

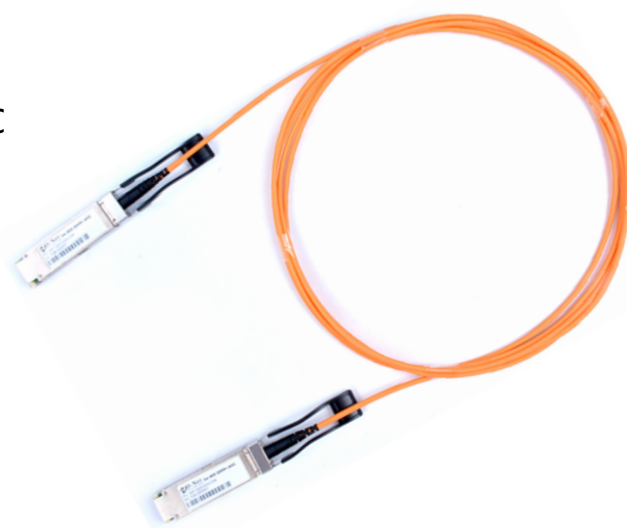
40Gbps QSFP+ AOC

Features

- Compliant with QSFP+ (SFF-8436) form factors
- Low power consumption of max 1.5W
- Supports digital diagnostic monitoring interface
- Inrush control circuit
- Hot pluggable
- Operating temperature range: 0°C ~ 70°C
- RoHS-6 compliant

Applications

- 40G BASE-SR4 Ethernet links
- InfiniBand SDR/DDR/QDR interconnects
- 4G/8G/10G fiber channel
- Client-side telecom connections



Main Specifications

1.Description

O-Net Communication's 40Gbps Active Optical Cable (AOC) is a low-cost, high-performance QSFP+ pluggable interface module with four independent duplex channels, each capable of operating up to 10Gbps (40Gbps maximum total bandwidth) with a reach of up to 150 m. By using high-performance optical components and fibers, the module offers clear advantages in terms of cost, efficiency, and performance over copper cables.

2.Absolute Maximum Ratings

Parameter	Symbol	Min	Typical	Max	Unit
Storage Temperature	Ts	-40		85	°C
Relative Humidity (non-condensation)	RH	0		85	%
Supply Voltage	Vcc	-0.5		3.5	V
Data Input Voltage-Single Ended	V _{DIP} -V _{DIN}			1	V



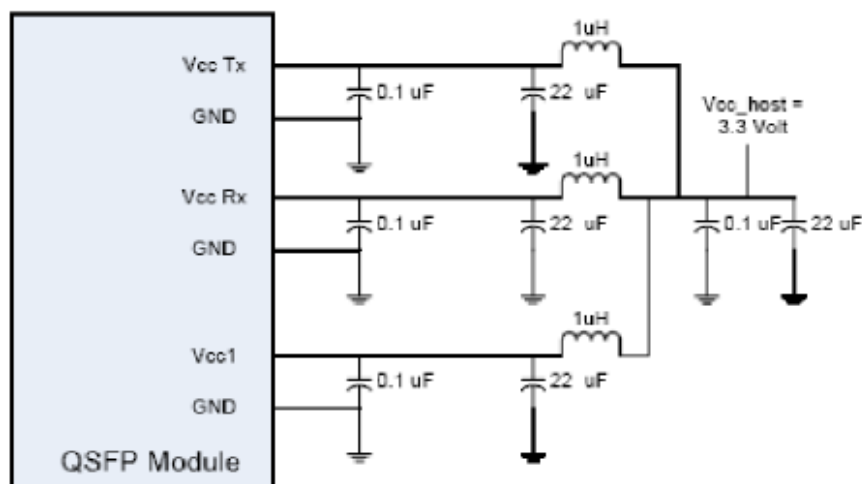
3.Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Case Temperature	T_C	0		70	$^{\circ}\text{C}$
Supply Voltage	V_{CC}	3.135	3.3	3.465	V
Input Control Voltage High	V_{IH}	2		$V_{CC}+0.5$	V
Input Control Voltage Low	V_{IL}	0		0.8	V
Signal Rate per Channel		2.5		10.3125	Gbps

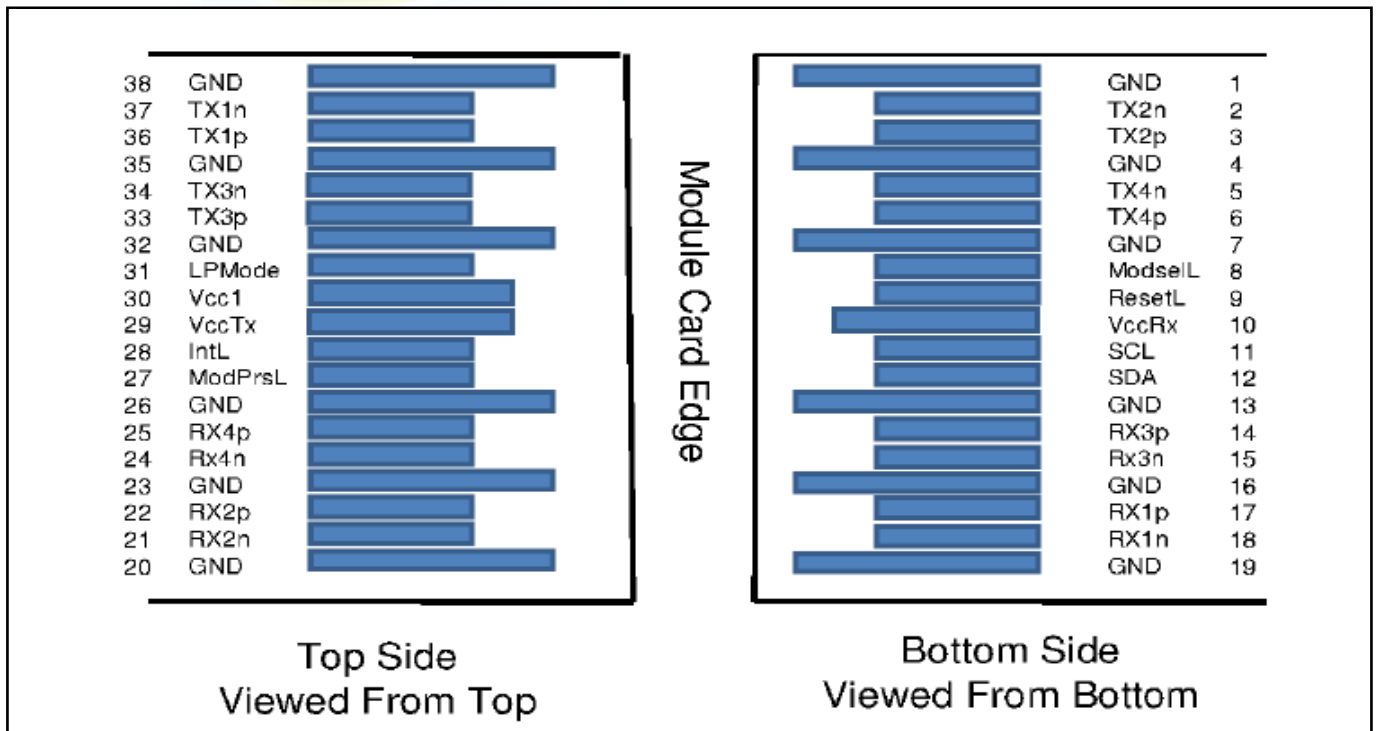
4.Electrical Characteristics

Parameter	Symbol	Min	Typical	Max	Unit
Data Input Differential Voltage	V_{in_pp}	200		1600	mV
Data Output Differential Voltage	V_{out_pp}	200		900	mV
Rise and Fall Times	Tr/Tf		25		ps
Bit Error Rate	BER		1E-15	1E-12	

5.Recommended Power Supply Circuit for the Host Board



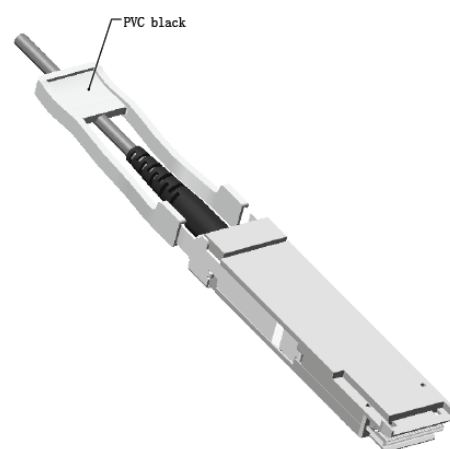
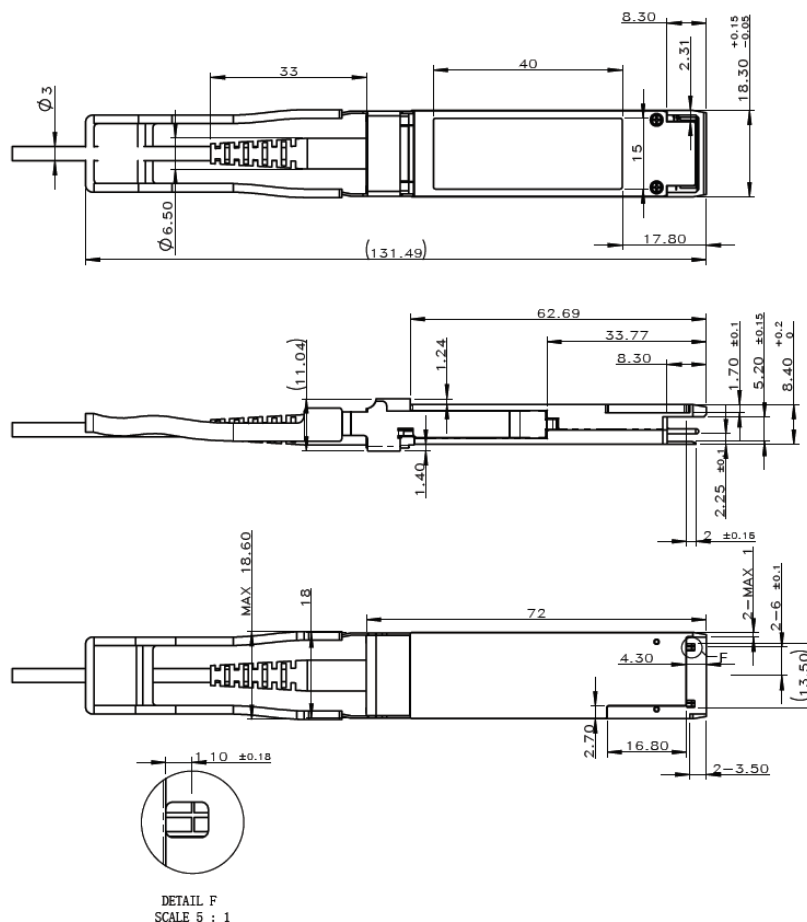
6.QSFP+ Connector Pin Definition



Pin	Logic	Symbol	Description
1		GND	Ground
2	CML-I	Tx2n	Transmitter Inverted Data Input
3	CML-I	Tx2p	Transmitter Non-Inverted Data Input
4		GND	Ground
5	CML-I	Tx4n	Transmitter Inverted Data Input
6	CML-I	Tx4p	Transmitter Non-Inverted Data Input
7		GND	Ground
8	LVTTL-I	ModselL	Module Select
9	LVTTL-I	ResetL	Module Reset
10		Vcc Rx	+3.3V power supply Receiver
11	LVC MOS-I/O	SCL	2-wire serial interface clock
12	LVC MOS-I/O	SDA	2-wire serial interface data
13		GND	Ground
14	CML-O	Rx3p	Receiver Non-Inverted Data Output
15	CML-O	Rx3n	Receiver Inverted Data Output
16		GND	Ground
17	CML-O	Rx1p	Receiver Non-Inverted Data Output
18	CML-O	Rx1n	Receiver Inverted Data Output
19		GND	Ground

Pin	Logic	Symbol	Description
20		GND	Ground
21	CML-O	Rx2n	Receiver Inverted Data Output
22	CML-O	Rx2p	Receiver Non-Inverted Data Output
23		GND	Ground
24	CML-O	Rx4n	Receiver Inverted Data Output
25	CML-O	Rx4p	Receiver Non-Inverted Data Output
26		GND	Ground
27	LVTTL-O	ModPrsL	Module Present
28	LVTTL-O	IntL	Interrupt
29		Vcc Tx	+3.3V power supply Transmitter
30		Vcc1	+3.3V power supply
31	LVTTL-I	LPMODE	Low Power Mode
32		GND	Ground
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input
34	CML-I	Tx3n	Transmitter Inverted Data Input
35		GND	Ground
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input
37	CML-I	Tx1n	Transmitter Inverted Data Input
38		GND	Ground

Mechanical Dimensions



Order Information

- The above specifications represent the typical performance of an O-Net 40Gbps QSFP+ AOC.
- Please contact our Sales to discuss your specific requirements.