Finisar

RELIABILITY AND INNOVATION IN FIBER OPTICS

Harnessing the power of digital fiber optics for high-speed data and telecommunications networks
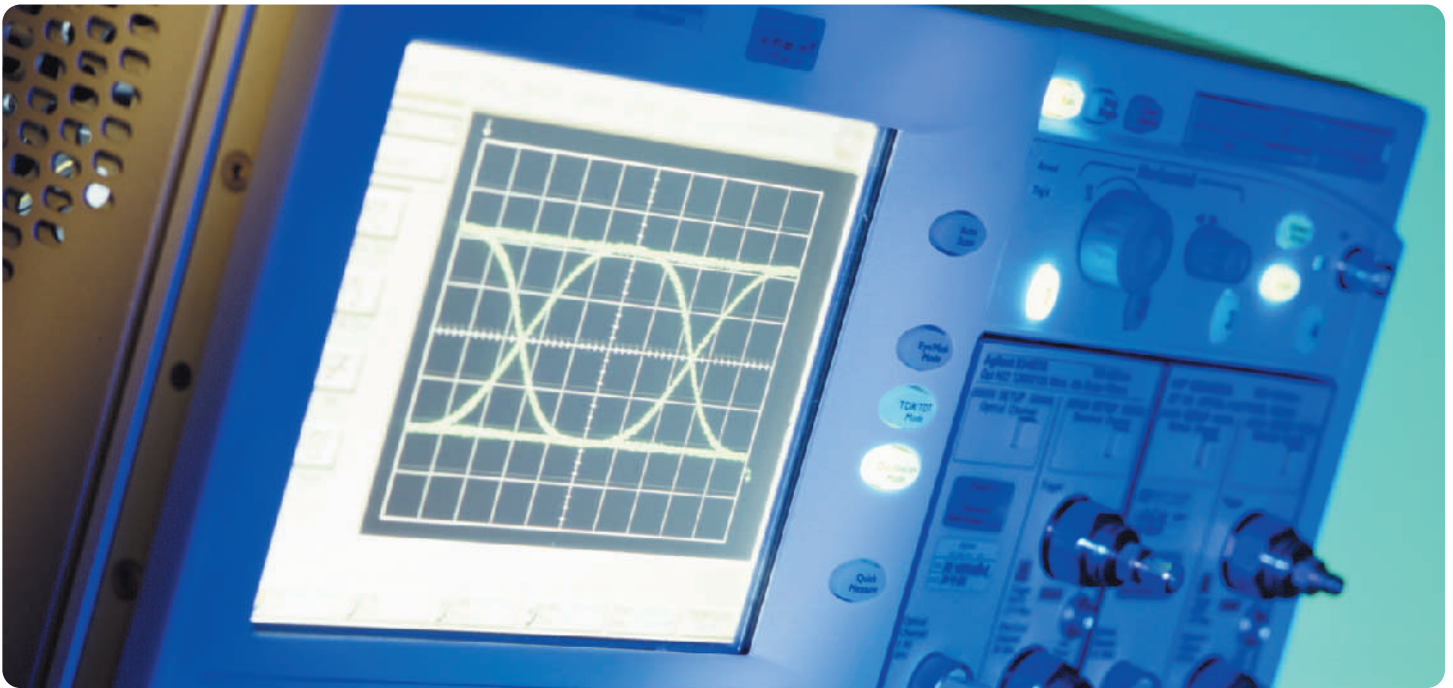
OPTICS

Finisar designs and manufactures high-quality optical transceivers and wavelength management subsystems for gigabit-rate fiber optic applications in Gigabit Ethernet, Fibre Channel and SONET/SDH networks.

www.finisar.com

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Finisar is a technology leader in gigabit fiber optic subsystems and network performance test systems, which enable multi-gigabit speed data communications over local area networks (LANs), storage area networks (SANs), metropolitan area networks (MANs) and cable television networks (CATV). Since 1988, we have been focused on using leading-edge technology to provide a broad range of high performance, reliable, value-added optoelectronic subsystems to manufacturers of networking, storage and CATV equipment. Additionally, we produce network performance test systems with unique software capabilities that help these manufacturers design, install, and maintain gigabit networks.

At Finisar, we take pride in making products that exemplify our commitment to engineering excellence, product reliability and customer value. The company's success in designing products with superior performance and added functionality is a reflection of our extensive knowledge base in optoelectronics, ASIC design and software development. As a datacom company, we take a different approach on developing innovative solutions for our customers, an approach which frequently demands that we think outside the box in terms of how things should be done.

LEARN MORE ABOUT OUR OPTICAL NETWORKING PRODUCTS ▶

F i n i s a r

Optical Transceivers

Finisar designs and manufactures a broad line of optical transceivers compliant with Gigabit Ethernet, Fibre Channel and SONET/SDH standards. Our products operate at rates up to 10Gb/s and up to 80 km (50 miles) and are available in several form factors, both for fixed solder mounting (SFF, 1x9) or pluggable applications (SFP, GBIC). They operate with outstanding performance over extended voltage and temperature ranges, while minimizing Electromagnetic Interference (EMI) and providing very low jitter.

"Smart" Digital Diagnostics

Most Finisar transceivers incorporate a microprocessor and diagnostics port, which provides performance information on the data link. Users can remotely monitor in real-time the received optical power, the transmitted optical power, the laser bias current and the transceiver temperature of any transceiver in the network. These digital diagnostic functions allow telecommunication companies to implement reliable performance monitoring in an accurate and cost-effective way.

If you have specific questions about our products please talk to one of our sales representatives at 408-548-1000, e-mail us at: sales@finisar.com, or go to www.finisar.com

SONET / SDH
OPTICAL TRANSCEIVERS

"Smart" SFP

• Supports 2.488Gb/s bi-directional data links on SMF
• LR-1 and LR-2 distances
• Standard "pluggable" SFP footprint (MSA compliant)
• "Smart" digital diagnostics functions
• Duplex LC connector
• Very low jitter
• Metal enclosure, for lower EMI
• Single 3.3V power supply
• Low power dissipation
• Operating temperature range: -10°C to 70°C

OC-48 LR STM L-16

• Supports 2.488Gb/s bi-directional data links on SMF
• IR-1 and IR-2 distances
• Standard "pluggable" SFP footprint (MSA compliant)
• "Smart" digital diagnostics functions
• Duplex LC connector
• Very low jitter
• Metal enclosure, for lower EMI
• Single 3.3V power supply
• Low power dissipation
• Operating temperature range: -10°C to 70°C

OC-48 IR STM S-16

• Supports 2.488Gb/s bi-directional data links on SMF
• SR distances
• Standard "pluggable" SFP footprint (MSA compliant)
• "Smart" digital diagnostics functions
• Duplex LC connector
• Very low jitter
• Metal enclosure, for lower EMI
• Single 3.3V power supply
• Low power dissipation
• Operating temperature range: -10°C to 70°C

OC-48 SR STM I-16

2x5 SFF, 2x10 SFF

• Supports 2.488Gb/s bi-directional data links on SMF
• IR-1 and IR-2 distances
• Standard 2x5/2x10 SFF footprint (MSA compliant)
• Analog diagnostics supported in the 2x10 versions
• Duplex LC connector
• Very low jitter
• Metal enclosure, for lower EMI
• Single 3.3V power supply
• Low power dissipation
• Operating temperature range: -10°C to 70°C

• Supports 2.488Gb/s bi-directional data links on SMF
• SR distances
• Standard 2x5/2x10 SFF footprint (MSA compliant)
• Analog diagnostics supported in the 2x10 versions
• Duplex LC connector
• Very low jitter
• Metal enclosure, for lower EMI
• Single 3.3V power supply
• Low power dissipation
• Operating temperature range: -10°C to 70°C

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Gigabit Ethernet and Fibre Channel Products
OPTICAL TRANSCEIVERS

1.25 Gb/s
2.125 Gb/s

"Smart" GBIC

SX (850nm)
LX (1310nm)

- Supports 1 Gb/s and 2 Gb/s bi-directional data links on MMF and SMF
- Link lengths of up to 10 km
- Very low jitter
- Hot-pluggable
- "Smart" digital diagnostics functions
- Operating voltage: 5V and 3.3V
- Low power dissipation
- Operating temperature range: -10°C to 85°C

"Smart" Extended GBIC

40km links
(1310nm)

- Supports 1.25 Gb/s bi-directional data links on
- SMF
- APD Receiver
- Link lengths of up to 40 km
- Very low jitter
- Hot-pluggable
- "Smart" digital diagnostics functions
- Operating voltage: 5V and 3.3V
- Low power dissipation
- Operating temperature range: 0°C to 70°C

1.25 Gb/s
2.125 Gb/s

"Smart" SFP

SX (850nm)
LX (1310nm)

- Supports 1 Gb/s and 2 Gb/s bi-directional data links on MMF and SMF
- Link lengths of up to 10 km
- 1x/2x interoperability
- Standard "pluggable" SFP footprint (MSA compliant)
- Duplex LC connector
- "Smart" digital diagnostics functions
- Very low jitter
- Metal enclosure, for lower EMI
- Single 3.3V power supply
- Low power dissipation
- Operating temperature range: -10°C to 85°C

"Smart" Extended SFP

40km links
(1310nm)

- Supports 1 Gb/s and 2 1 Gb/s bi-directional data links on SMF
- Link lengths of up to 80 km
- Standard 2x5 SFF footprint (MSA compliant)
- Duplex LC connector
- Very low jitter
- Metal enclosure, for lower EMI
- Single 3.3V power supply
- Low power dissipation
- Operating temperature range: -10°C to 70°C

Gigabit Ethernet and Fibre Channel Products
COPPER TRANSCEIVERS

1.25 Gb/s
2.125 Gb/s

Active Copper

30m links
HSSDC/DB-9 connector

- Supports 1 Gb/s and 2 Gb/s bi-directional data links on STP and Twinax cables.
- Link lengths of up to 33 m
- HSSDC or DB-9 connector
- Very low jitter
- Hot-pluggable
- Operating voltage: 5V and 3.3V
- Low power dissipation
- Operating temperature range: -10°C to 85°C

1000BASE-T GBIC

100m links
CAT 5 UTP

- Supports 1.25 Gb/s bi-directional data links on Category 5 UTP cables.
- Link lengths of up to 100 m, per IEEE 802.3ab
- RJ-45 connector
- Very low jitter
- Hot-pluggable
- Operating voltage: 5V
- Operating temperature range: 0°C to 75°C

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Gigabit Ethernet and Fibre Channel Products
OPTICAL TRANSCEIVERS

1.25 Gb/s
2.125 Gb/s

"Smart" Extended GBIC

**80km links
(1550nm)**

- Supports 1.25 Gb/s bi-directional data links on SMF
- Link lengths of up to 80 km
- Very low jitter
- Hot-pluggable
- "Smart" digital diagnostics functions
- Operating voltage: 5V and 3.3v
- Low power dissipation
- Operating temperature range: 0°C to 60°C
- APD version available (120km)

1x9

SX (850nm)

Supports 1.25 Gb/s bi-directional data links on MMF

Link lengths of up to 550 m

Very low jitter

Operating voltage: 5V and 3.3V

Low power dissipation

Operating temperature range: 0°C to 85°C

1.25 Gb/s
2.125 Gb/s

"Smart" Extended SFP

**80km links
(1550nm)**

- Supports 1 Gb/s and 2 1 Gb/s bi-directional data links on SMF
- Link lengths of up to 35 km
- Standard "pluggable" SFP footprint (MSA compliant)
- Duplex LC connector
- "Smart" digital diagnostics functions
- Very low jitter
- Metal enclosure, for lower EMI
- Single 3.3V power supply
- Low power dissipation
- Operating temperature range: -10°C to 70°C

2x5 SFF

**SX (850nm)
LX (1310nm)**

- Supports 1 Gb/s and 2 Gb/s bi-directional data links on MMF and SMF
- Link lengths of up to 10 km
- 1x/2x interoperability
- Standard 2x5 SFF footprint (MSA compliant)
- Duplex LC connector
- Very low jitter
- Metal enclosure, for lower EMI
- Single 3.3V power supply
- Low power dissipation
- Operating temperature range: -10°C to 85°C

10 Gigabit Ethernet / SONET OC-192
OPTICAL TRANSCEIVERS

FTRX   10 Gb/s
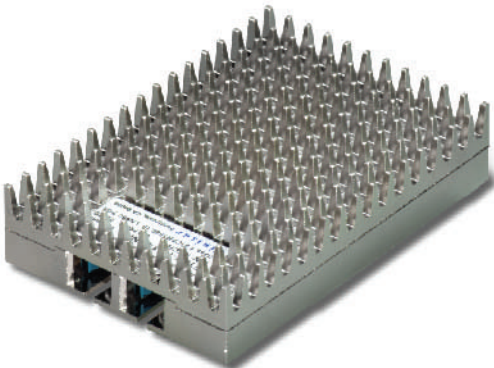
- Up to 10.3 Gb/s serial bi-directional data links
- IEEE P802.3ae and OC-192 SR-1 versions available
- Supports LAN PHY and WAN PHY
- Compliant with 300-pin MSA form factor (XFP under development)
- Low power dissipation
- Metal enclosure for lower emissions and ESD

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Coarse Wavelength Division Multiplexing

Finisar's full line of coarse wavelength division multiplexing (CWDM) modules is designed to address the specific requirements of the metropolitan access market. Finisar's CWDM products, including transceivers, optical add/drop multiplexers (OADMs) and multiplexers/demultiplexers, deliver dramatic cost savings to optical networking manufacturers, enabling them to develop systems that are lower in cost, easier to provision and simpler to operate.

LAN and SAN equipment vendors can deploy these new modules to immediately add WDM capability into their existing product suites while optical system manufacturers can leverage Finisar's CWDM products to build metro access equipment that is complimentary with existing DWDM core equipment.

Finisar's CWDM product family includes every major optical component needed to support a metro access optical data network, including transceivers (available in eight specific wavelengths between 1470 and 1610nm), optical add/drop muxes (OADMs) and multiplexers/demultiplexers (either four or eight channels). These products provide optical networking support for many common protocols including SONET, Gigabit Ethernet and Fibre Channel over a grid of eight coarse WDM optical wavelengths. Data rates range from 100Mbps to OC-48 SONET.

Finisar offers the mux/demux and OADM modules in two different configurations to better meet a customers needs. These devices are available as a module with fiber optic pigtails or as a plug-in installed in Finisar's 1 RU chassis. The module version of the product enables OEMs to design and build their own circuit boards with CWDM capability. The plug-in version allows network equipment manufacturers to quickly add CWDM capability to existing products, speeding time to market.

CWDM OADM Plug-in Module

- **Cost-effective CWDM technology**
- **Adds/drops one wavelength**
- **Dual SC connectors for simple GBIC interfacing**
- **Reliable passive WDM optical technology**
- **Scales easily for ring networks**
- **Low optical insertion loss**
- **Low-profile modular design**
- **Fits in 1RU 19" rack mount chassis**

CWDM MUX/DEMUX Plug-in Module

- **Cost-effective CWDM technology**
- **Terminates four or eight wavelengths**
- **Dual SC connectors for simple GBIC interfacing**
- **Reliable passive WDM optical technology**
- **Ring or point-to-point applications**
- **Low optical insertion loss**
- **Low-profile modular design**
- **Fits in 1RU 19" rack mount chassis**

CWDM OADM Module

- **Cost-effective CWDM technology**
- **Adds/drops one wavelength**
- **Reliable passive WDM optical technology**
- **Scales easily for ring networks**
- **Low optical insertion loss**

CWDM MUX/DEMUX Module

- **Cost-effective CWDM technology**
- **Terminates four or eight wavelengths**
- **Reliable passive WDM optical technology**
- **Ring or point-to-point applications**
- **Low optical insertion loss**

CWDM GBIC Transceiver Modules

- **8 CWDM wavelengths available**
- **Up to 80 km data links**
- **Hot plug-and-play capabilities**
- **Built-in diagnostics**
- **Class 1 laser safety**
- **Metal enclosure for lower EMI**
- **Low power dissipation**