

# Fiber Optics Series

## SFP/SFP+/XFP/X2



### Features

- SFP, SFP+, XFP, X2
- Compliant with IEEE802.3z Gigabit Ethernet Std.
- Compliant with SDH STM-1/4/8/16/64, SONET OC-3/12/24/48/192 Std.
- Industry Std. Small Form Pluggable(SFP) Package
- Connector: LC(SFP, SFP+); SC(X2)
- Wavelength: 850nm VCSEL, 1310nm FP, 1550 nm DFB.
- Bit Rate: 155Mbps, 1.25Gbps, 2.67Gbps, 4.25Gbps, 8Gbps, 10Gbps, 16Gbps
- Transmission distance: 300m, 550m, 2km, 10km, 40km, 70km ~ 140km
- Power supply: 3.3 Voltage
- Class 1 laser product complies with EN60825-1

## 25G SFP28



### Features

- Operating temperature: 0~70°C
- Compliant with IEEE802.3
- Compliant with SFF-8431, SFF-8472
- Up to 25.78Gbps
- Maximum Power Consumption 1.5W
- 25G Electrical Interface(OIF CEI-28G-VSR)
- Wavelength: 850nm VCSEL, 1310nmDFB, EML,
- 1270/1330nm
- Support Links up to:  
SR: 100m, LR: 10km, ER: 40km  
BWDM: 10km, 40km  
CWDM: 10km
- Industrial temperature available
- All-metal housing of superior EMI performance

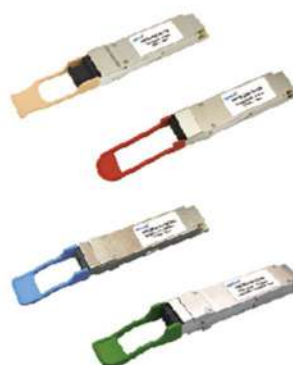
## Copper SFP/SFP+



### Features

- Compliant with IEEE802.3u, 802.3z, 802.3ab
- Compliant with SFF-8431, SFF-8432
- Die-cast metal housing
- Auto-sense MDI & MDI-S
- Support SGMII interface (for 10/100/1000Base-T operation)
- Compatible:  
Cat5 cable in excess of 100M for 1000Base-T  
Cat6A/7 cable in excess of 30M for 10G-T
- Power supply: 3.3 Voltage
- Hot pluggable
- RJ45 connector

## 40G/100G Series



### Features

Operating temperature: 0~70°C

#### 40G QSFP+

- Compliant with SFF-8436
- Compliant with 40G Ethernet IEEE 802.3ba 40GBASE Standard
- MTP/MPO Connector: SR4, IR4(PSM), LR4(PSM)
- LC Duplex Connector: LR4, IR4
- Support Links up to:  
SR4: 300m / IR4: 2km / LR4: 10km / ER4: 40km  
BWDM: 150m

#### 100G QSFP28

- Compliant with SFF-8665
- Up to 25Gbps data rate per channels
- MTP/MPO Connector: SR4, PSM4
- LC Duplex Connector: LR4, ER4 Lite, CWDM4
- Support Links up to:  
SR4: 100m / CWDM4, PSM4: 2km / LR4: 10km  
ER4: 30km / BWDM: 2km

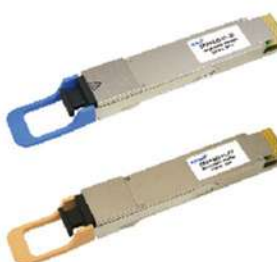
## BWDM Transceiver



### Features

- 1G, 10G, 25G, 40G & 100G
- Compliant with IEEE802.3z, 802.3ae, 802.3cc, 802.3ba
- Wavelength: 1310/1550nm, 1310/1490nm, 1510/1570nm, 1270/1330nm, 1490/1550nm
- Transmission distance: 10km, 20km, 40km, 60km, 80km~120km
- Power supply: 3.3 Voltage
- Connector: Simplex LC connector
- Class 1 laser product complies with EN60825-1

## 400G QSFP-DD



### Features

- Operating temperature: 0~70°C
- Compliant with 40G Ethernet IEEE 802.3bs
- Wavelength: 850VCSEL, 1310nm EML
- Single 3.3V power supply
- MTP/MPO Connector: SR8, DR4, DR4+, LC Duplex Connector: LR4, FR4
- Support Links up to:  
SR8: 100m / DR4: 500m / DR4+: 2km  
FR4: 2km / LR4: 10km

## 40G/100G Repeater



### Features

- Supports the remote management included the Web GUI, Console, SNMP management via NMC Card
- Supports 100G/40G repeater mode and loopback mode
- 100GBASE-SR4 / LR4 / ER4 lite
- 40GE-SR4 / LR4 / ER4
- Extending the signal transmit distance with FEC function
- LLR function for remote trouble shooting
- Hot pluggable (module and interface)
- 3R: Re-amplify, Re-Shape, Re-Clock
- Stand alone support(Non-management)
- Dual AC or dual DC power supplier

## Media Converter Rack



### Features

- Complies with IEEE802.3, 802.3u, 802.3ab 802.3z
- 1000Base-SX/LX/LH standard
- 10/100M, 10/100/1000M, 1000BASE, 10Gbps
- MDI/MDI-X Auto Negotiation
- Indication light: PWR, Link/Act, FX 1000M, TX 10/100/1000M
- Connector: Simplex or Duplex SC, LC, ST, FC

#### Rack:

- 2U, 19" Rack
- 14 slots for media converter module
- Power AC 110~240 VAC, DC -48 VDC
- Provides central and redundant power to each individual converter



# High Speed Cable Assemblies

## 10G/25G/40G/100G DAC Series



### Features

- Operating temperature: 0~70°C
- Compliant with IEEE802.3ae, 802.3ba, 802.3bj, 802.3by
- Compliant with SFF-8431, SFF-8432, SFF-8436 SFF-8665
- Compliant with RoHS
- Support in-band 4xSDR, DDR, QDR, EDR, FDR
- Hot Pluggable
- Link up length:  
10G SFP+ DAC: ~15m  
25G SFP28 DAC: ~5m  
40G QSFP+ DAC: ~15m  
56G FDR DAC: ~5m  
100G QSFP28 DAC: ~5m

## 10G/25G/40G/100G AOC Series



### Features

- Operating temperature: 0~70°C
- Compliant with SFF-8431, SFF-8432, SFF-8436, SFF-8665
- Compliant with RoHS
- Low power consumption
- Hot Pluggable electrical interface
- I2C standard management interface
- Differential AC-coupled high speed data interface
- Single 3.3V power supply
- Up to 100m OM3 MMF transmission

## 40G/100G to 4x10G/25G fanout DAC Series



### Features

- Operating temperature: 0~70°C
- Low crosstalk
- All-metal housing for superior EMI performance
- I2C based two-wire serial interface for easy control and monitoring
- EMI/EMC performance
- **QSFP+ to 4x10G SFP+ DAC**
- Compliant with IEEE802.3ba
- Compliant with SFF-8436, SFF-8431
- Copper link length up to 10m(Active limiting)
- AC coupling of PECL signals
- **QSFP28 to 4x25G SFP28 DAC**
- Compliant with IEEE802.3bj, IEEE802.3by
- Compliant with SFF-8665, SFF-8402
- Copper link length up to 5m
- 4 independent duplex channels operating at 25G
- AC coupled inputs and outputs
- 100 Ohm differential impedance

## 40G/100G to 4x10G/25G fanout AOC Series



### Features

- Operating temperature: 0~70°C
- Low power consumption<2.5W
- Low crosstalk
- Hot Pluggable
- **QSFP+ to 4x10G SFP+ AOC**
- Compliant with QSFP+ and SFP+ MSA
- 4 independent duplex channels operating at 10G
- Up to 20m MMF OM3
- **QSFP28 to 4x25G SFP28 AOC**
- Compliant with QSFP28 and SFP28 MSA
- 4 independent full-duplex channels
- Support 103.1Gbps aggregate bit rate
- Up to 20m / 30m with OM3 / OM4 MMF
- 4x25G electrical interface(OIF CEI-28G-VSR) for QSFP28 terminal

## 400G QSFP-DD DAC Series



### Features

- Operating temperature: 0~70°C
- Compliant with QSFP-DD MSA
- Compliant with Acc. IEEE802.3cd
- Supporting data rate/lane: up to 25G(NRZ) or 50G(PAM4)
- **QSFP-DD fanout DAC (PAM4 only)**
- QSFP-DD to 8x SFP56
- QSFP-DD to 2x QSFP56
- QSFP-DD to 4x QSFP28
- Up to 3m
- **QSFP-DD Active DAC**
- QSFP-DD to QSFP-DD DAC
- Up to 10m

## 400G QSFP-DD DAC Series



### Features

- Operating temperature: 0~70°C
- Compliant with QSFP-DD MSA
- Compliant with IEEE 802.3bs
- 850nm VCSEL
- Lower power consumption<3.5W
- Up to 70 / 100m using OM3 / OM4 MMF transmission
- Hot pluggable electrical interface
- Up to 25G / 50G per channel

## Patch Cord



### Features

- All patch cords are available in PC or APC types
- Customizable length
- Cable type: single mode, multi mode
- Fiber type: simplex, duplex
- Connector: SC, LC, MPO, MTP, ST, FC, MTRJ
- Patch cords have variety of OM1, OM2, OM3, OM4 and OS1
- MPO/MTP: 12/24 core, Type A/B/C
- Extended warranty
- Characteristics: LSZH, OFNP, OFNR

## 10G/25G/40G/100G 400G Loopback



### Features

- Operating temperature: 0~70°C
- Complies with SFF-8431, SFF-8432, SFF-8436, SFF-8665, QSFP-DD MSA SONET, SDH, GBE, FC
- Custom configurations available
- Customizable power consumption
- Customizable signal attenuation
- Support 10/25/40/100/400Gbps total data rate
- Hot pluggable MSA foot print
- Supports digital serial ID and user memory
- Loop data from transmit to receive ports for testing
- Burn-in test
- Field troubleshooting