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ETU-LINK TECHNOLOGY CO., LTD.

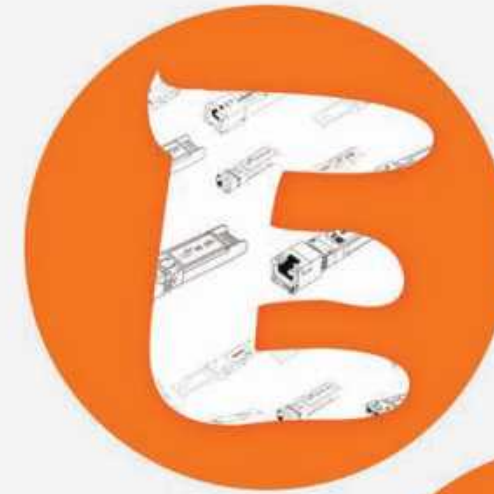
OUR CONTINUAL PURSUIT IS TO WIN YOUR MOVING

Do you know

Welcome

To

ETU-LINK
易天·光通信



LINK?

Contents

400G Optical Transceiver
400G QSFP-DD

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25G SFP28 LR

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QSFP+ TO SFP+ Converter
QSFP+ TO SFP+ Converter

SFP
2.5G SFP Single Fiber
2.5G SFP Dual Fiber
1.25G SFP Single Fiber
1.25G SFP Dual Fiber
155M SFP Single Fiber
155M SFP Dual Fiber
SFP Copper Transceiver

EPON OLT
EPON OLT PX20+
EPON OLT PX20++
EPON OLT PX20+++Enhanced

GPON OLT
GPON OLT B+
GPON OLT C+
GPON OLT C++Enhanced

Optical Components
Patch Cord
Pigtail
Adapter

Media Converter
10/100M Dual Fiber
10/100M Single Fiber
1000M Dual Fiber
1000M Single Fiber
10/100/1000M Dual Fiber
10/100/1000M Single Fiber
SFP Media Converter
10G SFP+ Media Converter

*Do you know
our team?*

Contents

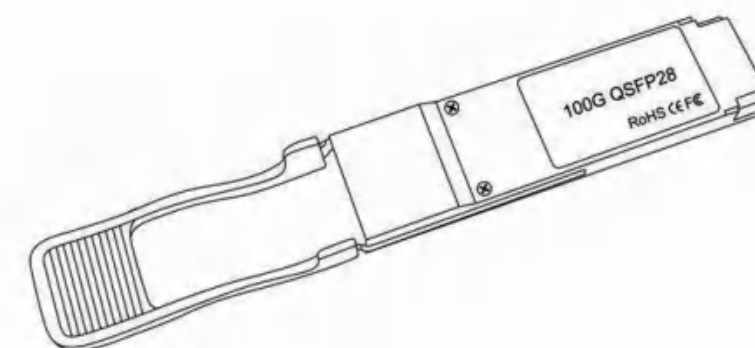
Who We Are?

ETU-Link Technology Co., Ltd was established in 2012, business focuses on developing **optical network modules** for **data centers** and **telecom operators**.

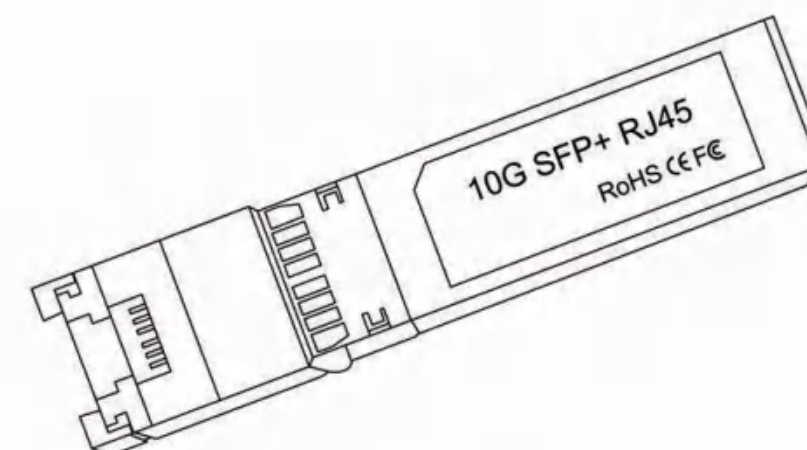
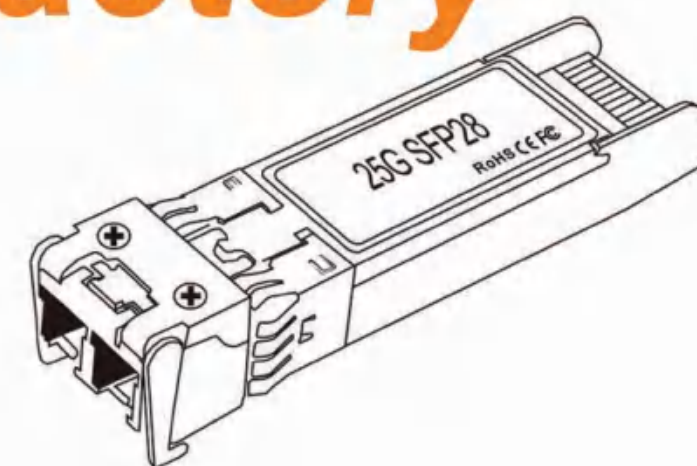
Continuously invests in R&D and **Automatic Production** processes to ensure continued innovation and market relationship with development of world class products. This investment allowed us to become an **400G, 200G and 100G Market provider** and we are proud to be treated by our customers as an important and trusted strategic transceiver partner.

ETU Team develop products that meet different customer's requirements with best-in-class quality, power and optical performance. This is enabling our customers to shorten their time to market and increase market share. We are uniquely positioned to provide extensive hardware and firmware interoperability testing to help the OEM partners.

The ETU sales team loves nothing more than to support the customer on the specific projects. We care about all requirements and can often be found working out of hours to communication with the customer in different demand .



Let's see the factory



/ Company Show

Production Department



*Do you learn
ETU Exhibition?*



ECOC 2017
Sweden Gothenburg



SVIAZ 2019
Russia Moscow



CIOE 2022
China Shenzhen



ECOC 2018
Ireland Dublin



Convergence 2017
India Delhi



CommunicAsia 2019
Singapore

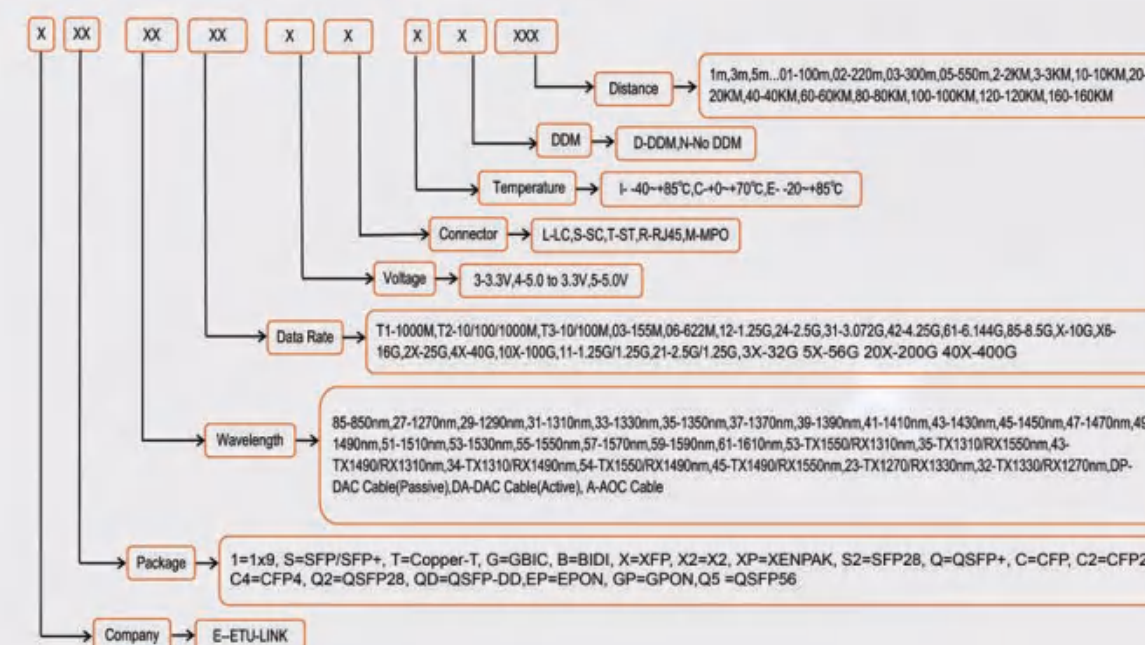
*Do you worry about
The quality?*

Certifications

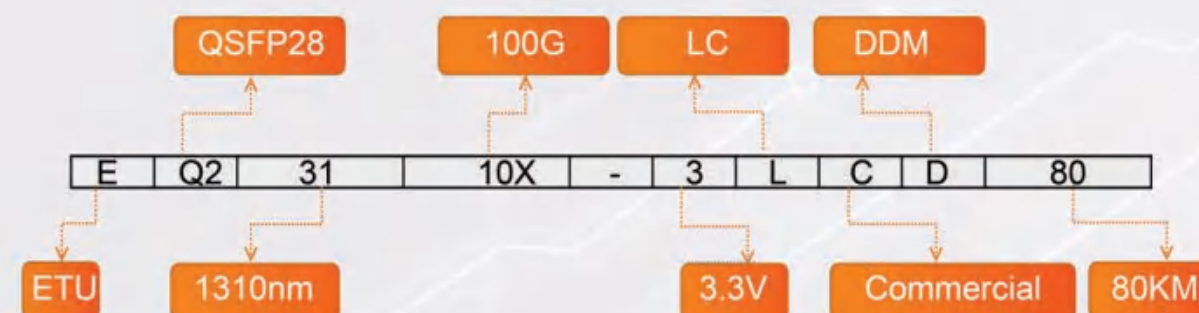


The Naming Rule

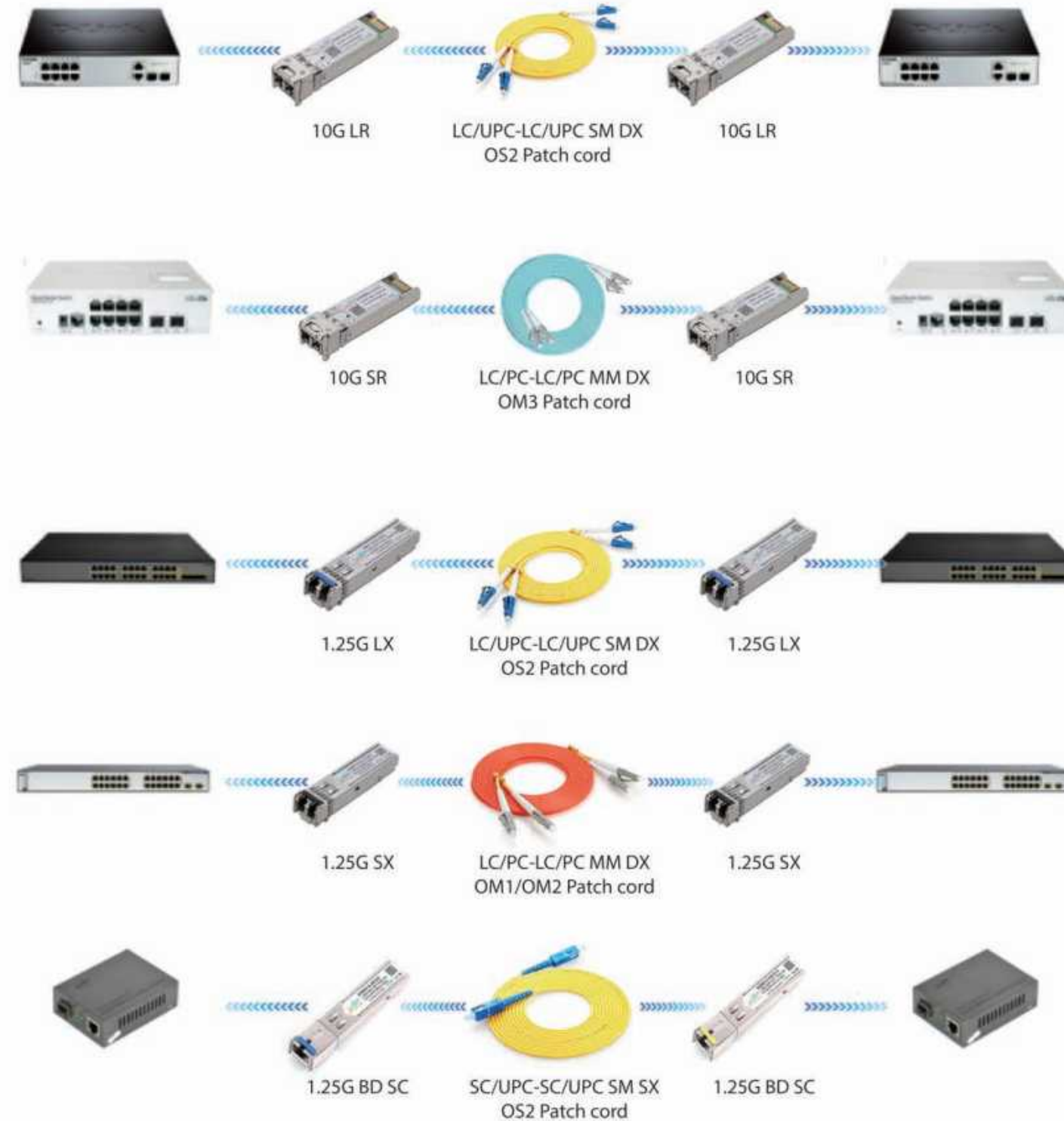
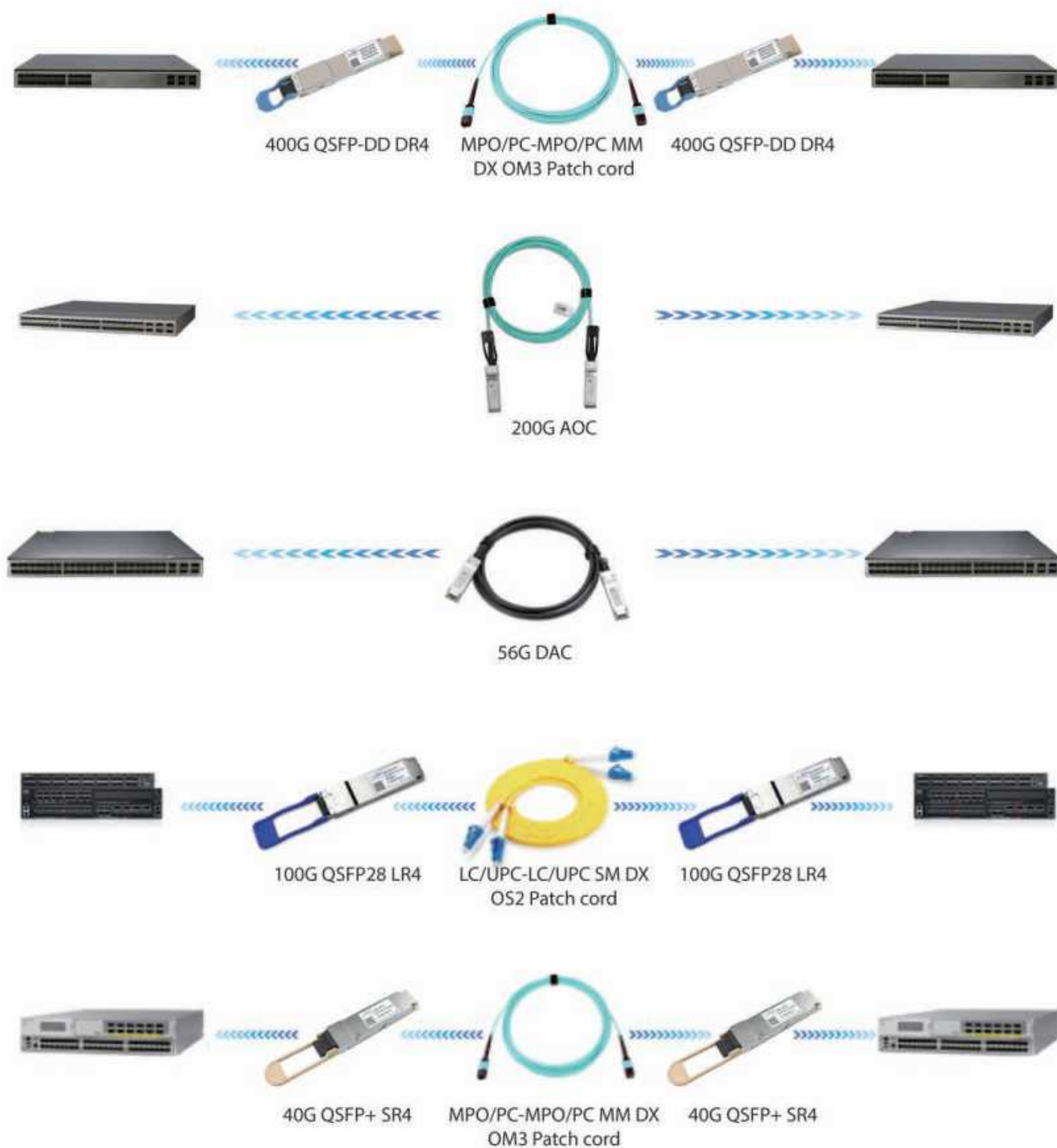
ETU-LINK Product Model Naming Rule



For Example: EQ23110X-3LCD80



The Installation Guide



Notes: If the module is not matched with the patch cord properly, the product will not working.

Products Processing

The Flow of Laser Production



- 01 Metal Device Cleaning
- 02 Assembling
- 03 Laser Spot Welding
- 04 Emission Coupling
- 05 End Face Cleaning
- 06 Initial Launch Testing
- 07 Power Control
- 08 Reception Coupling
- 09 Viscose Baking
- 10 Warm Evidence-based
- 11 Spectral Testing
- 12 Packaging

The Production Processing of SFP



- 01 Cutting Feet
- 02 Welding
- 03 Assembling
- 04 Debugging
- 05 Cleaning End Face
- 06 Aging
- 07 Distance Testing
- 08 QC
- 09 Switch Testing
- 10 Write Code and Labeling
- 11 Product Final Testing
- 12 Buckle Lock
- 13 Cleaning
- 14 Packaging

Mounting and Dismounting of Optical Modules

01 Mounting



02 Dismounting



Fault Analysis and Solution

Phenomenon	Preliminary Analysis	Investigation	Solution
Indicator light no lighting	Compatibility	※ Checking the Tx port by optical power meter if has Tx power. ※ Input device command to check if the DDM can be read.	※ There is no optical power output and the DDM information invalid, check with the vendor if write the right code for device.
Tx power normally working, no communication	Optical path break down	※ Check the fiber connected correctly or not? ※ Check whether the optical fiber section/ SFP port is polluted or not? Polluted fiber section/ SFP	※ Correct the right connection way. ※ Clean the patch cord with dust-free paper or use the cleaner to clean the SFP port.
Link down	Matching faulty	※ Check the optical module if mach the switch port, such as data rata, distance, and singe fiber SFP/ dual fiber SFP.	※ Replace the suitable optical module.

Product Comparison

Single Fiber VS Dual Fiber Media Converter

Advantage: Effectively control the fiber cost.



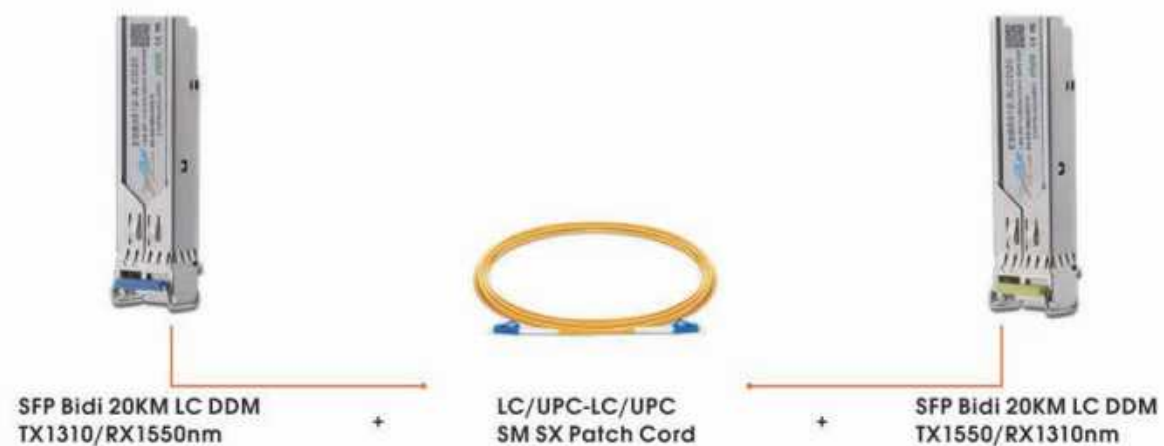
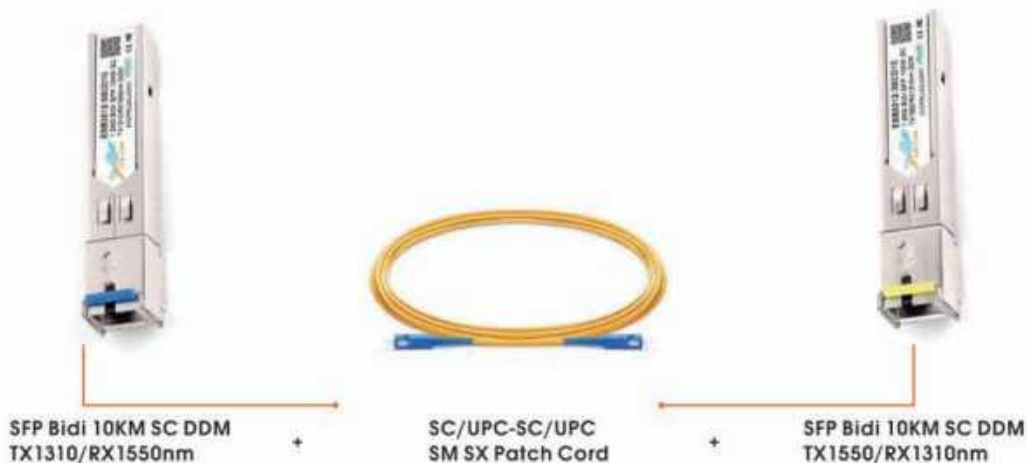
Single Fiber Media Converter A + SC/UPC-SC/UPC SM SX Patch Cord + Single Fiber Media Converter B

Advantage:
Dual core fiber, it will be no worried when one of them meet problem.



Dual Fiber Media Converter + SC/UPC-SC/UPC SM DX Patch Cord + Dual Fiber Media Converter

Single Fiber VS Dual Fiber SFP



Single Mode VS Multimode SFP



Tips:

The fiber need to match the corresponding SFP, or else it will be no working.
Single mode SFP matches with single mode patch cord;
Multi mode SFP matches with multi mode patch cord.

40G QSFP+ Modules VS DAC/AOC Cable



- ① DAC/AOC installation is more convenient than QSFP+ modules with patch cord.
- ② Compare with QSFP modules, DAC/AOC occupy absolute cost advantage.

Product List

400G DR4 Transceiver



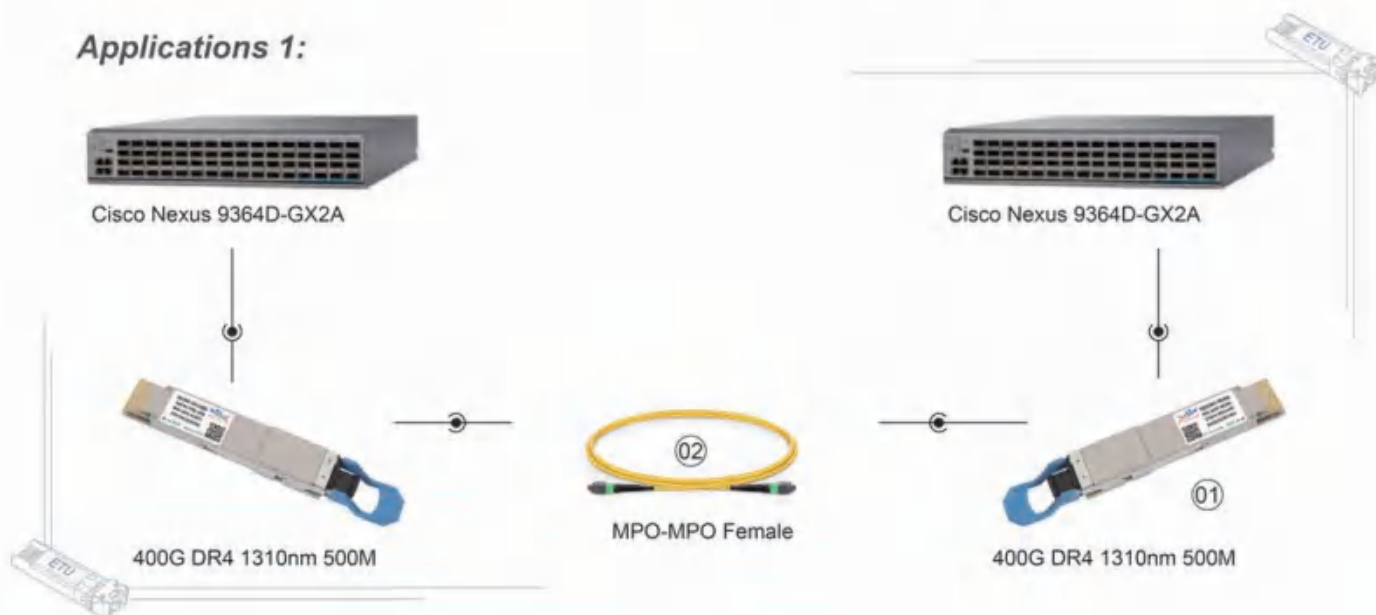
Features

- Compliant with IEEE802.3bs standard: 400GAUI-8 electrical interface
- Compliant with IEEE 802.3bs standard:400GBASE-DR4 optical interface
- Compliant with QSFP-DD MSA HW Rev 5.0 Type 2 housing with MPO-12 connector
- Compliant with QSFP-DD CMIS Rev 4.0
- Supports 3dB channel insertion loss
- Maximum power consumption 12W
- Case operating temperature 0°C to 70°C
- Two wire serial Interface with digital diagnostic monitoring

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EQD3140X-3MCD05	400G	DR4 QSFP-DD	1310nm	500M	-2.9~4	0~70	<-4.4	MPO	EML+PIN
EQDxx40X-3LCD10	400G	LR4 QSFP-DD	1310nm	10KM	-9~5.1	0~70	<1.4	LC	EML+PIN

Applications 1:



Item No	ETU PN	Description
①	EQD3140X-3MCD05	400G DR4 1310nm 500M DDM
②	Patch cord	MPO-MPO Female OS2 TypeB 12core

100G QSFP28 Transceiver



Features

- Digital diagnostics monitoring interface
- Duplex LC optical receptacle
- No external reference clock
- Single 3.3 V power supply
- Case operating temperature range:0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EC28510X-3MCD01	100G	CFP2 SR10	850nm	100M	-8.4~2.4	0~70	<-10.3	MPO	VCSEL+PIN
EC2xx10X-3LCD10	100G	CFP2 LR4	L WDM	10KM	-4.3~4.5	0~70	<-8.6	LC	DFB+PIN
EQ28510X-3MCD01	100G	QSFP28 SR4	850nm	100M	-8.4~3.4	0~70	<-10.3	MPO	VCSEL+PIN
EQ23110X-3LCD10	100G	QSFP28 LR4	1310nm	10KM	-4.3~4.5	0~70	<-8.6	LC	DFB+PIN
EQ23110X-3MCD10	100G	QSFP28 PSMLR4	1310nm	10KM	-5~2.0	0~70	<-11.4	MPO	DFP+PIN
EQ23110X-3LCD40	100G	QSFP28 ER4	1310nm	40KM	-2.9~4.5	0~70	<-15	LC	EML+APD
EQ23110X-3LCD80	100G	QSFP28 ZR4	1310nm	80KM	0-2	0~70	<-16.8	LC	EML+APD

Applications 2:



Item No	ETU PN	Description
①	EQ23110X-3LCD80	100G QSFP28 ZR4 1310nm 80KM LC DDM
②	Patch cord	LC/UPC-LC/UPC SM DX OS2

40G QSFP+ Transceiver



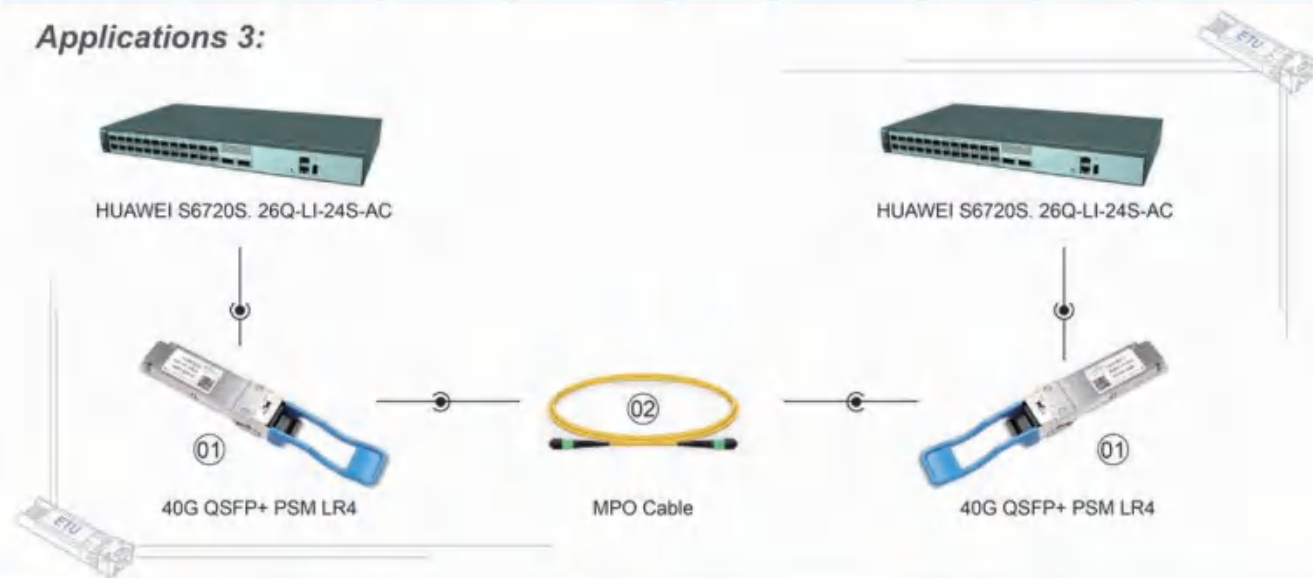
Features

- Hot-pluggable QSFP form factor
- Supports 41.2Gb/s aggregate bit rates
- Power dissipation < 3.5W
- Commercial case temperature range 0°C to 70°C
- Single 3.3V power supply
- XLPP electrical interface
- Built-in digital diagnostic monitoring functions, including Tx/Rx power

Product Information

Model No.	Data Rate	Package	Abbreviation	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EQ854X-3MCD01	40G	QSFP+	SR4	850	100M	-7.6~0.5	0~70	<-9.5	MPO	VCSEL+PIN
EQ854X-3MCD03	40G	QSFP+	ESR4	850	300M	-7.6~1	0~70	<-9.9	MPO	VCSEL+PIN
EQ314X-3MCD2	40G	QSFP+	IR4	1310	2KM	-7.6~1	0~70	<-9.9	MPO	DFB+PIN
EQxx4X-3LCD2	40G	QSFP+	LX4	4*10 CWDM	2KM	-7~2.3	0~70	<-11.5	LC	DFB+PIN
EQxx4X-3LCD10	40G	QSFP+	LR4	4*10 CWDM	10KM	-7~2.3	0~70	<-11.5	LC	DFB+PIN
EQ314X-3LCD10	40G	QSFP+	LR4	1310	10KM	-5.5~1.5	0~70	<-12.5	LC	DFB+PIN
EQxx4X-3LCD30	40G	QSFP+	Lite ER4	CWDM	30KM	-7~2.3	0~70	<-11.5	LC	DFB+PIN
EQxx4X-3LCD40	40G	QSFP+	ER4	CWDM	40KM	-2.7~4.5	0~70	<-16.8	LC	DFB+PIN
EQB854X-3LCD01	40G	QSFP+ Bidi	SR4-BD	850	150M	-4~5	0~70	<-11	LC	VCSEL+PIN
EQ314X-3MCD10	40G	QSFP+	PSM LR4	1310	10KM	-5.5~1.5	0~70	<-12.5	MPO	DFB+PIN
EQ314X-3LCD40	40G	QSFP+	ER4	1310	40KM	-2.7~4.5	0~70	<-16.8	LC	DFB+PIN
EQ314X-3LCD80	40G	QSFP+	ZR4	1310	80KM	+4~-7	0~70	<-6	LC	DFB+APD

Applications 3:



Item No	ETU PN	Description
①	EQ314X-3MCD10	40G QSFP+ PSM LR4 1310nm 10KM MPO
②	MPO Cable	SM 12core MPO/APC MPO/APC Female 3.0mm LSZH type B

25G SFP28 Transceiver



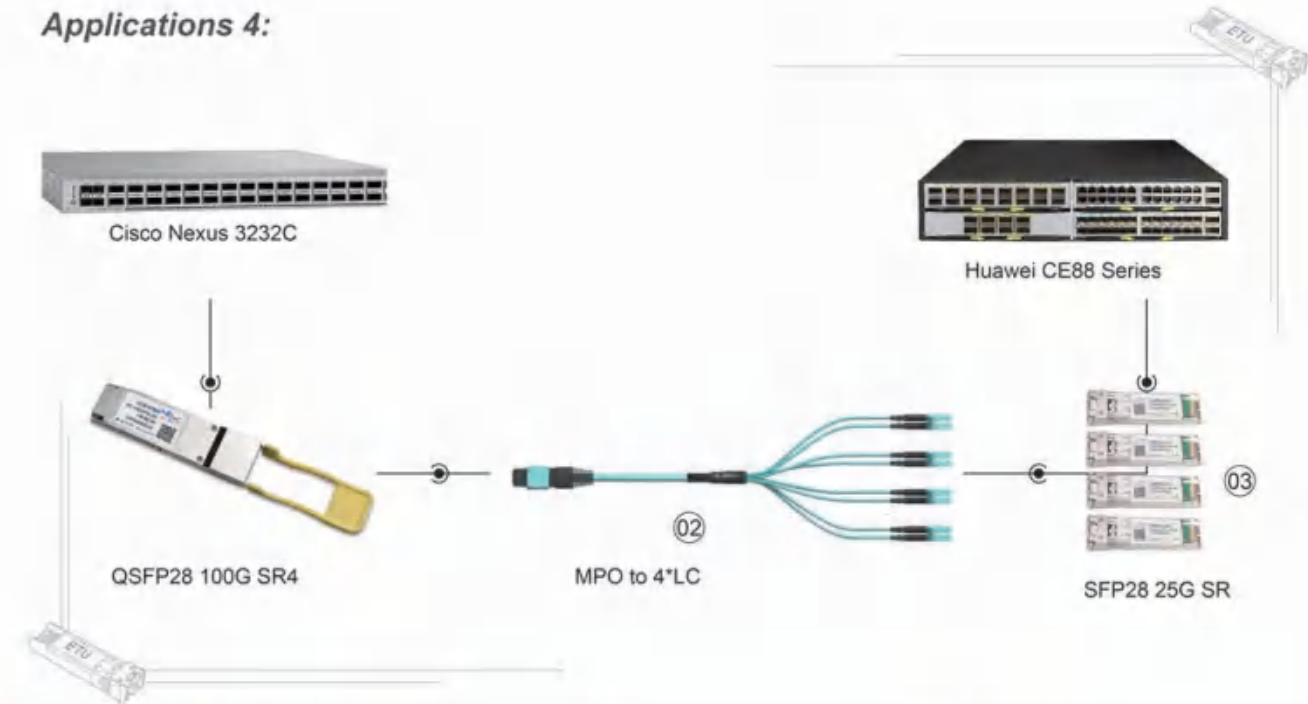
Features

- Supports 25Gbps data rate
- Internal CDR on both transmitter and receiver channel
- Hot-pluggable SFP28 form factor
- Duplex LC receptacle
- Single 3.3V power supply
- Digital diagnostics functions are available via the I2C interface
- ROHS 6 compliant
- Case operating temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES2852X-3LCD01	25G	SFP28	850	100M	-8.4~2.4	0~70	<-10	LC	VCSEL+PIN
ES2312X-3LCD10	25G	SFP28	1310	10KM	2~3	0~70	<-6.8	LC	DFB+PIN

Applications 4:



Item No	ETU PN	Description
①	EQ28510X-3MCD01	100G QSFP28 SR4 850nm 100M MPO
②	Patch Cord	1M MPO Female to 4 LC PC Duplex 8 Fibers OM3 Type B
③	EQ28510X-3MCD01	25G SFP28 850nm 100M

Active Optical Cable

200G QSFP56 AOC



Features

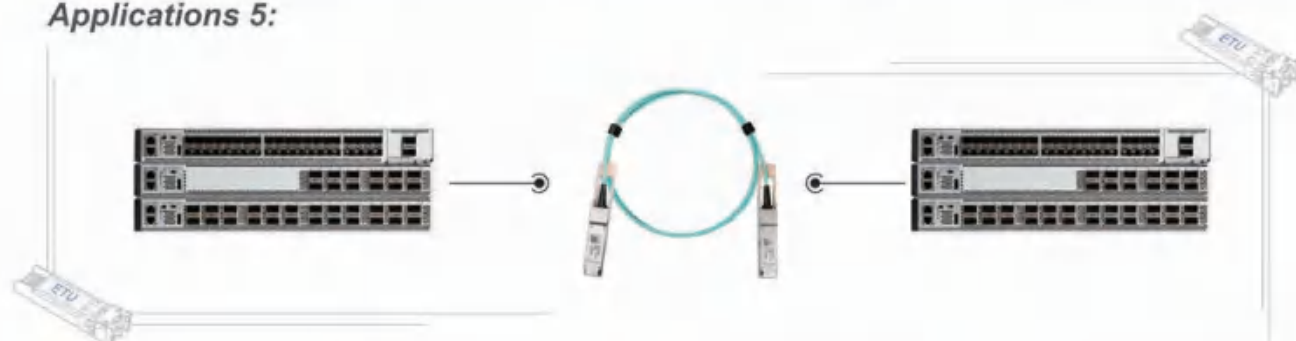
- Supports IBTA InfiniBand HDR
- Up to 200Gb/s data rate
- 4x 50Gb/s PAM4 modulation
- SFF-8665 compliant QSFP56 port
- SFF-8636 compliant I2C management
- Single 3.3V power supply
- 4.5W power dissipation each end, with retiming
- Operating case temp Commercial: 0°C to +70 °C
- RoHS compliant

Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
EQ5A20X-33CD1	200Gbps	OM3	3.0mm	1M
EQ5A20X-33CD3	200Gbps	OM3	3.0mm	3M
EQ5A20X-33CD5	200Gbps	OM3	3.0mm	5M
EQ5A20X-33CD7	200Gbps	OM3	3.0mm	7M
EQ5A20X-33CD10	200Gbps	OM3	3.0mm	10M
EQ5A20X-33CD15	200Gbps	OM3	3.0mm	15M
EQ5A20X-33CD20	200Gbps	OM3	3.0mm	20M
EQ5A20X-33CD25	200Gbps	OM3	3.0mm	25M
EQ5A20X-33CD30	200Gbps	OM3	3.0mm	30M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 5:



Item No	ETU PN	Description
01	EQ5A20X-33CD1	200G QSFP56 to QSFP56 AOC Cable 1M

100G QSFP28 AOC



Features

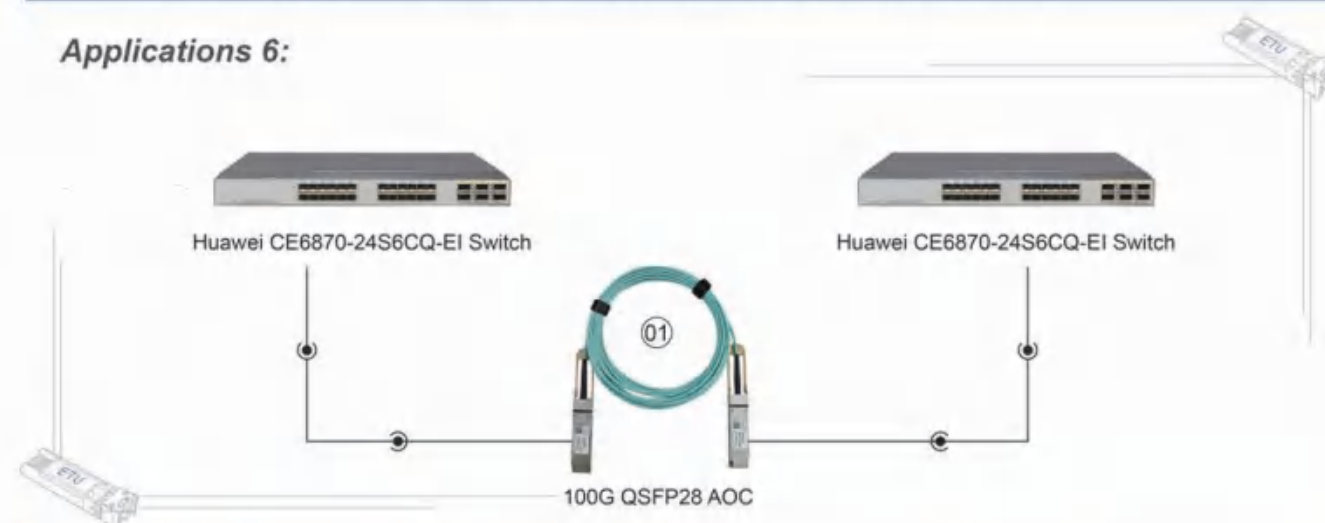
- Four-channel full-duplex active optical cable
- Reliable VCSEL array technology using multi-mode fiber
- Available in standard lengths of 3, 5, 10, 15, 20, 30, 50,70m
- Low power consumption <3.5W
- Commercial case temperature range: 0°C to 70°C
- 3.3V power supply voltage
- ROHS 6 compliant
- Hot pluggable QSFP form factor

Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
EQ2A10X-33CD1	100Gbps	OM3	3.0mm	1M
EQ2A10X-33CD3	100Gbps	OM3	3.0mm	3M
EQ2A10X-33CD5	100Gbps	OM3	3.0mm	5M
EQ2A10X-33CD7	100Gbps	OM3	3.0mm	7M
EQ2A10X-33CD10	100Gbps	OM3	3.0mm	10M
EQ2A10X-33CD15	100Gbps	OM3	3.0mm	15M
EQ2A10X-33CD20	100Gbps	OM3	3.0mm	20M
EQ2A10X-33CD25	100Gbps	OM3	3.0mm	25M
EQ2A10X-33CD30	100Gbps	OM3	3.0mm	30M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 6:



Item No	ETU PN	Description
01	EQ2A10X-33CD5	100G QSFP28 to QSFP28 AOC Cable 5M

40G QSFP+ AOC

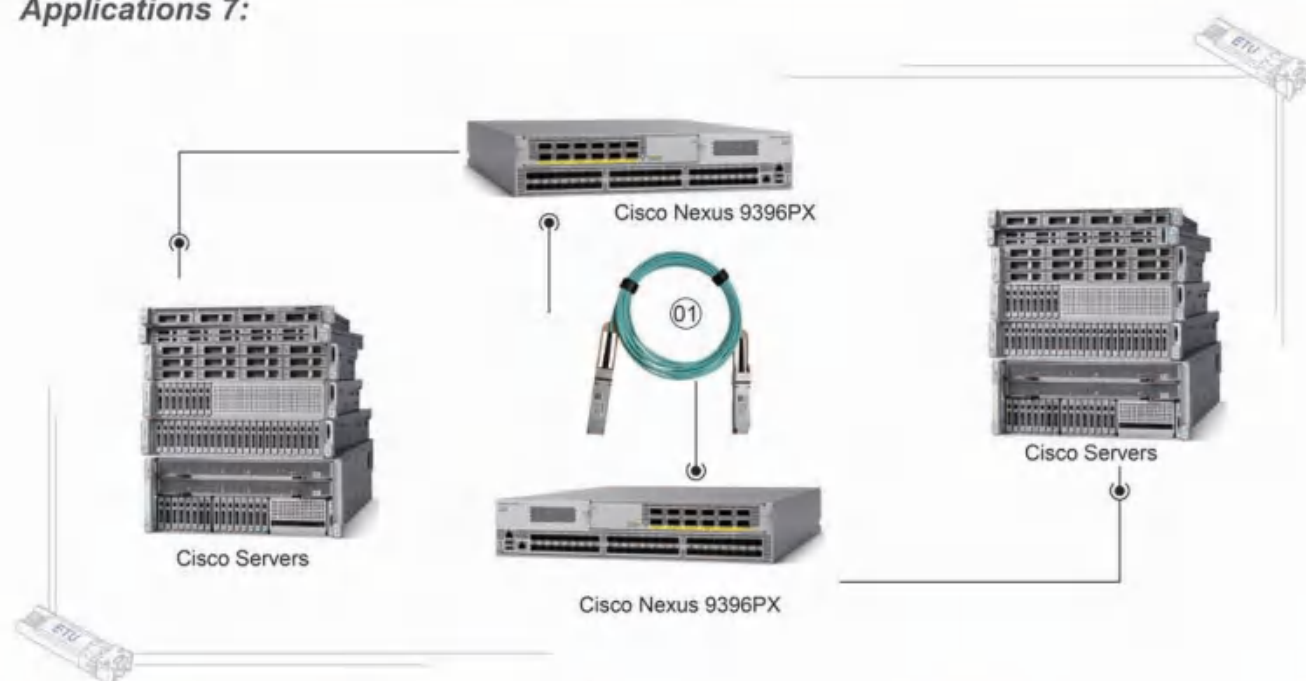
	Features - Four-channel full-duplex active optical cable - Transmission data rate up to 11.3Gbit/s per channel - Reliable VCSEL array technology using multi mode fiber - Available in standard lengths of 3, 5, 10, 15, 20, 30, 50, 100m - Low power consumption <1.5W - Commercial case temperature range: 0°C to 70°C 3.3V power supply voltage - ROHS 6 compliant - Hot pluggable QSFP form factor
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Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
EQA4X-33CD1	40Gbps	OM3	3.0mm	1M
EQA4X-33CD3	40Gbps	OM3	3.0mm	3M
EQA4X-33CD5	40Gbps	OM3	3.0mm	5M
EQA4X-33CD7	40Gbps	OM3	3.0mm	7M
EQA4X-33CD10	40Gbps	OM3	3.0mm	10M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 7:



Item No	ETU PN	Description
01	EQA4X-33CD1	40G QSFP+ to QSFP+ AOC Cable 1M

40G QSFP+ to 4*10G SFP+ AOC

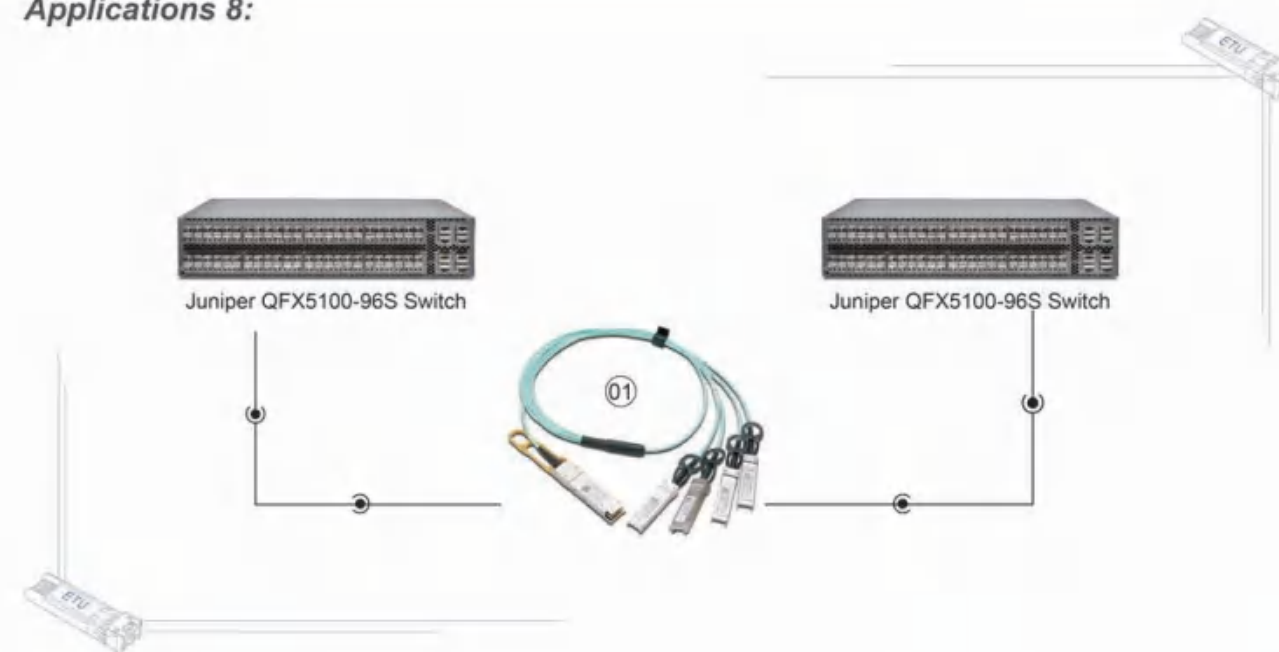
	Features - Electrical interface compliant to QSFP+ connector (SFF-8436) and SFP+ connectors (SFF-8431) - Hot pluggable 850nm VCSEL transmitter, PIN photo-detector receiver - Up to 30m on OM2 MMF - Up to 100m on OM3 MMF - Commercial case temperature range: 0°C to 70°C - All-metal housing for superior EMI performance - ROHS compliant (lead free)
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Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
EQA4X-34S3CD1	40Gbps	OM3	3.0mm	1M
EQA4X-34S3CD3	40Gbps	OM3	3.0mm	3M
EQA4X-34S3CD5	40Gbps	OM3	3.0mm	5M
EQA4X-34S3CD7	40Gbps	OM3	3.0mm	7M
EQA4X-34S3CD10	40Gbps	OM3	3.0mm	10M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 8:



Item No	ETU PN	Description
01	EQA4X-34S3CD1	40G QSFP+ to 4X10G SFP+ AOC Cable 1M

25G SFP28 AOC

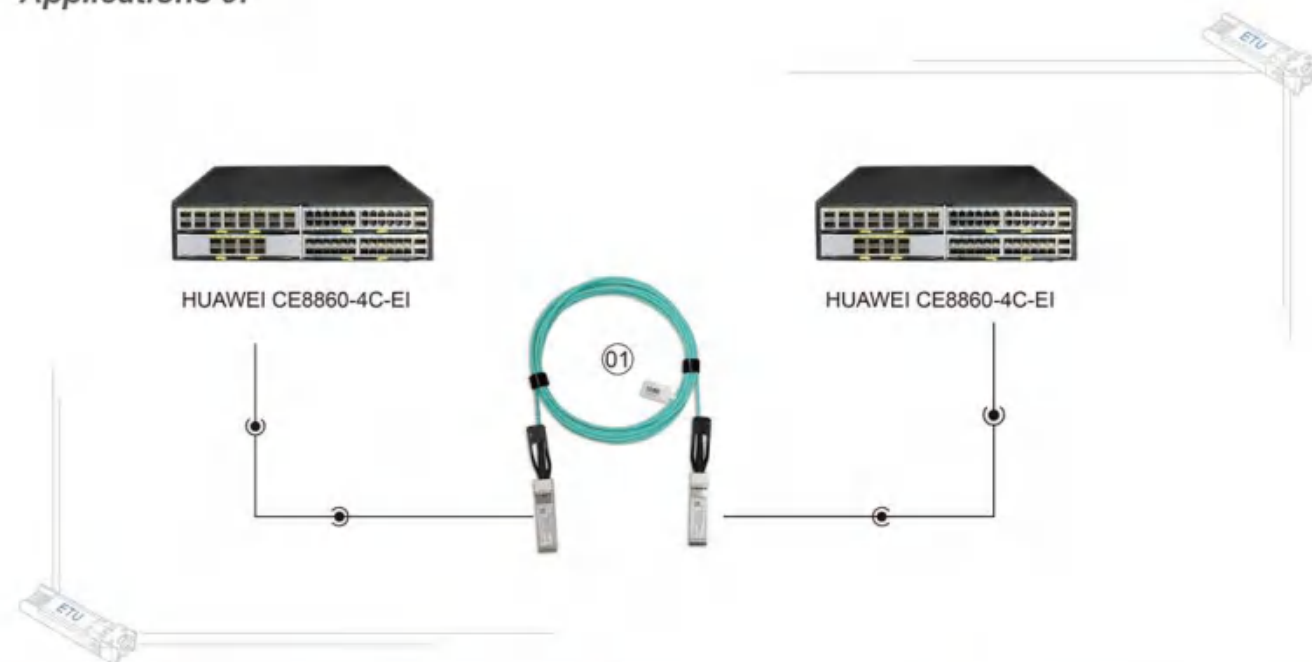
	Features - Electrical interface compliant to SFF-8431 850nm VCSEL laser and PIN photo-detector - Maximum link length of 70m on OM3 MMF and 100m on OM4 MMF - Digital diagnostics functions are available via the I2C interface - ROHS compliant
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Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
ES2A2X-33CD1	25Gbps	OM3	3.0mm	1M
ES2A2X-33CD3	25Gbps	OM3	3.0mm	3M
ES2A2X-33CD5	25Gbps	OM3	3.0mm	5M
ES2A2X-33CD7	25Gbps	OM3	3.0mm	7M
ES2A2X-33CD10	25Gbps	OM3	3.0mm	10M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 9:



Item No	ETU PN	Description
01	ES2A2X-33CD3	25G SFP28 to SFP28 AOC Cable 3M

10G SFP+ AOC

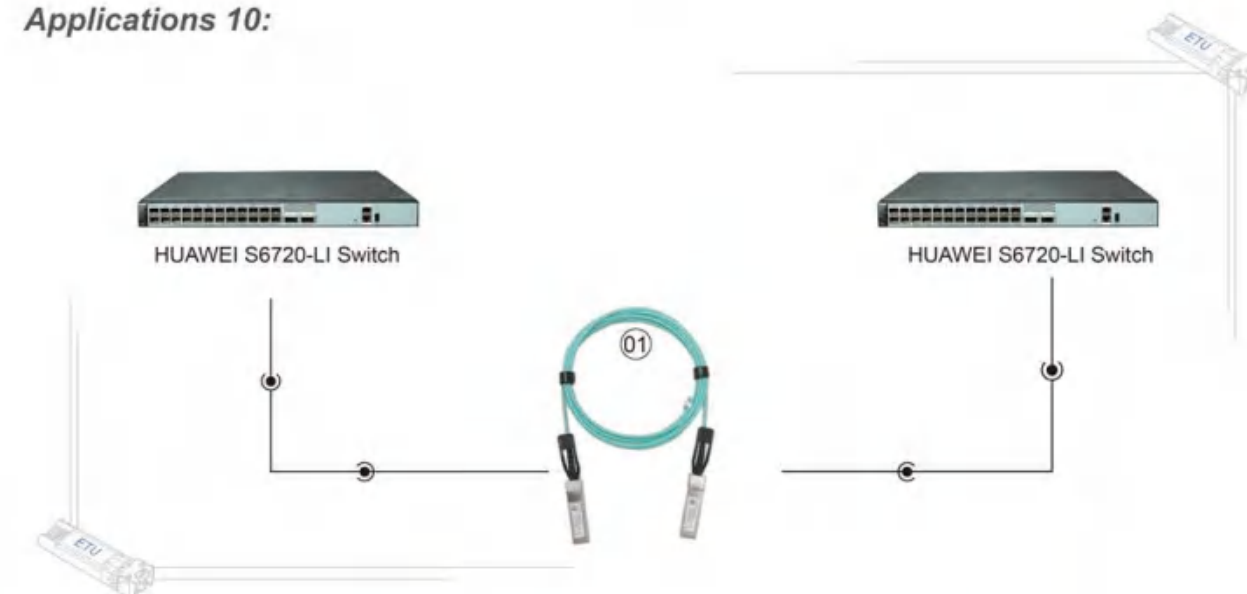
	Features - Electrical interface compliant to SFF-8431 850nm VCSEL transmitter, PIN photo-detector receiver - Up to 300m on OM3 MMF - Commercial case temperature range: 0°C to 70°C - All-metal housing for superior EMI performance - ROHS compliant (lead free)
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Product Information

PN	Data Rate	Cable Type	Fiber Diameter	Fiber Length
ESAX-33CD1	10Gbps	OM3	3.0mm	1M
ESAX-33CD2	10Gbps	OM3	3.0mm	2M
ESAX-33CD3	10Gbps	OM3	3.0mm	3M
ESAX-33CD5	10Gbps	OM3	3.0mm	5M
ESAX-33CD7	10Gbps	OM3	3.0mm	7M
ESAX-33CD10	10Gbps	OM3	3.0mm	10M

Note: The cable can be offered different length by customer's request, the longest cable be reached 200M.

Applications 10:



Item No	ETU PN	Description
01	ESAX-33CD1	10G SFP+ to SFP+ AOC Cable 1M

Direct Attach Cable

100G QSFP28 DAC

	Features - Compliant with SFF-8636 - Support IEEE802.3Bj(Ethernet) - I2C based two-wire serial interface for easy control and monitoring - Hot pluggable - Low crosstalk - Low power consumption
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
EQ2DP10X-330CN1	100Gbps	30AWG	1M
EQ2DP10X-330CN2	100Gbps	30AWG	2M
EQ2DP10X-330CN3	100Gbps	30AWG	3M
EQ2DP10X-326CN5	100Gbps	26AWG	5M

Applications 11:



Item No	ETU PN	Description
01	EQ2DP10X-330CN1	100G QSFP28 to QSFP28 DAC Cable 1M

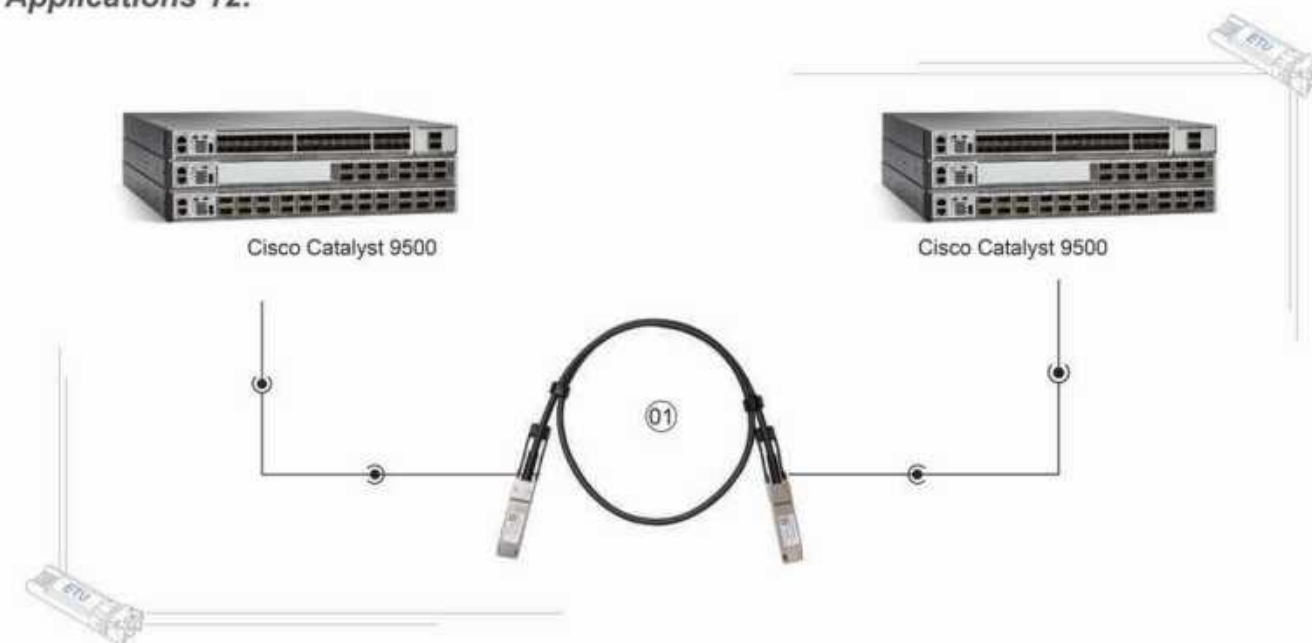
56G QSFP+ DAC

	Features - Compliant with SFF-8436 - Up to 14.3125Gbps data rate per channel - Up to 7m transmission - Operating temperature: 0~70 °C - Single 3.3V power supply - RoHS compliant
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
EQDP5X-330CN1	56Gbps	30AWG	1M
EQDP5X-330CN2	56Gbps	30AWG	2M
EQDP5X-330CN3	56Gbps	30AWG	3M
EQDP5X-326CN5	56Gbps	26AWG	5M

Applications 12:



Item No	ETU PN	Description
01	EQDP5X-330CN1	56G QSFP+ TO QSFP+ DAC Passive Cable 1M

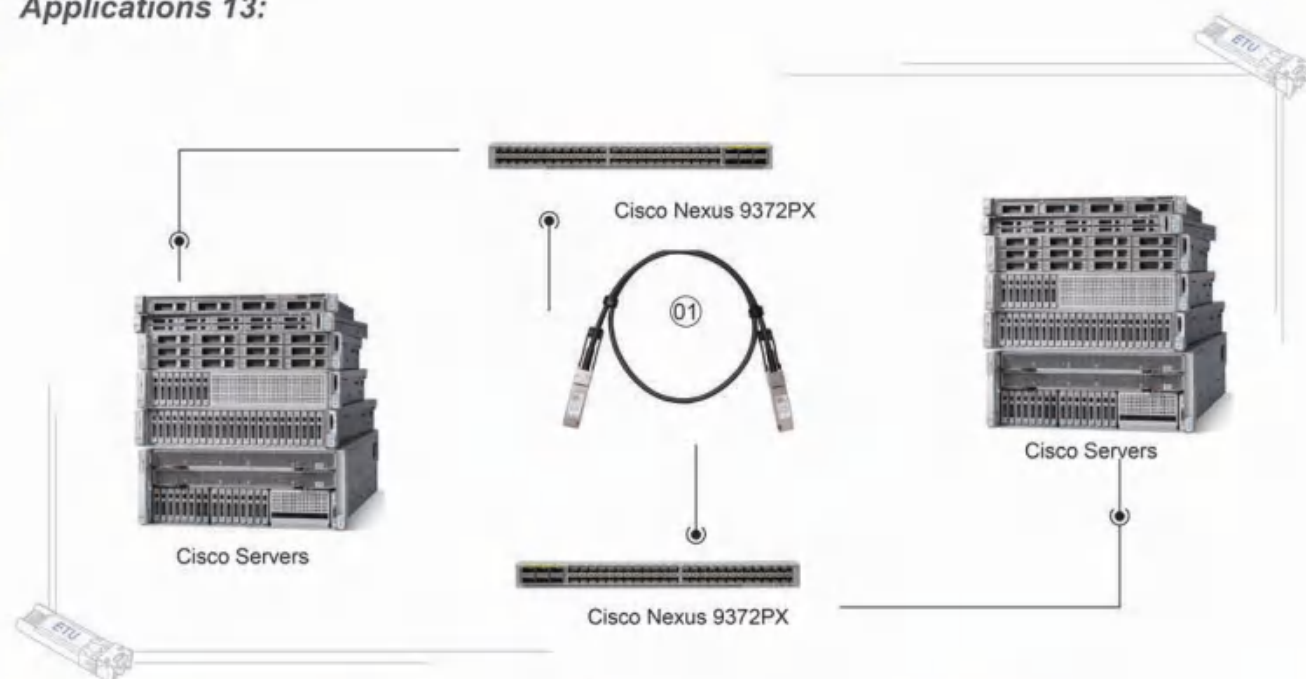
40G QSFP+ DAC

	Features - Compliant QSFP MSA specifications - Fully compatible with IEEE802.3ba and infiniband QDR specifications 40Gb/s total bandwidth - Single 3.3V power supply, low power consumption <1.5W - All-metal housing for superior EMI performance 30 AWG to 24 AWG cable sizes available - ROHS compliant
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
EQDP4X-330CN1	40Gbps	30AWG	1M
EQDP4X-330CN2	40Gbps	30AWG	2M
EQDP4X-330CN3	40Gbps	30AWG	3M
EQDP4X-326CN5	40Gbps	26AWG	5M
EQDP4X-324CN7	40Gbps	24AWG	7M

Applications 13:



Item No	ETU PN	Description
01	EQDP4X-330CN1	40G QSFP+ to QSFP+ DAC Passive Cable 1M

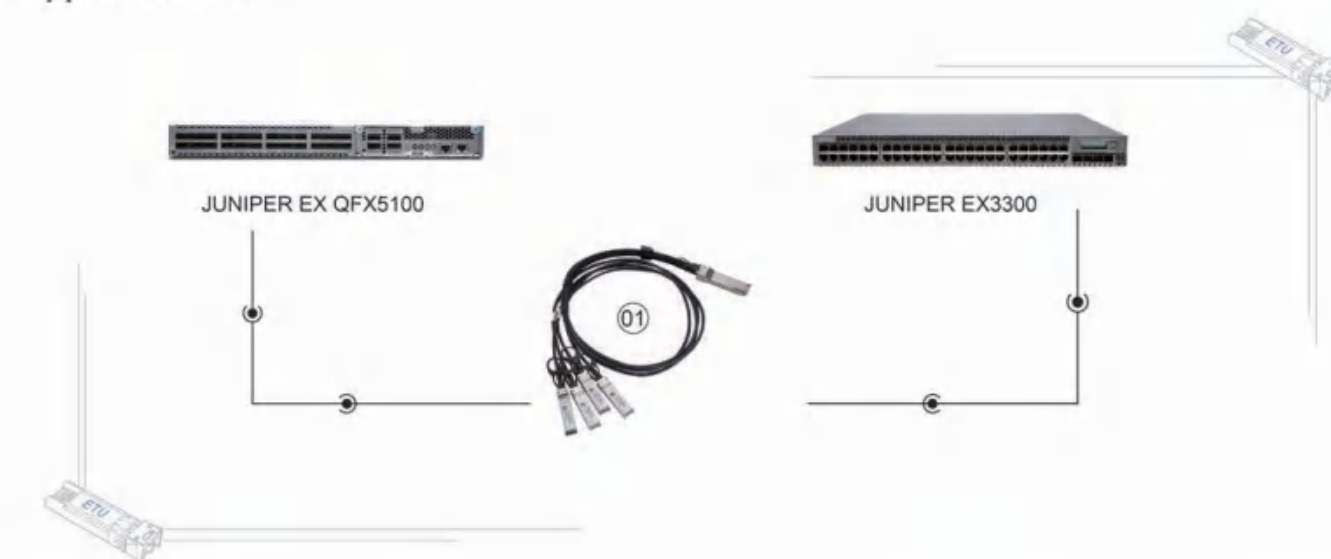
40G QSFP+ to 4*10G SFP+ DAC

	Features - Connector A: (1) QSFP 40Gbps rated connector (SFF-8436 compliant) - Connector B: (4) SFP+ 10Gbps rated connectors (SFF-8431 compliant) - Economically links up a QSFP port with an upstream 10GbE-SFP+ switch - Fully compliant to the latest SFP+ & QSFP MSA (Multi-source-agreement) - Supports all current 10-Gigabit Ethernet and 40-Gigabit Ethernet standards - Fully ROHS compliant for environmental protection
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
EQDP4X-34SCN1	40Gbps	30AWG	1M
EQDP4X-34SCN2	40Gbps	30AWG	2M
EQDP4X-34SCN3	40Gbps	30AWG	3M
EQDP4X-34SCN5	40Gbps	26AWG	5M
EQDP4X-34SCN7	40Gbps	24AWG	7M

Applications 14:



Item No	ETU PN	Description
01	EQDP4X-34SCN1	40G QSFP+ to 4*SFP+ DAC Passive Cable 1M

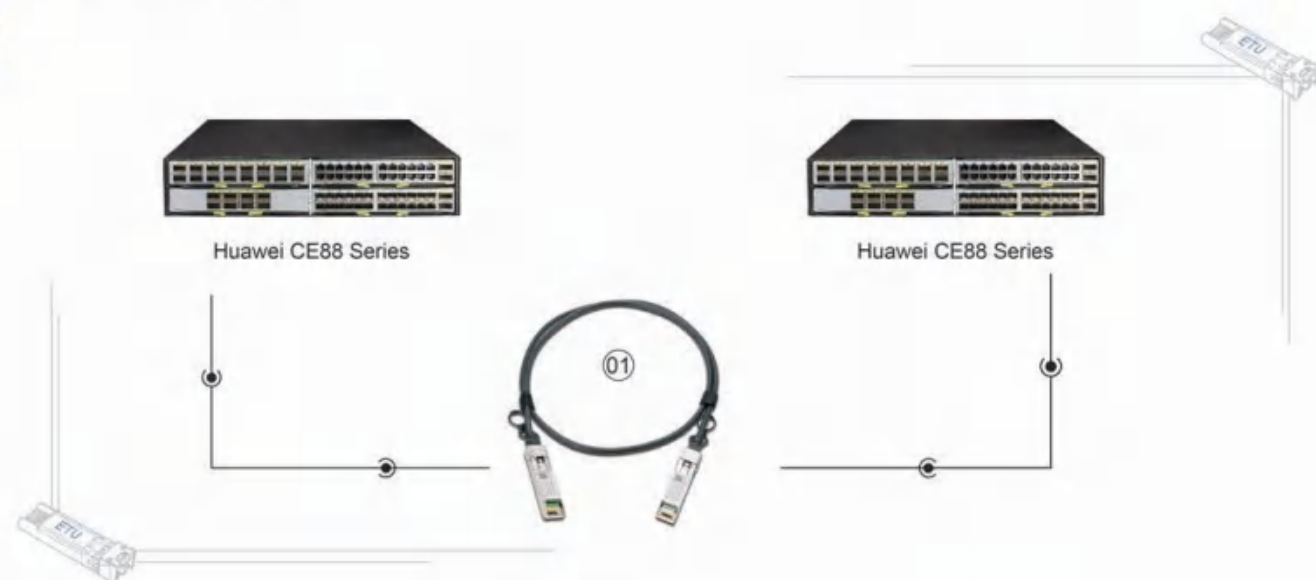
25G SFP28 DAC

	Features - Up to 25Gb/s data rate SFF-8402 compliant - Single 3.3V supply voltage - BER better than 10⁻¹⁵ - Hot pluggable - Compliant with SFF-8432 - Compliant with IEEE 802.3by - Compliant with ROHS - Commercial case temperature range: 0°C to 70°C
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
ES2DP2X-330CN1	25Gbps	30AWG	1M
ES2DP2X-330CN2	25Gbps	30AWG	2M
ES2DP2X-330CN3	25Gbps	30AWG	3M
ES2DP2X-326CN5	25Gbps	26AWG	5M

Applications 15:



Item No	ETU PN	Description
01	ES2DP2X- 330CN1	25G SFP28 to SFP28 DAC Cable 1M

10G SFP+ DAC

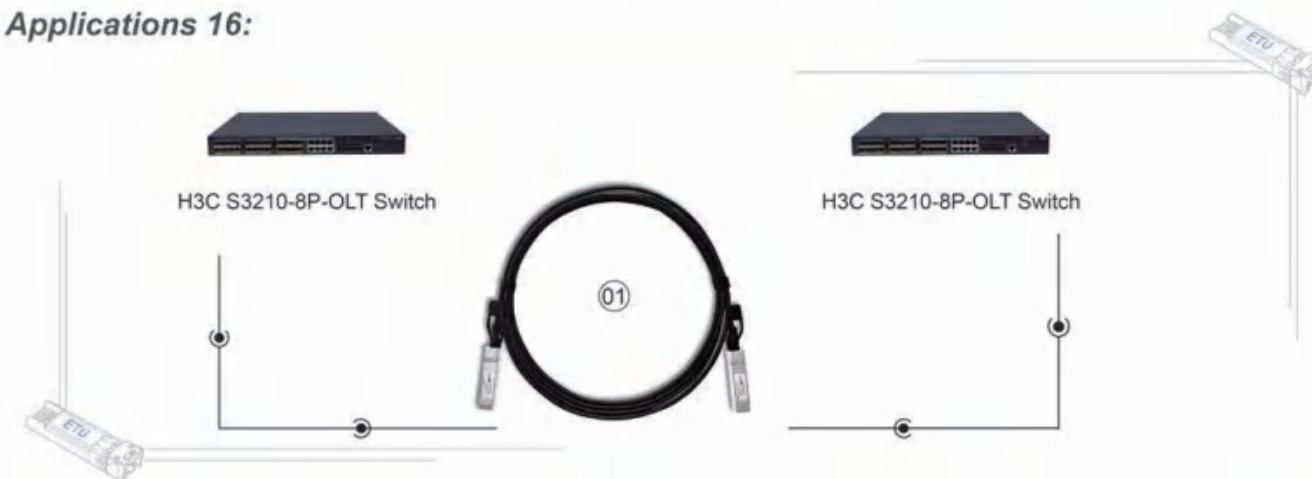
	Features - Supports multi-gigabit data rates up to 10.5Gbps - Supports 1x, 2x, 4x and 8x fiber channel data rates - Hot-pluggable SFP 20PIN footprint - Serial ID module on MOD(0-2) - AC coupling of PECL signals - EMI/EMC performance - Low power consumption < 0.5W - Power supply :+3.3V - Compliant to SFP+ MSA - Commercial case temperature range: 0°C to 70°C - ROHS compliance
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Product Information

PN	Data Rate	Fiber Diameter	Fiber Length
ESDPX-330CN0	10Gbps	30AWG	0.5M
ESDPX-330CN1	10Gbps	30AWG	1M
ESDPX-330CN2	10Gbps	30AWG	2M
ESDPX-330CN3	10Gbps	30AWG	3M
ESDPX-324CN5	10Gbps	24AWG	5M
ESDPX-324CN7	10Gbps	24AWG	7M
ESDPX-324CN10	10Gbps	24AWG	10M
ESDPX-324CN15	10Gbps	24AWG	15M

Note: The cables are divided into active and passive. It is suggested that choose active cable if 7M or more.

Applications 16:



Item No	ETU PN	Description
01	ESDPX-330CN1	10G SFP+ to SFP+ DAC Passive Cable 1M

10G XFP Single Fiber Transceiver



Features

- Supports 9.95Gb/s to 11.3Gb/s bit rates
- Type: 1270nmTx/1330nmRx 1330nmTx/1270nmRx
- Single 3.3V power supply and TTL logic interface
- Single LC connector interface
- Hot pluggable
- Commercial case temperature range: 0°C to 70°C
- XFP MSA rev 4.5 compliant
- DDM function

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EXB23X-3LCD10	10G	XFP	1270/1330	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EXB32X-3LCD10	10G	XFP	1330/1270	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EXB23X-3LCD20	10G	XFP	1270/1330	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EXB32X-3LCD20	10G	XFP	1330/1270	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EXB23X-3LCD40	10G	XFP	1270/1330	40KM	-1~3	0~70	<-15.8	LC	DFB+PIN
EXB32X-3LCD40	10G	XFP	1330/1270	40KM	-1~3	0~70	<-15.8	LC	DFB+PIN
EXB23X-3LCD60	10G	XFP	1270/1330	60KM	2~6	0~70	<-20	LC	DFB+PIN
EXB32X-3LCD60	10G	XFP	1330/1270	60KM	2~6	0~70	<-20	LC	DFB+PIN
EXB45X-3LCD80	10G	XFP	1490/1550	80KM	0~4	0~70	<-30	LC	DFB+PIN
EXB54X-3LCD80	10G	XFP	1550/1490	80KM	-1~3	0~70	<-30	LC	DFB+PIN

10G XFP Dual Fiber Transceiver



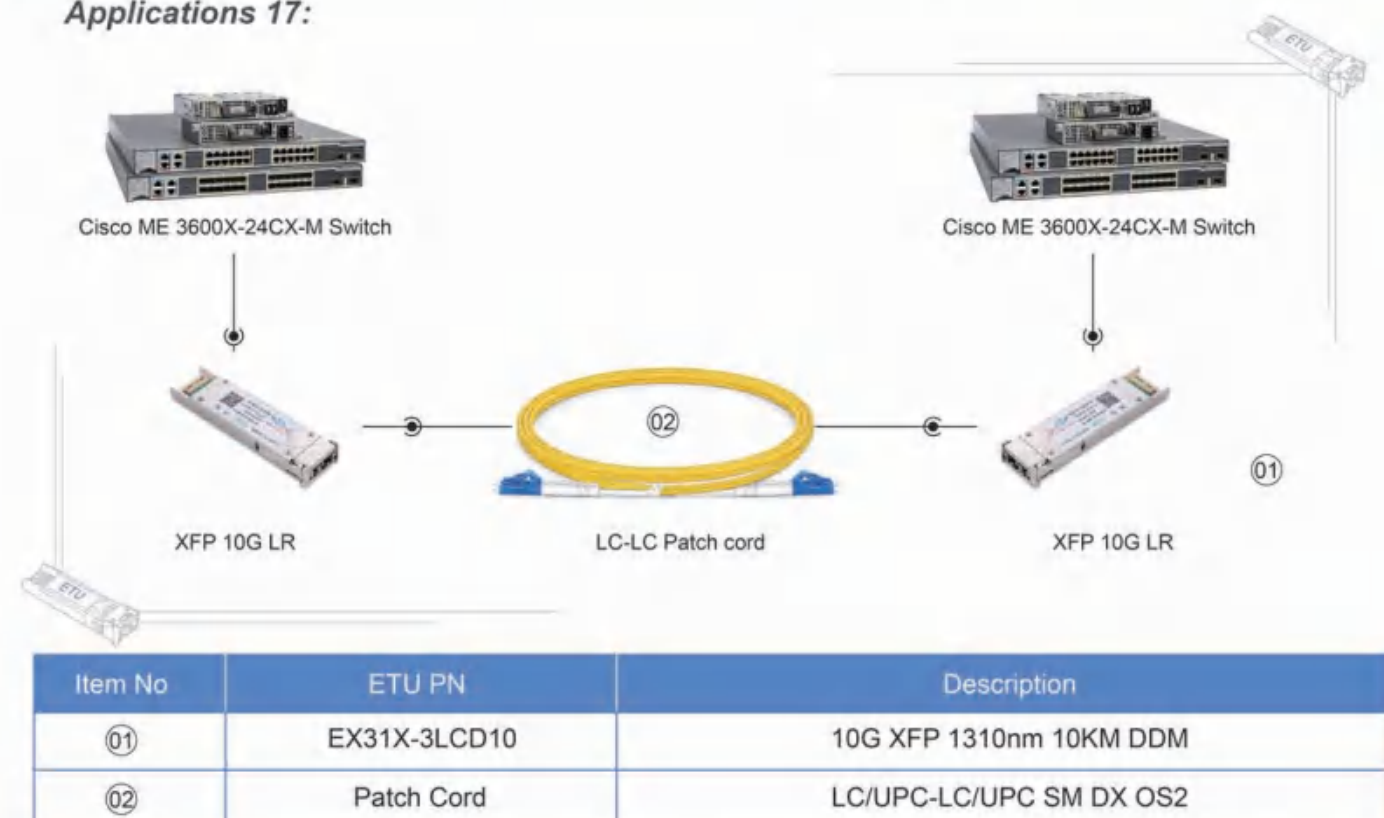
Features

- Hot pluggable
- Support 9.95Gb/s to 11.1Gb/s bit rate
- Below 3.5W power consumption
- XFP MSA package with duplex LC connector
- Digital diagnostic monitor interface
- Very low EMI and excellent ESPD protection
- Commercial case temperature range: 0°C to 70°C
- No reference clock requirement

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EX85X-3LCD03	10G	XFP	850	300M	-6~-1	0~70	<-10	LC	VSCEL+PIN
EX31X-3LCD10	10G	XFP	1310	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EX31X-3LCD20	10G	XFP	1310	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
EX31X-3LCD40	10G	XFP	1310	40KM	-1~-4	0~70	<-16.4	LC	DFB+PIN
EX55X-3LCD40	10G	XFP	1550	40KM	-1~-4	0~70	<-16.4	LC	EML+PIN
EX55X-3LCD80	10G	XFP	1550	80KM	0~5	0~70	<-24	LC	EML+APD

Applications 17:



10G XFP CWDM/DWDM Transceiver



Features

- Hot pluggable
- Supports 9.95Gb/s to 11.1Gb/s bit rate
- Below 3.5W power dissipation
- XFP MSA package with duplex LC connector
- Digital diagnostic monitor interface
- Very low EMI and excellent ESPD protection
- Commercial case temperature range: 0°C to 70°C
- No reference clock requirement

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
EXCxxX-3LCD10	10G	XFP	1270~1450	10KM	-1~3	0~70	<-15	LC	CWDM+PIN
EXCxxX-3LCD40	10G	XFP	1470~1610	40KM	-1~3	0~70	<-15	LC	CWDM+PIN
EXCxxX-3LCD80	10G	XFP	1470~1610	80KM	0~5	0~70	<-24	LC	CWDM+APD
EXDxxX-3LCD40	10G	XFP	1528.77~1563.86	40KM	-1~4	0~70	<-15.8	LC	DWDM+PIN
EXDxxX-3LCD80	10G	XFP	1528.77~1563.86	80KM	0~5	0~70	<-24	LC	DWDM+APD

Applications 18:



Item No	ETU PN	Description
①	EXDxxX-3LCD40	10G XFP DWDM 40KM DDM
②	Patch Cord	LC/UPC-LC/UPC SM DX OS2
③	Mux/Demux	16 Channels C21-C36 Dual Fiber DWDM Mux/Demux

10G SFP+ Single Fiber Transceiver



Features

- Up to 11.1Gb/s data rate
- 1490nm EML laser and APD receiver for
- 1550nm EML laser and APD receiver for
- 2-wire interface with integrated Digital Diagnostic monitoring
- Up to 100km transmission on SMF
- BIDI LC optical connector
- Single +3.3V power supply
- RoHS-10 compliant and lead-free
- Compliant with SFF+MSA and SFF-8472
- Maximum power consumption 1.8W
- Metal enclosure, for lower EMI
- Meet ESD requirements, resist 8KV direct contact voltage
- Commercial case temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ESB23X-3LCD10	10G	SFP+	1270/1330	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ESB32X-3LCD10	10G	SFP+	1330/1270	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ESB23X-3LCD20	10G	SFP+	1270/1330	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ESB32X-3LCD20	10G	SFP+	1330/1270	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ESB23X-3LCD40	10G	SFP+	1270/1330	40KM	-1~3	0~70	<-15.8	LC	DFB+PIN
ESB32X-3LCD40	10G	SFP+	1330/1270	40KM	-1~3	0~70	<-15.8	LC	DFB+PIN
ESB23X-3LCD60	10G	SFP+	1270/1330	60KM	0~5	0~70	<-20	LC	DFB+PIN
ESB32X-3LCD60	10G	SFP+	1330/1270	60KM	0~5	0~70	<-20	LC	DFB+PIN
ESB45X-3LCD80	10G	SFP+	1490/1550	80KM	0~4	0~70	<-23	LC	DFB+PIN
ESB54X-3LCD80	10G	SFP+	1550/1490	80KM	0~4	0~70	<-23	LC	DFB+PIN
ESB45X-3LCD100	10G	SFP+	1490/1550	100KM	1~6	0~70	<-25	LC	EML+APD
ESB54X-3LCD100	10G	SFP+	1550/1490	100KM	1~6	0~70	<-25	LC	EML+APD

10G SFP+ Dual Fiber Transceiver



Features

- Hot pluggable
- 10Gb/s serial optical interface
- Compliant with SFP+ MSA
- SFP MSA package with duplex LC connector
- Digital diagnostic monitor interface
- Very low EMI and excellent ESPD protection
- High transmission margin
- +3.3V single power supply
- Below 1.5W power consumption
- SFP mechanical interface
- Wide data-rate range

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES85X-3LCD03	10G	SFP+	850	300M	-6~-1	0~70	<-10	LC	VCSEL+PIN
ES31X-3LCD10	10G	SFP+	1310	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ES31X-3LCD20	10G	SFP+	1310	20KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN
ES31X-3LCD40	10G	SFP+	1310	40KM	-1~-4	0~70	<-16.4	LC	DFB+PIN
ES55X-3LCD40	10G	SFP+	1550	40KM	-1~-4	0~70	<-16.4	LC	EML+PIN
ES55X-3LCD80	10G	SFP+	1550	80KM	0~5	0~70	<-24	LC	EML+APD
ES55X-3LCD100	10G	SFP+	1550	100KM	1~4	0~70	<-26	LC	EML+APD

Applications 19:

Comparison of 10G Dual and Bidi

① Connector

② Fiber

③ Wavelength



10G SFP+ Dual SFP+

10G SFP+ Bidi

10G SFP+ Bidi

850nm, 1310nm, 1550nm...

10G SFP+ Dual SFP+

2 Fiber

1 Fiber

10G SFP+ Bidi

Tx1270/Rx1330nm
Tx1330/Rx1270nm
Tx1490/Rx1550nm
Tx1550/Rx1490nm

10G SFP+ CWDM/DWDM Transceiver



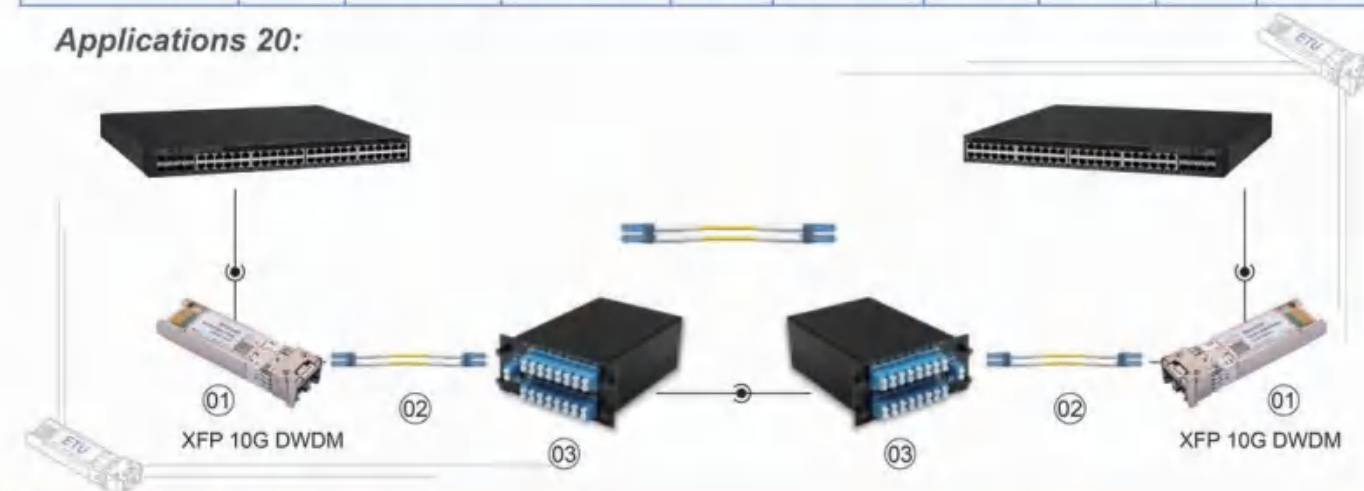
Features

- 10Gb/s serial optical interface compliant to 802.3ae 10GBASE-ER/EW
- Electrical interface compliant to SFF-8431 specifications for enhanced 8.5 and 10 Gigabit small form factor pluggable module "SFP+"
- 2-wire interface for management specification compliant with SFF 8472
- Digital diagnostic monitoring interface for optical transceivers eye safety designed to meet laser class1 compliant with IEC60825-1
- Commercial case temperature range: 0°C to 70°C
- Metal enclosure for low EMI
- Low power consumption advanced firmware allow customer system encryption information to be stored in transceiver
- Single +3.3V power supply

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ESCxxX-3LCD10	10G	SFP+	1270~1610	10KM	-6~-0.5	0~70	<-14.4	LC	CWDM+PIN
ESCxxX-3LCD20	10G	SFP+	1270~1610	20KM	-6~-0.5	0~70	<-14.4	LC	CWDM+PIN
ESCxxX-3LCD40	10G	SFP+	1470~1610	40KM	-1~3	0~70	<-15.8	LC	EML+PIN
ESCxxX-3LCD80	10G	SFP+	1470~1610	80KM	0~5	0~70	<-24	LC	EML+APD
ESDxxX-3LCD40	10G	SFP+	1528.77~1563.86	40KM	-1~4	0~70	<-15.8	LC	EML+PIN
ESDxxX-3LCD80	10G	SFP+	1528.77~1563.86	80KM	0~5	0~70	<-24	LC	EML+APD

Applications 20:



Item No	ETU PN	Description
①	ESCxxX-3LCD20	10G SP+ CWDM 20KM DDM
②	Patch Cord	LC/UPC-LC/UPC SM DX OS2
③	Mux/Demux	16 Channels 1470-1610nm Dual Fiber CWDM Mux/Demux

8G SFP+ Dual Fiber Transceiver



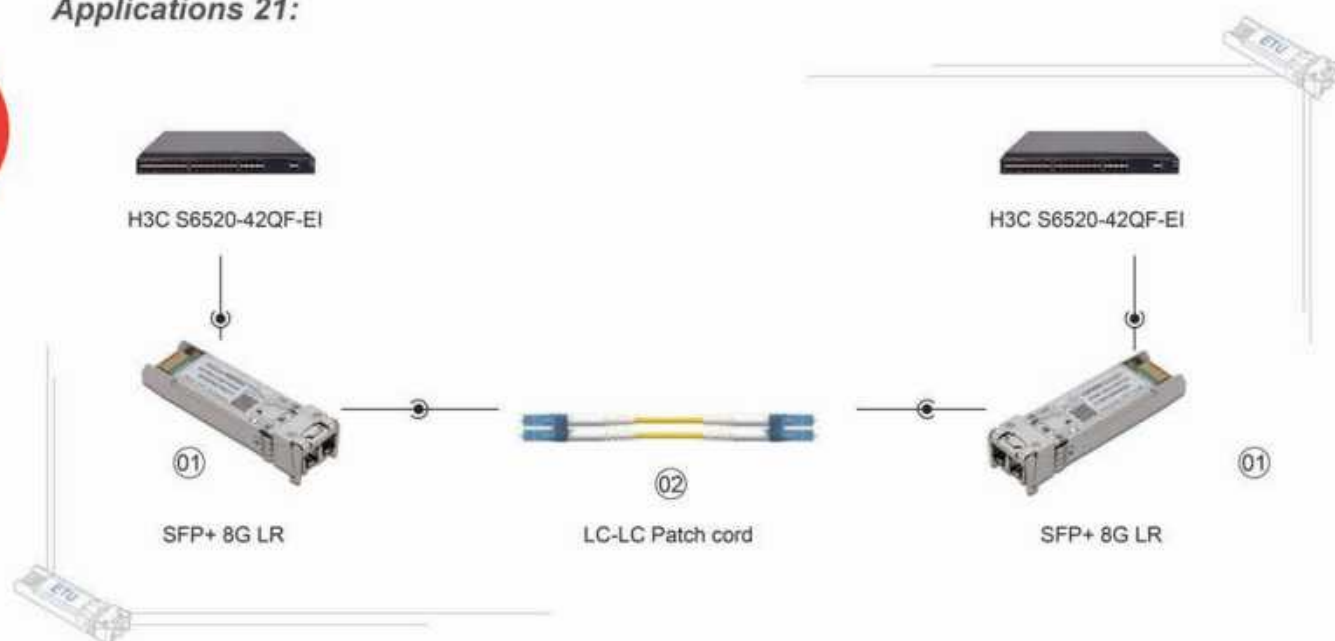
Features

- Up to 8.5Gb/s Bi-directional data links
- Hot pluggable SFP+ footprint
- Built-in digital diagnostic in functions
- Duplex LC connector
- Single 3.3V power supply
- Commercial case temperature range: 0°C to 70°C
- ROHS6 compliant (lead free)

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES8585-3LCD03	8G	SFP+	850	300M	-6~-1	0~70	<-10	LC	VCSEL+PIN
ES3185-3LCD2	8G	SFP+	1310	2KM	-9~-3	0~70	<-18	LC	FP+PIN
ES3185-3LCD10	8G	SFP+	1310	10KM	-6~-0.5	0~70	<-14.4	LC	DFB+PIN

Applications 21:



Item No	ETU PN	Description
01	ES3185-3LCD10	8G SFP+ 1310nm 10KM DDM
02	Patch Cord	LC/UPC-LC/UPC SM DX OS2

10G SFP+ Copper



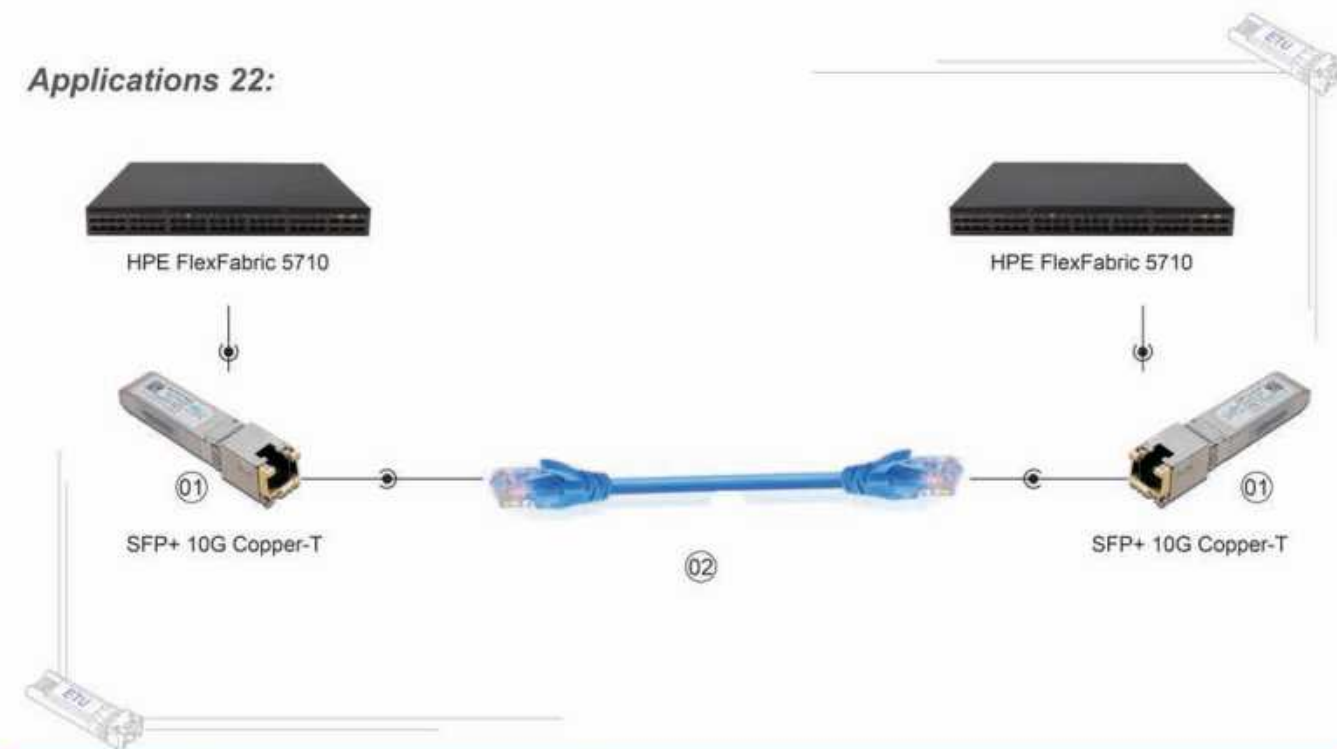
Features

- Supports 10Gbase-T / 5Gbase-T / 2.5Gbase-T / 1000base-T
- Hot-pluggable SFP footprint
- Compact RJ-45 connector assembly
- ROHS compliant and lead free
- Single +3.3V power supply
- 10 Gigabit Ethernet over Cat 6a cable
- Ambient operating temperature: 0°C to +65°C

Product Information

Model No.	Data Rate	Distance	Temp.(°C)	Interface
ES-T5-R	10G	30M	0~65	RJ45
ES-T6-R	10G	80M	0-70	RJ45

Applications 22:

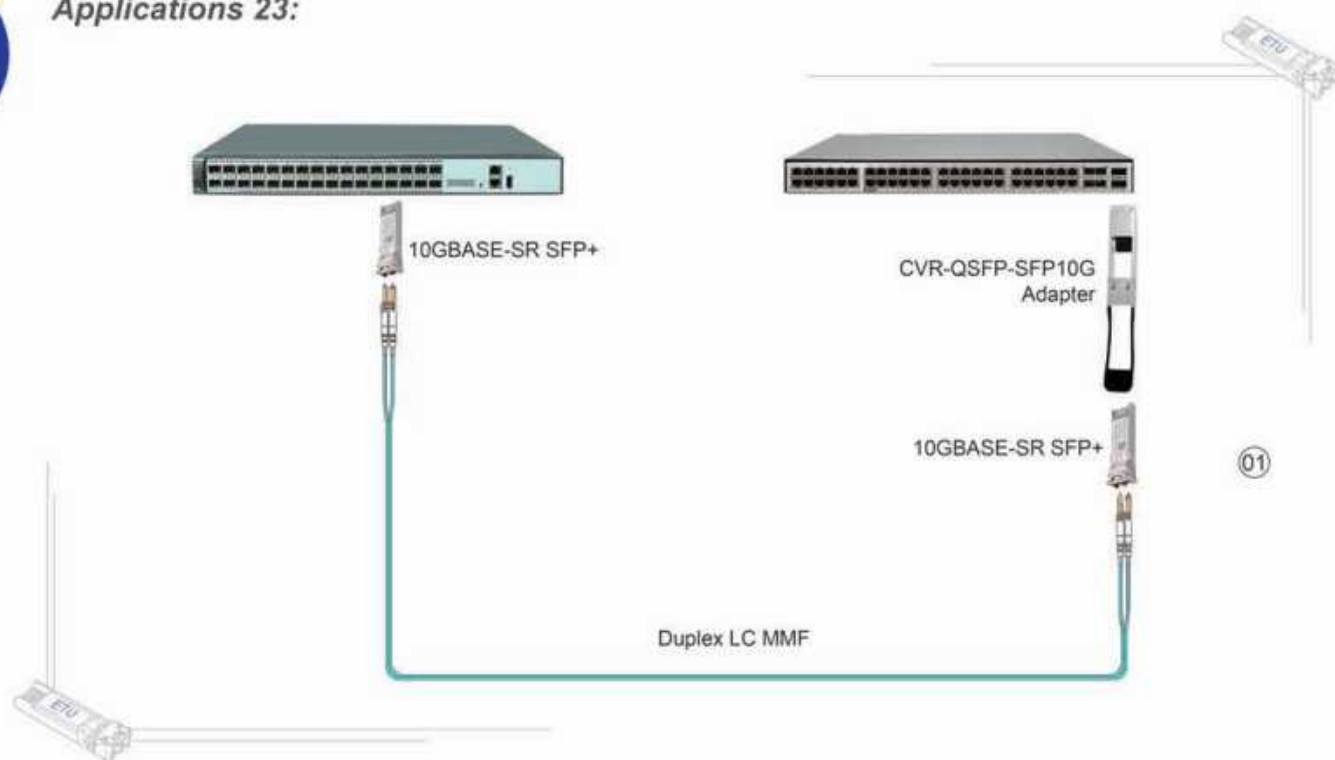


Item No	ETU PN	Description
01	ES-T5-R	10G SFP+ Copper-T RJ45 30m
02	Cat6 Cable	Cat6 UTP Cable

QSFP+ TO SFP+ Converter

	Features - Compliant to industry standards :QSFP+ MSA SFF-8436 / SFP+ MSA SFF-8431 - Precision process control for minimization of pair-to-pair skew 1 independent duplex channels operating at 10Gbps/2.5Gbps/5Gbps - All-metal housing for superior EMI performance 100 ohm differential impedance system - Operating case temperature: 0 to 70°C - Low insertion loss - Low crosstalk - RoHS compliant
	Applications - Data Servers/Routers/Switches - Networked storage systems - Data Center networking - InfiniBand Trade Association (IBTA)

Applications 23:



2.5G SFP Single Fiber Transceiver

	Features - Dual data-rate of 2.488Gbps/2.125Gbps operation - Compliant with SFP MSA and SFF-8472 with simplex LC receptacle - Digital diagnostic monitoring: internal calibration or external calibration - Compatible with SONET OC-48 system - Compatible with ROHS +3.3V single power supply - Commercial case temperature range: 0°C to 70°C
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Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(℃)	Sensitivity	Interface	Source
ESB3524-3LCD20	2.5G	SFP	1310/1550	20KM	-5~0	0~70	<-18	LC	DFB+PIN
ESB5324-3LCD20	2.5G	SFP	1550/1310	20KM	-5~0	0~70	<-18	LC	DFB+PIN
ESB3524-3LCD40	2.5G	SFP	1310/1550	40KM	-5~0	0~70	<-19	LC	DFB+PIN
ESB5324-3LCD40	2.5G	SFP	1550/1310	40KM	-5~0	0~70	<-19	LC	DFB+PIN
ESB4524-3LCD80	2.5G	SFP	1490/1550	80KM	0~5	0~70	<-24	LC	DFB+APD
ESB5424-3LCD80	2.5G	SFP	1550/1490	80KM	0~5	0~70	<-24	LC	DFB+APD

2.5G SFP Dual Fiber Transceiver



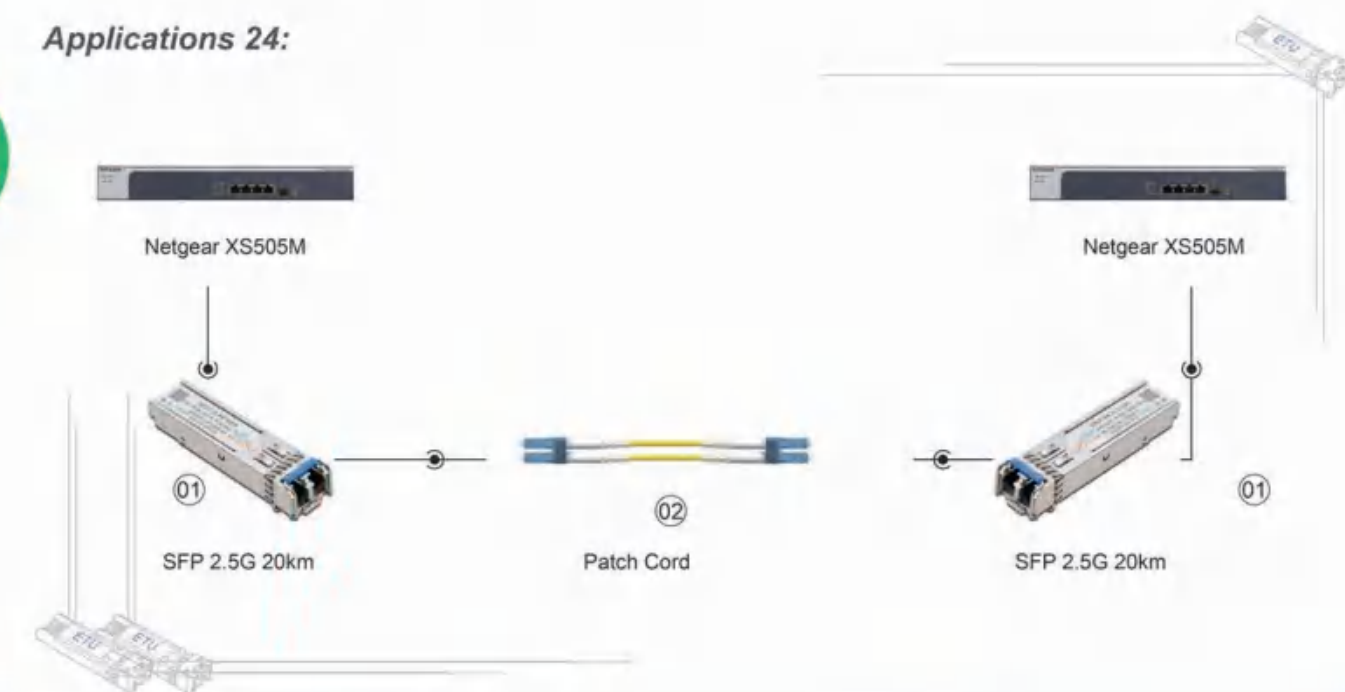
Features

- Data-rate of 2.67Gbps operation
- Compliant with SFP MSA and SFF-8472 with duplex LC receptacle
- Digital diagnostic monitoring: internal calibration or external calibration
- Compatible with SONET OC-24-LR-1
- Compatible with ROHS
- +3.3V single power supply
- Commercial case temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES8524-3LCD03	2.5G	SFP	850	300M	-10~-4	0~70	<-18	LC	VCSEL+PIN
ES3124-3LCD2	2.5G	SFP	1310	2KM	-9~-3	0~70	<-18	LC	FP+PIN
ES3124-3LC20	2.5G	SFP	1310	20KM	-5~0	0~70	<-18	LC	DFB+PIN
ES3124-3LC40	2.5G	SFP	1310	40KM	-5~0	0~70	<-19	LC	DFB+PIN
ES5524-3LC80	2.5G	SFP	1550	80KM	0~5	0~70	<-26	LC	DFB+APD

Applications 24:



Item No	ETU PN	Description
①	ES3124-3LCD20	2.5G SFP 1310nm 20KM
②	Patch Cord	LC/UPC-LC/UPC SM DX OS2

1.25G SFP Single Fiber Transceiver






Features

- Dual data-rate of 1.25Gbps/1.063Gbps operation
- Compliant with SFP MSA and SFF-8472 with simplex LC receptacle
- Digital diagnostic monitoring: internal calibration or external calibration
- Compatible with SONET OC-24-LR-1
- Compatible with ROHS
- +3.3V single power supply
- Commercial case temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ESB3512-3LCD3	1.25G	SFP	1310/1550	3KM	-10~-4	0~70	<-20	LC	FP+PIN
ESB5312-3LCD3	1.25G	SFP	1550/1310	3KM	-10~-4	0~70	<-20	LC	FP+PIN
ESB3512-3LCD10	1.25G	SFP	1310/1550	10KM	-9~-3	0~70	<-22	LC	FP+PIN
ESB5312-3LCD10	1.25G	SFP	1550/1310	10KM	-9~-3	0~70	<-22	LC	DFB+PIN
ESB3512-3LCD20	1.25G	SFP	1310/1550	20KM	-9~-3	0~70	<-22	LC	FP+PIN
ESB5312-3LCD20	1.25G	SFP	1550/1310	20KM	-9~-3	0~70	<-22	LC	DFB+PIN
ESB3412-3LCD20	1.25G	SFP	1310/1490	20KM	-9~-3	0~70	<-22	LC	FP+PIN
ESB4312-3LCD20	1.25G	SFP	1490/1310	20KM	-9~-3	0~70	<-22	LC	DFB+PIN
ESB3512-3LCD40	1.25G	SFP	1310/1550	40KM	-5~0	0~70	<-24	LC	DFB+PIN
ESB5312-3LCD40	1.25G	SFP	1550/1310	40KM	-5~0	0~70	<-24	LC	DFB+PIN

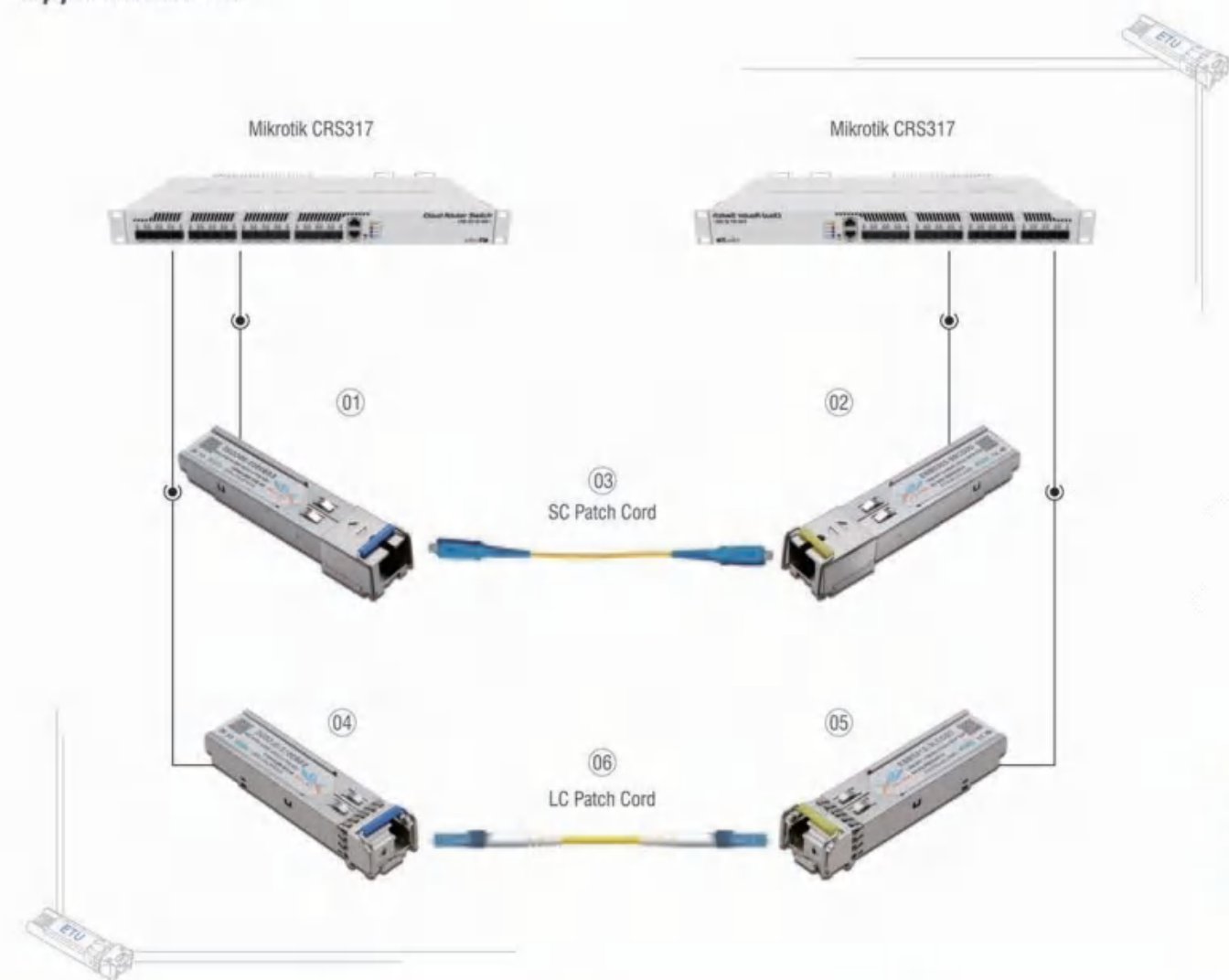
1.25G SFP Single Fiber Transceiver

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(℃)	Sensitivity	Interface	Source
ESB3412-3LCD40	1.25G	SFP	1310/1490	40KM	-5~0	0~70	<-24	LC	DFB+PIN
ESB4312-3LCD40	1.25G	SFP	1490/1310	40KM	-5~0	0~70	<-24	LC	DFB+PIN
ESB3512-3LCD60	1.25G	SFP	1310/1550	60KM	0~5	0~70	<-26	LC	DFB+PIN
ESB5312-3LCD60	1.25G	SFP	1550/1310	60KM	0~5	0~70	<-26	LC	DFB+PIN
ESB5412-3LCD80	1.25G	SFP	1550/1490	80KM	0~5	0~70	<-26	LC	DFB+PIN
ESB4512-3LCD80	1.25G	SFP	1490/1550	80KM	0~5	0~70	<-26	LC	DFB+PIN
ESB5412-3LCD120	1.25G	SFP	1550/1490	120KM	1~5	0~70	<-32	LC	DFB+APD
ESB4512-3LCD120	1.25G	SFP	1490/1550	120KM	1~5	0~70	<-32	LC	DFB+APD
ESB3512-3SCD3	1.25G	SFP	1310/1550	3KM	-10~-4	0~70	<-20	SC	FP+PIN
ESB5312-3SCD3	1.25G	SFP	1550/1310	3KM	-10~-4	0~70	<-20	SC	FP+PIN
ESB3512-3SCD20	1.25G	SFP	1310/1550	20KM	-9~-3	0~70	<-22	SC	FP+PIN
ESB5312-3SCD20	1.25G	SFP	1550/1310	20KM	-9~-3	0~70	<-22	SC	DFB+PIN
ESB3512-3SCD40	1.25G	SFP	1310/1550	40KM	-5~0	0~70	<-24	SC	DFB+PIN
ESB5312-3SCD40	1.25G	SFP	1550/1310	40KM	-5~0	0~70	<-24	SC	DFB+PIN
ESB4512-3SCD80	1.25G	SFP	1490/1550	80KM	0~5	0~70	<-26	SC	DFB+PIN
ESB5412-3SCD80	1.25G	SFP	1550/1490	80KM	0~5	0~70	<-26	SC	DFB+PIN

1.25G SFP Single Fiber Transceiver

Applications 25:



Item No.	ETU PN	Description
①	ESB3512-3SCD3	1.25G BIDI TX1310nm RX1550nm SC 3KM DDM
②	ESB5312-3SCD3	1.25G BIDI TX1550nm RX1310nm SC 3KM DDM
③	Patch Cord	SC/UPC-SC/UPC SM SX OS2
④	ESB3512-3LCD3	1.25G BIDI TX1310nm RX1550nm LC 3KM DDM
⑤	ESB5312-3LCD3	1.25G BIDI TX1550nm RX1310nm LC 3KM DDM
⑥	Patch Cord	LC/UPC-LC/UPC SM SX OS2

1.25G SFP Dual Fiber Transceiver



Features

- Compliant with specifications for IEEE802.3Z
- Single +3.3V power supply
- Multi-source package with duplex LC connector
- Hot pluggable
- Eye safety designed to meet laser class1
- Monitoring interface compliant with SFF-8472
- Compliant with IEC60825-1
- Compliant with bellcore TA-NWT-000983

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES8512-3LCD05	1.25G	SFP	850	550M	-10~-4	0~70	<-18	LC	VCSEL+PIN
ES3112-3LCD2	1.25G	SFP	1310	2KM	-10~-4	0~70	<-20	LC	FP+PIN
ES3112-3LCD10	1.25G	SFP	1310	10KM	-9~-3	0~70	<-22	LC	FP+PIN
ES3112-3LCD20	1.25G	SFP	1310	20KM	-9~-3	0~70	<-22	LC	FP+PIN
ES3112-3LCD40	1.25G	SFP	1310	40KM	-5~0	0~70	<-24	LC	DFB+PIN
ES5512-3LCD40	1.25G	SFP	1550	40KM	-5~0	0~70	<-24	LC	DFB+PIN
ES5512-3LCD80	1.25G	SFP	1550	80KM	0~5	0~70	<-26	LC	DFB+PIN
ES5512-3LCD120	1.25G	SFP	1550	120KM	1~5	0~70	<-32	LC	DFB+APD

1.25G & 2.5G CWDM SFP Transceiver



Features

- Transceiver unit with independent
- CWDM laser diode transmitter
- APD photodiode receiver
- Dual data-rate of 1.25Gbps/1.0625Gbps operation
- Up to 120km on 9/125μm SMF
- Standard serial ID information compliant with SFP MSA
- SFP MSA package with duplex LC connector
- Digital diagnostic monitor interface
- Very low EMI and excellent ESPD protection
- High transmission margin
- +3.3V single power supply
- Wide operating temperature range
- ROHS compliant

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ESCxx12-3LCD40	1.25G	SFP	1270~1450	40KM	-5~0	0~70	<-24	LC	CWDM+PIN
ESCxx12-3LCD80	1.25G	SFP	1470~1610	80KM	0~5	0~70	<-26	LC	CWDM+PIN
ESCxx12-3LCD120	1.25G	SFP	1470~1610	120KM	1~5	0~70	<-32	LC	CWDM+APD
ESCxx24-3LCD40	2.5G	SFP	1470~1610	40KM	-5~0	0~70	<-24	LC	CWDM+PIN
ESCxx24-3LCD80	2.5G	SFP	1470~1610	80KM	0~5	0~70	<-26	LC	CWDM+APD

155M SFP Dual Fiber Transceiver



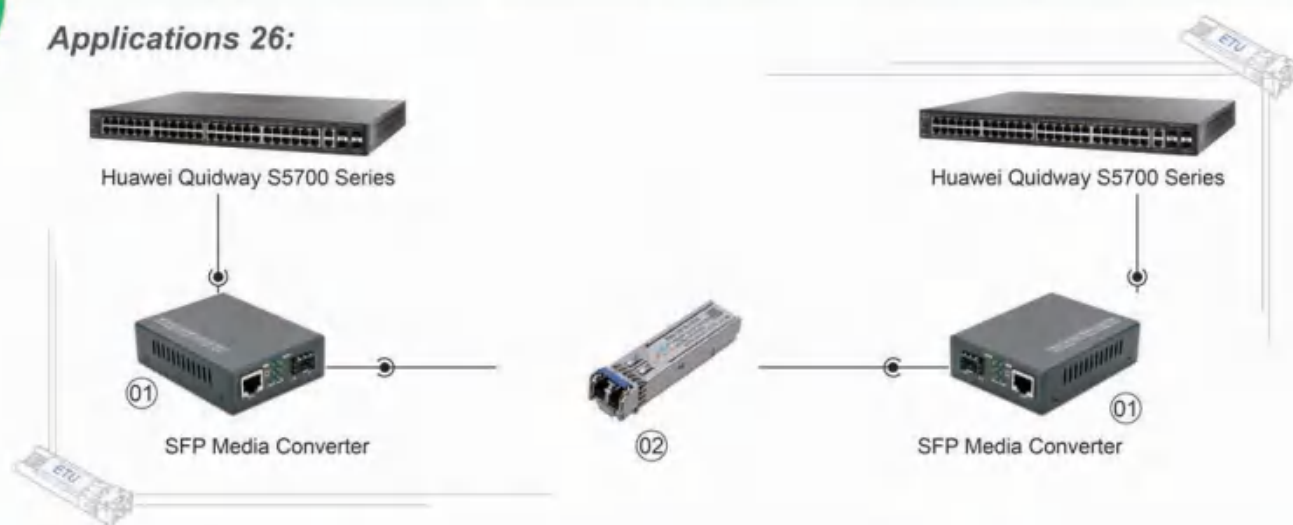
Features

- Up to 155Mbps data-rate
- Compliant with SFP MSA and SFF-8472 with duplex LC receptacle
- Digital diagnostic monitoring: internal calibration or external calibration
- Compatible with ROHS
- +3.3V single power supply
- Commercial case temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Sensitivity	Interface	Source
ES3103-3LCD2	155M	SFP	1310	2KM	-20~-10	0~70	<-32	LC	FP+PIN
ES3103-3LCD20	155M	SFP	1310	20KM	-15~-8	0~70	<-32	LC	FP+PIN
ES3103-3LCD40	155M	SFP	1310	40KM	-5~0	0~70	<-32	LC	DFB+PIN
ES5503-3LCD80	155M	SFP	1550	80KM	-2~3	0~70	<-34	LC	DFB+PIN
ES5503-3LCD120	155M	SFP	1550	120KM	0~5	0~70	<-32	LC	DFB+PIN
ES5503-3LCD160	155M	SFP	1550	160KM	1~5	0~70	<-34	LC	DFB+APD

Applications 26:



Item No	ETU PN	Description
①	EM-100-SSXX	10/100M SFP Media Converter
②	ES3103-3LCD20	155M SFP LX 1310nm 20km

SFP Copper Transceiver



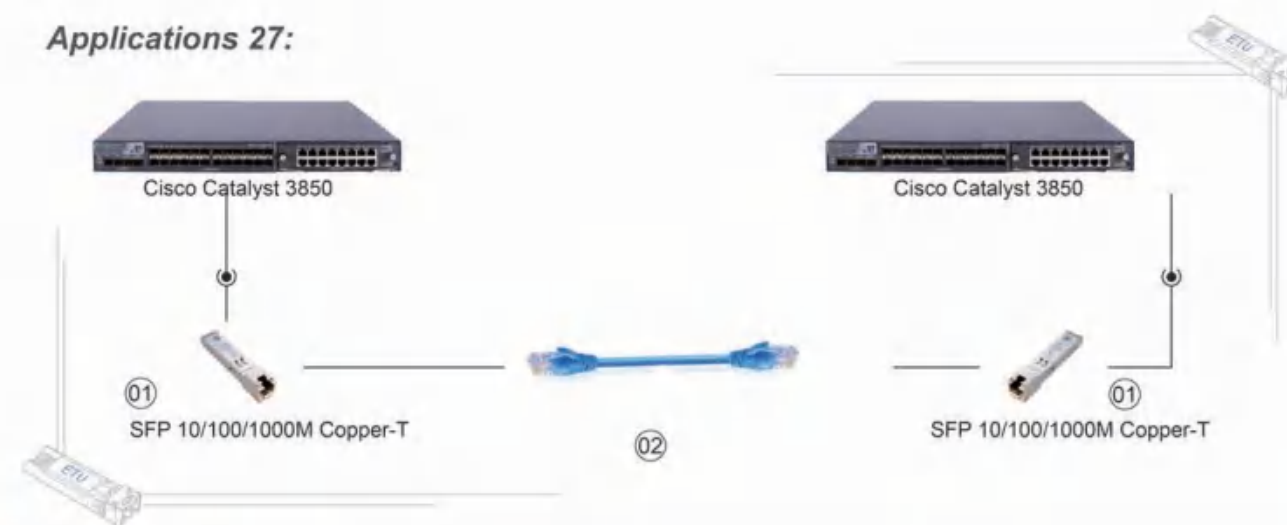
Features

- Support 10Gbase-T / 5Gbase-T / 2.5Gbase-T / 1000
- Hot-pluggable SFP footprint
- Low power dissipation(1.05W typical)
- Compact RJ-45 connector assembly
- Fully metal enclosure, for lower EMI
- ROHS compliant and (lead-free)
- Single +3.3V power supply
- 1.25 Gigabit Ethernet over cat 5 cable
- Commercial case temperature range: 0°C to 70°C
- 10 Gigabit Ethernet over

Product Information

Model No.	Data Rate	Distance	Temp.(°C)	Interface
ES-T1-R	1000M only	100M	0~70	RJ45
ES-T2-R	10/100/1000M	100M	0~70	RJ45
ES-T3-R	10/100M	100M	0~70	RJ45
ES-T4-R	1000M	100M	-40~+85	RJ45

Applications 27:



Item No	ETU PN	Description
①	ES-T2-R	10/100/1000M SFP 100M Copper-T RJ45
②	UTP Cable	UTP Cable

EPON OLT Optical Transceiver



Features

- Single fiber bi-directional data links symmetric 1.25Gbps application
- 1490nm continuous-mode DFB laser transmitter and 1310nm burst-mode APD-TIA receiver
- Reset-less burst-mode receiver simply the system design
- Single 3.3V power supply
- Digital diagnostic monitoring interface
- Low EMI and excellent ESD protection
- Class 1 laser safety standard IEC-60825 compliant
- Commercial case temperature range: 0°C to 70°C

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Interface	Source
EEP4311-3SCDP2	1.25G/1.25G	EPON OLT PX20+	Tx 1490nm 1.25G, Rx 1310nm 1.25G	20KM	3.5~4.5	0~70	SC	DFB+APD
EEP4311-3SCDP2x	1.25G/1.25G	EPON OLT PX20++	Tx 1490nm 1.25G, Rx 1310nm 1.25G	20KM	5.5~6.5	0~70	SC	DFB+APD
EEP4311-3SCDP2xx	1.25G/1.25G	EPON OLT PX20+++ Enhanced (7db)	Tx 1490nm 1.25G, Rx 1310nm 1.25G	20KM	6~7	0~70	SC	DFB+APD
EEP3411-3SCDP2	1.25G/1.25G	EPON ONU PX20+	Tx 1310nm 1.25G, Rx 1490nm 1.25G	20KM	0~4	0~70	SC	DFB+APD

GPON OLT Optical Transceiver



Features

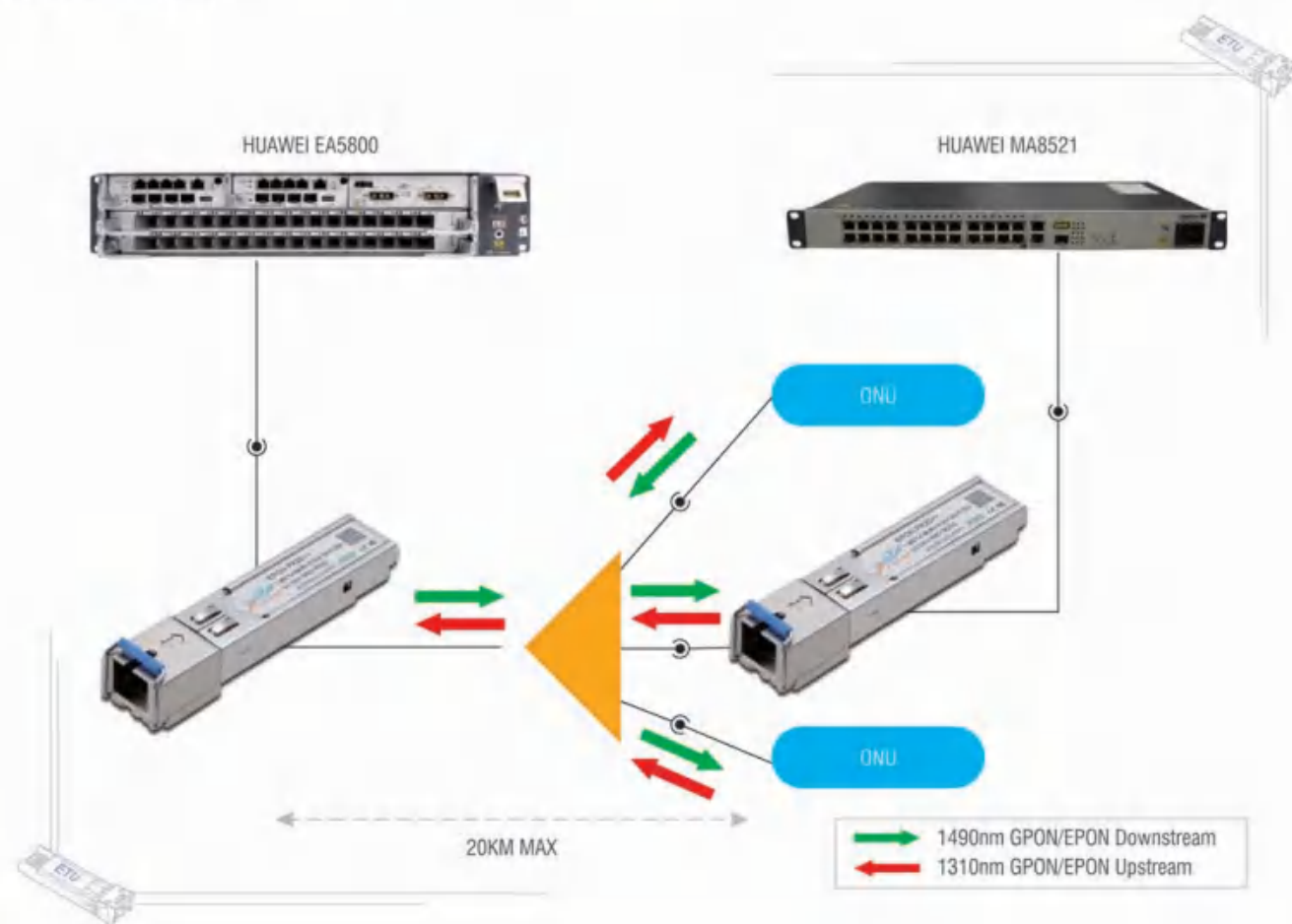
- Single fiber bi-directional data links with asymmetric 2.488Gbps Tx and 1.244Gbps Rx
- Digital diagnostic monitoring interface
- Single 3.3V power supply
- ROHS 6 compliance
- Commercial case temperature range: 0°C to 70°C
- 1490nm continuous-mode DFB laser transmitter and 1310nm burst-mode APD-TIA receive

Product Information

Model No.	Data Rate	Package	Wavelength(nm)	Distance	Output Power	Temp.(°C)	Interface	Source
EGP4321-3SCDB2	2.5G/1.25G	GPON OLT B+	TX 1490nm 2.488Gbps, RX 1310nm 1.244Gbps	20KM	3~4	0~70	SC	DFB+APD
EGP4321-3SCDC2	2.5G/1.25G	GPON OLT C+	TX 1490nm 2.488Gbps, RX 1310nm 1.244Gbps	20KM	4.5~5.5	0~70	SC	DFB+APD
EGP4321-3SCDC2x	2.5G/1.25G	GPON OLT C++	TX 1490nm 2.488Gbps, RX 1310nm 1.244Gbps	20KM	5.5~6.5	0~70	SC	DFB+APD
EGP3412-3SCDB2	1.25G/2.5G	GPON ONU B+	Tx 1310nm 1.25G, Rx 1490nm 2.488G	20KM	0.5~5	0~70	SC	DFB+APD

GPON OLT Optical Transceiver

Applications 28:



Patch Cord Details



Features

- Low insertion loss and back reflection loss
- Good durability
- Good exchange ability
- High temperature stability
- Standard: telcordia GR-326-CORE
- Compact design
- IEC,JIS,TELCORDIA-326 compliance



Features

- MPO connector complied with IEC-61754-7 A quick-to-deploy
- Scalable solution
- High compatibility, flexibility & system
- Performance lower installation cost
- Optimized performance - Elite MPO and discrete premium connector
- Support 40GBASE-SR4 in applicable parallel optics networks
- Compliant to IEC-61754-7 and TIA-604-5(FOCIS-5) standard

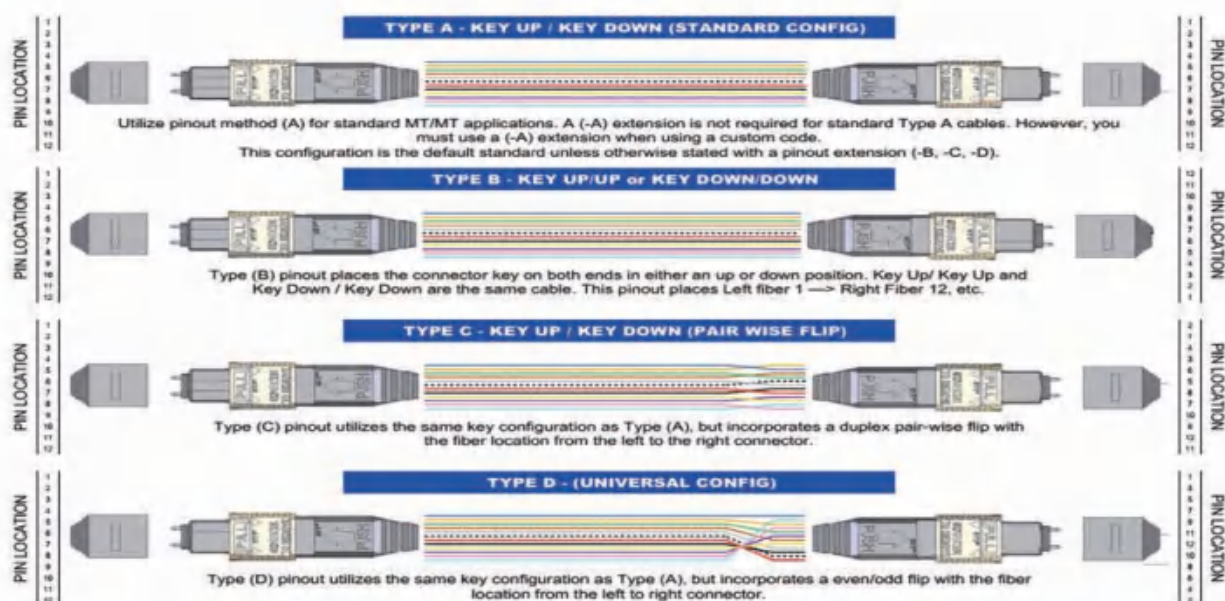
Application

- SAN (Storage Area Network) data center LAN
- LAN/SAN switch equipment distribution
- Area(EDA) emerging 40G and 100G protocols

Patch Cord Order Information

Connector-1	Polishing	Connector-2	Polishing	Cable Type	Length	Cable Diameter	Fiber Cont	Remark
SC	APC	LC	PC	OS2	5M	2.0MM	Duplex	LSZH
FC,SC	PC,UPC	FC,SC	PC,UPC	OM1 62.5/125	0.5M	0.9MM	Simplex	Colors
LC,ST	APC	LC,ST	APC	OM2 50/125	1M,2M	1.8MM	Duplex	Armored
MU,MTRJ		MU,MTRJ	DIN	OM3 (10G)	3M,4M	2.0MM	4,6,8 Counts	Waterproof
E2000,MPO		E2 000,MPO		OS1	5M...	3.0MM	12 Counts...	LSZH
SMA,DIN		SMA,DIN		OS2 9/12	100M...	Others	48 Counts...	PVC
				G657A/B/D	500M...			OFNR
				G655	1000M...			OFNP

ETU PN	Description
EGP4321-3SCDB2	GPON OLT B+ 2.5G/1.25G TX1490nm 2.5G,RX1310nm 1.25G SC 20km
EGP4321-3SCDC2	GPON OLT C+ 2.5G/1.25G TX1490nm 2.5G,RX1310nm 1.25G SC 20km
EGP4321-3SCDC2x	GPONOLT C++ 2 5G/1.25G TX1490nm 2.5G RX1310nm 1.25G SC 20km
EGP4321-3SCDCE2x	GPON OLT C++ Enhanced 2 5G/1.25G TX1490nm 2.5G, RX1310nm 1.25G SC 20km
EGP3421-3SCDB2	GPON ONU B+ 1.25G/2. 5G TX1310nm 1.25G,RX1490nm 2.5G SC 20km
EEP4311-3SCDP2	GE PON OLT PX20+ 1.25G/1.25G TX1490nm 1.25G, RX1310nm 1.25G SC 20km
EEP4311-3SCDP2x	GE PON OLT PX20++ 1.25G/1.25G TX1490nm 1.25G,RX1310nm 1.25G SC 20km
EEP4311-3SCDP2xx	GE PON OLT PX20+++Enhanced 1.25G/1.25G TX1490nm 1.25G, RX1310nm 1.25G SC 20km
EEP3411-3SCDP2	GE PON ONU PX20+ 1.25G/1.25G TX1310nm 1.25G, RX1490nm 1.25G SC 20km



Pigtail Details



Features

- Insert loss $\leq 0.2\text{dB}$
- Return loss: PC/UPC $> 35\text{dB}$ APC $> 60\text{dB}$
- Temperature range: $-40\sim+55^{\circ}\text{C}$
- 0.9mm、2.0mm、3.0mm

Pigtail Order Information

Connector-1	Polishing	Cable Type	Length	Cable Diameter	Fiber Cont	Remark
SC	APC	OS2	0.5M	0.9MM	Simplex	LSZH
FC,SC	PC,UPC	OM1 62.5/125	0.5M	0.9MM	Simplex	Colors
LC,ST	APC	OM2 50/125	1M,2M	1.8MM	4,6,8 Counts	Armored
MU,MTRJ		OM3 10G	3M	2.0MM	12 Counts...	Waterproof
E2000,MPO		OS1		3.0MM	48 Counts...	LSZH
SMA,DIN		OS2 9/125		Others		PVC
		G657A1/2/G652D				OFNR

Adapter Details



Features

- Low insertion loss high return loss
- High-precision alignment
- Accord with the standard of the telcordia ANSI,-TIA/EIA,NTT,JIS
- Optional for the shell material or sleeve material
- Compatible with NTT-SC standard

Adapter Order Information

Connector-1	Polishing	Color	Material	Sleeve Material	Channels	Remark
SC		Blue	Material	Zirconia Ceramic	Simplex	Dust Cap
FC,SC		Blue	Plastic	Zirconia Ceramic	Simplex	Color
LC,ST	PC	Beige	Plastic	Phosphor Bronze	Duplex	Black
MU,MTRJ	PC,UPC	Green	Metal			Red
E2000	APC					Blue
						Beige
						Green

Applications 29:



Media Converter



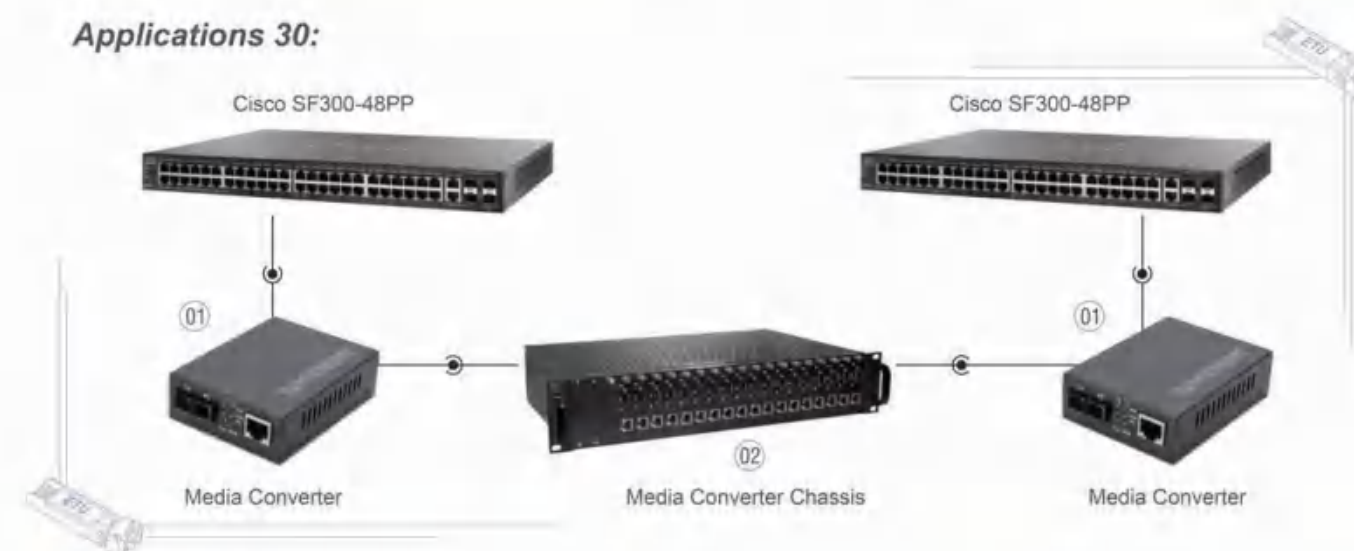
Features

- This product supports IEEE802.3 10 base-T Standard/IEEE 802.3u 100Base-TX/FX Standard/IEEE 802.3z 1000Base-TX/FX standard, as well as full duplex and half duplex mode.

Media Converter	
Model	Description
10/100Mbps Dual Fiber	
EM-100-M2	10/100M Dual Fiber MM Media Converter, 1310nm, 2KM SC Connector
EM-100-S20	10/100M Dual Fiber SM Media Converter, 1310nm, 20KM SC Connector
EM-100-S40	10/100M Dual Fiber SM Media Converter, 1310nm, 40KM SC Connector
EM-100-S60	10/100M Dual Fiber SM Media Converter, 1550nm, 60KM SC Connector
EM-100-S80	10/100M Dual Fiber SM Media Converter, 1550nm, 80KM SC Connector
10/100Mbps Single Fiber	
EM-100-BS20	10/100M Single Fiber SM Media Converter, 1310/1550nm, 20KM SC Connector
	10/100M Single Fiber SM Media Converter, 1550/1310nm, 20KM SC Connector
EM-100-BS40	10/100M Single Fiber SM Media Converter, 1310/1550nm, 40KM SC Connector
	10/100M Single Fiber SM Media Converter, 1550/1310nm, 40KM SC Connector
EM-100-BS60	10/100M Single Fiber SM Media Converter, 1490/1550nm, 60KM SC Connector
	10/100M Single Fiber SM Media Converter, 1550/1490nm, 60KM SC Connector
EM-100-BS80	10/100M Single Fiber SM Media Converter, 1490/1550nm, 80KM SC Connector
	10/100M Single Fiber SM Media Converter, 1550/1490nm, 80KM SC Connector
1000Mbps Dual Fiber	
EM-1000-M05	1000M Dual Fiber MM Media Converter, 850nm 550M SC Connector
EM-1000-S20	1000M Dual Fiber SM Media Converter, 1310nm, 20KM SC Connector
1000Mbps Single Fiber	
EM-1000-BS20	1000M Single Fiber SM Media Converter, 1310/1550nm, 20KM SC Connector
	1000M Single Fiber SM Media Converter, 1550/1310nm, 20KM SC Connector

10/100/1000Mbps Dual Fiber	
EM-1100-M05	10/100/1000M Dual Fiber MM Media Converter, 850nm, 550M SC Connector
EM-1100-M2	10/100/1000M Dual Fiber MM Media Converter, 1310nm, 2KM SC Connector
EM-1100-S20	10/100/1000M Dual Fiber SM Media Converter, 1310nm, 20KM SC Connector
EM-1100-S40	10/100/1000M Dual Fiber SM Media Converter, 1310nm, 40KM SC Connector
EM-1100-S60	10/100/1000M Dual Fiber SM Media Converter, 1550nm, 60KM SC Connector
EM-1100-S80	10/100/1000M Dual Fiber SM Media Converter, 1550nm, 80KM SC Connector
10/100/1000Mbps Single Fiber	
EM-1100-BS20	10/100/1000M Single Fiber SM Media Converter, 1310/1550nm, 20KM SC Connector
	10/100/1000M Single Fiber SM Media Converter, 1550/1310nm, 20KM SC Connector
EM-1100-BS40	10/100/1000M Single Fiber SM Media Converter, 1310/1550nm, 40KM SC Connector
	10/100/1000M Single Fiber SM Media Converter, 1550/1310nm, 40KM SC Connector
EM-1100-BS60	10/100/1000M Single Fiber SM Media Converter, 1490/1550nm, 60KM SC Connector
	10/100/1000M Single Fiber SM Media Converter, 1550/1490nm, 60KM SC Connector
SFP Media Converter	
EM-100-SSXX	10/100Mbps SFP Media Converter without SFP Module
EM-1100-SSXX	10/100/1000Mbps SFP Media Converter without SFP Module
10G SFP+ Media Converter	
EM-11100-SSXX	10G SFP+ Media Converter without SFP Module

Applications 30:



Item No	ETU PN	Description
①	EM-1100-S20	10/100/1000M Media Converter 1310nm 20km
②	Media Converter Chassis	Media Converter Chassis

Regular Product

Abbreviation	ETU PN	Description
RJ45	ES-T2-R	10/100/1000M SFP Copper-T RJ45
10G RJ45	ES-T5-R	10G SFP+ Copper-T RJ45 30m
SX	ES8512-3LCD05	1.25G SFP 850nm 550M DDM
LX	ES3112-3LCD10	1.25G SFP 1310nm 10KM DDM
	ES3112-3LCD20	1.25G SFP 1310nm 20KM DDM
EX	ES3112-3LCD40	1.25G SFP 1310nm 40KM DDM
	ES5512-3LCD40	1.25G SFP 1550nm 40KM DDM
ZX	ES5512-3LCD80	1.25G SFP 1550nm 80KM DDM
SR	ES85X-3LCD03	10G SFP+ 850nm 300M DDM
LR	ES31X-3LCD10	10G SFP+ 1310nm 10KM DDM
	ES31X-3LCD20	10G SFP+ 1310nm 20KM DDM
ER	ES31X-3LCD40	10G SFP+ 1310nm 40KM DDM
	ES55X-3LCD40	10G SFP+ 1550nm 40KM DDM
ZR	ES55X-3LCD80	10G SFP+ 1550nm 80KM DDM
QSFP+ SR4	EQ854X-3MCD01	40G QSFP+ 850nm 100M DDM
QSFP+ LR4	EQ314X-3LCD10	40G QSFP+ 1310nm 10KM DDM
QSFP+ ER4	EQ314X-3LCD40	40G QSFP+ 1310nm 40KM DDM
QSFP+ ZR4	EQ314X-3LCD80	40G QSFP+ 1310nm 80KM DDM
QSFP28 SR4	EQ28510X-3MCD01	100G QSFP28 850nm 100M DDM
QSFP28 LR4	EQ23110X-3LCD10	100G QSFP28 1310nm 10KM LC
QSFP28 ER4	EQ23110X-3LCD40	100G QSFP28 1310nm 40KM LC
QSFP28 ZR4	EQ23110X-3LCD80	100G QSFP28 1310nm 80KM LC

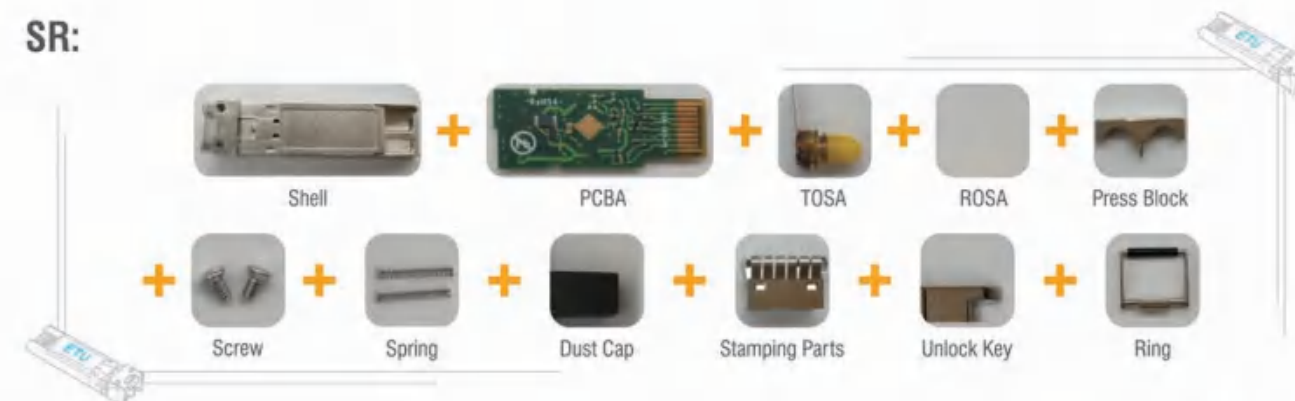
Proper Nouns

SM:	Single Mode	MM:	Multimode
SX:	Simplex	DX:	Duplex
IL:	Insertion Loss	RL:	Return Loss
MSA:	Multi-Source Agreements	CDR:	Clock Data Recovery
DDM:	Digital Diagnostic Monitoring	WDM:	Wavelength Division Multiplexing
CWDM:	Coarse Wavelength Division Multiplexer	DWDM:	Dense Wavelength Division Multiplexer

Optical Transceiver Components



SR:



LR:



BD SC:



1.25G Dual Fiber :



10G BD:



1.25G BD:



Regular Product

