

# *Finisar*<sup>®</sup>

## **Product Guide**

**Transceivers, Transponders, and Active Cables for  
Datacom and Telecom Applications**



**CFP**



**QSFP**



**SFP+**



**XFP**



**300 PIN**



**Active Cable**

**Finisar's** broad product selection and innovative technology have made us the optical module manufacturer of choice for all major networking equipment vendors worldwide. We have taken a leading role in transforming the datacommunications and telecommunications equipment market from utilizing discrete optical components to leveraging the design and pay-as-you-grow flexibility offered by pluggable modules. Our products are fully compliant with Ethernet, Fibre Channel, SONET/SDH/OTN and PON standards and operate at data rates up to 100 Gb/s. They are capable of distances ranging from very short reach within a datacenter to campus, access, metro, and long-haul reaches. They feature outstanding performance over extended voltage and temperature ranges, while minimizing jitter, electromagnetic interference (EMI) and power dissipation.

## FINISAR MODULES ARE AVAILABLE IN A WIDE VARIETY OF FORM FACTORS:

### 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 and OC-48/STM-16 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/OBSAI compliant



SFP

### SFP+ (optical; longwave and shortwave)

- **DATACOM** applications using 10 Gigabit Ethernet and 2x/4x/8x/16x Fibre Channel

#### Features

- 3.3 V operating voltage
- Supports bit rates up to 14.025 Gb/s
- Distances from short links up to 80 km metro links
- Wide operating temperature range
- Digital diagnostics
- Wireless CPRI/OBSAI compliant



SFP+

### CFP (optical; longwave and shortwave)

- **DATACOM** applications using 40G and 100G Ethernet
- **TELECOM** applications using OTU3 across all reaches

#### Features

- Hot-pluggable CFP form factor
- Supports 39.8 Gb/s to 103.1 Gb/s aggregate bit rates
- CFP MSA-compliant form factor
- Single 3.3 V power supply



CFP

### QSFP (optical; longwave and shortwave)

- **DATACOM** applications using 40G Ethernet
- **TELECOM** applications using OTU3

#### Features

- Four-channel full-duplex transceiver module
- Hot Pluggable, MSA-compliant QSFP+ form factor
- Maximum link length of 100 m on OM3 MMF, 150 m on OM4 MMF, and 10 km on SMF
- Multirate capability; supports 1.06 Gb/s to 11.3 Gb/s per channel



QSFP

### 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

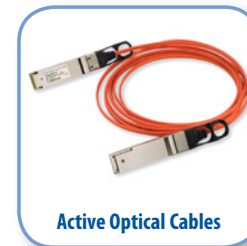


CXP

### Active Optical Cables



- 10 Gb/s Serial Active Optical Cable for 1/10GbE and 1/2/4/8x Fibre Channel
- 40 Gb/s to 56 Gb/s Parallel Active Optical Cable for 40GbE, InfiniBand 4xQDR, and Infiniband 4xFDR
- 150 Gb/s Parallel Active Optical Cable for 100GbE and InfiniBand 12xQDR



Active Optical Cables

### SNAP12 (optical; shortwave)

- **DATACOM** applications for inter-chassis connections

#### Features

- Twelve-channel transmitter and receiver modules
- Pluggable MegArray connector and unretimed electrical interface
- Maximum link length of 600m at 2.5Gb/s on OM3 MMF Fiber
- Multirate capability: 1 Gb/s to 2.7 Gb/s per channel

### XFP (optical; longwave, shortwave, DWDM, and Tunable)

- **DATACOM** applications using 10 Gigabit 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 80 km
- Digital diagnostics

### X2/XENPAK (optical; longwave and shortwave)

- **DATACOM** applications using 10 Gigabit Ethernet and 10x Fibre Channel

#### Features

- 1.2 V, 3.3 V and 5 V operating voltage
- Supports bit rates up to 10.5 Gb/s
- Distances up to 10 km
- Digital diagnostics

### 300 PIN (optical; longwave)

- **TELECOM** 10 Gb/s and 40 Gb/s applications

#### Features

- Supports bit rates up to 44.6 Gb/s
- Available in RZ-OOK (10G), NRZ-OOK (10G/40G), and NRZ-DPSK (40G) formats
- Compliant to industry standards (ITU-T; SFI-4/5; 300 PIN MSA)
- DWDM broadly 50GHz spaced tunability across C or L bands

### SFF (optical 2x5, 2x7 and 2x10; 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

- 3.3 V operating voltage
- Distances from very short links up to 80 km
- Wide operating temperature range
- Metal enclosure for lower EMI
- 2x7 and 2x10 incorporate digital diagnostics

### PON (optical; longwave)

- **TELECOM** access applications for GPON and EPON

#### Features

- 3.3 V operating voltage
- EPON stick incorporates full EPON ONU functionality
- Distances up to 20 km, Class B+, PX-20+
- Digital diagnostics

## FINISAR'S PATENTED DIGITAL DIAGNOSTICS

Finisar's XFP, XPAK, X2, XENPAK, 300 PIN, SFP, SFP+, and 2x7 and 2x10 SFF 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.



SNAP12



XFP



X2



XENPAK



300 PIN

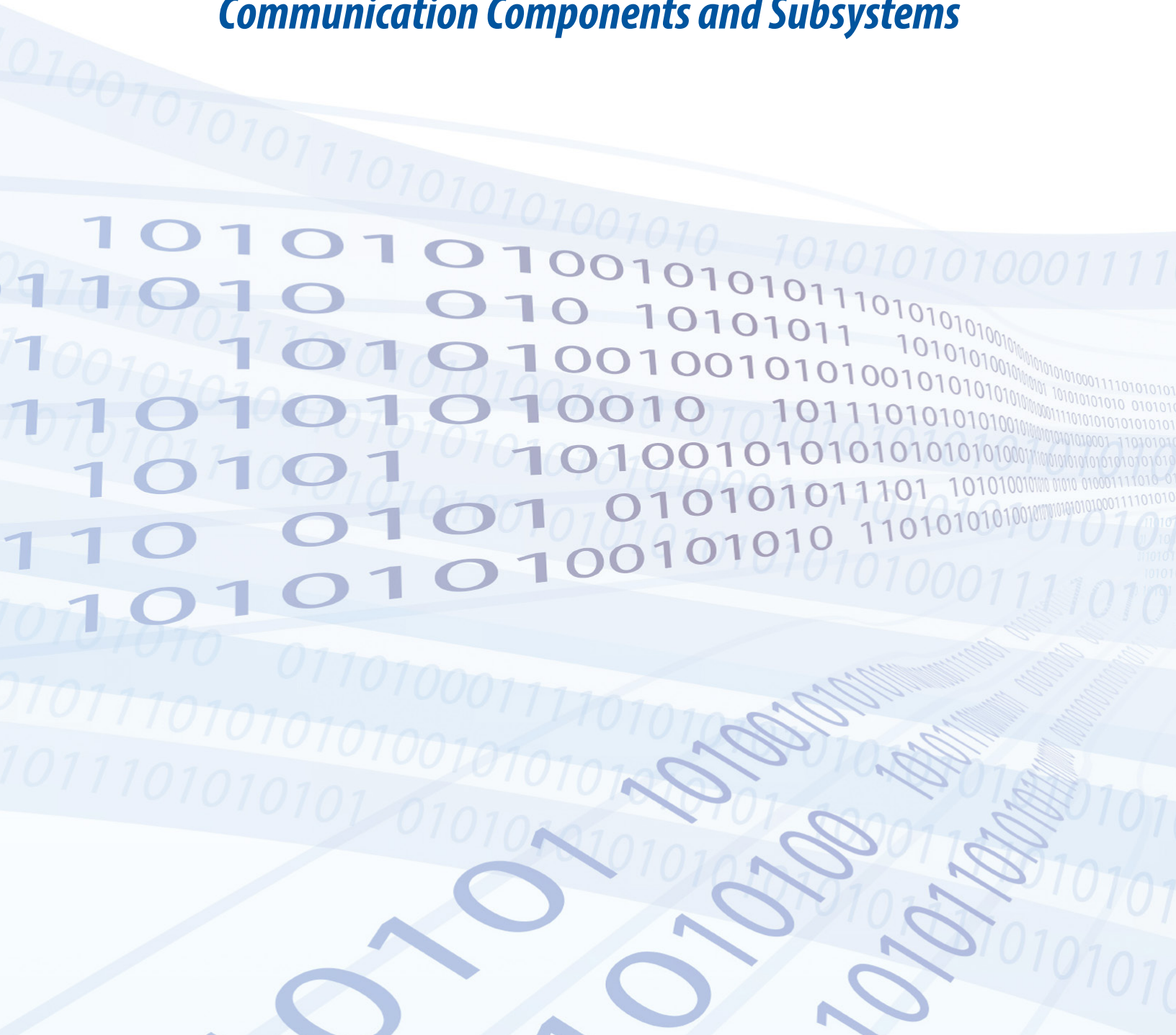


SFF



PON

# *World's Largest Supplier of Optical Communication Components and Subsystems*



*Finisar*<sup>®</sup>



1389 Moffett Park Drive  
Sunnyvale, CA 94089-1133  
Telephone: +1 408-548-1000  
Sales: +1 408-541-5690

Email: [sales@finisar.com](mailto:sales@finisar.com)  
Blog: [www.finisar.com/blogs/lightspeed](http://www.finisar.com/blogs/lightspeed)  
[www.finisar.com](http://www.finisar.com)





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.