

120G CXP to 3xQSFP+ AOC Cable

CXP active optical cable assemblies are fully duplex 12 channel cable assemblies that supports signal transmission rates up to 10.3 Gb/s per channel for distances from 2 to 100 meters using laser optimized advance high-performance multimode fiber (OM3). The CXP cable interface is based on the SFF-8632 and Infiniband industry standards and it is supporting 120G Ethernet.

The CXP to 3xQSFP cables are ideal for high density HPC signal transmission applications typically seen in most large data centers and in high computational applications. CXP cables support Infiniband SDR, DDR and QDR signal transmission performance and also support Fibre Channel 8G per channel transmission.

Features

- Compliant to SFF-8642: Mini Multilane Series: Shielded Integrated Connector, and IBTA Annex A6 CXP Interface Specification
- Compliant to InfiniBand Architecture Specification.
- Twelve independent Transmitters, and twelve independent Receivers, all operate at 10Gbps.
- Bi-directional operation, 12 × 10 Gbps per direction.
- Support transmission distance up to 100 meters on OM3 fiber
- 12ch 850nm VCSEL array
- 12ch PIN-detector array
- I2C communication bus
- Low power consumption CXP<2.5w, QSFP <1.5w
- Cable Length 1-100M



Application:

- Ethernet 40G, 100G
- Storage: DAS, SAN, NAS
- Hus, Switches, Routers, Server
- InfiniBand 12xSDR, 12xDDR, 12xQDR

CXP Interface Specification:

Parameter	Description
Module Form Factor	CXP
Channel Data Rate	Up to 10.3125Gbps
BER	10^{-12}
Supply Voltage	3.3V nominal
Management Interface Serial	I ² C(supports SFF8472)
Supply Current	500mA maximum
Operating Temperature	0~70°C

QSFP Interface Specification:

Parameter	Description
Module Form Factor	QSFP+(Supports SFF8436/SFF8472)
Channel Data Rate	Up to 40Gbps
BER	$<10^{-12}$
Supply Voltage	3.3V nominal
Management Interface Serial	I ² C(supports SFF8472)
Supply Current	180mA per end typical
Operating Temperature	0~70°C

Absolute Maximum Ratings:

Parameter	Symbol	Min	Max	Unit
Supply Voltage	Vcc	-0.3	3.6	V
Input Voltage	Vin	-0.3	Vcc+0.3	V
Storage Temperature	Tst	-20	85	°C
Case Operating Temperature	Top	0	70	°C
Humidity(non-condensing)	Rh	5	95	%

Recommended Operation Condition

Parameter	Symbol	Typical	Min	Max	Unit
Supply Voltage	Vcc	3.3	3.13	3.47	V
Case Operating Temperature	Tca		0	70	°C
Data Rate Per Lane	fd		2.5	10.3	Gbps
Fiber Bend Radius	Rb		3		cm
Humidity(non-condensing)	Rh		5	86	%

Specification

Parameter	Symbol	Typical	Min	Max	Unit
Differential input impedance	Zin	100	90	110	Ohm
Differential output impedance	Zout	100	90	110	Ohm
Differential input voltage amplitude	ΔV_{in}		300	1100	mVp-p
Differential output voltage amplitude	ΔV_{out}		500	800	mVp-p
Skew	Sw			300	ps
Bit Error Rate	BR			E-12	
Input Logic Level High	V _{IH}		2.0	VCC	V
Input Logic Level Low	V _{IL}		0	0.8	V
Output Logic Level High	V _{OH}		VCC-0.5	VCC	V
Output Logic Level Low	V _{OL}		0	0.4	V

Note: 1. BER= 10^{-12} ;PRBS 2³¹-1@10.3125Gbps.

2. Differential input voltage amplitude is measured between TxNp and TxNn.

3. Differential output voltage amplitude is measured between RxNp and RxNn.