision	Initiated	Reviewed	Approved	DCN	Release Date
V1.0	LIN	XX	XX	Released.	July 16, 2022

Important Notice

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