

10G-AOC-SFP

Active Optical Cable (AOC)



Key Features

- Cable Type: **Active Optical Cable (AOC)**
- Cable Configuration: **Point-to-Point**
- Connector Type: **SFP+ to SFP+**
- Supported Data Rate: **1.0625 Gbps - 10.52 Gbps**
- Maximum Distance: **100 m**
- AWG (Wire Gauge): **N/A**
- Fiber Type: **OM2 (1-100m)**
- DDM/DOM: **Supported**

Product Description

Our EDGEOPTIC 10G-AOC-SFP is a multi-vendor compatible 10G SFP+ active optical cable designed for high-performance 10 Gigabit Ethernet and Fiber Channel applications requiring extended reach beyond copper cable limitations. The 10G-AOC-SFP features point-to-point configuration with SFP+ connectors on both ends, utilizing embedded fiber optic technology to deliver reliable high-bandwidth connectivity up to 100 meters for data center interconnects, campus backbones, and inter-building connections.

The cable supports multi-rate operation from 1.0625 to 10.52 Gbps, accommodating various network protocols and legacy applications. For Ethernet deployments, the cable handles both Gigabit Ethernet at 1.25 Gbps and 10G Ethernet at 10.31 Gbps, providing backward compatibility for mixed-speed network environments. Fiber Channel support is comprehensive, including 1G FC at 1.0625 Gbps, 2G FC at 2.125 Gbps, 4G FC at 4.25 Gbps, 8G FC at 8.5 Gbps, and 10G FC at 10.52 Gbps, making the cable well-suited for storage area network connectivity across multiple generations of FC infrastructure.

The 10G-AOC-SFP operates at 850nm wavelength, utilizing VCSEL (Vertical-Cavity Surface-Emitting Laser) technology for transmission and PIN photodiode for receiving. The embedded multimode fiber supports distances up to 100 meters over OM2 fiber, providing significant reach advantages over copper alternatives. Because the optical fiber is permanently terminated within the cable assembly, there are no exposed fiber connectors to clean or protect, simplifying installation and maintenance compared to traditional optical patch cables with separate transceivers.



Active optical cables offer inherent immunity to electromagnetic interference, making them ideal for environments with significant electrical noise such as adjacent to power distribution units, motor drives, or industrial equipment. The lightweight and flexible construction allows for easier cable routing in congested pathways and reduced airflow obstruction compared to bulky copper bundles.

The cable operates from a +3.3V single power supply with maximum power consumption of 1W. The electrical interface conforms to SFP+ MSA and SFF-8431 specifications, ensuring broad compatibility with standard SFP+ host systems from multiple equipment vendors. Our 10G SFP+ AOC cables can be encoded for compatibility with over 80 different equipment brands.

The cable incorporates DDM/DOM (Digital Diagnostic Monitoring) functionality, providing real-time diagnostic data including transmitted and received optical power levels, module temperature, bias current, and supply voltage through the MSA-compatible interface. The cable operates within a 0 to 70°C temperature range with an MTBF rating of 1,000,000 hours.

Our 10G SFP+ active optical cable is CE/RoHS certified and compliant with product safety standards. Because our focus is providing top quality service, we perform comprehensive quality checks before delivery including optical parameter measurements, connector inspection tests, and SFP+ EEPROM memory data validation.

Technical Specifications

Specification	Value
Cable Type	Active Optical Cable (AOC)
Cable Configuration	Point-to-Point
Connector Type	SFP+ to SFP+
Supported Data Rate	1.0625 Gbps - 10.52 Gbps
Supported Ethernet Applications	10G Ethernet (10.31Gbps), Gigabit Ethernet (1.25 Gbps)
Supported Fiber Channel Applications	1G Fiber Channel (1.0625 Gbps), 2G Fiber Channel (2.125 Gbps), 4G Fiber Channel (4.25 Gbps), 8G Fiber Channel (8.5 Gbps), 10G Fiber Channel (10.52 Gbps)
Maximum Distance	100 m
Media Type	Multi-Mode Fiber (MMF)
Fiber Type	OM2 (1-100m)



Wavelength	850 nm
Transmitter Type	VSCEL Laser
Receiver Type	PIN photodiode
DDM/DOM	Supported
Temperature Range	Standard 0°-70°C
Power	+3.3V single power supply
Power Consumption (Max)	1 W
MTBF	1000000 hours
Compliance	CE, RoHS, SFP+ MSA, SFF-8431

Ordering Info

SKU	Description
10G-AOC-SFP-1	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 1m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-2	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 2m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-3	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 3m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-5	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 5m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-7	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 7m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-10	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 10m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-15	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 15m, MMF OM2, DDM, 0-70°C)



10G-AOC-SFP-20	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 20m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-25	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 25m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-30	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 30m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-50	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 50m, MMF OM2, DDM, 0-70°C)
10G-AOC-SFP-100	10G SFP+ to SFP+ Active Optical Cable (1.0625-10.52 Gbps, 100m, MMF OM2, DDM, 0-70°C)

Warranty

EDGE Optic's provides a limited warranty for **sixty (60) months** from Purchaser's receipt of the Equipment represented in this data sheet against defective design or workmanship.



Compatibility

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more than 100 vendor brands in data and telecom communications industry:

MS - General MSA	MS - EdgeCore	MS - KeyMile	MS - Ruckus
MS - Advantech	MS - EdgeWare	MS - KyLand	MS - Ruijie Networks
MS - Allied Telesis	MS - Eltex	LN - Lenovo	MS - Sandvine
AR - Arista	MS - Emulex	ML - Mellanox (NVIDIA)	MS - Silicom
MS - Arris	MS - Enterasys	ME - Meraki (Cisco)	MS - SolarFlare
AG - Avago	ER - Ericsson	MS - MikroTik	SW - Sonicwall
AV - Avaya	MS - EXFO	MS - MRV	MS - Sophos
MS - Barracuda	EX - Extreme Networks	NC - NEC	MS - Sumitomo
BR - Broadcom	MS - Finisar	MS - NetApp	MS - Supermicro
QL - Cavium (Qlogic)	FO - Fortinet	MS - Netgear	MS - Synology
MS - Ceragon	MS - Fujitsu	MS - Netinsight	MS - Telco Systems
CH - Checkpoint	HI - Hirschmann	NK - Nokia (Alcatel)	MS - TP-LINK
MS - Chelsio	HP - HP	NS - NSN	TM - Transmode
CN - Ciena	AU - HP Aruba	MS - OE Solutions	MS - Trendnet
CI - Cisco	HU - Huawei	MS - Oracle	MS - Ubiquiti Networks
MS - Comnet	IF - Infinera	MS - Palo Alto Network	MS - WatchGuard
MS - D-link	MS - Innolight	MS - Planet	WS - Waystream
MS - Dahua	IN - Intel	QL - Qlogic (Oracle)	MS - Zyxel
MS - DCN	MS - Ixia	MS - QNAP	XX - Other
DL - Dell	MS - JDSU	RD - RAD	
MS - DZS(Dasan-Zhone)	JU - Juniper	MS - RadWare	

Version Control

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CERTIFIED
ISO 9001



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