



## ABOUT US

**Sopto** is a professional hi-tech optoelectronics manufacturer engaging in R&D, manufacture, and distribution of fiber optical communication products. We focus on developing fiber optical communication and WAN network field. With hard work and development for several years, we have established a competitive technological group and completed reliable production line

Our object is to provide reliable and satisfactory service with the best quality to our clients; to do our best to meet the requirement of our customers and create the maximum profit for our clients. Please feel free to visit our website at [sopto.com](http://sopto.com) or contact us via [info@sopto.com](mailto:info@sopto.com). Sopto understands your needs and help you to get there cheaper, faster and in the right way.

### Ordering Information

To ease the ordering procedure, Sopto is pleased to offer our valuable customers three ordering channels as below. To make your shopping more enjoyable, we have no minimum order value requirement.

3 Different ways to Order

- A. Online Ordering
- B. Fax Order Form
- C. Issuing Formal Purchase Order





# Contents

## 1 Fiber Optical Transceivers

- ◆ SFP Transceiver
- ◆ GBIC Transceiver
- ◆ SGMII SFP Transceiver
- ◆ SFP BI-DI Transceiver
- ◆ XFP/SFP+ BI-DI Transceiver
- ◆ SFP CWDM Transceiver
- ◆ SFP GBIC Copper Transceiver
- ◆ SFP+ 10G Transceiver
- ◆ XFP 10G Transceiver
- ◆ XENPAK X2 10G Transceiver
- ◆ SFP/ XFP/ X2/ XENPAK DWDM

## 2 Media Converters & Chassis

- ◆ 10/100M Media Converter
- ◆ 10/100/1000M Media Converter
- ◆ Multi UTP Ports Media Converter
- ◆ SFP Media Converter
- ◆ 14 Slots Converter Chassis
- ◆ 16 Slots Management Converter Chassis

## 3 PDH Multiplexer & Chassis

- ◆ STM-1 Fiber Converter
- ◆ V.35/E1/ RS485 Fiber Modem
- ◆ N x E1 Fiber Optical Multiplexer
- ◆ 1+1 Fiber Optical Multiplexer
- ◆ E+E Fiber Optical Multiplexer
- ◆ 4U/6U Chassis
- ◆ Phone Optical Multiplexer

## 4 Protocol Converter & TDMOIP

- ◆ E1 /V.35 /RS485/ RS232 Converter
- ◆ Nx E1/ETH Converter
- ◆ TDMOIP N x E1

## 5 Digital Video Transmitter & Receiver

- ◆ 1/2/4/8/16/24/32/64 Channels Video
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Data
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Audio
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Audio+Data
- ◆ UTP Video Balun
- ◆ 4U Chassis

## 6 CATV Transmitter & Receiver

- ◆ EDFA
- ◆ Fiber Optical Node
- ◆ Fiber Optical Transmitter
- ◆ CATV Outdoor Cab/Splitter

## 7 GEAPON/GPON Solution

- ◆ OLT&ONU

## 8 HBA Cards & PCI-E Cards

- ◆ HBA Card
- ◆ 10G Ethernet Dual Port PCI Card
- ◆ Gigabit Single /Dual Fiber Port PCI Card
- ◆ Gigabit Dual UTP Port PCI Card

## 9 Fiber Optical Cable

- ◆ Indoor Optical Cable
- ◆ Outdoor Optical Cable
- ◆ FTTH Drop Cable

## 10 Fiber Optical Patch Cords

- ◆ General Patch Cords
- ◆ Loopback Patch Cords
- ◆ MTP/MPO Patch Cords
- ◆ Fan-out Patch Cords
- ◆ FTTH Drop Cable Patch Cords
- ◆ SFP+ 10G Cable

## 11 Fiber Optical Adaptor

- ◆ General Fiber Adaptor
- ◆ Hybrid Fiber Adaptor
- ◆ Bare Fiber Adaptor

## 12 Fiber Optical Attenuator

- ◆ Plug-type Fixed Value Attenuator
- ◆ Bulkhead-Fixed Value Attenuator
- ◆ Variable Attenuator
- ◆ Handheld Variable Attenuator

## 13 Splitter & CWDM & DWDM

- ◆ FBT Splitter
- ◆ PLC Splitter
- ◆ CWDM Mux /Demux/OADM Module
- ◆ DWDM Mux /Demux

## 14 FTTH Box & ODF & Closure

- ◆ FTTH Box
- ◆ ODF
- ◆ Fiber Closure

## 15 Network Cable & Accessories

- ◆ Cat5e/Cat6 Patch Cords
- ◆ Cat5e/Cat6 Patch Panel
- ◆ Faceplate/Keystone Jacket

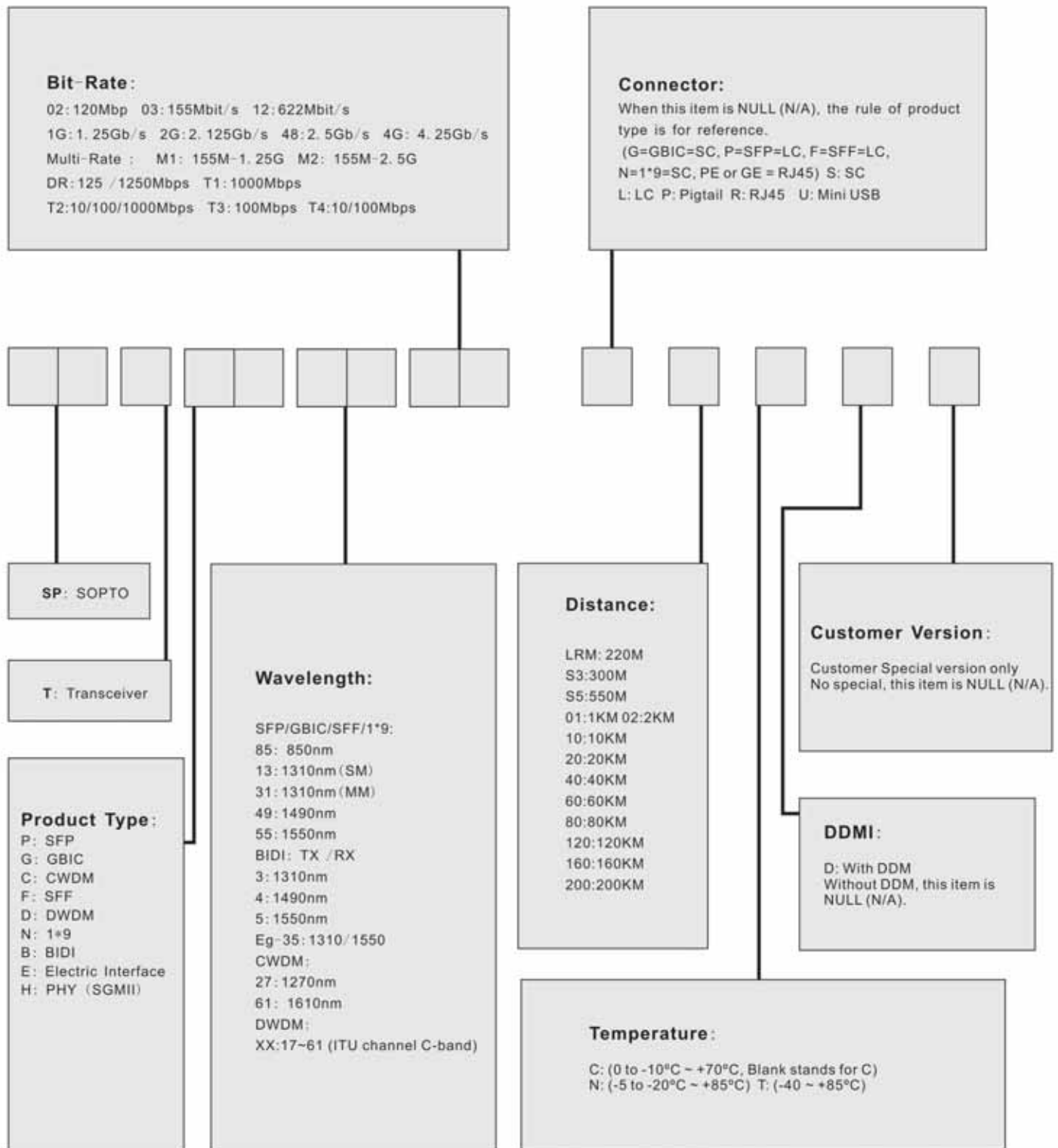
## 16 Tools & Testing Equipment

- ◆ Tool Kits
- ◆ General Tools
- ◆ Power Meter
- ◆ Light Source



# Fiber Optical Transceivers

## Fiber Optical Transceiver



# Fiber Optical Transceivers

## SFP Transceiver



### Description

- 1) Data rate: 155M/622M/1.25G/2.5G/4G
- 2) Wavelength: 850nm/1310nm/1550nm
- 3) PIN/APD photodiode receiver
- 4) SFP MSA package duplex LC
- 5) +3.3V single power supply
- 6) With or without DDM function
- 7) Very low EMI and excellent ESD protection
- 8) Distance from SX 550m to ZX 120km

### Applications

- 1) SONET/SDH
- 2) Fiber Channel
- 3) Ethernet

## Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)
SPT-P3103-02	155M	1310nm	2km	LED	-15~-5dBm	<-30dBm
SPT-P1303-20	155M	1310nm	20km	FP	-15~-8dBm	<-36dBm
SPT-P1503-120	155M	1550nm	120km	DFB	-3~-1dBm	<-38dBm
SPT-P851G-S5	1.25G	850nm	550m	VCSEL	-9~-3dBm	<-17dBm
SPT-P131G-10	1.25G	1310nm	10km	FP	-9~-3dBm	<-22dBm
SPT-P131G-40	1.25G	1310nm	40km	DFB	-5~0dBm	<-24dBm
SPT-P151G-120D	1.25G	1550nm	120km	DFB	0~+5dBm	<-32dBm
SPT-P854G-S1D	4.25G	850nm	150m	VCSEL	-9~-3dBm	<-15dBm
SPT-P154G-40	4.25G	1550nm	40km	DFB	-7~-1dBm	<-22dBm
SPT-P1548-120D	2.5G	1550nm	120km	DFB	>2dBm	<-28dBm
SPT-P1548-80D	2.5G	1550nm	80km	DFB	0~+5dBm	<-28dBm
SPT-P1348-10D	2.5G	1310nm	10km	DFB	-5~0dBm	<-18dBm
SPT-P3148-02D	2.5G	1310nm	2km	FP	-9~-3dBm	<-18dBm

## GBIC Transceiver



### Description

- 1) Gigabit Ethernet 1000Base-SX/LX/XD/ZX at 1.25Gb/s Optional
- 2) Wavelength: 850nm/1310nm/1550nm
- 3) Single +3.3V or +5V Power Supply
- 4) Hot-Pluggable Duplex SC
- 5) Eye Safety, Meet Laser Class1, Compliant with IEC60825-1
- 6) Compliant with Telcordia (Bellcore) GR-468-CORE
- 7) Compliant with Specifications for IEEE-802.3
- 8) Compliant with ANSI Spec.for Fiber Channel Applications at 1.06Gb/s

## Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)
SPT-G851G-S5	1.25G	850nm	550m	VCSEL	-9~-3dBm	<-17dBm
SPT-G131G-10	1.25G	1310nm	10km	FP	-9~-3dBm	<-22dBm
SPT-G151G-70	1.25G	1550nm	70km	DFB	0~+5dBm	<-24dBm
SPT-G151G-120	1.25G	1550nm	120km	DFB	0~+5dBm	<-32dBm

# Fiber Optical Transceivers

## SGMII SFP Transceiver



### Description

- 1) Meet SFP MSA and SFF-8472 with duplex LC receptacle
- 2) Metal enclosure for lower EMI
- 3) Transmitter Center Wavelength 850nm, 1310nm
- 4) Receiver PIN
- 5) Data Rate 125Mbps
- 6) Soft TX\_FAULT monitor
- 7) Soft RX\_LOS monitor
- 8) Soft Tx\_Disable control and monitor
- 9) With user writable EEPROM
- 10) Operating Temperature 0℃~+70℃
- 11) RoHS

### Applications

- 1) Connection Gigabit Ethernet To Fast Ethernet
- 2) Switch to Switch interface
- 3) Switched backplane applications

### Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)
SPT-PH3102-02D	125Mb/s	1310nm	2km	FP	-20~-14dBm	-31dBm
SPT-PH1302-10D	125Mb/s	1310nm	10km	FP	-15~-8dBm	-31dBm

## SFP BI-DI Transceiver



### Description

- 1) Data rate: 155M/622M/1.25G/2.5G/4G
- 2) Wavelength: 1310nm/1550nm/1490nm
- 3) PIN/APD photodiode receiver
- 4) SFP MSA package BIDI SC/ LC
- 5) +3.3V single power supply
- 6) With or without DDM function
- 7) Very low EMI and excellent ESD protection
- 8) Distance from LX 10km to ZX 120km

### Applications

- 1) SONET/SDH
- 2) Fiber Channel

### Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)
SPT-PB3503-L20	155M	1310nm	20km	FP	-14~-8dBm	<-33dBm
SPT-PB5303-L20	155M	1550nm	20km	FP	-14~-8dBm	<-33dBm
SPT-PB351G-L10	1.25G	1310nm	10km	FP	-9~-3dBm	<-20dBm
SPT-PB531G-L10	1.25G	1550nm	10km	DFB	-9~-3dBm	<-20dBm
SPT-PB351G-L40	1.25G	1310nm	40km	DFB	-3~+2dBm	<-23dBm
SPT-PB531G-L40	1.25G	1550nm	40km	DFB	-3~+2dBm	<-23dBm
SPT-PB451G-L120D	1.25G	1490nm	120km	DFB	0~+5dBm	<-38dBm
SPT-PB541G-L120D	1.25G	1550nm	120km	DFB	-3~+2dBm	<-38dBm





# Fiber Optical Transceivers

## XFP/SFP+ BI-DI Transceiver



### Features:

- 1) Support 9.95Gb/s to 10.3Gb/s bit rates
- 2) Hot-pluggable XFP, SFP+ footprint
- 3) Maximum link length of 10km with SMF
- 4) 1270/1310nm DFB laser Transmitter and 1 330/1270nm Receiver
- 5) XFP/SFP+ MSA package with LC connector
- 6) No reference clock required
- 7) Loop Back Support
- 8) +3.3V power supply
- 9) Power dissipation <2W
- 10) Compatible with RoHS
- 11) Built-in digital diagnostic functions

### Applications:

- 1) 10GBASE-LR at 10.3125Gbps
- 2) 10GBASE-LW at 9.953Gbps
- 3) 10GBASE-BX 10G Ethernet

## SFP CWDM Transceiver



### Description

- 1) CWDM DFB Laser diode transmitter
- 2) Transmitter Center Wavelength 1270nm, 1290nm, 1310nm, 1330nm, 1350nm, 1370nm, 1390nm, 1410nm, 1430nm, 1450nm, 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm and 1610nm.
- 3) Receiver PIN or APD
- 4) Data Rate up to 4Gbps
- 5) Operating Temperature 0°C ~ +70 °C
- 6) Distance up to 80km
- 7) RoHS compliant

### Applications

- 1) Gigabit Ethernet
- 2) ATM
- 3) SONET/SDH

### Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)	Others
SPT-PCXX1G-80D	1.25G	1470~1610nm	80km	DFB	0~+5dBm	<-24dBm	ROHS
SPT-PCXX2G-80D	2.5G	1470~1610nm	80km	DFB	0~+5dBm	<-28dBm	ROHS

## SFP / GBIC Copper Transceiver

### Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)	Others
SPT-PE-T1	1000M		100m				ROHS
SPT-PE-T2	10/100/1000M		100m				ROHS
SPT-GE-T1	1000M		100m				ROHS

# Fiber Optical Transceivers



## Description

- 1) Up to 1.25Gbps data links
- 2) Support intelligent auto-negotiation 1000BASE-T
- 3) SFP/GBIC form with compact RJ-45 connector
- 4) Very low EMI and excellent ESD protection
- 5) Low power dissipation
- 6) Detailed product information in EEPROM
- 7) 100m transmission over unshielded twisted pair (UTP) Cat5 Cable
- 8) SGMII interface hot-pluggable
- 9) With spring latch for high density application
- 10) +3.3/5V single power supply
- 11) Operating case temperature: 0°C to +70°C
- 12) RoHS compliant

## SFP+ 10G Transceiver



## Description

- 1) 8GFC and 10Gbit/s 8.5G data rates
- 2) SFP+ MSA Compliant
- 3) Very low power consumption (<1W)
- 4) With Digital Diagnostic Monitor Interface
- 5) Operating temperature range 0°C to 70°C
- 6) 10G Serial Electrical I/F

## Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)	Others
SPT-SFP+-SR	10G/8.5G	850nm	300m	VCSEL	-6.5~-1dBm	-11.1dBm	ROHS
SPT-SFP+-LR	10G/8.5G	1310nm	10km	DFB	-8.2~0.5dBm	-14.4dBm	ROHS
SPT-SFP+-ER	10G/8.5G	1550nm	40km	DFB	-3~3dBm	-14.1dBm	ROHS

## XFP 10G Transceiver



## Description

- 1) 850nm/1310nm/1550nm laser diode transmitter
- 2) Support 9.95Gb/s to 11.3Gb/s data rate
- 3) Below 2.5W power consumption
- 4) XFP MSA package with duplex LC connector
- 5) With Digital Diagnostic Monitor Interface
- 6) Operating temperature range 0°C to 70°C
- 7) No reference clock requirement

## Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)	Others
SPT-XFP-SR	10G	850nm	0.3km	VCSEL	-7.5~-1dBm	-9.9dBm	ROHS
SPT-XFP-LR	10G	1310nm	10km	DFB	-6.5~0.5dBm	-14.5dBm	ROHS
SPT-XFP-ER	10G	1550nm	40km	DFB	-1~2dBm	-12.3dBm	ROHS
SPT-XFP-ZR	10G	1550nm	80km	DFB	0~4dBm	-24dBm	ROHS





# Fiber Optical Transceivers

## XENPAK/ X2 10G Transceiver



### Description

- 1) Compatible with XENPAK MSA Rev3.0
- 2) Support of IEEE 802.3ae 10GBASE-L
- 3) XENPAK/X2 MSA package with duplex LC connector
- 4) With Digital Diagnostic Monitor Interface
- 5) Operating temperature range 0°C to 70°C
- 6) Hot Pluggable 70-PIN Connector with XAU Electrical Interface

- 1) Xenpak-10G-SR, Xenpak-10G-LR, Xenpak-10G-ER
- 2) X2-10G-SR, X2-10G-LR, X2-10G-ER

### Ordering Information

Part No	Data rate	Wavelength	Distance	Source	TX power(dbm)	RX Sens(dbm)	Others
SPT-XENPAK-SR	10G	850nm	0.3km	VCSEL	-5~-1dBm	-11.1dBm	ROHS
SPT-XENPAK-LR	10G	1310nm	10km	DFB	-8.2~-0.5dBm	-12.6dBm	ROHS
SPT-XENPAK-ER	10G	1550nm	40km	DFB	-1~2dBm	-11.7dBm	ROHS
SPT-X2-SR	10G	850nm	0.3km	VCSEL	-3~-1dBm	-11.1dBm	ROHS
SPT-X2-LR	10G	1310nm	10km	DFB	-8.2~0.5dBm	-14.4dBm	ROHS
SPT-X2-ER	10G	1550nm	40km	DFB	-1~2dBm	-11.7dBm	ROHS

## SFP /XFP/ X2 /XENPAK DWDM



### Description

- 1) Wavelength selectable to C-band and L-band ITU-T grid wavelengths
- 2) Suitable for use in 100GHz channel spacing DWDM systems
- 3) DWDM SFP,XFP,X2,XENPAK MSA Compliant
- 4) Up to 2.667Gb/s, 9.95Gbs to 11.3Gbps
- 5) Low Power Dissipation <1.3W Maximum
- 6) -5°C to 70°C Operating Case Temperature
- 7) Diagnostic Performance Monitoring of module temperature, supply voltage, laser bias current, transmit optical power, receive optical power, laser temperature and TEC current
- 8) Extended link budget with APD receiver technology
- 9) OC48/STM-16 Long Reach 80km (1600 ps/nm), 120km (2400 ps/nm) Versions

### Applications

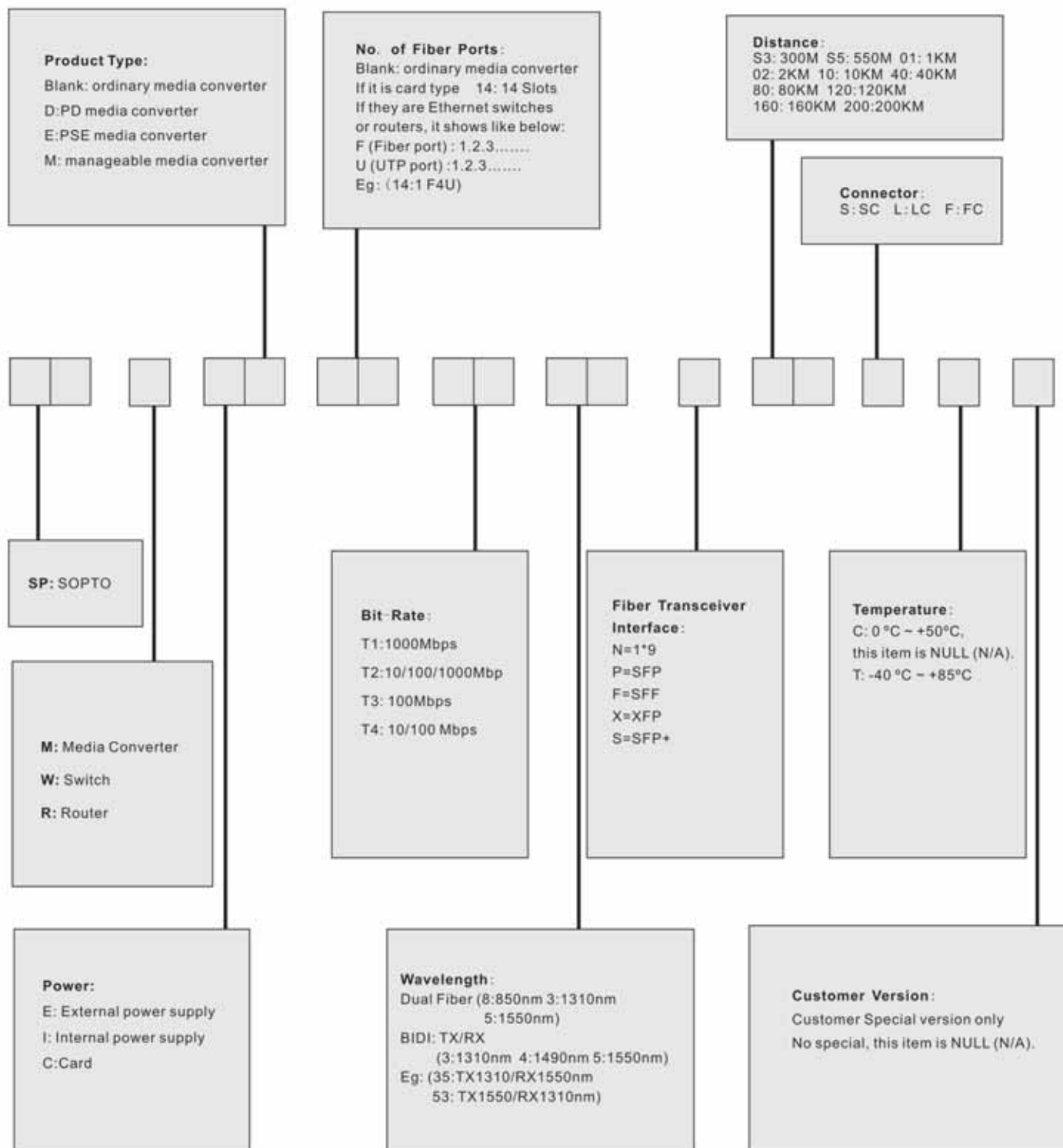
- 1) SFP Transceivers for DWDM SONET/ SDH
- 2) 10GBASE-ER/EW SONET OC-192 & SDH STM 64
- 3) DWDM Networks

### Ordering Information

Part No	Data Rate	Lambda	Laser	Receiver	Reach	Connector
SPT-PDXX1G-80D	1.25Gbps	ITU-T Channel C-band, 17~61	Cooled DFB	APD	80km	LC
SPT-PDXX1G-120D	1.25Gbps	ITU-T Channel L-band, 62~16	Cooled DFB	APD	120 km	LC
SPT-PDXX1G-80D	2.5Gbps	(ITU-TG.6921563.86~1528.77	Cooled DFB	APD	80km	LC
SPT-PDXX1G-120D	2.5Gbps	1610.06~1564.68 DWDM,078nm)	Cooled DFB	APD	120 km	LC
SPT-XFP-DWXX-ER	10Gbps	ITU-T Channel, 17~61(ITU-T G.692	DWDM rated EML	InGaAs PIN	40km	LC
SPT-XFP-DWXX-ZR	10Gbps	1563.86~1528.77 DWDM,078nm)	DWDM rated EML	APD	80km	LC
SPT-X2-DWXX-ER	10Gbps	ITU-T Channel, 17~61(ITU-T G.692	Cooled EA-DFB	PIN-PD	40km	SC
SPT-X2-DWXX-ZR	10Gbps	1563.86~1528.77 DWDM,078nm)	Cooled EA-DFB	APD	80km	SC
SPT-XENPAK-DWXX-ER	10Gbps	ITU-T Channel, 17~61(ITU-T G.692	Cooled EA-DFB	PIN-PD	40km	SC
SPT-XENPAK-DWXX-ZR	10Gbps	1563.86~1528.77 DWDM,078nm)	Cooled EA-DFB	APD	80km	SC

# Media Converters & Chassis

## Ordering Information



# Media Converters & Chassis

## 10 /100M Media Converter



### Description:

- 1) Data rate: 10/100M
- 2) Dual fiber or single fiber (WDM)
- 3) Wavelength:850nm/1310nm/1550nm
- 4) External or internal power supply
- 5) Distance from SX 2km to ZX 120km
- 6) Manageable or unmanageable available

## 10 /100/ 1000M Media Converter



### Description

- 1) Data rate: 1000M or 10/100/1000M
- 2) Dual fiber or single fiber (WDM)
- 3) Wavelength:850nm/1310nm/1550nm
- 4) External or internal power supply
- 5) Distance from SX 550m to ZX 120km
- 6) Manageable or unmanageable available
- 7) SFP gigabit Media converter available

## Multi UTP Ports Media Converter



### Description

- 1) Data rate: 10/100M or 10/100/1000M
- 2) Available for SFP Dual fiber or single fiber (WDM)
- 3) Available for 2/3/4/7/8UTP ports
- 4) Wavelength: 850nm/1310nm/1550nm
- 5) External or internal power supply
- 6) Distance from SX 550m to ZX 120km
- 7) Manageable or unmanageable available



# Media Converters & Chassis

## SFP Media Converter



### Description:

- 1) Data rate: 10/100M or 1000M or 10/100/1000M
- 2) Available for SFP Dual fiber or single fiber (WDM)
- 3) Wavelength: 850nm/1310nm/1550nm
- 4) External or internal power supply
- 5) Distance from SX 550m to ZX 120km
- 6) Manageable or unmanageable available

## 14 Slots Converter Chassis



### Description

- 1) 14 slots media converter Chassis
- 2) Available for 10/100m or 10/100/1000M standalone media converter
- 3) Two 220V or 110V or 48V power supply or both
- 4) Without management

## 16 Slots Management Converter Chassis



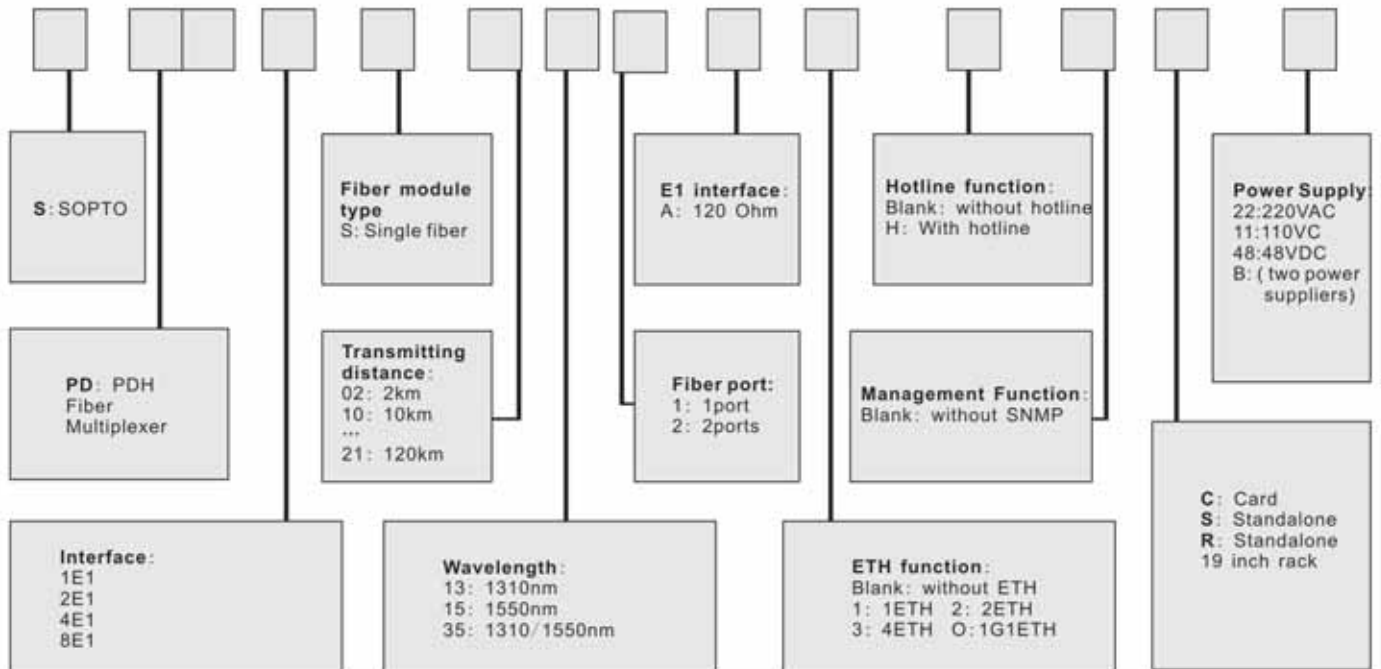
### Description:

- 1) 16 slots media converter Chassis
- 2) Available for 10/100m or 10/100/1000M standalone media converter cards
- 3) Two 220V or 110V or 48V power supply or both
- 4) With strong management, Supporting protocols like CONSOLE, WEB, TELNET and SNMP



# PDH Multiplexer & Chassis

## Ordering Information



## STM-1 Fiber Converter



### Description:

- 1) Provide 2 types of loop-back function:  
Electrical interface loop to remote  
Optical interface loop to local
- 2) Dual fiber or single fiber
- 3) Electric interface: 75ohm, CMI coding
- 4) 220V or 110V or 48V power supply or both

## V.35 /E1/RS485 Fiber Modem



### Description

- 1) V.35/E1/RS485/RS232/RS422 Fiber modem
- 2) Dual fiber or single fiber, SC or FC Connector
- 3) E1 interface: 120ohm or 75ohm
- 4) 220V or 110V or 48V power supply or both

# PDH Multiplexer & Chassis

## N x E1 Fiber Optical Multiplexer



### Description:

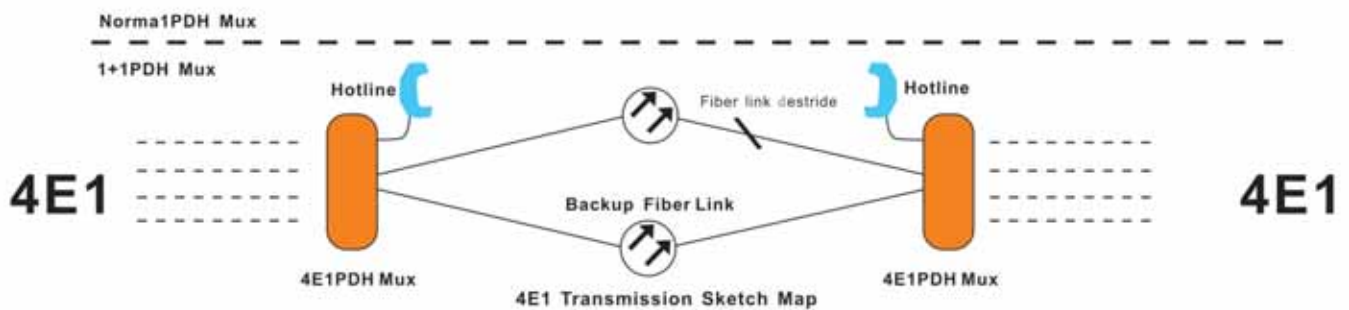
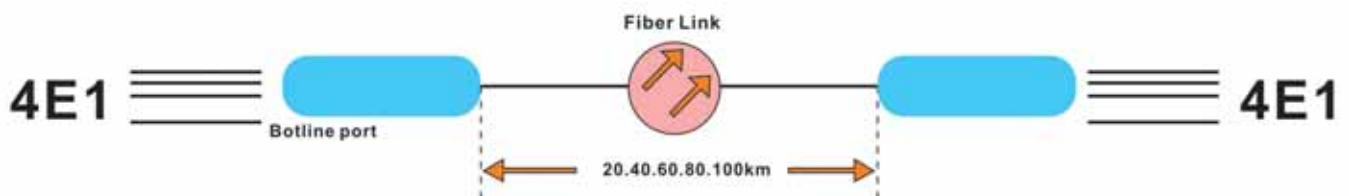
- 1) E1, 2E1, 4E1, 8E1, 16E1 Fiber Optical multiplexer
- 2) Mini rack or 19 inch rack
- 3) Dual fiber or single fiber, SC or FC Connector
- 4) E1 interface: 120ohm or 75ohm
- 5) 220V or 110V or 48V power supply or both

## 1+1 Fiber Optical Multiplexer



### Description:

- 1) E1, 2E1, 4E1, 8E1, 16E1 with 1+1 Fiber port
- 2) Mini rack or 19 inch rack
- 3) Dual fiber or single fiber, SC or FC Connector
- 4) E1 interface: 120ohm or 75ohm
- 5) 220V or 110V or 48V power supply or both





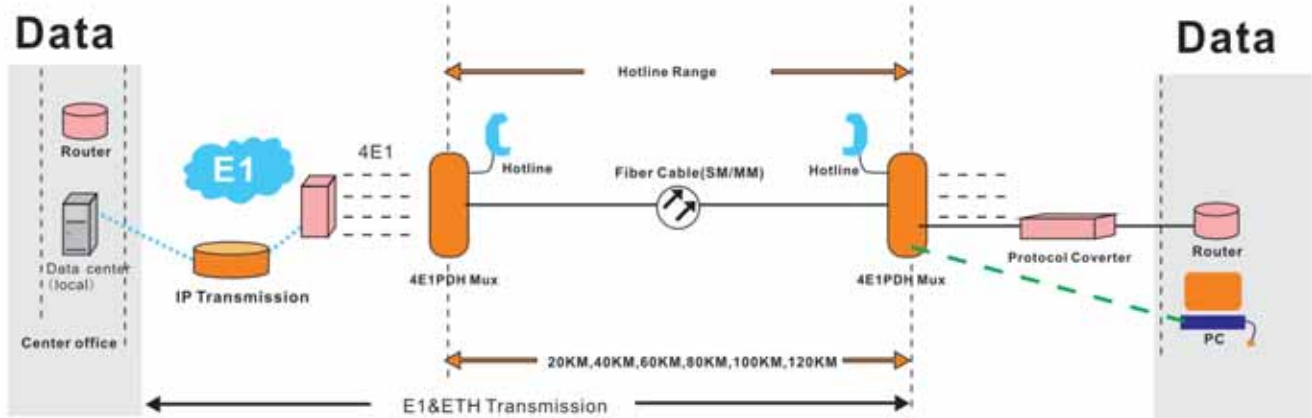
# PDH Multiplexer & Chassis

## E+E Fiber Optical Multiplexer



### Description:

- 1) E1, 2E1, 4E1, 8E1, 16E1 with 1/2/4 Ethernet Port
- 2) Mini rack or 19 inch rack
- 3) Dual fiber or single fiber, SC or FC Connector
- 4) E1 interface: 120Ohm or 75ohm
- 5) 220V or 110V or 48V power supply or both



## 4U / 6U Chassis



### Description:

- 1) 4U Rack support all types of cards as protocol converter, fiber modem, E1 or 4E1 multiplexers
- 2) Support 16 pcs of cards and 2 power supply
- 3) 6U rack support all types of cards as 4E1/8E1/16E1 multiplexers
- 4) Support 12 pcs of cards, 1 management card and 2 power suppliers
- 5) Both racks support mixed cards in the same chassis

# PDH Multiplexer & Chassis

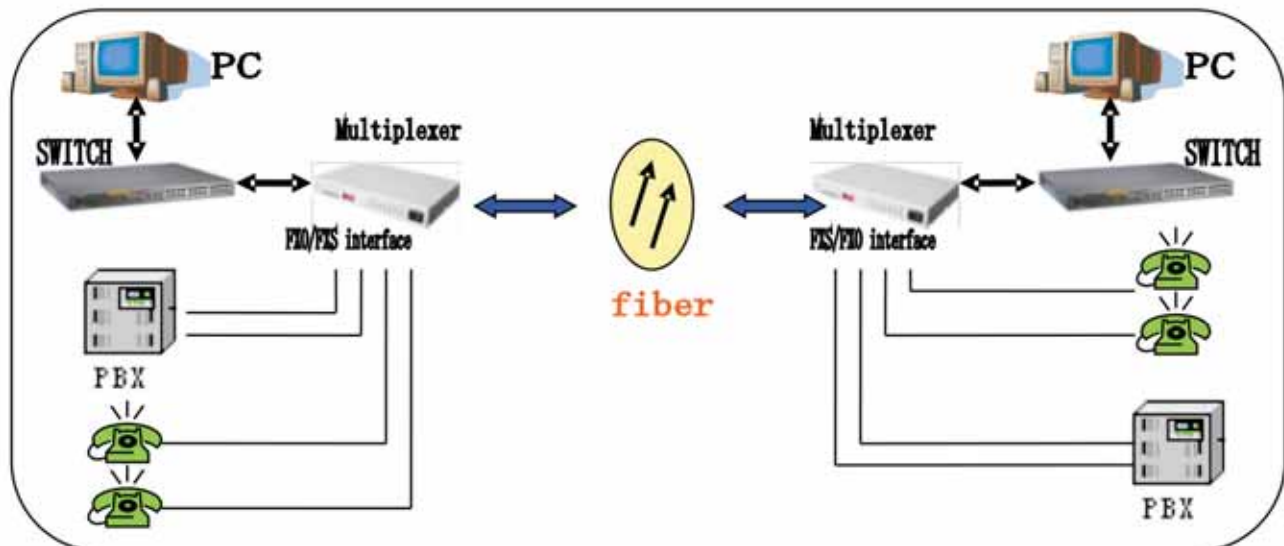
## Phone Optical Multiplexer



### Description:

- 1) 4/8/16/30 Channel voice with 1/2/4 Ethernet Port
- 2) FXS or FXO port
- 3) Dual fiber or single fiber, SC or FC Connector
- 4) E1 interface: 120ohm or 75ohm
- 5) 220V or 110V or 48V power supply or both

### Application:



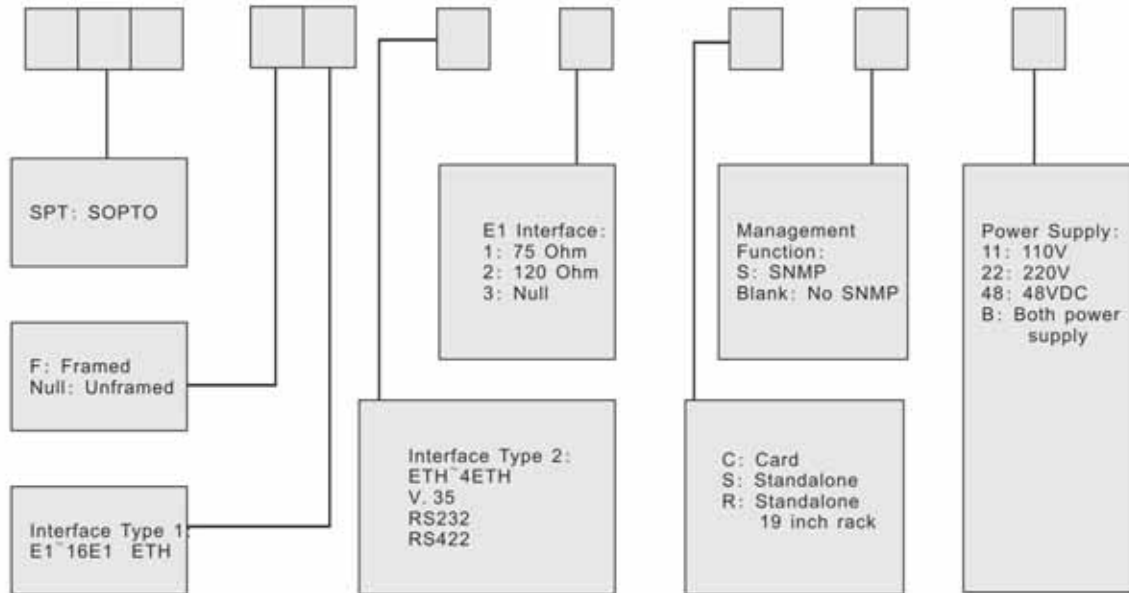
### Ordering Information

Part No.	Description of goods
SPD-E1-PCM041	10/100M Ethernet port+4*FXO(FXS) 120ohm or 75ohm phone multiplexer 220V
SPD-E1-PCM08	1 or 4 10/100M Ethernet port+8*FXO(FXS)+4*RS232+1*V.35 120ohm 220V
SPD-E1-PCM16	4*10/100M+16*FXO(FXS)+4*RS232 port 120ohm 220V
SPD-E1-PCM30	1*10/100M+30*FXO(FXS)+1*RS232 port 120Ohm 220V
SPD-PCM04	10/100M +4*FXO(FXS) SM dual fiber 20km 220V
SPD-PCM08	4*10/100M+8*FXO(FXS)+1*RS232+1*V.35 SM dual fiber 20km 220V
SPD-PCM16	4*10/100M+16*FXO(FXS)+1*RS232+1*V.35 SM dual fiber 20km 220V
SPD-PCM30	1*10/100M+30*FXO(FXS)+1*RS232 SM dual fiber 20km 220V



# Protocol Converter & TDMOIP

## Ordering Information



### E1 / V.35 / RS485 / RS232 Converter



#### Description:

- 1) E1/V.35/RS485/RS232 Converter
- 2) E1 interface: 120Ohm or 75ohm
- 3) 220V or 110V or 48V power supply or both

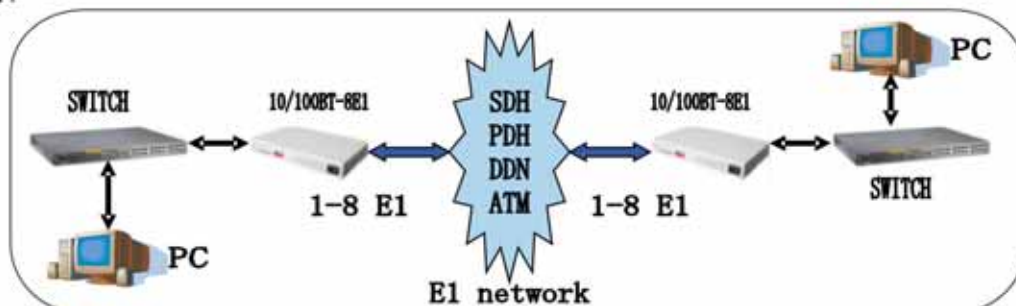
### N x E1 / ETH Converter



#### Description

- 1) E1/2E1/4E1/8E1/16E1 to 1, 2 or 4 ETH Ports
- 2) E1 interface: 120ohm or 75ohm
- 3) Mini rack or 19 inch rack
- 4) 220V or 48V or both

#### Application:





# Protocol Converter & TDMOIP

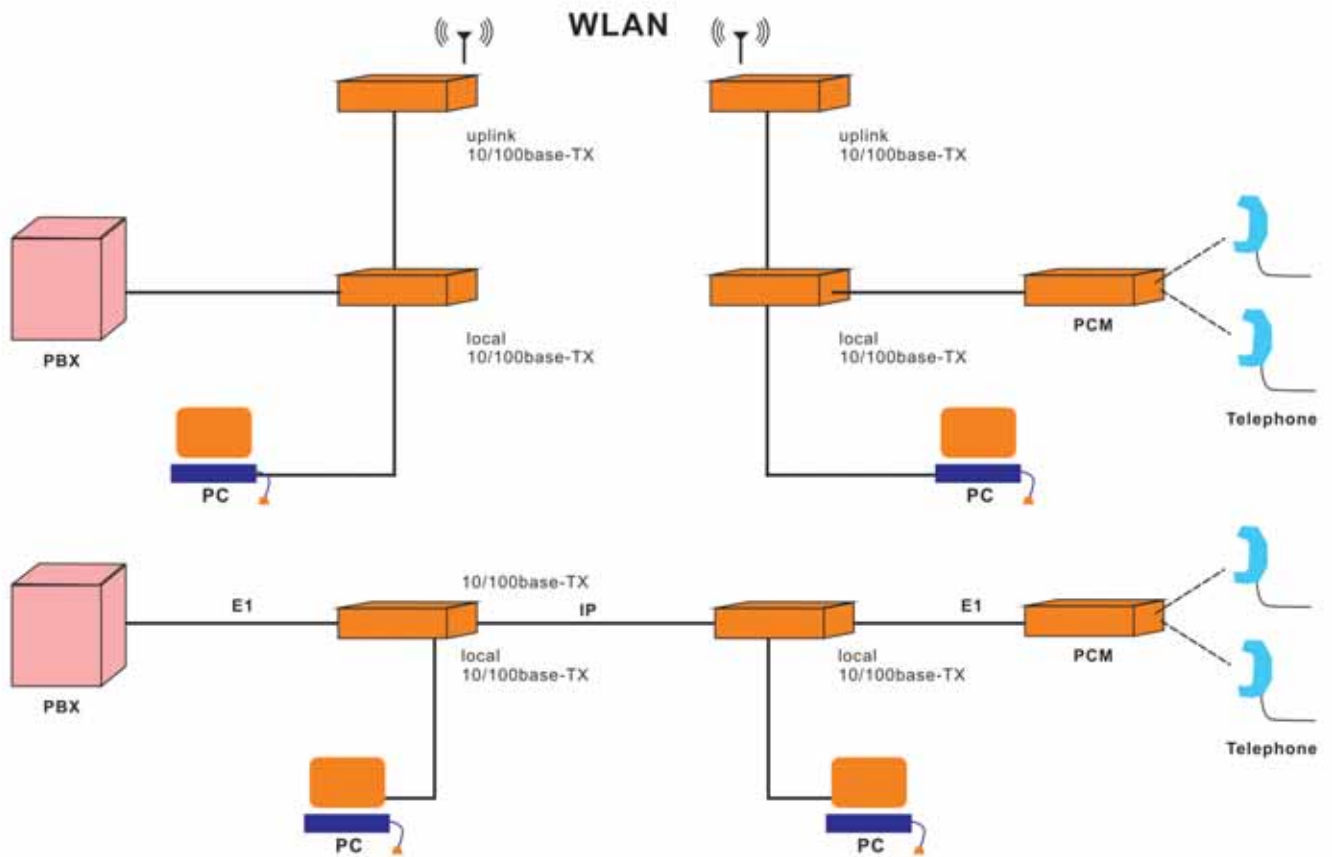
TDMOIP N x E1



**Description:**

- 1) TDMOIP E1/2E1/4E1 over 1 or 2 ETH Ports
- 2) E1 interface: 120ohm or 75ohm
- 3) 220V or 110V or 48V power supply or both

**Application :**



**Ordering Information**

Part No.	Description of goods
TDMOIP-1E1-ETH	E1 over IP, one local Ethernet port
TDMOIP-2E1-ETH	2E1 over IP, one local Ethernet port
TDMOIP-4E1-ETH	4E1 over IP, one local Ethernet port



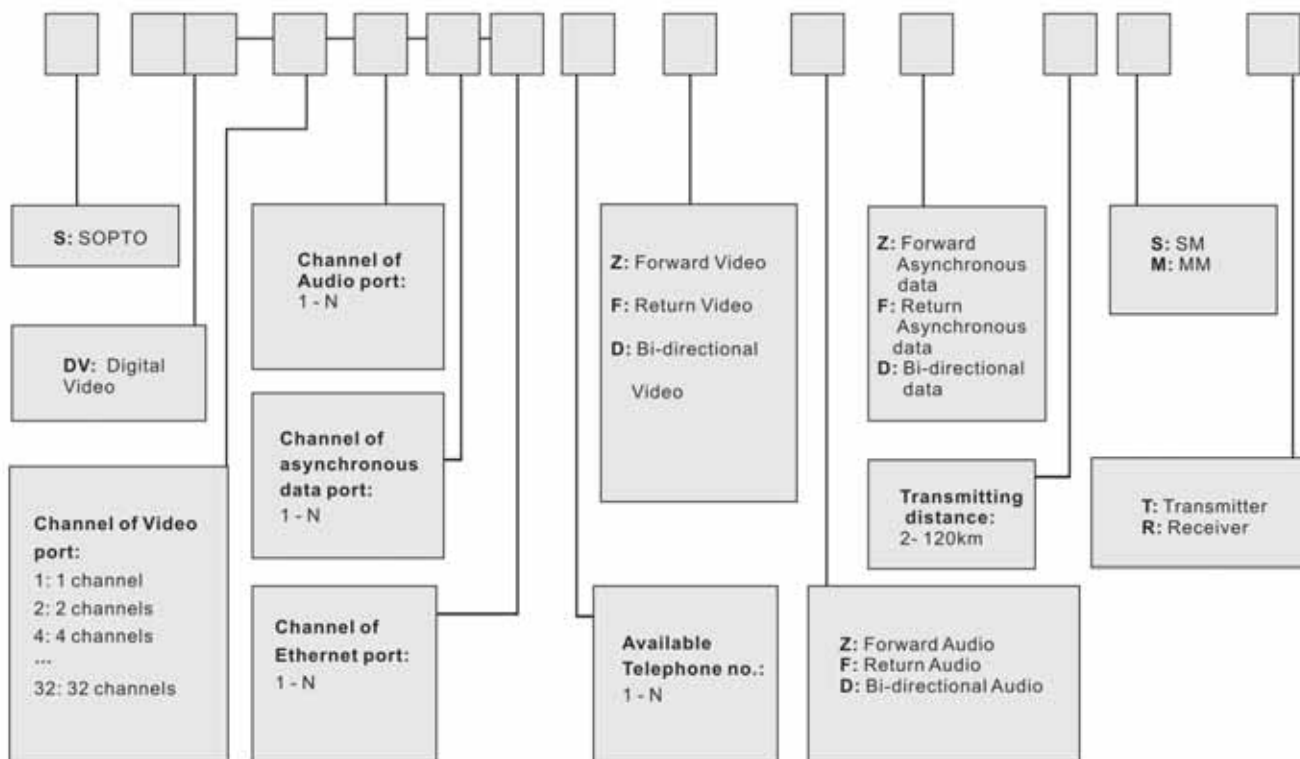
# Digital Video Transmitter & Receiver

\*In recent years Digital Video Optical Transmitter & Receiver is being extensively used in security applications.

\*Reduction in prices and increase in demand of Digital Video Optical Transmitter & Receiver has induced the need to develop new techniques.

\*Sopto provides cost-effective product solutions to our customers with best process control and quality assurance!

## Ordering Information



### Description:

- 1) Card-type or Stand-alone type for your choice; suitable for concentration management in 2U/4U Racks
- 2) 10 –digit coding and non-compression video transmission
- 3) supporting any high –resolution video signal
- 4) Video Band-Width: 10MHz
- 5) automatically compatible with PAL, NTSC and SECAM video format
- 6) With APC circuit, constant output optical power and wide dynamic range
- 7) Large capacity of gigabit optical fiber transmission, easy for upgrading
- 8) Supporting video intact regenerative relay
- 9) Supporting advanced SNMP standards, realize long-distance web-controlling
- 10) LED indication of power and other parameter status, monitoring real-time operation
- 11) Modularized and industrialized design ensuring reliability and flexibility
- 12) Advanced auto- adaptive technology avoiding on-site electric or optical regulation
- 13) Capable of auto resumption of power fuse

### Target Industries:

- 1) Intelligent transportation supervisory system(ITS)
- 2) High-speed Way supervisory/Tele-Communication System
- 3) Security protection system, TV medical treatment
- 4) Long-distance Muti-media Schooling, Campus monitoring
- 5) Long-distance broadcast television transmission system
- 6) High-building Security Protection
- 7) Military Tele-Com projects

# Digital Video Transmitter & Receiver

## Digital Video Transmitter & Receiver



- ◆ 1/2/4/8/16/24/32/64 Channels Video
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Data
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Audio
- ◆ 1/2/4/8/16/24/32/64 Channels Video+Audio+Data
- ◆ 4U Chassis



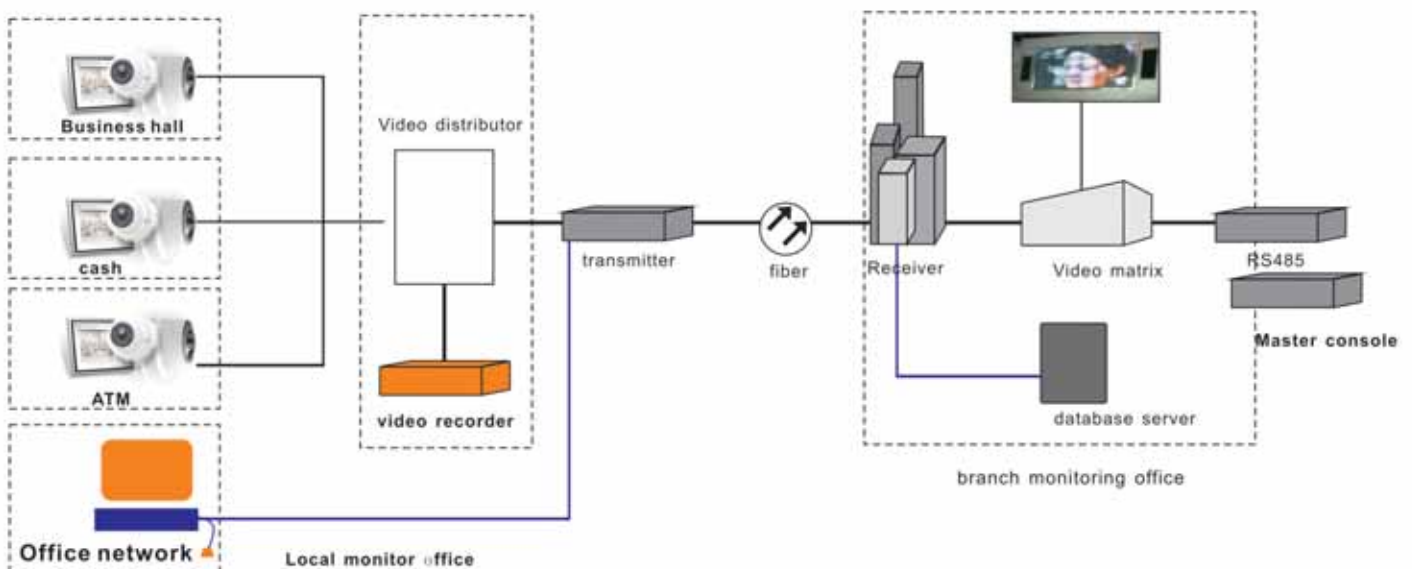
## ◆ UTP Video Balun



### Description:

- 1) 1 Channel passive video transceiver. Receiving and transmitting video signals via UTP cable without power
- 2) Frequency response: DC-6Mhz Common-mode/differential-mode
- 3) Coax, male BNC: 75\*UTP Terminal block or UTP RJ45 Data connector: 100\*
- 4) 1 Channel Passive video/data transceiver and 4/16 Channel passive video transceivers are available.

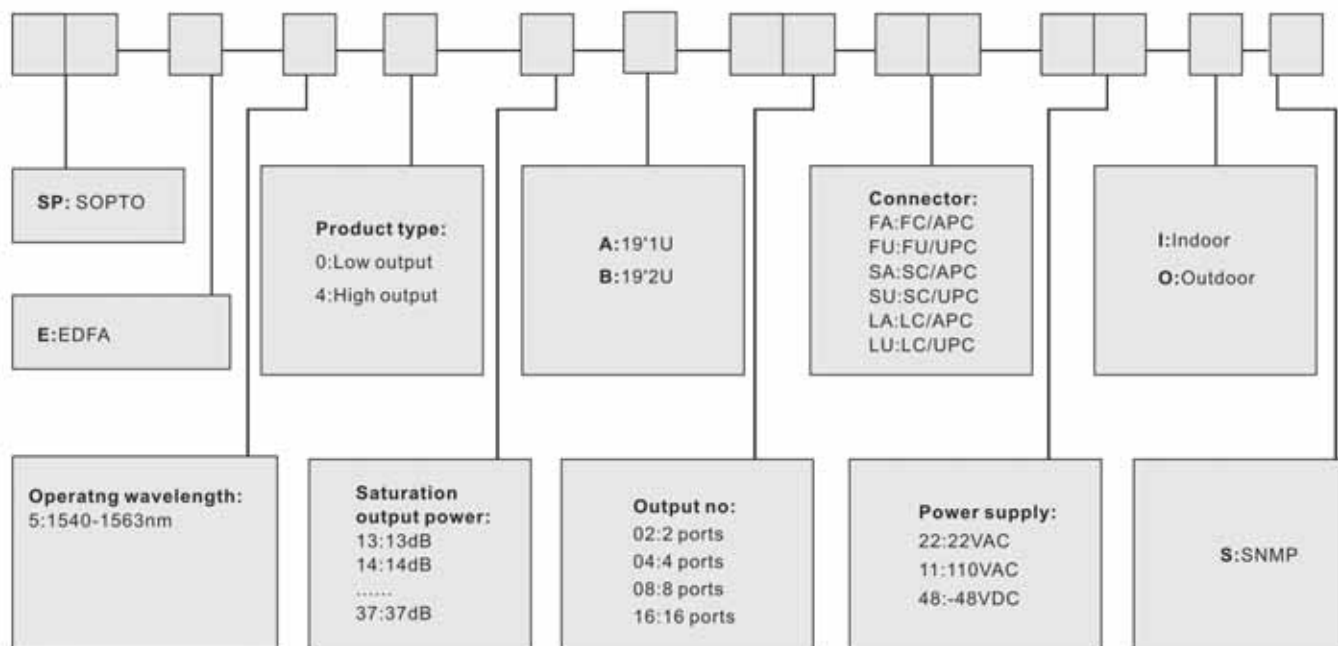
### Application:





# CATV Transmitter & Receiver

## EDFA Ordering Information



## EDFA( Erbium-dropped Fiber Amplifier)

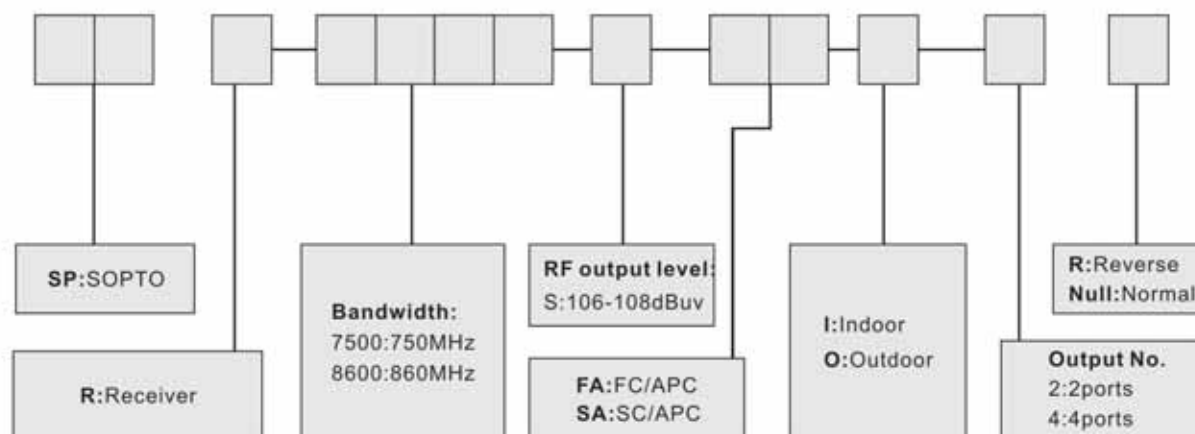


### Description:

- 1) Adopting high-quality Pump Laser diode and Erbium-Doped optical fiber
- 2) Advanced APC and ATC circuit to ensure the performance
- 3) Low noise figure and high gain
- 4) Input & output optical isolator
- 5) Output power: 13-23dBm
- 6) 1U 19' rack mounted case with VFD in front panel;
- 7) RS232/485 interface optional for remote monitoring and control

## Fiber Optical Node

### Ordering Information



# CATV Transmitter & Receiver



## Description:

- 1) Oxidation processing, water-proof aluminum housing with stainless mesh gasket
- 2) Optional low noise circuit ensures non-linear specification
- 3) Optional GaAs circuit allows low power optical input;
- 4) 1V/1mv optical detection port;
- 5) Separate AC port and two outboard test ports;
- 6) All ports have AC indicating LEDs;
- 7) Two/Four output ports in forward path.
- 8) Changeable tap and splitter output;

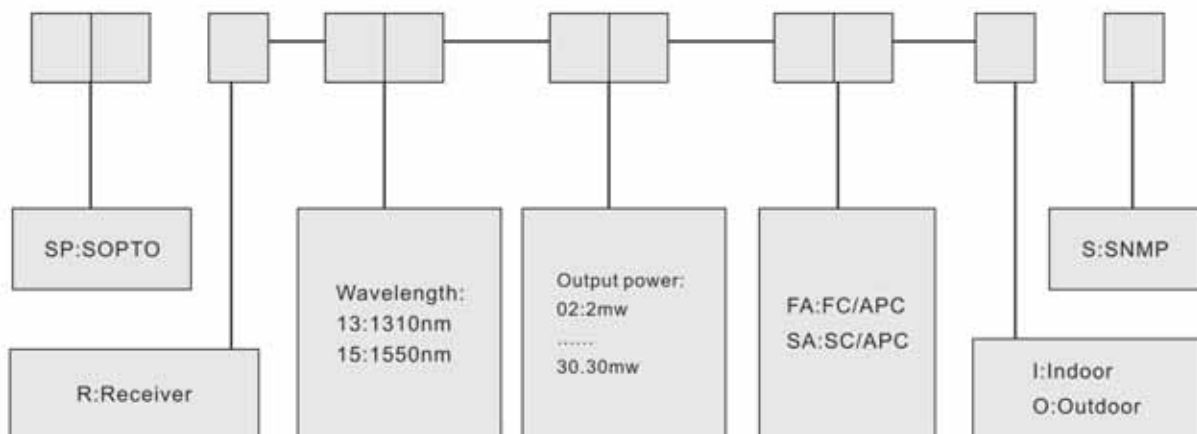
## Fiber Optical Transmitter



## Description:

- 1) Adopt world-famous company advanced DFB laser instrument
- 2) Max output optical power reach 30mW
- 3) Build-in pre-distortion compensation
- 4) Good stability and trouble alarm system
- 5) 1U 19' rack mounted case with VFD in front panel
- 6) RS232/485 interface optional for remote monitoring and control

## Ordering Information



## CATV Outdoor Tap/Splitter



## Description:

- 1) Used in indoor or outdoor CATV trunk link as splitter or directional coupler
- 2) Double-sided design circuit board, can used in Bi-directional network
- 3) Waterproof Aluminum Shell, the PCB is on the bottom cover
- 4) Frequency range: 5-1000Mhz
- 5) 1/2/3/4 way tap and Splitter



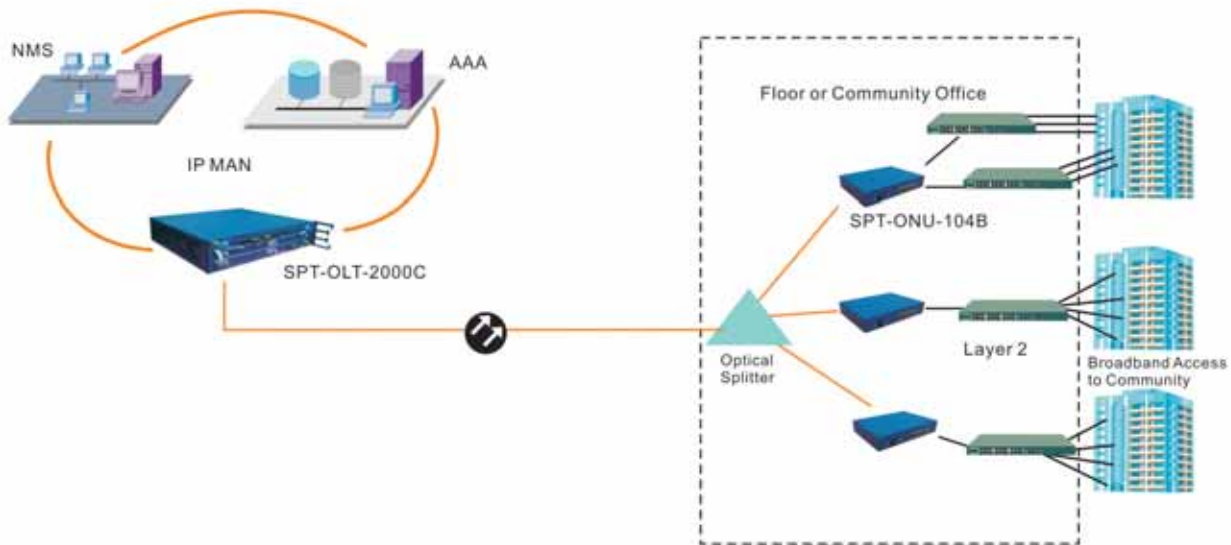
# GEPON/GPON Solution

**SPT-OLT-2000C** is system terminal platform; it is combining with the advanced industrial design, manufacturing technology by mini designing. Which is high reliability, flexible, easy maintain. It can support 8 GEPON PON ports and connect 512 remote ONU mostly (by 1:64 splitter), and provides 8 GE optical/electrical uplink interfaces. SPT-OLT-2000C can be apply to FTTB/FTTP/FTTH access solutions.

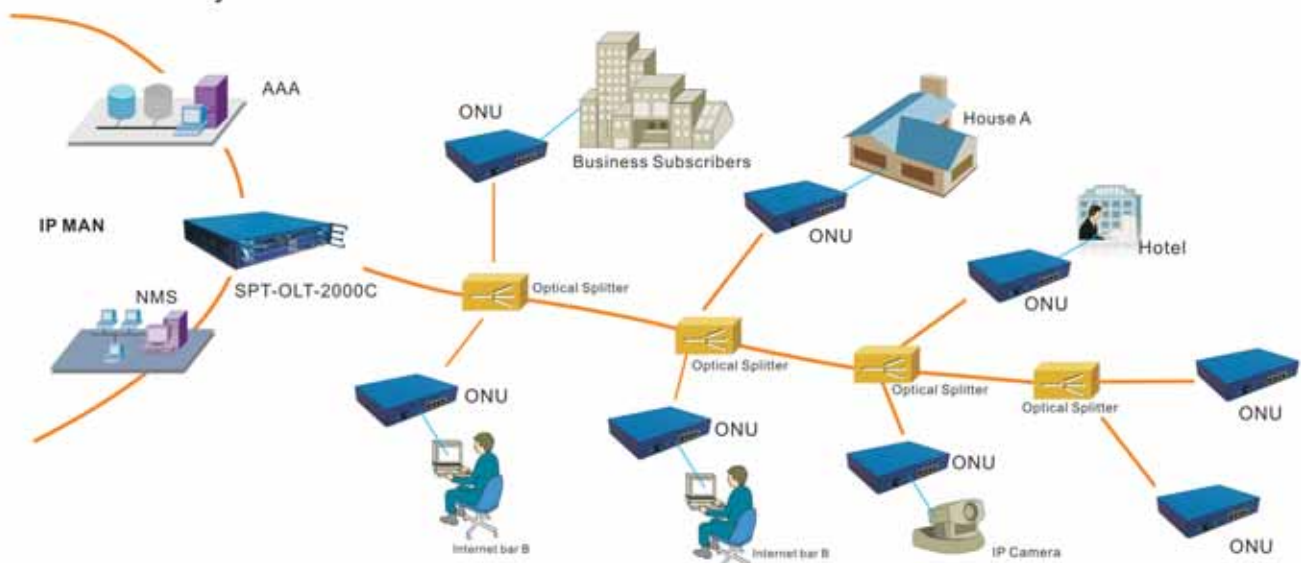


## Application:

\*Carrier FTTB+LAN Solution



\*Carrier Key Account Access Solution





# HBA Cards & PCI-E Cards

## HBA Cards



### Description:

- 1) 64-bit, PCI-X 2.0 266-MHz DDR, compatible with 66/33-MHz PCI and 133/100/66-MHz PCI-X
- 2) Single 4-Gbps FC
- 3) Small form factor fixed (SFF) multimode optic with LC-style connector
- 4) 4/2/1 Gbps auto-negotiation (4.2480/2.1240/1.0625Gbps)
- 5) Relative ( non-condensing): 10% to 90%
- 6) Storage: 5% to 95%

## 10G Ethernet Dual Port PCI Card



General and Technical Description	
Manufacturer Product Name	SOPTO 10 Gigabit Ethernet Dual Port Server Adapter X520 SFP+ 2
Product Code	SPNC-10G2BF-SFP+
Form Factor	Internal-connected with Intel Xeon 5500 series processor servers
Controller-Processor	Intel 82599ES*1
Bus Type	PCI Express 2.0 (5GT/s)
Bus Width	x8 lane PCI Express, operable in x8 and x16 slots
Bus Speed (x8, encoded rate)	20 Gbps uni-directional; 40 Gbps bi-directional
Network Interface Type	SFP+ Slots *2, two LC fiber-optic connectors Direct Attach cables
Data Rate(s) Supported	Optical: 1 GbE/10 GbE Direct Attach: 10 GbE per port
Network Standards Physical Layer Interface	10GBASE-LR 10GBASE-SR
IEEE Network Standards	IEEE 802.3



# HBA Cards & PCI-E Cards

## Gigabit Single/Dual Fiber Port PCI Card



### General and Technical Description

<b>Manufacturer Product Name</b>	SOPTO PRO/1000 PF Single/Dual Ports Server Adapter
<b>Product Code</b>	SPNC-10001PF    SPNC-10002PF
<b>Form Factor</b>	Internal-connected with servers ,Workstations and Others
<b>Controller-Processor</b>	Intel 82572E1 *1
<b>Bus Type</b>	PCI Express 2.0a
<b>Bus Width</b>	x4 lane PCI Express operable in x4, x8, x16 slots
<b>Bus Speed (x4, encoded rate)</b>	10 Gbps uni-directional; 20 Gbps bi-directional
<b>Network Interface Type</b>	Single-Port ,SFP Slots *1      Dual-Ports,SFP Slots *2
<b>Data Rate(s) Supported</b>	10, 100, and 1000 Mbps per port
<b>Optional Connection Parts</b>	SFP Transceiver *1/*2, (1000BASE-SX, 1000BASE-LX, 1000BASE-ZX). LC fiber cables
<b>IEEE Network Standards</b>	IEEE 802.3(1000BASE-SX, 1000BASE-LX, 1000BASE-ZX).
<b>Typical Power Consumption</b>	3.3 W (3.3 V & 1 A)
<b>Hardware Certifications</b>	FCC B, UL, CE, VCI, BSMI, CTICK, MIC

# HBA Cards & PCI-E Cards

## Gigabit Dual UTP Port PCI Card



General and Technical Description	
Manufacturer Product Name	SOPTO PRO/1000 PT Dual Port Server Adapter
Product Code	SPNC-10002PT
Form Factor	Internal-connected with servers ,Workstations and Others
Controller-Processor	Intel 82571EB *1
Bus Type	PCI Express1.0a
Bus Width	x4 lane PCI Express operable in x4, x8, x16 slots
Bus Speed (x4, encoded rate)	10 Gbps uni-directional; 20 Gbps bi-directional
Network Interface Type	Dual-Port ,RJ-45 Slots *2
Data Rate(s) Supported	10, 100, and 1000 Mbps per port
Optional Connection Parts	RJ-45*2,(10BASE-T,100BASE-T,1000BASE-T). UTP-5 cables.
IEEE Network Standards	IEEE 802.3(10BASE-T, 100BASE-T, 1000BASE-T).
Typical Power Consumption	4.95 W (3.3 V & 1.5 A)
Hardware Certifications	FCC B, UL, CE, VCI, BSMI, CTICK, MIC

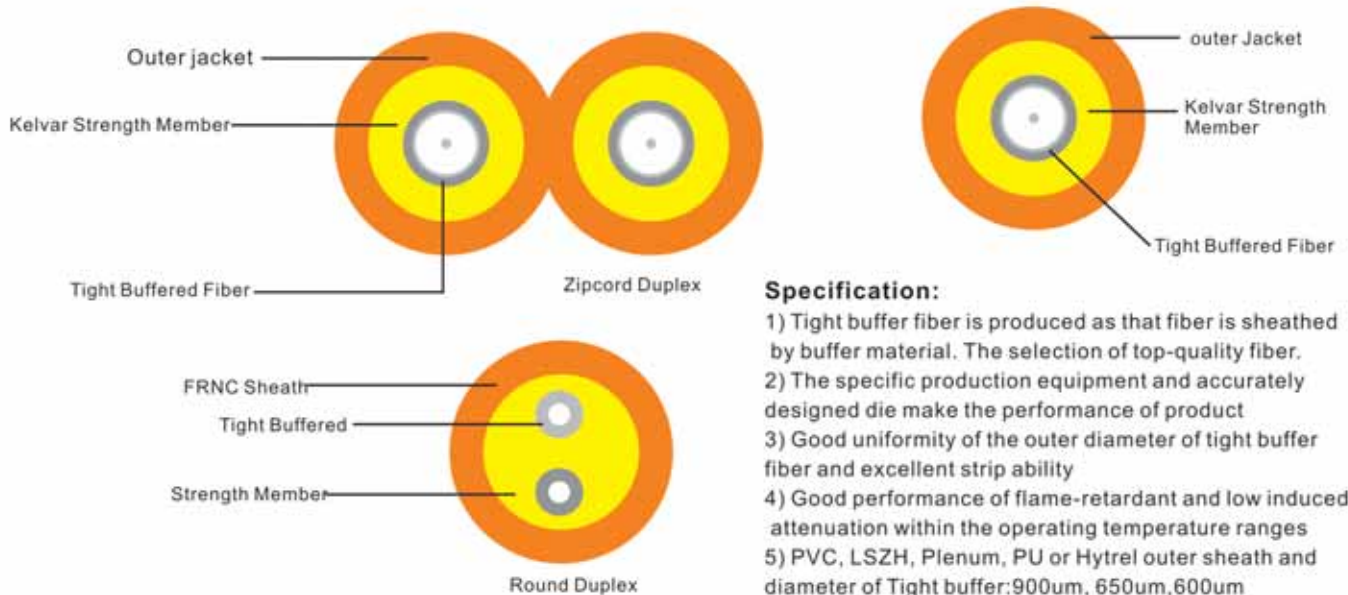




# Fiber Optical Cable

## Indoor Optical Cable

**Indoor Optical Cable** is tight buffer cables available in both SM and MM type. The jacket color of SM and MM cables is yellow and orange respectively. Custom cable jacket colors and special fiber types are available for nearly all cables below.



### Specification:

- 1) Tight buffer fiber is produced as that fiber is sheathed by buffer material. The selection of top-quality fiber.
- 2) The specific production equipment and accurately designed die make the performance of product
- 3) Good uniformity of the outer diameter of tight buffer fiber and excellent strip ability
- 4) Good performance of flame-retardant and low induced attenuation within the operating temperature ranges
- 5) PVC, LSZH, Plenum, PU or Hytelr outer sheath and diameter of Tight buffer: 900um, 650um, 600um

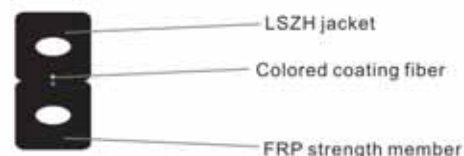
## Outdoor Optical Cable



### Specification:

- 1) Stranded Loose Tube Light-armored cable(GYTS)
- 2) Loose tube style, Gel-filled, layer-stranded
- 3) Fiber cable with metallic/non-metallic central strength member of steel wire/FRP
- 4) Different cores are available
- 5) GYXTW.,GYTA,GYFTY,GYTY53,GYTA53,GYSTC8S are available

## FTTH Drop Cable



### Description:

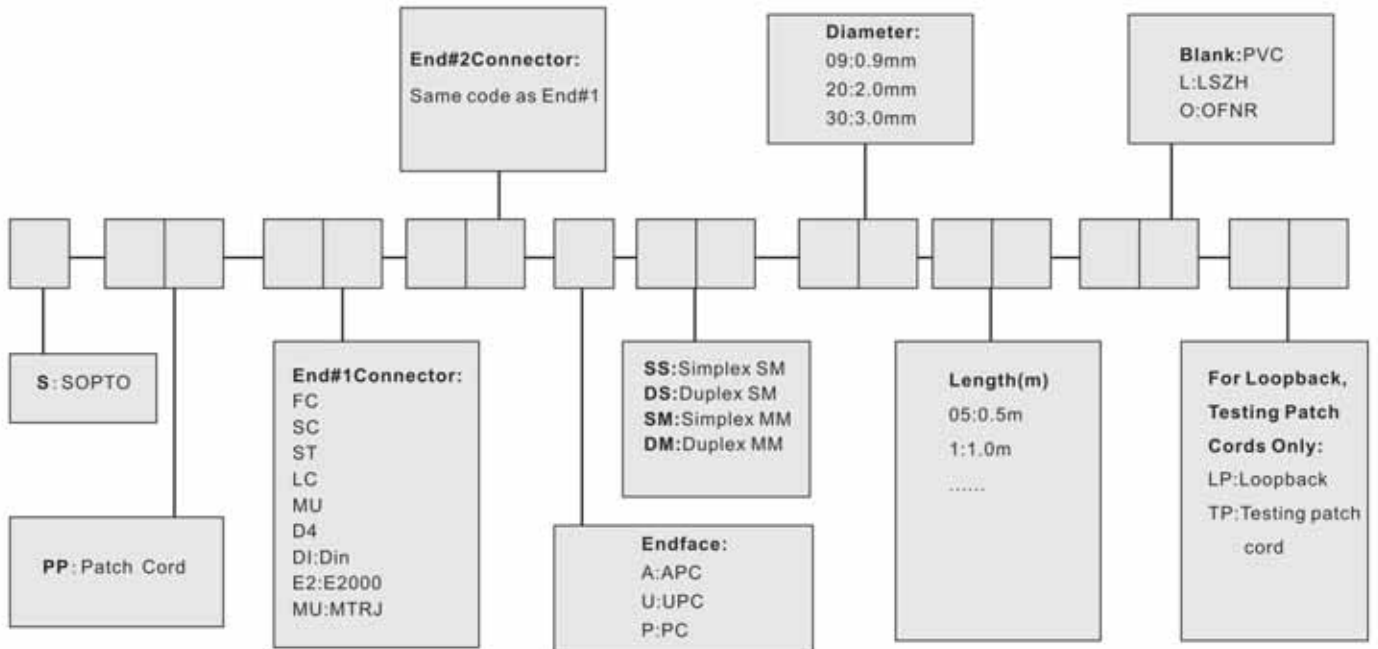
- 1) The Optical fiber unit is positioned in the centre
- 2) Two parallel fiber reinforced plastics as placed at the two sides
- 3) Two parallel FRP strength members ensure good performance of crush resistance to protect the fiber
- 4) Simply structure, light weight and high practicability
- 5) LSZH and flame retardant sheath
- 6) Different cores are available

### Application:

- 1) Access network, fiber to the home
- 2) Used end users directly cabling

# Fiber Optical Patch Cords

## Ordering Information



## General Patch Cords



### Description:

- 1) Low insertion loss, high return loss
- 2) High dense connection, easy for operation
- 3) High credibility and stability
- 4) Good in repeatability and exchangeability

### Application:

- 1) Testing equipment
- 2) FTTX+LAN
- 3) Optical fiber CATV
- 4) Optical communication system, Telecommunication

## Specification

Parameter	Unit	FC, SC, LC, ST, MTRJ, MU, DIN, D4 fiber patch cord			
		Cable type: Simplex, duplex(zipcord), PVC or LSZH			
		SM(9/125)			MM(50/125, 62.5/125)
		PC	UPC	APC	PC
Insertion loss(typical)	dB	≤0.3	≤0.2	≤0.3	≤0.2
Return loss	dB	≥45	≥50	≥60	≥30
Operating wavelength	nm	1310, 1510			
Exchangeability	dB	≤0.2			
Vibration	dB	≤0.2			
Operating temperature	℃	-40~75			
Storage temperature	℃	-45~85			
Cable diameter	mm	φ3.0, φ2.0, φ0.9			



# Fiber Optical Patch Cords

## Loopback Patch Cords



### Description:

- 1) High precision pins for fiber alignment
- 2) UPC and APC available
- 3) SM or MM
- 4) Cable type:0.9/2.0/3.0mm available
- 5) Push/pull mating for quick installation
- 6) High density and compact size

## Specification

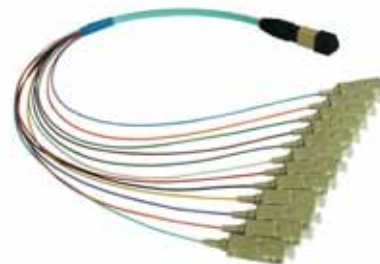
Characteristics	Unit	SM	MM
Insertion Loss(IL)	dB	1.2 (Typical) 1.5(Max)	0.2(Typical) 0.7(Max)
Endurance (500 matings)	dB	<0.3	<0.2
End face	-	UPC/APC	UPC/Plat Polish
Operating Temperature	°C	-40~+80	
Cable type	-	PVC, LSZH, OM3, OFNR, OFNP, Plenum	

## MPO /MTP Patch Cords

**MPO/MTP** patch cord is a multi-fiber patch cord with fiber count of 4, 6, 8 or 12.

**MPO/MTP** patch cords use Precision molded MT ferrules, together with metal guide pins and precise housings ensuring fiber alignment when mating.

**MPO/MTP** connector assembled to ribbon or bare ribbon connectors with push-pull latching.



### Description:

- 1) High precision pins for fiber alignment
- 2) UPC and APC available
- 3) Save time and cost
- 4) Material meet ROHS requirement
- 5) Push/pull mating for quick installation
- 6) High density and compact size

### Application:

- 1) Local Area Network
- 2) Optical Switch Connections
- 3) Fiber channels
- 4) Parallel interconnection
- 5) Miniature OE Modules



# Fiber Optical Patch Cords

## Specification

Characteristics	Unit	SM	MM
Insertion Loss(IL)	dB	<0.5(typical) <0.7(maximum)	<0.5(typical) <0.7(maximum)
Return Loss(RL)	dB	>35 (UPC)      >40(APC)	>20
Endurance (500 matings)	dB	< 0.3	
End face	-	UPC/APC	UPC/Plat Polish
Operating Temperature	℃	-40~+80	
Axial Pull for jacketed cable	N	100	
Cable type	-	PVC, LSZH, OM3, OFNR, OFNP, Plenum	

## Fan-out Patch Cords

### Description:

- 1) High Return loss and low insertion loss
- 2) High Interchangeability
- 3) Customized Design
- 4) Custom Angle polishing available, PC,UPC and APC
- 5) Number of fibers:1,2,4,8,16,32,40 and so on
- 6) Fiber diameters: 0.9mm,2.00mm and 3.00mm
- 7) All kinds of connectors are available
- 8) SM or MM
- 9) Cable type:0.9/2.0/3.0mm available
- 10) Push/pull mating for quick installation
- 11) High density and compact size



## FTTH Drop Cable Patch Cords



### Description:

- 1) High precision pins for fiber alignment
- 2) UPC and APC available
- 3) SM or MM, 1/2/4 more cores are available
- 4) Cable type:0.9/2.0/3.0mm available
- 5) Push/pull mating for quick installation
- 6) High density and compact size



# Fiber Optical Patch Cords

## SFP+ 10G Cable

**SFP+** product family extends the use of the Small Form-Factor Pluggable (SFP) interconnect up to 10 Gbps. This system meets the performance requirements of SFF (Small Form-Factor) specification SFF-8431 and supports 8G Fiber Channel, 10G Ethernet, InfiniBand™ standard and Fiber Channel over Ethernet (FCoE) applications. The SFP+ product family includes cable assemblies, cages and connectors. Our SFP+ direct-attach copper cable assemblies provide a cost-effective solution over fiber optics in short reach applications. The design allows for serial data transmission up to 10Gbps in each direction. The mechanical design of the cable braid crimp and EMI skirt suppress EMI radiation. Low power consumption helps make the SFP+ copper cable assembly an economical solution for within rack or rack-to-rack applications.



### Description:

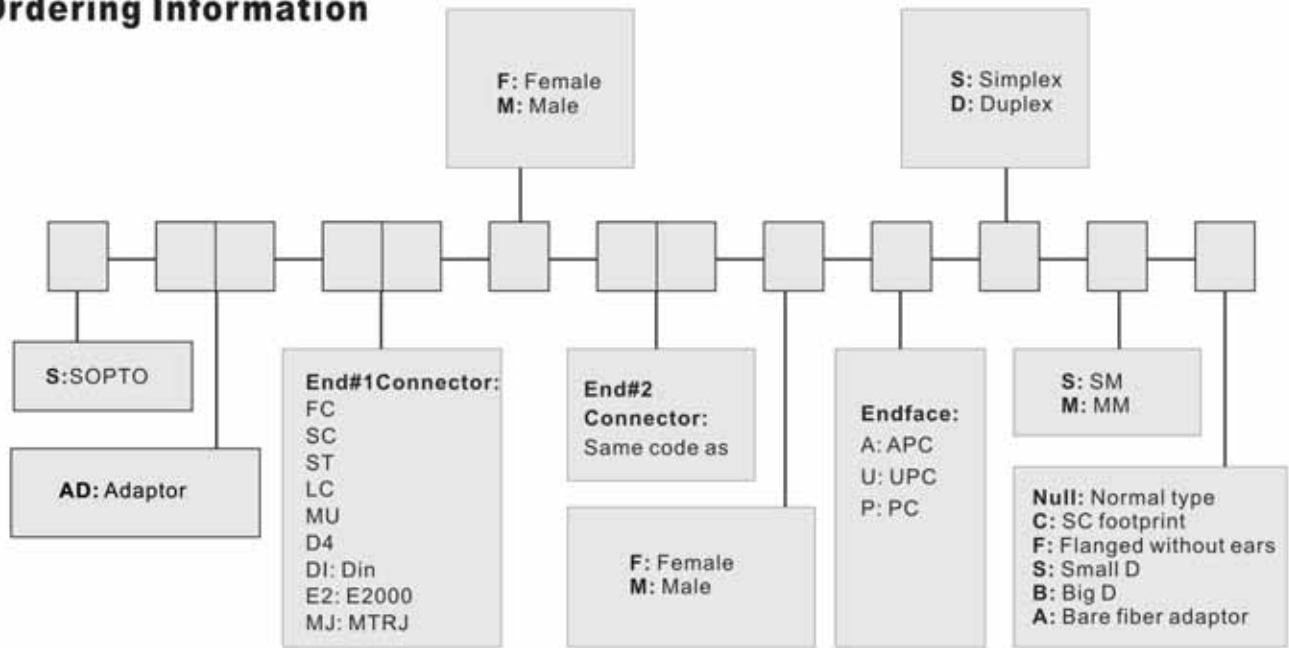
- 1) MSA SFF-8431
- 2) Supports serial data rates up to 10Gbps
- 3) Low cost alternative to fiber optic assemblies
- 4) Low power consumption
- 5) Enhanced EMI suppression
- 6) 24AWG through 30 AWG cable available
- 7) Pull-to-release retractable pin latch design
- 8) Networking-servers, routers and hubs

### Ordering Information

SPT-SFP+C05	SFP+ 10GB Copper 0.5M Cable
SPT-SFP+C1	SFP+ 10GB Copper 1M Cable
SPT-SFP+C2	SFP+ 10GB Copper 2M Cable
SPT-SFP+C3	SFP+ 10GB Copper 3M Cable
SPT-SFP+C5	SFP+ 10GB Copper 5M Cable
SPT-SFP+C7	SFP+ 10GB Copper 7M Cable
SPT-SFP+C10	SFP+ 10GB Copper 10M Cable

# Fiber Optical Adaptor

## Ordering Information



## General Fiber Adaptor



### Description:

- 1) Low insertion loss, high return loss
- 2) PC, UPC and APC available
- 3) Ceramic or Bronze Sleeve
- 4) Material meet ROHS requirement
- 5) Simplex or Duplex, SM or MM
- 6) High density and compact size

## Parameter

Parameter	Unit	LC, SC, FC, MU, ST, SC-ST, FC-ST, FC-SC, FC-LC, FC-MU			
		SM			MM
		PC	UPC	APC	PC
Insertion Loss (Typical)	dB	≤ 0.3	≤ 0.2	≤ 0.3	≤ 0.2
Return Loss	dB	≥ 45	≥ 50	≥ 60	≥ 30
Exchangeability	dB	≤ 0.2			
Repeatability	dB	≤ 0.2			
Durability	Time	> 1000			
Operating Temperature	℃	-40~75			
Storage Temperature	℃	-45~85			





# Fiber Optical Adaptor

## Hybrid Fiber Adaptor



### Description:

- 1) Low insertion loss, high return loss
- 2) PC, UPC and APC available
- 3) Ceramic or Bronze Sleeve
- 4) Material meet ROHS requirement
- 5) Simplex or Duplex, SM or MM
- 6) High density and compact size

### Parameter

Parameter	Unit	LC, SC, FC, MU, ST, SC-ST, FC-ST, FC-SC, FC-LC, FC-MU			
		SM			MM
		PC	UPC	APC	PC
Insertion Loss (Typical)	dB	≤ 0.3	≤ 0.2	≤ 0.3	≤ 0.2
Return Loss	dB	≥ 45	≥ 50	≥ 60	≥ 30
Exchangeability	dB	≤ 0.2			
Repeatability	dB	≤ 0.2			
Durability	Time	> 1000			
Operating Temperature	℃	-40~75			
Storage Temperature	℃	-45~85			

## Bare Fiber Adaptor

Bare fiber adaptors provide a simple and effective way to use exterminated fibers with commercial receptacles. Simply strip and cleave your fiber and insert in to the bare fiber adapter. Broken fibers are easily removed with piano wire, allowing hundreds of insertions. They are recommended for power meter hook-ups, temporary system repairs or wherever a quick fiber connection is required.



### Description:

- 1) Suitable for fiber with coating diameter of 250um and 900um optical fibers with hole diameter between 125 to 127um can be used
- 2) Save time and cost

### Applications:

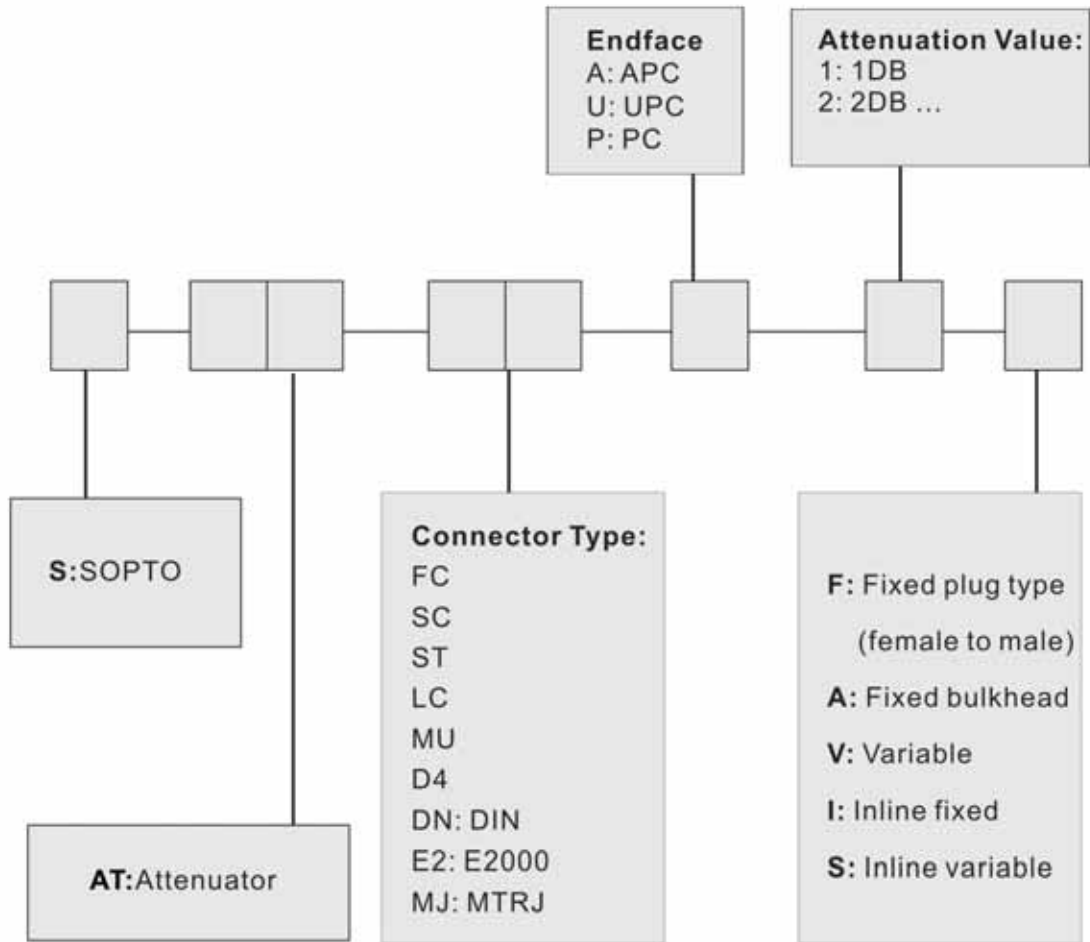
- 1) OTDR acceptance testing
- 2) Power meter hookups
- 3) Approximate losses/continuity testing
- 4) Talk set connections

### Parameter

Compatible Optical fibers	10/125 um ± 2um	50/125 ± 2um 62.5/125 ± 2um
Connection loss (dB)	<1	<0.5
Material	Stainless steel housing, Ceramic ferrule	
Dimension & weight	37Lx11Hx12D mm, approx. 11g	

# Fiber Optical Attenuator

## Ordering Information



## Plug-type Fixed Value Attenuator(Female to Male)



### Description:

- 1) Low back reflection and Low PDL
- 2) PC, UPC and APC available
- 3) Wide attenuation range
- 4) Precision ceramic ferrule
- 5) FC, SC, ST, LC.... Optional
- 6) Plastic or metal housing material

## Variable Attenuator



### Description:

- 1) Operation wavelength:1310/1550
- 2) Attenuation value:3,5,7,10,15,20DB
- 3) Max Optical Input power: 200mW
- 4) Max PDL:0.2DB
- 5) Return loss: UPC>55dB,APC>60dB



# Fiber Optical Attenuator

## Bulkhead-Fixed Value Attenuator (Adaptor)



### Description:

- 1) Suitable for 850nm or 1310 or 1550nm
- 2) PC, UPC and APC available
- 3) Wide attenuation range
- 4) Precision ceramic ferrule
- 5) FC(Square), SC(Flange), ST(Thread)
- 6) Plastic or metal housing material

Item	Unit	Parameter
Operating Wavelength	Nm	1310/1550
Attenuation Range	dB	1-10dB(1dB step), 15, 20, 25, 30dB
Return Loss	dB	PC: $\geq 50$ UPC: $\geq 55$ APC: $\geq 60$
Attenuation Tolerance	dB	$\leq 1.0$ (11-30dB)
Working Temperature	$^{\circ}\text{C}$	$-25^{\circ}\text{C} \sim +75^{\circ}\text{C}$
Storage Temperature	$^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

## Handheld Variable Attenuator



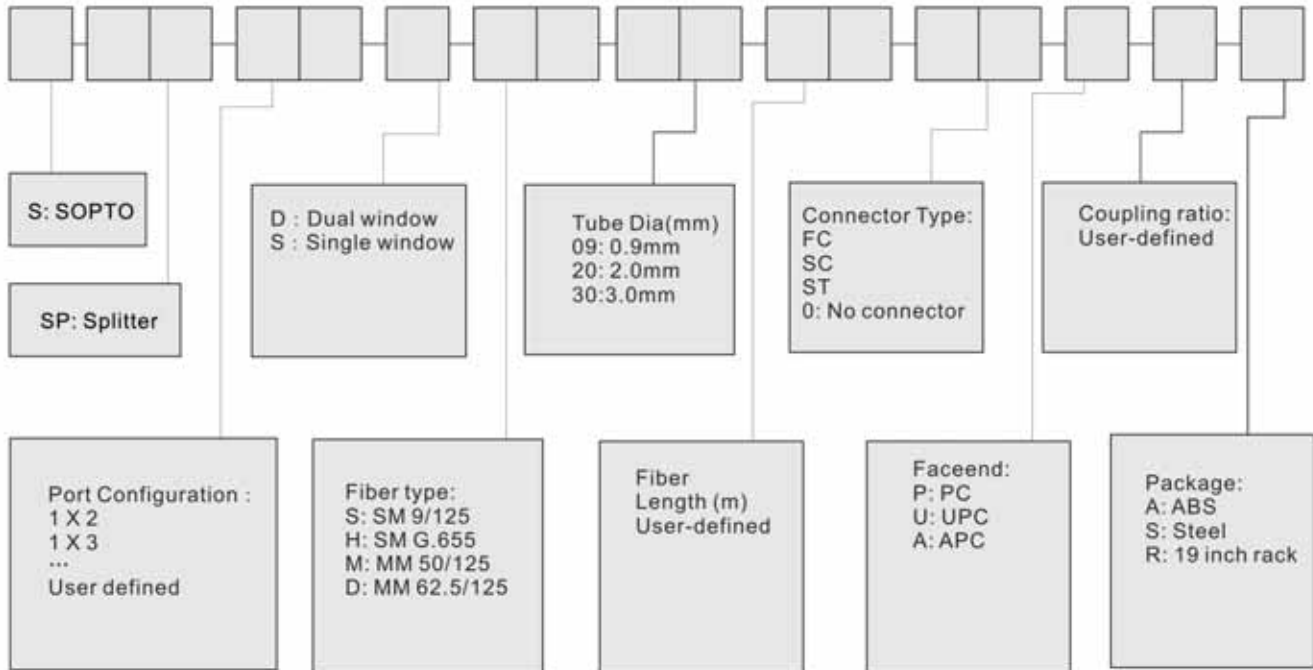
Type	Handheld Variable Attenuator
Wavelength Range	1260~1650nm
Applicable Fiber	9/125um SM
Connector	FC/PC
Calibration Wavelength	1310/1490/1550/1625nm
Attenuation Range	2.5~60dB
Resolution	0.05dB
Min Insertion Loss	$< 2.5\text{dB}$
Linearity	$\pm 0.5\text{dB}$
Repeatability	$\pm 0.2\text{dB}$
Overall Attenuation Accuracy	$\pm 0.8\text{dB}$



# Splitter & CWDM & DWDM

## FBT Splitter

### Ordering Information:



SOPTO's Tree, Star Couplers are high quality components designed to divide or combine optical signal in optical fiber system. These devices are fabricated by using the fused biconical taper (FBT) process and are reliable over wide range of temperature. Various packaging and pig tailing configurations can satisfy our customers' requirements.

### Parameter:

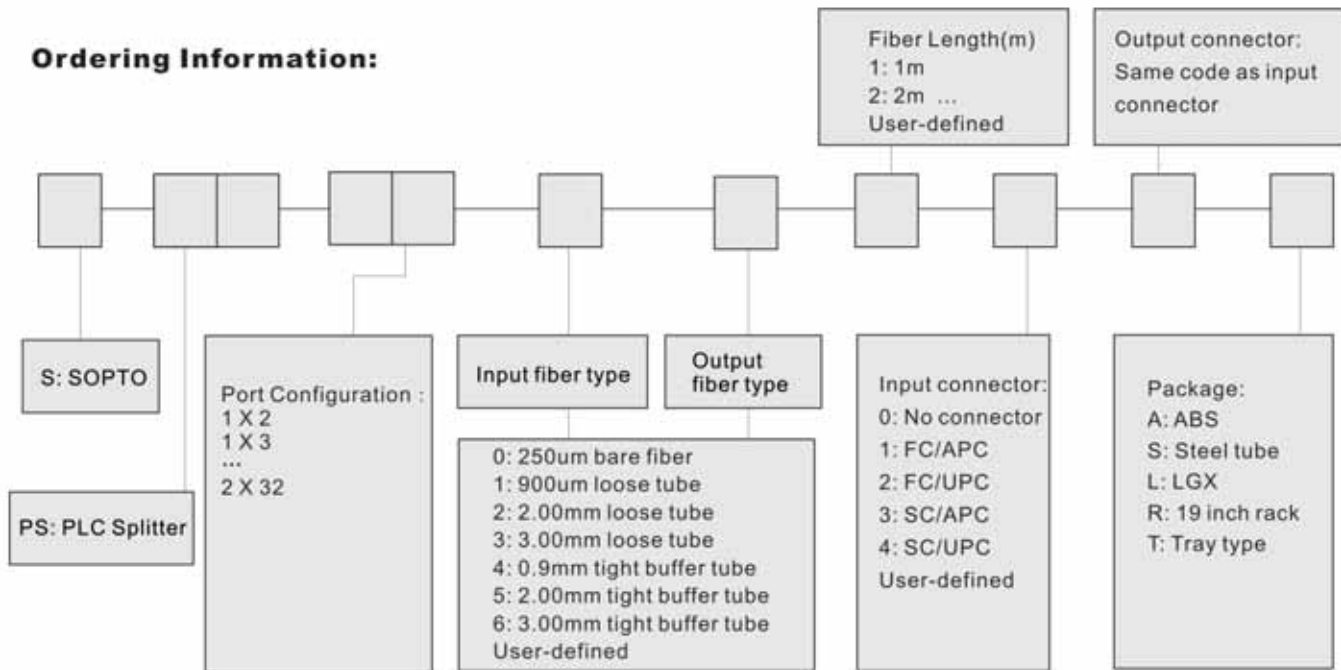
Parameter	Configuration			
	N x 4 (N=1,2,4)	N x 8 (N=1,2,8)	N x 16 (N=1,2,16)	N x 32 (N=1,2,32)
Operate Wavelength(nm)	1310/1550, or customized			
Bandwidth(nm)	±20			
Max. Excess Loss(dB)	0.2	0.3	0.4	0.5
Typical Insertion Loss(dB)	6.2	9.3	12.4	15.5
Max. Insertion Loss(dB)	6.8	10.2	13.6	17
Uniformity(dB)	1.2	1.8	2.4	3
PDL(dB)	0.08	0.12	0.16	0.2
Thermal Stability(dB)	0.2	0.3	0.4	0.5
Directivity(dB)	≥60			
Operate Temperature(°C)	-20~+70			
Lead Length(m)	1 or customized			
Lead Type(mm)	φ3.0, φ2.0, φ0.9			



# Splitter & CWDM & DWDM

## PLC Splitter

### Ordering Information:



Sopto's single-mode Planar Light wave Circuit Splitter (PLCS) are developed based on unique silica glass waveguide process with reliable precision aligned fiber pigtail in a miniature package, it provides a low cost light distribution solution with small form factor and high reliability. The PLCS devices have high performance in terms of low insertion loss, low PDL high return loss and excellent uniformity over a wide wavelength range from 1260nm to 1620nm and working in temperature from -40C to +85C. The PLCS devices have standard configurations of 1x4, 1x8, 1x16 and 1x32 configurations, as well as customized structures of 2x8, 2x16, 2x32 and 2x64.

### Parameter:

Port Configuration		1X2	1X4	1X8	1X16	1X32	1X64
Fiber Type		SMF-28e or Customer specified					
Operating Wavelength(nm)		1260~1650					
Insertion Loss(dB)	Typical	3.7	6.8	10.0	13.0	16.0	19.5
	Max	4.0	7.2	10.5	13.5	16.9	21.0
Loss Uniformity(dB)	Max	0.4	0.6	0.8	1.2	1.5	2.5
Return Loss(dB)	Min	50	50	50	50	50	50
Polarization Dependent Loss(dB)	Max	0.2	0.2	0.3	0.3	0.3	0.4
Directivity(dB)	Min	55	55	55	55	55	55
Wavelength Dependent Loss(dB)	Max	0.3	0.3	0.3	0.5	0.5	0.8
Temperature Dependent Loss(-40~85C)(dB)	Max	0.5	0.5	0.5	0.8	0.8	1.0

# Splitter & CWDM & DWDM

## CWDM Mux /Demux/OADM Module

Coarse Wavelength Division Multiplexing (CWDM) is a type of optical wavelength management device that are based on proven ultra low-loss thin-film filter (TFF) technology. It features small size, high reliability, high extensibility, simultaneous transmission of multi-wavelength. CWDM has gained prevalence in multi-wavelength digital transport architectures because it enables the use of very low cost uncooled distributed feedback (DFB) laser transmitters. Moreover, their powering requirements are reduced and reliability is increased.

Sopto provides whole series of 1xN CWDM products that are tailored for specific applications. All products meet GR-1209-CORE, GR-1221-CORE and ITU-T G.694.2 requirements.



### Feature:

- 1) 2, 4, 8, 16 or 18 CWDM Wavelengths Optional
- 2) Color Coded Equipment Ports for Ease of Installation
- 3) Reliable Passive Thin Film Filter WDM Optical Technology
- 4) Low Optical Insertion Loss, Epoxy-Free in Optical Path
- 5) Telcordia (Bellcore) GR-1221-CORE
- 6) Mux+Demux Fits in 1RU 19 Rack-mount Chassis Optional
- 7) RoHS Complaint

### Notes:

1. Specified without connectors.
2. Add an additional 0.2dB loss each pair connector.

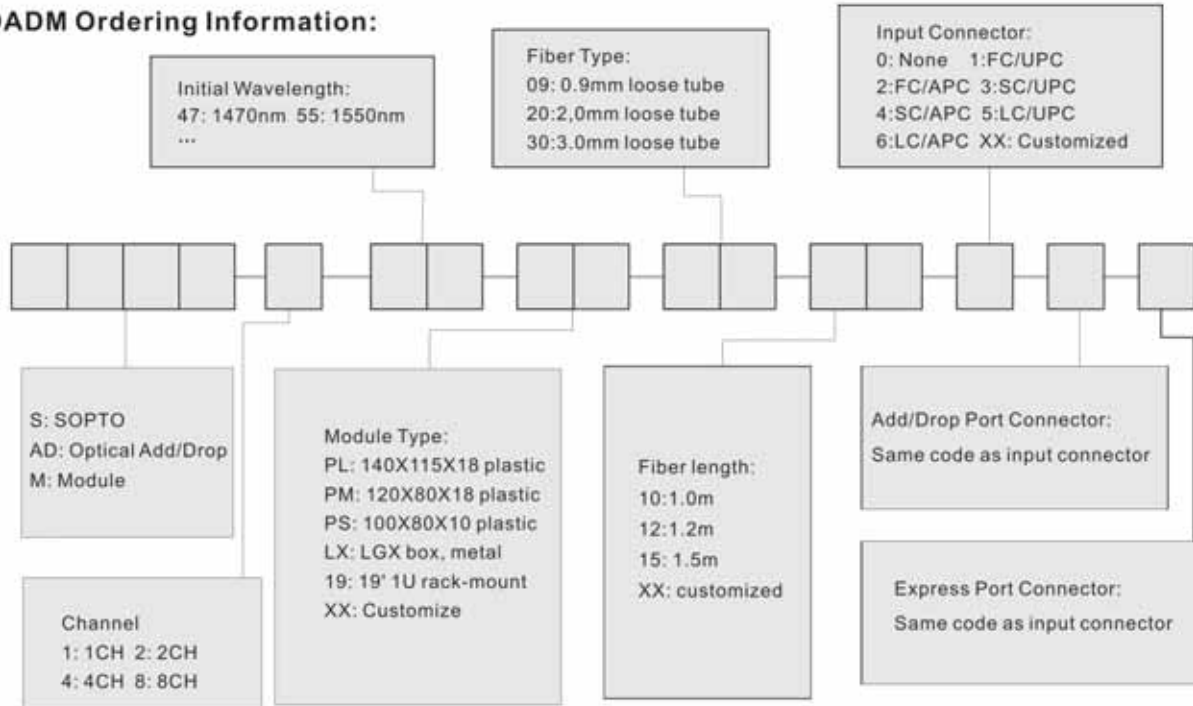
Function Type			Mux/Demux				OADM			
Parameters			1X2	1X4	1X8	1X16	1CH	2CH	4CH	8CH
Operating Wavelength (nm)			ITU, ITU+1							
Operating Wavelength (nm)			1460~1620 or 1260~1620							
Channel Space (nm)			20							
Fiber Type			SMF-28e or customer specified							
Insertion Loss (dB)	Input/Output Channel	Typ	0.7	1.4	2	3.5	0.5	0.7	1.4	2
		Max	1	1.7	2.5	4	0.6	1	1.7	2.5
	Express Channel for OADM	Typ					0.6	1.2	1.8	3.6
		Max					0.8	1.4	1.8	3.8
Isolation (dB)	Adjacent Channel	Min	30				30			
	Non-Adjacent Channel	Min	40				40			
	Express Channel for OADM	Min					25			
Ripple (dB)	Max	0.3	0.4	0.5	0.5	0.3	0.3	0.4	0.5	
PDL (dB)	Max	0.2				0.1				
PMD (ps)	Max	0.1								
RL (dB)	Min	45								
Directivity (dB)	Min	50								
Maximum Optical Power (mw)	Max	500								
Operating Temperature (°C)		-10~70								
Storage Temperature (°C)		-40~85								
Module Package (mm)		100*80*10		141*115*18		100*80*10		141*115*18		
LGX Package		1U, 2U				1U, 2U				
19" Rack mount Package		1U				1U				



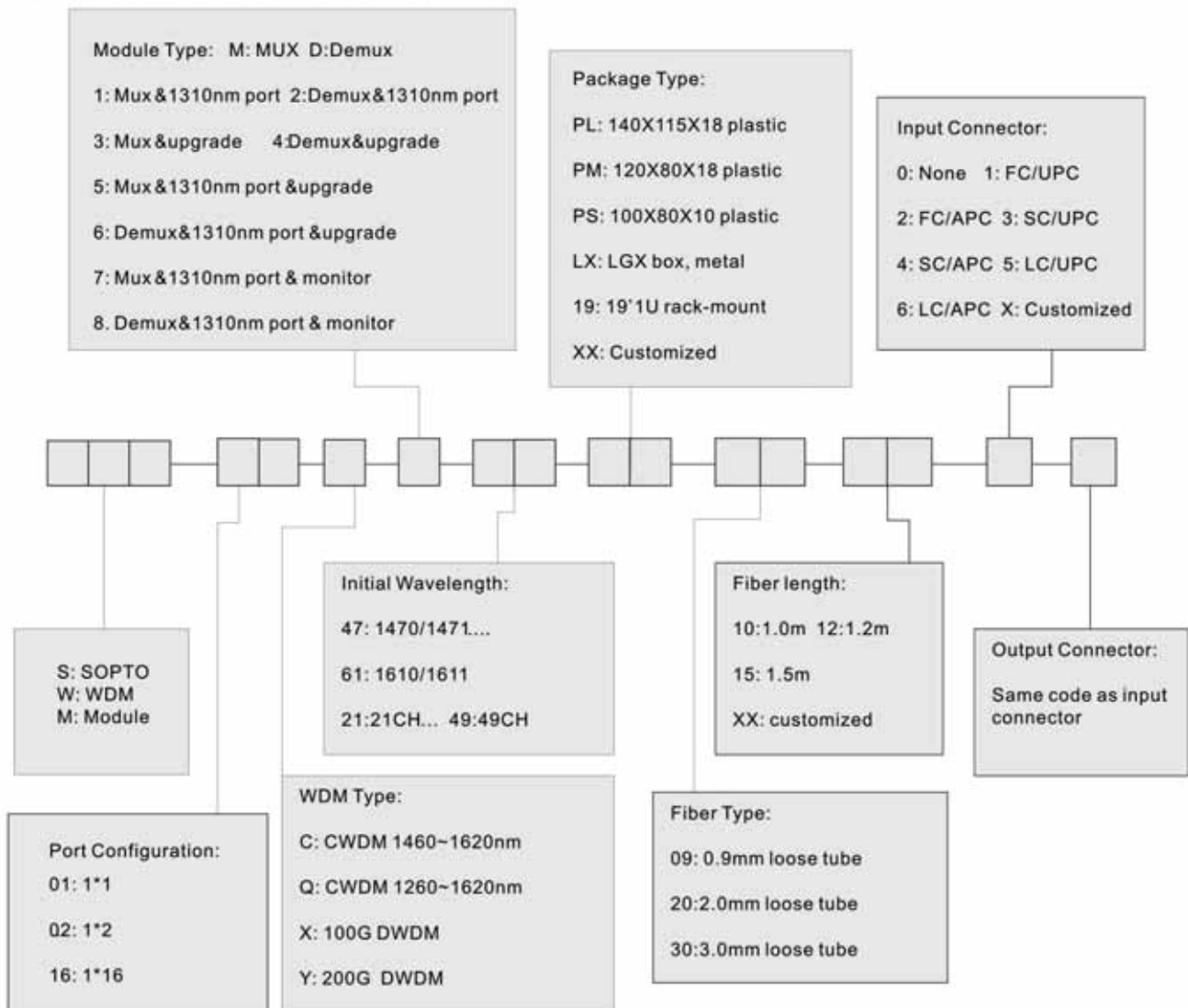


# Splitter & CWDM & DWDM

## OADM Ordering Information:



## CWDM/DWDM Mux/ Demux Ordering Information:



# Splitter & CWDM & DWDM

## DWDM Mux /Demux



### Feature:

- 1)ITU-T 100G or 200G 4/8/16/32/40 Channel DWDM Wavelengths Optional
- 2)Reliable Passive Thin Film Filter WDM Optical Technology
- 3)Low Optical Insertion Loss and High Channel Isolation
- 4)Expoxy-Free in Optical Path
- 5)Telcordia (Bellcore) GR-1221-CORE
- 6)Mux+Demux Fits in 1RU 19 Rack-mount Chassis Optional
- 7)RoHS Complaint

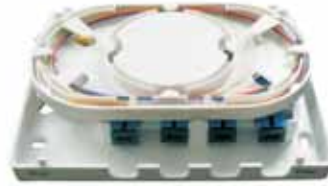
### 1×N DWDM Mux/Demux Module

Parameters							
Channel Space (GHz)		100			200		
Channel Number		1*4	1*8	1*16	1*4	1*8	1*16
Center Wavelength (nm)		ITU Grid					
Center Wavelength Accuracy (nm)		±0.05			± 0.1		
Channel Passband (@-0.5dB) (nm)		0.22			0.5		
Fiber Type		SMF-28e with 900um loose tube or customer specified					
IL (dB)		1.8	3.0	4.0	1.7	2.9	3.8
Passband Ripple (dB)		0.35	0.4	0.5	0.35	0.4	0.5
Isolation (dB)	Adjacent Channel	25			28		
	Non-Adjacent Channel	40					
PDL (dB)		0.2					
PMD (ps)		0.1					
RL (dB)		45					
Directivity (dB)		50					
Maximum Optical Power (mw)		300					
BOX Package (mm)		100*80*10 or 140*115*18					
LGX Package		1U,2U					
19" Rack mount Package		1U					



# FTTH Box & ODF & Closure

## FTTH Box



### Description:

- 1) Small size, light weight, pleasing in appearance
- 2) Wall mounted with mechanical protection function
- 3) Max fiber capacity 4-16 fibers, 4-16 adapter output
- 4) Available for FC, SC, ST, LC adaptors
- 5) Hinge and convenient press-pull button lock design

### Applications:

Used in the end termination of residential building and villas, to fix and splice with pigtailed

## Outdoor Splitter Distribution Box



### Description:

- 1) Industry Standard User Interface, be made of high impact plastic.
- 2) Can accommodate 1x8 & 1X16&1X32&1X64 PLC splitter.
- 3) Anti-UV, Ultra violet resistant and rainfall resistant.
- 4) Wall and pole mountable.

### Applications:

- 1) Applicable in FTTH project
- 2) Suitable for corridor, basement, room and building's outer walls application
- 3) With the function of mechanical splice, fusion splice, light splitting, wiring distributions

Items	Dimension(WxDxH)	Max.Capacity	Note
SDB-0208	181X45X207mm	8 ports&splice	Pole/Wall
SDB-0216	220x80x300mm	16 ports&splice	Pole/Wall
Item		SDB-0164	
Dimension (WxDxH)		W570xD190xH600mm	
Cable diameter (mm)		Φ10~ Φ14	
Cable ports		2 holes	
Max capacity of splice tray		24 (single fiber)	
Max quantity of splice tray		3	
Max capacity of main backbone cable		12 (single fiber)	



# FTTH Box & ODF & Closure

## ODF



### Description:

- 1) 19-inch rack fiber optical SC type
- 2) 12/24/48/96 ports patch panel drawer type
- 3) Fixed type and dustproof type are available
- 4) Compatible with SC, FC, LC and ST adaptor and suitable for ribbon and single fibers
- 5) SM or MM, simplex or duplex



### Description:

- 1) Wall mounted Indoor type, outdoor waterproof type available
- 2) 12/24/48 ports are available
- 3) Compatible with SC, FC, LC and ST adaptor and suitable for ribbon and single fibers
- 4) SM or MM, simplex or duplex

## Fiber Closure



Horizontal Type

### Description

- 1) Suitable for aerial, duct and underground
- 2) Reliable gasket sealing
- 3) Plastic body filled with silicom rubber and sealed with hoop, heat shrinkable tube
- 4) 12/24/36/48.. cores are available
- 5) Horizontal and vertical type available
- 6) Plastic or metal housing material



Vertical Type

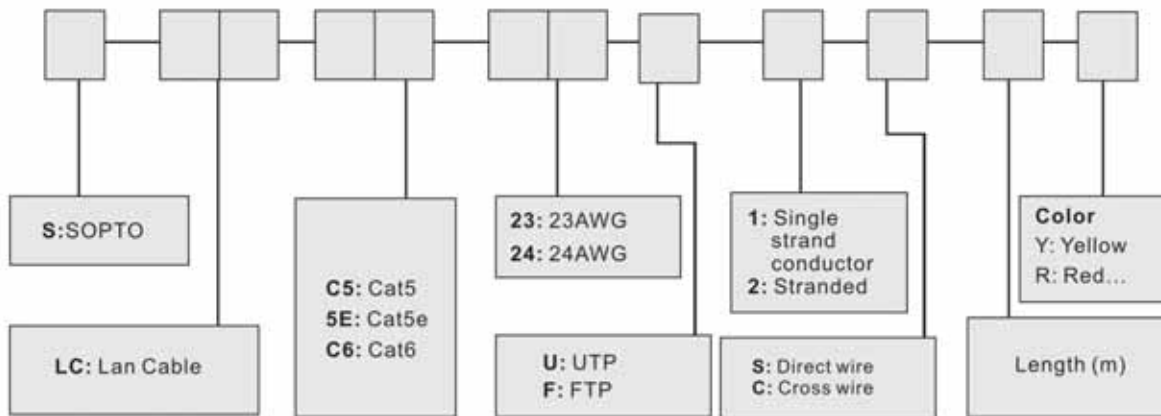
### Description:

- 1) Applies to PLC splitter with Max ratio 2:32 or 2\*2:16
- 2) Max qty of SC adaptor is 36pcs
- 3) High strength and corrosion resistance
- 4) Plastic or metal housing material



# Network Cable & Accessories

## Lan Cable & Lan Patch Cords



## Cat5e/Cat6 Patch Cords

### Description:

- 1) Support high density installations
- 2) Cord fits into narrow jack locations
- 3) Uniform appearance between the Cat6 and Cat5e patch cords
- 4) Exceeds cordage requirements of TIA/EIA 568B and ISO/IEC 118801
- 5) Different colors and length are available



## Cat5e/Cat6 Patch Panel



### Description:

- 1) Entire high-carbon steel outer frame with plastic powder cladding
- 2) RJ45 jack frame material: PBT, golden plated phosphor bronze pins
- 3) Fitting for 22/23/24AWG cables, punching duration: 250 times
- 4) 6/12/24/36/48.. cores are available

## Faceplate

Faceplate



### Description:

- 1) Material: PC UL94V-0
- 2) Retentiveness of insertion structure: 50N 50+-5s
- 3) Different ports are available

Keystone Jacket



### Description:

- 1) Voltage rating: 125VAC RMS
- 2) Current rating: 1.5AMP
- 3) Contact resistance: 100Milliohms Max
- 4) Insulation resistance: 1000Megohms MIN@50VDC
- 5) Dielectric strength: 750VAC RMS 60Hz, 1MIN
- 6) Housing material: PC UL94V-0

# Tools & Testing Equipment

## Tool Kits/General Tools



### Tool Kits Product List

Model No.	Specification
SPT-08A	22PCS Fusion splice kits
SPT-08C	18PCS Fusion splice kits
SPT-6100N	Fiber Fusion splicing tool kit
SPT-6300N	Fiber Fusion splicing tool kit
SPT-510T	Economic Optical Fiber test & inspection kit
SPT-520T	Optical fiber test & inspection kit
SPT-530T	Full-featured optical fiber test & inspection kit
SPT-540T	Complete optical fiber test & inspection kit
SPT-550T	Fiber optical loss test kit
SPT-950KE	Field Quick Termination kit(for SC/ST/FC connector)
SPT-950KF	Field Quick Termination kit(for SC/ST/FC connector)
SPT-710C	Fiber Optical cleaning kit
SPT-730C	Fiber Optical inspection and cleaning kit
45-162	Buffer Tube Stripper
CFS-2	Fiber Tails Stripper
RCC-240C	Cable Cutter
HWC-6	Steel Wire Cutter
HW-132A	Armored Cable Slitter
ACS	ACS Armored Cable Slitter
FOKC	FOKC Kevlar Cutter





# Tools & Testing Equipment

## Power Meter



Product Name	Model No.	Specification
Power Meter	SPT3208A	Power range(dBm)-70~+3
	SPT3208C	Power range(dBm)-50~+26
	SPT3211A	Power range(dBm)-70~+10
	SPT3211C	Power range(dBm)-50~+30
	SPT3205A	Power range(dBm) -60~+3
	SPT3205B	Power range(dBm)-50~+10
	SPT3203R	650nm -40 ~ +3(dBm)
Intelligent power meter	SPT3206A	Power range(dBm) -70~+6
	SPT3206C	Power range(dBm) -50~+26
PON Power Meter	SPT3212A	Multi function power meter
	SPT3212	Test PON 1490/1550/1310

## Light Source



Product Name	Model No.	Specification
Handheld Light Source	SPT3109	1310/1550 dual wavelength
	SPT3109	850/1300 dual wavelength
	SPT3109	850/1300 dual wavelength
	SPT3109	650/1310/1550nm
		650/1310/1550 add to 3Mw
	SPT3109	850/1310/1550nm
	SPT3109	850/1300/1550nm
	SPT3109	850/1300/1310/1550nm

# Compatible Transceiver

CISCO	SOPTO P/N	Goods Description
WS-G5483	SPT-GE-T1	1000BASE-T 100m
WS-G5484	SPT-G851G-S5	1000BASE-SX Short Wavelength GBIC
WS-G5486	SPT-G131G-10	1000BASE-LX/LH long haul GBIC 10KM
WS-G5487	SPT-G151G-70	1000Base-ZX extended reach GBIC 70KM
GLC-T	SPT-PE-T1	1000BASE-T SFP
GLC-SX-MM	SPT-P851G-S5	GE SFP, LC connector SX transceiver
GLC-LH-SM	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
GLC-ZX-SM	SPT-P151G-80	1000BASE-ZX SFP,80KM
SFP-GE-S	SPT-P851G-S5D	1000BASE-SX SFP 0.5KM DDM
SFP-GE-L	SPT-P131G-10D	1000BASE-LX SFP 10KM DDM
SFP-GE-Z	SPT-P151G-80D	1000BASE-ZX SFP,80KM DDM
GLC-BX-D	SPT-PB431G-10	1000BASE-BX SFP, 1490TX/1310RX, 10km LC
GLC-BX-U	SPT-PB341G-10	1000BASE-BX SFP, 1310TX/1490RX, 10km LC
GLC-BX-D	SPT-PB531G-10	1000BASE-BX SFP, 1550TX/1310RX, 10km LC
GLC-BX-U	SPT-PB351G-10	1000BASE-BX SFP, 1310TX/1550RX, 10km LC
X2-10GB-SR	SPT-X2-SR	10GBASE-SR X2 Module
X2-10GB-LR	SPT-X2-LR	10GBASE-LR X2 Module
X2-10GB-ER	SPT-X2-ER	10GBASE-ER X2 Module
X2-10GB-ZR	SPT-X2-ZR	X2 10GB 1550-nm 80KM
XENPAK-10GB-SR	SPT-XENPAK-SR	10GBASE-SR XENPAK Module 300m
XENPAK-10GB-LR	SPT-XENPAK-LR	10GBASE-LR XENPAK Module 10km
XENPAK-10GB-ER	SPT-XENPAK-ER	10GBASE-ER XENPAK Module 40km
XENPAK-10GB-ZR	SPT-XENPAK-ZR	10GBASE-ER XENPAK Module 80km
XFP-10GB-SR	SPT-XFP-SR	10GBASE-SR XFP Module 300m
XFP-10GB-LRK	SPT-XFP-LR	10GBASE-LR XFP Module 10km Ethernet
XFP-10GB-ER	SPT-XFP-ER	10GBASE-ER XFP Module 40km
XFP-10GB-ZR	SPT-XFP-ZR	10GBASE-ZR XFP Module 80km
SFP+ 10G-SR	SPT-SFP+SR	SFP+ 10G-SR 850-nm 300M
SFP+ 10G-LR	SPT-SFP+LR	SFP+ 10G-LR 1310-nm 10KM
SFP+ 10G-ER	SPT-SFP+ER	SFP+ 10G-LR 1550-nm 40KM
SFP+ 10G-ZR	SPT-SFP+ZR	SFP+ 10G-ZR 1550-nm 80KM

Juniper	Enterasys	SOPTO	Goods Description
740-008450	GPIM-02	SPT-GE-T1	1000BASE-T 100m
740-006577	GPIM-01	SPT-G851G-S5	1000BASE-SX Short Wavelength GBIC
740-006578	GPIM-09	SPT-G131G-10	1000BASE-LX/LH long haul GBIC 10KM
740-006579	GPIM-08	SPT-G151G-70	1000Base-ZX extended reach GBIC 70KM
740-011613	MGBIC-LC01	SPT-P851G-S5	GE SFP, LC connector SX transceiver
740-011614	MGBIC-LC09	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
740-011612	MGBIC-08	SPT-P151G-80	1000BASE-ZX SFP,80KM



# Compatible Transceiver

Nortel	SOPTO	Goods Description
AA1419042	SPT-GE-T1	1000BASE-T 100m
AA1419001	SPT-G851G-S5	1000BASE-SX Short Wavelength GBIC
AA1419002	SPT-G131G-10	1000BASE-LX/LH long haul GBIC 10KM
AA1419003	SPT-G151G-70	1000Base-ZX extended reach GBIC 70KM
AA1419013-E5	SPT-P851G-S5	GE SFP, LC connector SX transceiver
AA1419015-E5	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
AA1419037-E5	SPT-P151G-80	1000BASE-ZX SFP,80KM
AA1419070-E6	SPT-PB431G-10	1000BASE-BX SFP, 1490TX/1310RX,10km LC
AA1419069-E6	SPT-PB341G-10	1000BASE-BX SFP, 1310TX/1490RX,10km LC
AA1419070	SPT-PB531G-10	1000BASE-BX SFP, 1550TX/1310RX,10km LC
AA1419069	SPT-PB351G-10	1000BASE-BX SFP, 1310TX/1550RX,10km LC

Alcatel-Lucent	SOPTO P/N	Goods Description
GBIC-C	SPT-GE-T1	1000BASE-T 100m
GBIC-SX	SPT-G851G-S5	1000BASE-SX Short Wavelength GBIC
GBIC-LX	SPT-G131G-10	1000BASE-LX/LH long haul GBIC 10KM
GBIC-LH-70	SPT-G151G-70	1000Base-ZX extended reach GBIC 70KM
MiniGBIC-SX (3HE00027AA)	SPT-P851G-S5	GE SFP, LC connector SX transceiver
MiniGBIC-LX (3HE00028AA)	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
PBA-GIGE ZX SFP (3HE00029AA)	SPT-P151G-80	1000BASE-ZX SFP,80KM
KIT GIGE BX10-D (3HE0068AA)	SPT-PB431G-10	1000BASE-BX SFP, 1490TX/1310RX,10km LC
KIT GIGE BX10-D (3HE0068AB)	SPT-PB341G-10	1000BASE-BX SFP, 1310TX/1490RX,10km LC
KIT GIGE BX10-D (3HE0068AA)	SPT-PB531G-10	1000BASE-BX SFP, 1550TX/1310RX,10km LC
KIT GIGE BX10-D (3HE0068AB)	SPT-PB351G-10	1000BASE-BX SFP, 1310TX/1550RX,10km LC

Extreme	Zyxel	SOPTO	Goods Description
10011	GBIC-SX	SPT-G851G-S5	1000BASE-SX Short Wavelength GBIC
10013	GBIC-LX-10	SPT-G131G-10	1000BASE-LX/LH long haul GBIC 10KM
10017	GBIC-ZX-80	SPT-G151G-80	1000Base-ZX extended reach GBIC 80KM
10051	SFP-SX	SPT-P851G-S5	GE SFP, LC connector SX transceiver
10052	SFP-LX-10	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
10053	SFP-ZX-80	SPT-P151G-80	1000BASE-ZX SFP,80KM
10056	SFPBX1490-10	SPT-PB431G-10	1000BASE-BX SFP, 1490TX/1310RX,10km LC
10057	SFPBX1310-10	SPT-PB341G-10	1000BASE-BX SFP, 1310TX/1490RX,10km LC

Huawei	Foundry	SOPTO P/N	Goods Description
SFP-1000Base-T	E1MG-TX	SPT-GE-T1	1000BASE-T100m
SFP-850nm-1000Base-SX	EIMG-SX	SPT-P851G-S5	GE SFP, LC connector SX transceiver
SFP-1310nm-1000Base-LX	EIMG-LX	SPT-P131G-10	GE SFP, LC connector LX/LH transceiver 10KM
SFP-1550nm-1000Base-ZX	EIMG-LHA	SPT-P151G-80	1000BASE-ZX SFP,80KM
10GBASE-SR-XENPAK	10G-XNPK-SR	SPT-XENPAK-SR	10GBASE-SR XENPAK Module 300m
10GBASE-LR-XENPAK	10G-XNPK-LR	SPT-XENPAK-LR	10GBASE-LR XENPAK Module 10km
10GBASE-ER-XENPAK	10G-XNPK-ER	SPT-XENPAK-ER	10GBASE-ER XENPAK Module 40km





Web : [WWW.SOPTO.COM](http://WWW.SOPTO.COM)  
Sopto International Limited  
Shenzhen Sopto Technology Co., LTD

Tel: +86-755-36946668  
Fax: +86-755-26053449  
Skype: soptosopto



Email: [info@sopto.com](mailto:info@sopto.com)  
Add.: Room 222, Block 1, Energy Industrial Zone, Qianhai Road, Nanshan, Shenzhen, China