

40G QSFP+ Active Optical Cable

(RoHS Compliant)

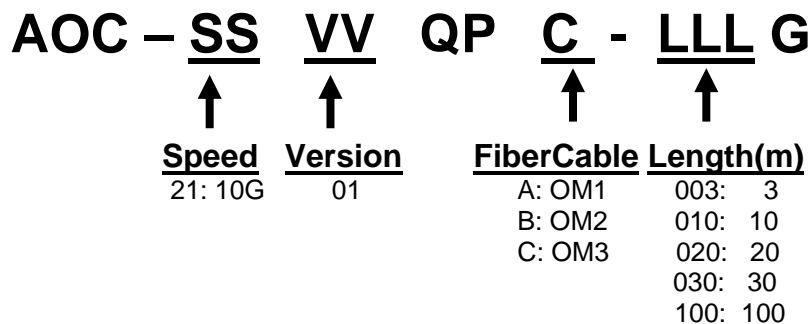
FEATURES

- ◆ Four Full-Duplex Lanes
- ◆ Up to 10.3125Gbps/lane (40Gbps/4lane)
- ◆ Fiber link up to 100 meters
- ◆ Hot-Pluggable Interface
- ◆ DDM function support RX input power, Voltage, internal Temperature
- ◆ Low latency, low weight, and low power consumption
- ◆ Compliant with SFF-8436, IEEE802.ba
- ◆ EMI performance match FCC class B
- ◆ BER better than 10^{-12}
- ◆ Storage, Network, Server, NIC, Switch
- ◆ Low power AOC solution

OVERVIEW

OPTOWAY is devoted to providing reliable and outstanding active optical cables (AOC) company. Optoway 40G QSFP+ AOC is a high-speed solution with cost-effective design which can extend to 100m. It is compatible with InfiniBand SDR, DDR, QDR application, as well as 4x10G Ethernet (40GbE), Fiber Channel, PCI-Express, SAS/SATA interconnect.

ORDER INFORMATION



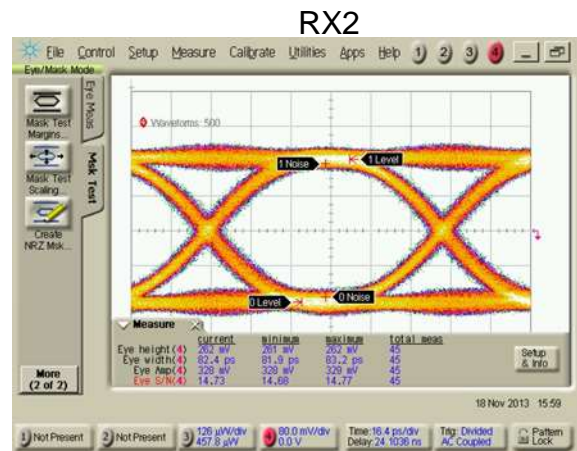
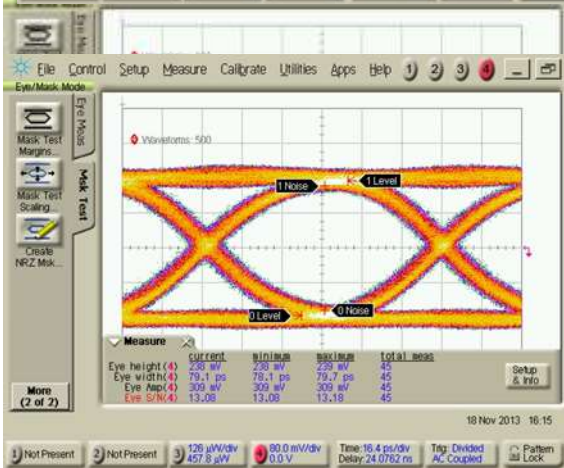
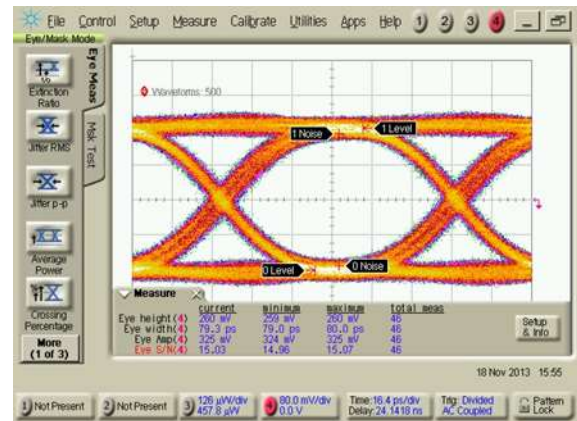
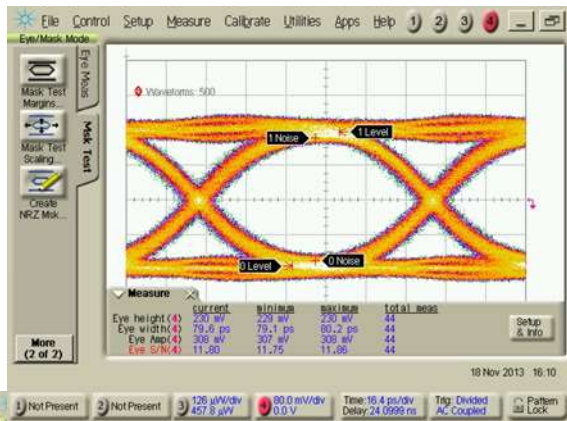
1.1 Environmental specifications

Parameter	Min	Max	Units	Note
Operating case temperature	0	70	°C	
Storage temperature	-10	75	°C	
Operating relative Humidity	5	85	%	
Max Supply Voltage	-0.5	3.8	V	

1.2 Operating Specifications

Parameter	Min	Typ	Max	Units	Note
Supply voltage	3.15		3.45	V	
Supply current	200	230	260	mA	Per end
Power consumption	0.66	0.76	0.86	W	Per end @3.3V
Data rate	2.5		10.3125	Gbps	
BER	<10 ⁻¹²			Err/bits	
Input swing	300		800	mV	differential
Output swing	300		700	mV	differential

1.3 Active optical cable Eye Performance



RX3

RX4

Figure 1.1 10-m link RX electric eye (Single Ended)

1.4 Contact Description

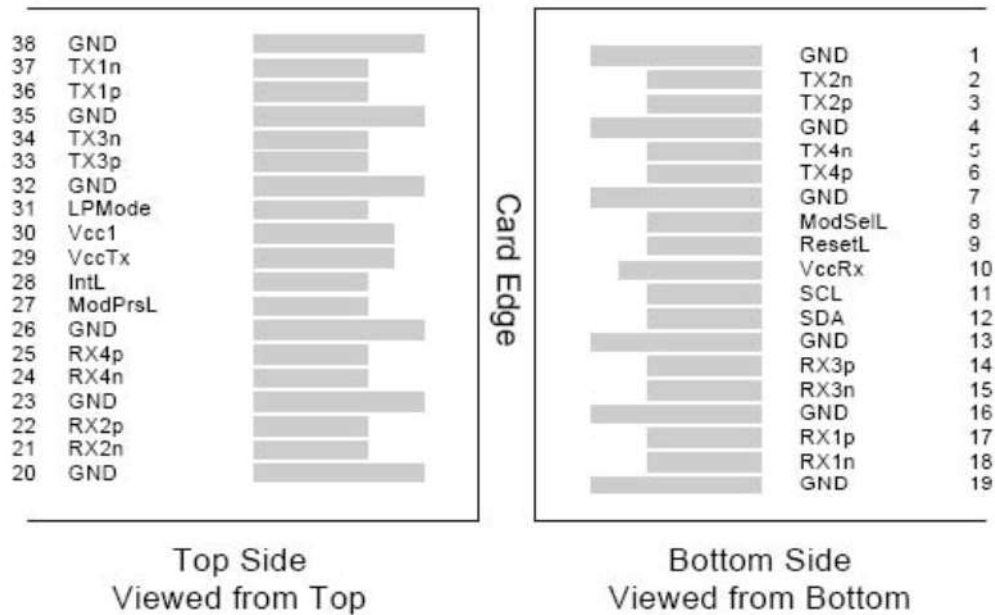


Figure 1.2 module PCB pad assignment view

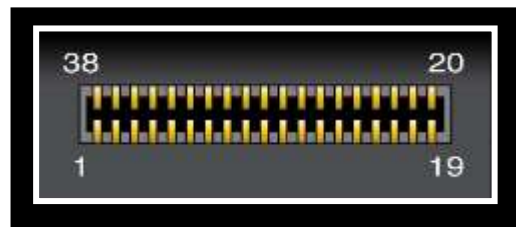
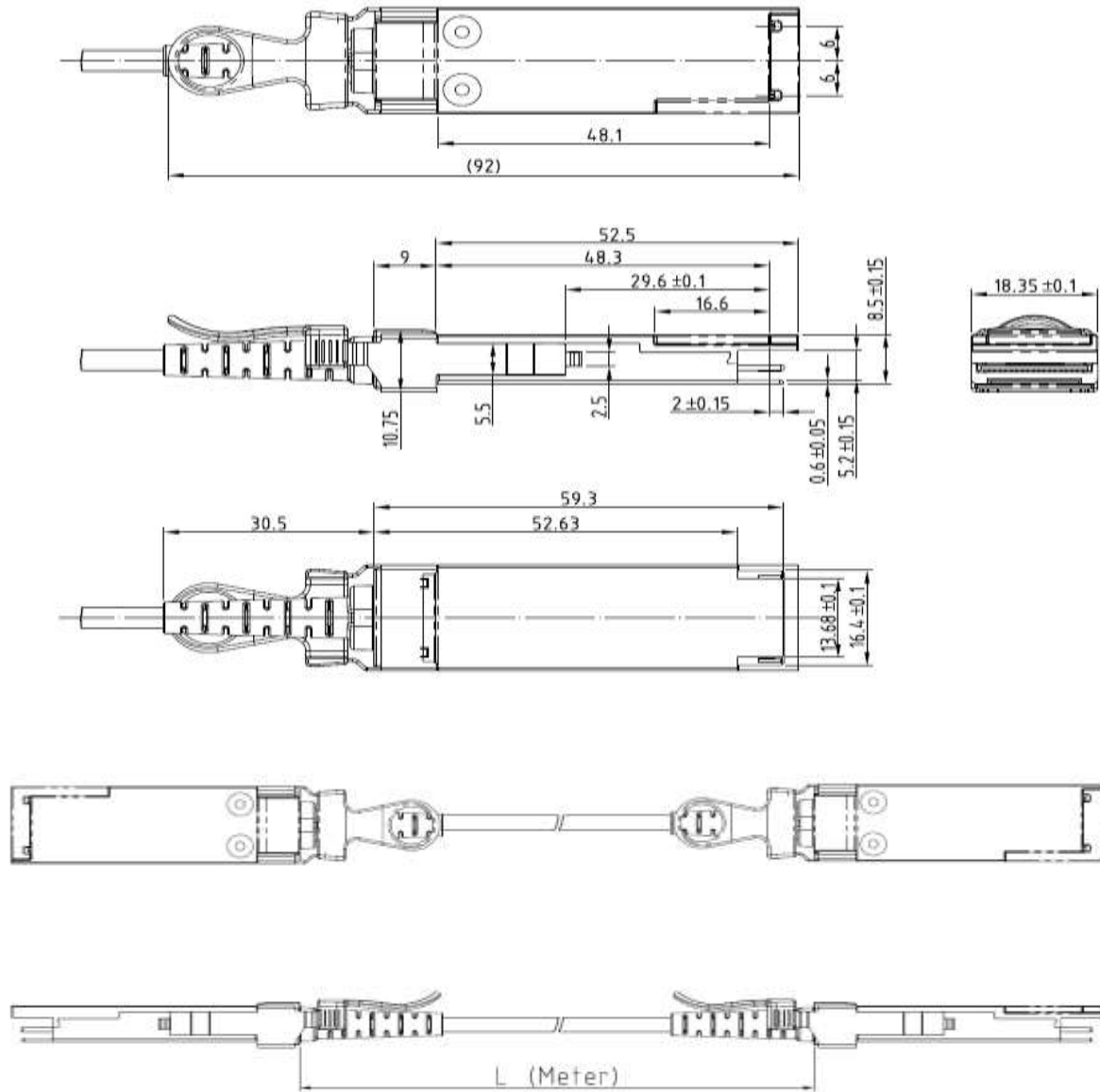


Figure 1.3 QSFP+ socket contact assignment

1.5 Pin Descriptions

Pin	Symbol	Description	Note
1	GND	Ground	
2	TX2n	Lane2 Transmitter Inverted Data Input	
3	TX2p	Lane2 Transmitter Non-Inverted Data Input	
4	GND	Ground	
5	TX4n	Lane4 Transmitter Inverted Data Input	
6	TX4p	Lane4 Transmitter Non-Inverted Data Input	
7	GND	Ground	
8	ModSelL	Module Select	
9	ResetL	Module Reset	
10	Vcc	Rx +3.3V Power Supply Receiver	1
11	SCL	2-wire serial interface clock	
12	SDA	2-wire serial interface data	
13	GND	Ground	
14	RX3p	Lane3 Receiver Non-Inverted Data Output	
15	RX3n	Lane3 Receiver Inverted Data Output	
16	GND	Ground	
17	RX1p	Lane1 Receiver Non-Inverted Data Output	
18	RX1n	Lane1 Receiver Inverted Data Output	
19	GND	Ground	
20	GND	Ground	
21	RX2n	Lane2 Receiver Inverted Data Output	
22	RX2p	Lane2 Receiver Non-Inverted Data Output	
23	GND	Ground	
24	RX4n	Lane4 Receiver Inverted Data Output	
25	RX4p	Lane4 Receiver Non-Inverted Data Output	
26	GND	Ground	
27	ModPrsL	Module Present	
28	IntL	Interrupt	
29	Vcc TX	Tx +3.3V Power Supply Transmitter	1
30	Vcc1	+3.3V Power Supply	1
31	LPmode	Low Power Mode	
32	GND	Ground	
33	TX3p	Lane3 Transmitter Non-Inverted Data Input	
34	TX3n	Lane3 Transmitter Inverted Data Input	
35	GND	Ground	
36	TX1p	Lane1 Transmitter Non-Inverted Data Input	
37	TX1n	Lane1 Transmitter Inverted Data Input	
38	GND	Ground	

1.6 Thunderbolt Cable Mechanical Dimension



L	Tolerance
1m	0~+20cm
3m	0~+20cm
5m	0~+20cm
10m	0~+0.5m
20m	0~+0.5m
30m	0~+0.5m