Transceivers, Transponders, and Active Optical Cables

**SFP (copper and optical; longwave, shortwave and WDM)**

**DATACOM** applications using Fast Ethernet, Gigabit Ethernet, 1x/2x/4x Fibre Channel

**TELECOM** applications using OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, EPON/GPON and Wireless/CPRI across all reaches

**Features**
- 3.3 V operating voltage
- Distances from very short links up to 100+ km
- Wide operating temperature range
- Metal enclosure for lower EMI
- Digital diagnostics
- Wireless CPRI compliant

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**QSFP+/QSFP28 (optical; longwave and shortwave)**

**DATACOM** applications using 40G and 100G Ethernet, 128G Fibre Channel and high-density 10G and 25G Ethernet

**TELECOM** applications using OTU3 and OTU4

**Features**
- Four-channel full-duplex transceiver module
- Hot-pluggable, MSA-compliant QSFP+ and QSFP28 form factors
- Maximum link length of 300m on OM3 MMF, 400m on OM4 MMF, and 40 km on SMF
- 3.3 V operating voltage

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**CXP (optical; shortwave)**

**DATACOM** applications using 100G Ethernet and chassis interconnections

**Features**
- Twelve-channel full-duplex transceiver module
- Hot Pluggable CXP form factor
- Maximum link length of 100m on OM3 MMF and 150m on OM4 MMF
- Multirate capability: supports 1.06 Gb/s to 12.5 Gb/s per channel

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**Active Optical Cables**

- **SFPwire**: 10 Gb/s SFP+ Active Optical Cable for 10G Ethernet
- **quadwire**: 40 Gb/s to 100 Gb/s Parallel Active Optical Cable for 40GbE and 100GbE, InfiniBand 4xQDR, Infiniband 4xFDR, Infiniband 4xEDR and Intel® Omni-Path Architecture
- **C. wire**: 150 Gb/s Parallel Active Optical Cable for 100GbE and InfiniBand 12xQDR

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**SFP+/SFP28 (optical; longwave, shortwave, DWDM and tunable)**

**DATACOM** applications using 10G and 25G Ethernet and 2x/4x/8x/16x/32x Fibre Channel (LW and SW)

**TELECOM** applications using either OC-192/STM-64, 10G Ethernet, or Wireless/CPRI

**Features**
- 3.3 V operating voltage
- Supports bit rates up to 28.05 Gb/s (LW, SW, and DWDM) and 11.3 Gb/s (Tunable)
- Distances from short links up to 80 km metro (LW, SW, and DWDM) and 80 km (Tunable)
- Wide operating temperature range
- Digital diagnostics
- Wireless CPRI compliant (LW and SW)
- Bi-directional SFP+ transceiver available

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**CFP/CFP2/CFP4 (optical; longwave and shortwave)**

**DATACOM** applications using 40G and 100G Ethernet

**TELECOM** applications using OTU3 and OTU4

**Features**
- Hot-pluggable, MSA-compliant CFP, CFP2 and CFP4 form factors
- Supports 39.8 Gb/s to 112 Gb/s aggregate bit rates
- Maximum link length of 100m on OM3 MMF; 150m on OM4 MMF; 10km on SMF, and 500km in Amplified DWDM Applications
- 3.3 V operating voltage

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**Active Optical Cables**

- **SFPwire**: 10 Gb/s SFP+ Active Optical Cable for 10G Ethernet
- **quadwire**: 40 Gb/s to 100 Gb/s Parallel Active Optical Cable for 40GbE and 100GbE, InfiniBand 4xQDR, Infiniband 4xFDR, Infiniband 4xEDR and Intel® Omni-Path Architecture
- **C. wire**: 150 Gb/s Parallel Active Optical Cable for 100GbE and InfiniBand 12xQDR
Optical Engines (optical; shortwave)

**DATACOM** applications for inter-chassis connections

**Features**
- Twelve-channel full-duplex transceiver modules
- Maximum link length of 100m at 10 Gb/s on OM3 MMF or 70m at 25 Gb/s on OM4 MMF
- Multirate capability: supports 1 Gb/s up to 28.05 Gb/s per channel

Coherent (optical; longwave)

**TELECOM** 100Gb/s and 200Gb/s applications

**Features**
- Pluggable CFP2-ACO with analog interface
  - Analog host interface is compatible with any external DSP
  - Modulation format independent
- 5"x7" module supporting multiple modulation formats with internal DSP
  - Platform supports DP-BPSK, DP-QPSK, or DP-16QAM at up to 32Gbaud
  - Best in class OSNR performance

X2 (optical; longwave and shortwave)

**DATACOM** applications using 10G Ethernet

**Features**
- Supports bit rates up to 10.5 Gb/s
- Distances up to 10 km
- Digital diagnostics

Endurance Compact Transceivers (optical; longwave and shortwave)

**Features**
- Compact form-factor for high-density solutions
- Data rate flexibility including 1G and 10G Ethernet, Fast Ethernet, and 1x/2x/4x/8x Fibre Channel
- Board-mounted for an edge optical interface or internal mounting
- Designed for rugged applications

XFP (optical; longwave, shortwave, DWDM, and tunable)

**DATACOM** applications using 10G Ethernet and 10x Fibre Channel

**TELECOM** applications using OC-192/STM-64

**Features**
- Supports bit rates up to 11.3 Gb/s
- Distances up to 200 km (LW, SW, and DWDM) and 80 km (Tunable)
- Digital diagnostics
- Wide operating temperature range versions available

SFF (optical; longwave and shortwave)

**DATACOM** applications using Gigabit Ethernet, 1x/2x/4x Fibre Channel

**TELECOM** applications using OC-3/STM-1, OC-12/STM-4 and OC-48/STM-16 across all reaches

**Features**
- Distances from very short links up to 80 km
- Wide operating temperature range
- Available in 2x5, 2x7 or 2x10. 2x7 and 2x10 incorporate digital diagnostics

**Finisar’s Patented Digital Diagnostics**

Finisar’s transceivers feature a microprocessor and diagnostics interface that provides performance information on the data link. Users can remotely monitor—in real-time—received optical power, transmitted optical power, laser bias current, transceiver input voltage and transceiver temperature of any transceiver in the network. These digital diagnostic functions provide network managers with a highly accurate, cost-effective tool for implementing reliable performance monitoring.
Technology Innovator.
Broad Product Portfolio.
Trusted Partner.
<table>
<thead>
<tr>
<th>Engine</th>
<th>Connection</th>
<th>Bandwidth</th>
<th>Cooling</th>
<th>Laser Type</th>
<th>PIN Type</th>
<th>Data Rate</th>
<th>Case Temperature Range (°C)</th>
<th>Connector</th>
<th>Module Type</th>
<th>Diagnostics</th>
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<td>Single Mode</td>
<td>10.3 Gb/s</td>
<td>Direct</td>
<td>DFB Laser</td>
<td>PIN</td>
<td>11.3 Gb/s</td>
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<td>LC Pluggable</td>
<td>Digital</td>
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<td>Direct</td>
<td>VCSEL</td>
<td>PIN</td>
<td>126 Gb/s</td>
<td>0 to 70</td>
<td>MPO (MTP12)</td>
<td>Pluggable</td>
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<td>Multi-mode</td>
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<td>Direct</td>
<td>VCSEL</td>
<td>PIN</td>
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(*) Using OM3 multimode fiber  
(**) Extended case temperature ranges are available upon request  
(***) Using OM4 multimode fiber and FEC