

SFP+ AOC PRODUCTS

Driving Your Next Generation DataCenter

SFP+ Active Optical Cable

APPLICATIONS

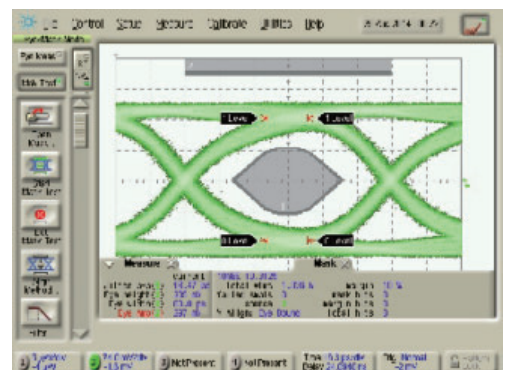
- 10 Gigabit Ethernet (10GbE)
- 4G and 8G Fiber Channel ,
Fibre Channel over Ethernet (FCoE)
- InfiniBand (QDR/DDR/SDR)
- Top of Rack (TOR) Switch
- Networked storage systems
- High Performance Computing
- Servers, switches, storage and NIC

STANDARDS COMPLIANCE

- SFF-8431
- SFF-8432
- SFF-8472
- RoHS

10Gtek SFP+ Active Optical Cables are hot-swappable, low-voltage cable assemblies that connect directly into SFP+ modules at both ends. These cables use a 20-position connector with active circuitry to increase distances and to improve EMI and reduce signal loss. 10Gtek's SFP+ Active Optical Cable transmits 10Gbps data in each direction over a loose tube fiber with distance up to 100m.

10Gtek AOC is SFP+ MSA compliance, low power consumption and lightweight, which can be used as an alternative solution to SFP+ passive and active copper cables, while providing improved signal integrity, longer distances, superior electromagnetic immunity and better bit error rate performance.



Typical Active Optical Cables Eye Pattern
10 meters

Performance Specifications:

Electrical					
Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage	V _{CC}	3.13	3.3	3.47	V
Supply Current	I _{CC}		60		mA
SFP+ Power Consumption			0.3	0.8	W
Bit Rate	BR	-	10.3125	-	Gbps
Rate Tolerance		-100	-	+100	ppm
Operating Temperature	T _C	0		+70	deg.C

Transmitter Electrical					
Parameter	Symbol	Min	Typ	Max	Unit
Optical Modulation Amplitude (OMA)	P _{OMA}		-1.5		dBm
Average Launch Power	P _{AVE}	-5		-1	dBm
Optical Wavelength	λ	840	850	860	nm
RMS Spectral Width	Δλ _{rms}			0.45	dB
Optical Extinction Ratio	ER	3	5.5		dB
Transmitter and Dispersion Penalty	TDP			3.9	dB
Relative Intensity Noise	RIN _{12OMA}			-128	dB/Hz

Receiver Electrical					
Parameter	Symbol	Min	Typ	Max	Unit
Receiver Sensitivity (OMA)10.3Gb/s	R _{SENS1}			-11.1	dBm
Stressed Receiver Sensitivity (OMA) 10.3Gb/s	R _{SENS2}			-7.5	dBm
Maximum Input Power	P _{MAX}	0.5			dBm
Wavelength Range	λ _C	840	850	860	nm
Receiver Reflectance	R _{rx}			-12	dB
LOS De-Assert	LOS _D			-14	dBm
LOS Assert	LOS _A	-30	-23		dBm
LOS Hysteresis		0.5			dB

General	
Module Form Factor(s)	SFP+(SFF8431/SFF8432)
Protocols supported	10G Ethernet
Channels	1 channels bi-directional
Channel Data Rate	Up to 10.3125 Gbps/channel
BER	< 10 ⁻¹² BER
Operating Optical Wavelength	850 nm
Cable Length	Up to 100m

Cable		
Parameter	Value	Remark
Type	OM3 Multimode Fiber Loose tube fiber	
Minimum Bend radius (mm)	30	
Cable diameter (mm)	3.0 ±0.15	
Cable length (m)	5, 10, 20, 50	Custom cable length

Ordering Information:

SFP+ Active Optical Cable Assemblies

Length	Data Rate	P/N
5 m	10Gbps	SFP-AOC-5M
10 m	10Gbps	SFP-AOC-10M
20 m	10Gbps	SFP-AOC-20M
50 m	10Gbps	SFP-AOC-50M