nex·gen

PRODUCT CATALOGUE

Solutions for Fiber Optic Network
Transceivers
Passive Mux-Demux
Fiber Products

Part of Amadys

POWERED BY Netceed

Nexgen is part of the Amadys Group, one of the main European market leaders in the distribution of passive equipment across telecom, electricity, water, gas, and industry sectors. In 2020, Amadys has made a strategic investment in Nexgen, recognizing the immense benefits that this collaboration promises. At the core of this partnership is Nexgen's unique ability to impart extensive knowledge in the domain of compatible transceivers.

Amadys' forward-thinking approach positions Nexgen as a catalyst for innovation within its operations. The investment underscores Amadys' commitment to staying ahead of the curve, leveraging Nexgen's expertise to enhance its capabilities in the rapidly evolving landscape of transceiver technology.

This collaboration serves as a testament to Amadys' dedication to providing cutting-edge solutions to its clientele. Nexgen's advanced features and compatibility align seamlessly with Amadys' commitment to excellence. As we embark on this mutually beneficial journey, the fusion of Amadys' market leadership and Nexgen's transformative capabilities promises a future where connectivity reaches new heights.

Together we are
Shaping Tomorrow.

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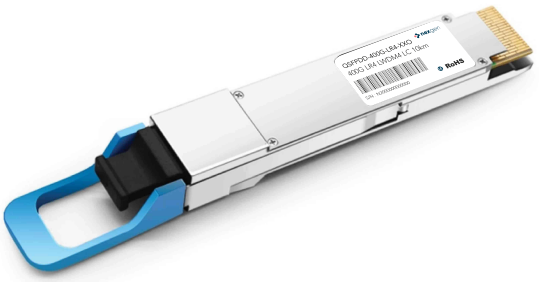
Leader of high quality and fully compatible products.

All our products are rigorously tested and coded in our own facilities to ensure your network reliability and uptime. As a partner, we accompany hand-in-hand all our customers to provide them easy plug & play solutions.



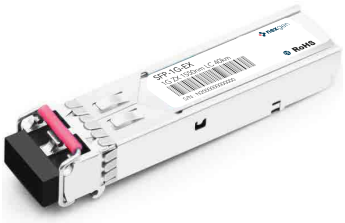
01 Transceivers

Type		Type		Type	
SFP	100M	QSFP+	40G	QSFP28	100G
SFP	1G	SFP56	50G	QSFP28-DD	200G
SFP+	10G	CFP	100G	QSFP56	200G
XFP	10G	CFP2	100G	QSFP-DD	400G/800G
SFP28	25G	CFP4	100G	OSFP	400G/800G/1.6T

Compatible with

- 3Com
- A Adva
- Agilent
- Alcatel
- Allied Telesis
- Alstom
- Anritsu
- Apac Opto
- Arbor
- Arista
- Arris
- Aruba
- AsGa
- Avago
- Avaya
- Avaya - Nortel
- B BlackMagic
- Brocade
- Brocade - Cyan
- Brocade VDX
- BTI System
- C Calix
- CareLink
- Check Point
- Ciena
- Cisco
- Citrix
- COE
- Commscope
- Coriant
- Corrigent
- Cyan
- D Dahua
- Datacom
- Dell
- D-Link
- E ECI
- Edge-Core
- Enterasys
- Ericsson
- Extreme Networks
- F F5 Networks
- Fibrolan
- Force10
- Fortigate (Fortinet)
- Fortinet
- G Garland
- Genexis
- Gigamon
- H Hirschmann
- HP - H3C
- HSE
- Huawei
- I IBM - Blade Networks
- Infinera
- Intel
- ISON Tech
- Ixia Net Optics
- J JDSU
- Juniper
- K Keymile
- KTI
- L Lancom
- Linksys
- Lynx
- M Marconi
- Mellanox
- Microsens
- Mikrotik
- Moxa
- MRV
- Myricom
- N NEC
- NetApp
- Netgear
- Netinsight
- Nexans
- Niagara
- Nokia
- Nortel
- O Optelian
- Orckit
- P PacketLight
- Palo Alto Networks
- Pica8
- Planet
- Procera Networks
- Q Qlogic
- R RAD
- Reason
- RiverStone
- S SAGEMCOM
- Selta
- SmartOptics
- Sophos
- Sorento
- Synology
- T Teldat
- Tellabs
- TP-link
- Transition Networks
- Transmode
- Trendnet
- U Ubiquity
- Unifi
- V VSS
- W Waystream
- Westermo
- WTD
- Z Zhone
- ZTE
- Zyxel

SFP



The small form-factor pluggable (SFP) standardized by the MSA (Multi Source Agreement) supports synchronous optical networking (SONET/SDH), Gigabit Ethernet, Fibre Channel, PON, and other communications protocols. At introduction, typical speeds were 100Mbit/s & 1 Gbit/s for Ethernet SFPs and now up to 4 Gbit/s Fibre Channel.

Applications

- 1000Base-X
- Metro-E
- LAN
- WAN
- Backhaul

Types

- Copper
- SMF or MMF interfaces
- Bi-Directional
- Compact Bi-Directional
- CWDM
- DWDM
- PON
- Commercial or Industrial Temp.

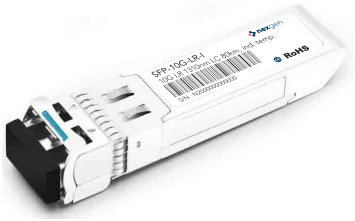
Reach

- 100m (Copper)
- 550m (MMF)
- 2km (MMF/SMF)
- 10km
- 20km
- 40km
- 60km
- 80km
- 120km
- 160km

Protocols

- 10/100/1000Base-X Ethernet
- SONET / SDH
- 1x 2x 4x Fibre Channel
- 3G CPRI

SFP+



The enhanced Small Form-factor Pluggable (SFP+) is an enhanced version of the SFP that supports data rates up to 16 Gbit/s. The SFP+ MSA specifications defines the module to support 8 Gb Fiber Channel, 10 Gb Ethernet and Optical Transport Network standard OTU2.

Applications

- 10GBase-X
- Metro-E
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center
- Remote PHY

Types

- Copper
- SMF or MMF interfaces
- Bi-Directional
- Compact Bi-Directional
- CWDM
- DWDM
- DWDM Tunable / Auto-Tune
- xPON (Combo PON)
- Commercial or Industrial Temp.

Reach

- 100m (Copper)
- 300m (MMF)
- 2km (MMF/SMF)
- 10km
- 20km
- 40km
- 60km
- 80km
- 100km

Protocols

- 10GBase-X Ethernet
- SONET / SDH
- 6x 8x 10x 16x Fibre Channel
- 6G CPRI
- 11G OTU2

XFP

The “X” Form-factor Pluggable (XFP) Principal applications include 10 Gigabit Ethernet, 10 Gbit/s Fiber Channel, synchronous optical networking (SONET) at OC-192 rates, synchronous optical networking STM-64, 10 Gbit/s Optical Transport Network (OTN) OTU-2, and parallel optics links.

Applications

- 10GBase-X
- Metro-E
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center
- Remote PHY

Types

- SMF or MMF interfaces
- Bi-Directional
- CWDM
- DWDM
- DWDM Tunable
- xPON (Combo PON)
- Commercial or Industrial Temp.

Reach

- 300m (MMF)
- 2km (MMF/SMF)
- 10km
- 20km
- 40km
- 60km
- 80km

Protocols

- 10GBase-X Ethernet
- SONET / SDH
- 6x 8x 10x 16x Fibre Channel
- CPRI
- 11G OTU2

SFP28

The Small Form-factor Pluggable 28 (SFP28) is defined by the MSA as having the same form-factor specificities as the SFP+. The SFP28 port will typically be backwards compatible with SFP+ and supports 25/28Gb Ethernet, 32Gb Fiber Channel along with Optical Transport Network (OTN).

Applications

- 25GBase-X
- 28GBase-X
- Metro-E
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Bi-Directional
- CWDM
- DWDM
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 10km
- 20km
- 40km

Protocols

- 25GBase-X Ethernet
- 32x Fibre Channel
- 28G OTU

QSFP+

The Quad Small Form-factor Pluggable + (QSFP+) is defined by the MSA as a module capable of offering 4 independent transmit and receive channels each capable of 10Gb/s operation for an aggregate data rate of 40Gb/s. The QSFP+ also supports the Optical Transport Network (OTN).

Applications

- 40GBase-X
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Bi-Directional
- SWDM4
- Commercial or Industrial Temp.

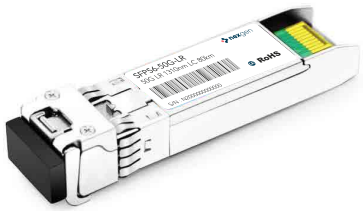
Reach

- 100m (MMF)
- 300m (MMF with SWDM4)
- 2km
- 10km
- 20km
- 40km

Protocols

- 40GBase-X Ethernet
- 43G OTU3

SFP56



The Small Form-factor Pluggable 56 (SFP56) uses the PAM4 laser modulation offering a 53Gb Ethernet capability.

Applications

- 50GBase-X
- Metro-E
- LAN
- WAN
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 10km

Protocols

- 50GBase-X Ethernet

CFP

The C Form-factor Pluggable (CFP) was designed after the small form-factor pluggable transceiver (SFP) interface, but is significantly larger to support 100Gb & 112Gb optical connections.

Applications

- 100GBase-X
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 10km
- 20km
- 40km

Protocols

- 100GBase-X Ethernet
- 100G Coherent
- 112G OTU4

CFP2

The C Form-factor Pluggable 2 (CFP2) was designed to be the half of the size of the CFP transceiver to support 100Gb/112Gb up to 400Gb optical connections.

Applications

- 100GBase-X
- 200GBase-X
- 400GBase-X
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- DCO
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 10km
- 20km
- 40km

Protocols

- 100GBase-X Ethernet
- 100G Coherent
- 112G OTU4
- 200GBase-X Ethernet
- 400GBase-X Ethernet

CFP4

The C Form-factor Pluggable 4 (CFP4) was designed to be the half of the size of the CFP2 transceiver to support 100Gb & 112Gb optical connections.

Applications

- 100GBase-X
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

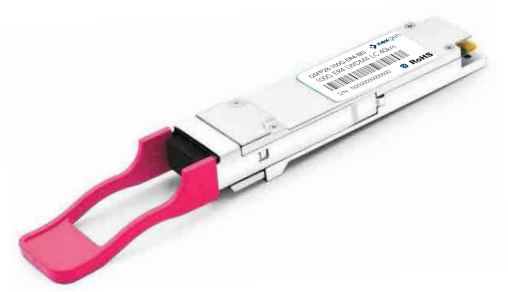
Reach

- 100m (MMF)
- 10km
- 20km
- 40km

Protocols

- 100GBase-X Ethernet
- 112G OTU4

QSFP28



The Quad Small Form-factor Pluggable 28 (QSFP28) is defined by the MSA as a module capable of offering 4 independent transmit and receive channels each capable of 25Gb/s operation for an aggregate data rate of 100Gb/s. The QSFP28 also supports the Optical Transport Network (OTN).

Applications

- 100GBase-X
- LAN
- WAN
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Bi-Directional
- CWDM
- DCO
- DWDM
- SWDM4
- Single Lambda
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 150m (MMF with SWDM4)
- 2km
- 10km
- 20km
- 40km
- 80km

Protocols

- 100GBase-X Ethernet
- 100G Coherent
- 112G OTU4

QSFP56

The Quad Small Form-factor Pluggable 56. The "56" in QSFP56 refers to the fact that it supports data rates up to 56Gb/s per channel using PAM4 modulation, making it suitable for high-performance networking.

Applications

- 200GBase-X
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

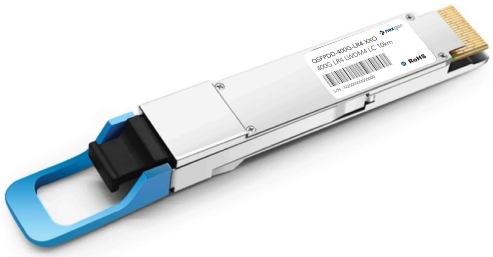
Reach

- 100m (MMF)
- 500m
- 2km
- 10km

Protocols

- 200GBase-X Ethernet

QSFP-DD



The Quad Small Form-factor Pluggable Double Density (QSFP-DD) comes in several variants providing speed ranging from 200Gb/s connections up to 800Gb/s connections. All versions are using PAM4 modulation.

Applications

- 200GBase-X
- 400GBase-X
- 800GBase-X
- Backhaul
- Carrier Transport
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

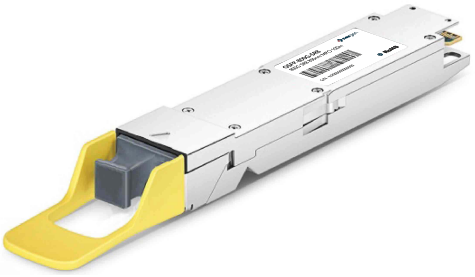
Reach

- 100m (MMF)
- 500m
- 2km
- 10km
- 20km
- 40km
- 80km
- Open ZR+

Protocols

- 200GBase-X Ethernet
- 400GBase-X Ethernet
- 400G Coherent
- 800GBase-X Ethernet

OSFP



The Octal Small Form-factor Pluggable Double Density (OSFP) is slightly bigger and longer than the QSFP-DD. It provides 400Gb/s connections using PAM4 modulation and is designed to support the next-generation 800Gb optics.

Applications

- 400GBase-X
- 800GBase-X
- Backhaul
- Data Center

Types

- SMF or MMF interfaces
- Commercial or Industrial Temp.

Reach

- 100m (MMF)
- 500m
- 2km
- 10km

Protocols

- 400GBase-X Ethernet
- 800GBase-X Ethernet

DAC / AOC

Direct Attach Cables (DAC) and Active Optical Cables (AOC) are both plug & play solutions design for Rack interconnections. The transceivers are directly spliced to the cable which make it a real easy-to-use solution.

Applications

- 10GBase-X
- 25GBase-X
- 40GBase-X
- 100GBase-X
- 200GBase-X
- 400GBase-X
- 800GBase-X
- 1.6TBase-X

Types

- DAC (Copper)
- AOC (Fiber)
- SFP+
- SFP28
- SFP56 (Breakout possibility)
- QSFP+ (Breakout possibility)
- QSFP28 (Breakout possibility)
- QSFP28-DD (Breakout possibility)
- QSFP-DD (Breakout possibility)
- OSFP (Breakout possibility)

Length

- Up to 7m (Copper)*
- Up to 100m (AOC)

Protocols

- 10GBase-X Ethernet
- 25GBase-X Ethernet
- 40GBase-X Ethernet
- 100GBase-X Ethernet
- 200GBase-X Ethernet
- 400GBase-X Ethernet
- 800GBase-X Ethernet
- 1.6TBase-X Ethernet

*Length depends on the Bitrate

02 The i-Code

The i-Code is a multi-usage device that provides the possibility to quickly reprogram the transceivers by selecting the desired OEM vendor compatibility. It also allows to tune 10Gb SFP+ DWDM channel and can conduct diagnostics on optics from any brand.

Supported Transceivers

SFP	SFP28	QSFP28
SFP+	SFP56	QSFP28-DD
XFP	QSFP+	QSFP-DD

Features

Advantages

- Recode Nexgen transceivers
- Nexgen Remote assistance
- Reduce spare stock
- Unlimited Recoding
- Diagnostic Monitoring
- Offline Tuning Capabilities

Requirements

- Windows 10/11
- Nexgen Portable Executable (PE)
- USB Type-C connector
- 5V USB Power Supply
- Internet connection

03 Pluggable Amplifiers

Pluggable Amplifiers come in several footprints 100% compatible with most common MSA standards ports : SFP+, XFP, CFP2 & QSFP. They are designed for easy plug-&-play optical signal amplifications used for various types of applications.

Applications

- Metro
- ROADM
- DCI
- O-Band (SOA)
- Monitoring
- xPON System
- CATV Networks

Pluggable Types

- SFP+
- XFP
- CFP2
- QSFP

Control Type

- Automatic Gain Control (AGC)
- Automatic Power Control (APC)

Technology Type

- Erbium Doped Fiber Amplifier (EDFA)
- Semiconductor Optical Amplifier (SOA)

04 xWDM Mux-Demux

Wavelength-Division Multiplexing (WDM) is a technology which multiplexes a number of optical carrier signals onto a single optical fiber by using different wavelengths of laser light enabling bidirectional communications over a single strand of fiber, also called wavelength-division duplexing, as well as multiplication of capacity.

Applications

- CWDM System
- DWDM System
- Uni-directional Systems
- Bi-directional Systems
- CATV Systems
- FTTx

Types

- Ultra Compact
- Compact
- ABS
- LGX
- 1U Rack

CWDM Features

- Single Fiber or Double Fiber
- East + West
- Supports from 1270nm to 1610nm
- Low insertion loss
- High channel isolation
- High temperature stability -40°C +85°C
- Epoxy-free optical path
- Modular within rack mount chassis

DWDM Features

- Supports from Channel 17 to 60
- Single or double fiber
- Extension Port + Monitor Port variant
- 1310nm + CWDM Port variant
- Low insertion loss
- High channel isolation
- High temperature stability -40°C +85°C
- Epoxy-free optical path
- Modular within rack mount chassis

05 PLC Splitters

The Planar Lightwave Circuit (PLC) Splitter is a passive device fabricated using lithography onto a silica glass substrate which allows for routing specific percentages of light. It is one of the most important devices with many input and output terminals, especially applicable to a passive optical network (xPON, FTTx) to connect the main distribution frame and the terminal equipment and to branch the optical signal.

Applications

- FTTx
- LAN/WAN Systems
- CATV Systems
- xPON

Types

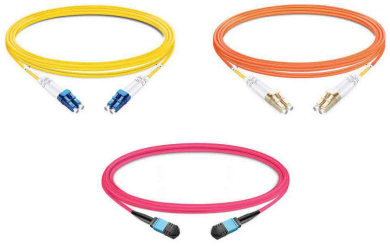
- Ultra Compact
- Compact
- ABS
- LGX
- 1U Rack

Features

- Low Insertion Loss
- PDL
- Wide operating bandwidth
- Wide operating temperature
- LC / SC connectors
- UPC / APC

Splitting Ratio

- 1 x N N [2 ; 64]
- 2 x M M [2 ; 64]



06 Patch Cords

A Patch cord is an electrical or optical cable used to connect (patch in) one electronic or optical device to another for signal routing. Devices of different types (switch connected to a computer, or a switch to a router) are connected with patch cords. Patch cords come in several variants in different colors so as to be easily distinguishable from each other.

Applications

- Data Centers
- Metro-E
- LAN/WAN Systems
- Backhaul
- Carrier Transport

Types

- MMF (OM3 / OM4 / OM5)
- SMF
- Simplex
- Duplex
- LC / SC / MPO / CS connectors
- UPC / APC
- Breakout possibility
- Bend insensitive

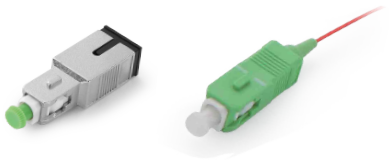
Length

- 1m
- 2m
- 3m
- 4m
- 5m
- 6m
- 7m
- ...
- 100m

Coating

- Available in PVC (OFNR), plenum
- Indoor
- Outdoor
- Ruggedized
- Low smoke zero halogen

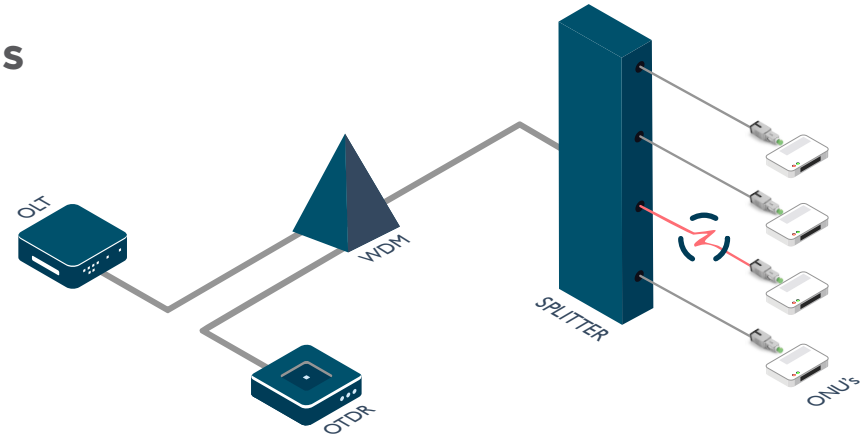
07 FBGs



The Fiber Bragg Gratings (FBGs) come in various type (connectors, pigtail, patchcords,...) and are placed directly on the network fiber. When the light spectrum propagates through the FBG, only a specific wavelength called the “Bragg wavelength” is reflected, leaving the remaining wavelengths unaffected. By analyzing the Bragg wavelength behavior, defects on the fiber can easily be located.

Applications

- FTTx
- Metro-E
- LAN/WAN Systems
- CATV Systems
- xPON



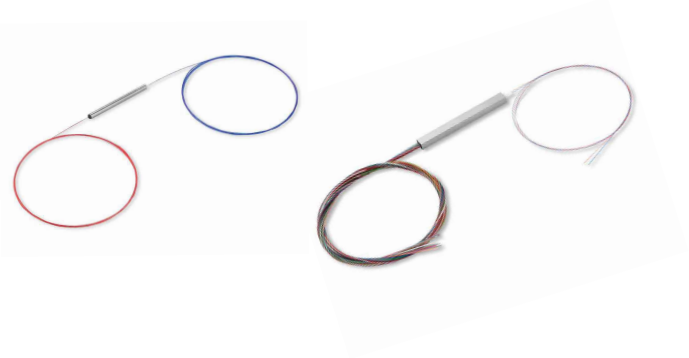
Types

- Patch Cords
- Pigtails
- Stand Alone Connector

Telcordia Norms

- GR-1209
- GR-1221

Couplers



Couplers are used to split or combine the light contained in optical fibers. Some types of couplers can be used to combine two or more inputs into one single output, they are called combiners in this case.

Applications

- FTTx
- LAN/WAN Systems
- CATV Systems
- xPON

Types

- Ultra Compact
- Compact

Features

- Low Insertion Loss
- High Return Loss
- PDL
- Wide operating bandwidth
- Wide operating temperature

Telcordia Norms

- GR-1209
- GR-1221

08 Media Converters

The Media Converters are devices that allow to interconnect fiber optic cabling-based systems with existing copper-based structured cabling systems. Available in several models supporting data rates from 100Mb up to 10Gb, they are used in Metropolitan Area Network (MAN) access and data Transport services to enterprises.

Applications

- Metro-E
- Carrier Transport
- Data Center
- FTTx

Types

- Compact
- Rackable
- Managed
- Non managed

Features

- Store / Forward switching mechanism
- Auto-Cross over for MDI/MDI-X in TP port
- Auto-Negotiation in TP Port
- Full / half Duplex Mode Operation
- MAC address table
- Jumbo Frame
- Memory Buffer
- Link Alarm
- Power down trap
- DIP Switch

Speed

- 100Mb/s
- 1Gb/s
- 2.5Gb/s
- 5Gb/s
- 10Gb/s

09 OTN Sub-systems

The Optical Transport Network (OTN) platform is designed to meet the evolving needs of data center interconnect (DCI) and long-distance wavelength division multiplexing (WDM) transmission. It provides scalable, efficient, and reliable optical networking infrastructure for carriers, cloud providers, and enterprise networks.

Applications

- Data Center Interconnect
- Cloud Connectivity
- Backbone Transmission
- Metro
- WAN

Features

- 1U / 2U / 5U design
- Up to 25.6 Tb/s
- All services supported
- Unified control software
- User-friendly interface

Protocols

- Ethernet
- Fibre Channel
- SDH/SONET
- OTU2
- OTU2e
- OTU4

Speed

- 100Mb/s
- 1Gb/s
- 8Gb/s
- 9.95Gb/s
- 10Gb/s
- 10.709Gb/s
- 11.0957Gb/s
- 11.8099Gb/s
- 25Gb/s
- 40Gb/s
- 100Gb/s
- 200Gb/s
- 400Gb/s

Ask for an On-site technical support.

Our engineers are here to help you !

Our On-site technical support facilitates the validation of our solutions on your network. By working hand-in-hand with our customers we ensure our products are tailor-made to their needs.

Contacts

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It’s not about what we do... It’s how we do it that makes the difference !

Did you ever get the feeling that the product you absolutely need may just not be supported by your network ?

Ask us for help! We’ve already extended the equipment capabilities in the past! And we’ll gladly do it again.