

#### 34060662-PRO

Huawei® 34060662 Compatible TAA Compliant 40GBase-SR4 QSFP+ Transceiver (MMF, 850nm, 150m, DOM, 0 to 70C, MPO)

#### **Features**

- SFF-8436 Compliance
- MPO Connector
- Commercial Temperature 0 to 70 Celsius
- Multi-mode Fiber
- Hot Pluggable
- Excellent ESD Protection
- Metal with Lower EMI
- RoHS Compliant and Lead Free



## **Applications:**

- 40GBase Ethernet
- 4x10G Breakout Option
- Access and Enterprise

### **Product Description**

This Huawei® 34060662 compatible QSFP+ transceiver provides 40GBase-SR4 throughput up to 150m over multi-mode fiber (MMF) using a wavelength of 850nm via an LC connector. It is guaranteed to be 100% compatible with the equivalent Huawei® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

Proline's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open international trade. TAA requires that the U.S. Government may acquire only "U.S. – made or designated country end products.



## **Absolute Maximum Ratings**

Parameter	Symbol	Min.	Тур.	Max.	Unit
Supply Voltage	Vcc	-0.5		4.0	V
Storage Temperature	Tstg	-40		85	°C
Operating Case Temperature	Тс	0	25	70	°C
Relative Humidity	RH	5		95	%
Data Rate Per Channel			10.3125		Gbps

### **Electrical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes	
Supply Voltage	Vcc	3.135	3.3	3.465	V		
Module Supply Current	Icc			430	mA		
Power Dissipation	P <sub>DISS</sub>			1.5	W		
Transmitter							
Input Differential Impedance	ZIN		100		Ω		
Differential Data Input Swing	VIN,pp	180		900	mVp-p		
Receiver							
Output Differential Impedance	ZOUT		100		Ω		
Differential Data Output Swing	VOUT,pp	300		850	mVp-p	1	
Data Output Rise Time/Fall Time	Tr/Tf	28			ps	2	

## Notes:

- 1. Internally AC coupled but requires an external  $100\Omega$  differential load termination.
- 2. 20 80 %.

# **Optical Characteristics**

Parameter	Symbol	Min.	Тур.	Max.	Unit	Notes	
Transmitter							
Launch Optical Power	Po	-7.6		+2.4	dBm	1	
Center Wavelength Range	λC	830	850	860	nm		
Extinction Ratio	ER	3			dB	2	
Spectral Width (RMS)	Δλ			0.65	nm		
Transmitter and Dispersion Penalty	TDP			3.2	dB		
Optical Return Loss Tolerance	ORLT			12	dB		
Eye Diagram	IEEE Std 802.3ba Compatible						
Receiver							
Center Wavelength	λC	830	850	860	nm		
Receiver Sensitivity (Pavg)	S			-9.5	dBm	3	
Damage Threshold	P <sub>OL</sub>	2.5			dBm	3	
Optical Return Loss	ORL	12			dB		
LOS Assert	LOSA	-30			dBm		
LOS De-Assert	LOSD			-11	dBm		
LOS Hysteresis		0.5			dB		

### Notes:

- 1. The optical power is launched into OM3 MMF.
- 2. Measured with a PRBS 2<sup>31</sup>-1 test pattern @10.3125Gbps.
- 3. Measured with PRBS  $2^{31}$ -1 test pattern, 10.3125Gbps, and BER<10<sup>-12</sup>.

**Pin Descriptions** 

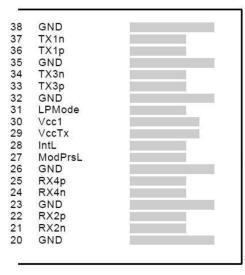
	Pin Descriptions								
Pin	Logic	Symbol	Name/Descriptions	Notes					
1		GND	Module Ground.	1					
2	CML-I	Tx2-	Transmitter Inverted Data Input.						
3	CML-I	Tx2+	Transmitter Non-Inverted Data Input.						
4		GND	Module Ground.	1					
5	CML-I	Tx4-	Transmitter Inverted Data Input.						
6	CML-I	Tx4+	Transmitter Non-Inverted Data Input.						
7		GND	Module Ground.	1					
8	LVTTL-I	ModSelL	Module Select.	2					
9	LVTTL-I	ResetL	Module Reset.	2					
10		VccRx	+3.3V Receiver Power Supply.						
11	LVCMOS-I	SCL	2-Wire Serial Interface Clock.	2					
12	LVCMOS-I/O	SDA	2-Wire Serial Interface Data.	2					
13		GND	Module Ground.	1					
14	CML-O	Rx3+	Receiver Non-Inverted Data Output.						
15	CML-O	Rx3-	Receiver Inverted Data Output.						
16		GND	Module Ground.	1					
17	CML-O	Rx1+	Receiver Non-Inverted Data Output.						
18	CML-O	Rx1-	Receiver Inverted Data Output.						
19		GND	Module Ground.	1					
20		GND	Module Ground.	1					
21	CML-O	Rx2-	Receiver Inverted Data Output.						
22	CML-O	Rx2+	Receiver Non-Inverted Data Output.						
23		GND	Module Ground.	1					
24	CML-O	Rx4-	Receiver Inverted Data Output.	1					
25	CML-O	Rx4+	Receiver Non-Inverted Data Output.						
26		GND	Module Ground.	1					
27	LVTTL-O	ModPrsL	Module Present. Internally pulled down to GND.						
28	LVTTL-O	IntL	Interrupt Output. Should be pulled up on the host board.						
29		VccTx	+3.3V Transmitter Power Supply.						
30		Vcc1	+3.3V Power Supply.						
31	LVTTL-I	LPMode	Low-Power Mode.						
32		GND	Module Ground.						
33	CML-I	Tx3+	Transmitter Non-Inverted Data Input.						
34	CML-I	Tx3-	Transmitter Inverted Data Input.						
	-1		ı	1					

35		GND	Module Ground.	1
36	CML-I	Tx1+	Transmitter Non-Inverted Data Input.	
37	CML-I	Tx1-	Transmitter Inverted Data Input.	
38		GND	Module Ground.	1

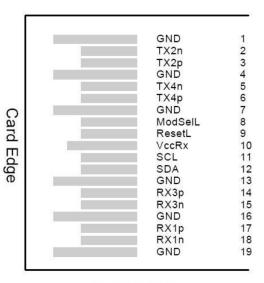
### Notes:

- 1. The module signal grounds are isolated from the module case.
- 2. This is an open collector/drain output that on the host board requires a  $4.7k\Omega$ - $10k\Omega$  pull-up resistor to the Host\_Vcc.

### **Electrical Pin-Out Details**

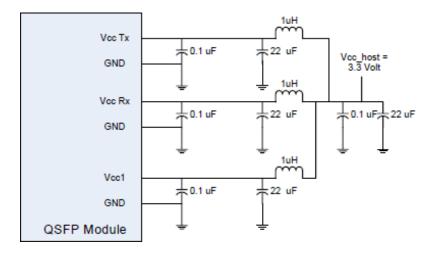


Top Side Viewed from Top

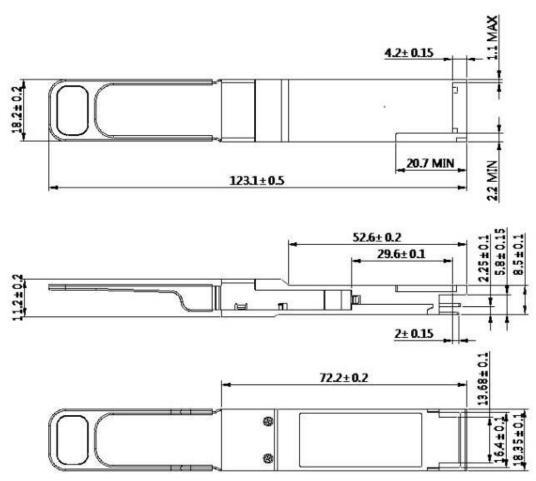


Bottom Side Viewed from Bottom

# **Recommended Host Board Power Supply Filter Network**



## **Mechanical Specifications**



#### **About Us:**

Proline Options is one of North America's leading providers of transceivers and high speed cabling. With a reputation for quality, tested products that cover the connectivity spectrum, Proline Options has a solution for you regardless of the specification.

At Proline Options, every product is tested in its intended application - never batch or spec tested only. We run bandwidth, distance and IOS network tests. We have documented an impressive 0.03% failure rate over the last 10 years. To continue this rate of success we invest millions annually in our own on-site testing lab.



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