

Product Guide

Transceivers, Transponders,
and Active Optical Cables



FINISAR®



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



SFP

SFP+/SFP28

(optical; longwave, shortwave, DWDM and tunable)

DATACOM applications using 10G and 25G Ethernet and 2x/4x/8x/10x/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 80km (Tunable)
- Wide operating temperature range
- Digital diagnostics
- Wireless CPRI compliant (LW and SW)
- Bi-directional SFP+ transceiver available



SFP+/SFP28

CFP/CFP2/CFP4/CFP8

(optical; longwave and shortwave)

DATACOM applications using 100G and 400G Ethernet

TELECOM applications using OTU4

Features

- Hot-pluggable, MSA-compliant CFP, CFP2, CFP4 and CFP8 form factors
- Supports 103.1 Gb/s to 425 Gb/s aggregate bit rates
- Maximum link length of 100m on OM3 MMF, 150m on OM4 MMF, 10km on SMF
- 3.3 V operating voltage



CFP/CFP2/CFP4/CFP8

QSFP+/QSFP28 (optical; longwave and shortwave)

DATACOM applications using 40G and 100G Ethernet 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
- Digital diagnostics
- Wireless CPRI compliant (LW and SW)



QSFP+/QSFP28

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 300m on OM3 MMF and 400m on OM4 MMF
- Multirate capability: supports 1.06 Gb/s to 12.5 Gb/s per channel



CXP

Active Optical Cables

SFPwire

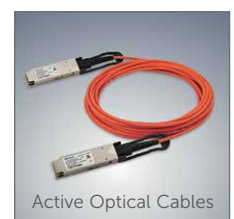
SFP+ Active Optical Cable for 10G and 25G Ethernet. Also available with Connectivity Diagnostics.®

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. Also available with Connectivity Diagnostics.®

C.wire

150 Gb/s Parallel Active Optical Cable for 100GbE and InfiniBand 12xQDR.



Active Optical Cables

Optical Engines (optical; shortwave)

DATACOM applications for inter-chassis connections

Features

- Twelve-channel full-duplex transceiver modules
- Maximum link length
100m at 10 Gb/s on OM3 MMF
70m at 25 Gb/s on OM4 MMF
- Multirate capability: supports 1 Gb/s up to 28.1 Gb/s per channel



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



Coherent (optical; longwave)

TELECOM 100 Gb/s and 200 Gb/s applications

Features

- Pluggable CFP2-ACO analog coherent optics module
 - Highest density coherent interface
 - Enables “pay-as-you-grow” deployment of coherent optics
 - Analog interface is compatible with any external DSP
 - Modulation format independent, supports data rates > 200 Gb/s



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/16x 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 Digital Diagnostics

Finisar’s transceivers feature a microprocessor and diagnostics interface that provide 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 patented digital diagnostic functions provide network managers with a highly accurate, cost-effective tool for implementing reliable performance monitoring.

Finisar’s Connectivity Diagnostics

Several of Finisar’s products feature the Connectivity Diagnostics® suite of tools, which helps data center technicians quickly and intuitively find specific modules in a sea of sockets using a visual indicator. LynkFind™ allows an operator to light up the pull-tab of the module at the far-end of a link by pressing the pull-tab of the near-end module. LynkGuardian™ lights up the modules at both ends of a link when either module experiences a fault. LynkCommander™ allows a network operations center to light up a module for easy identification on the data center floor. Together, these patented tools bring the intelligence normally available through data center monitoring software to a simple and intuitive visual indicator. The benefits to the data center operator enable faster installation and maintenance, easier troubleshooting, and simplified operations.

Technology Innovator.
Broad Product Portfolio.
Trusted Partner.



FINISAR[®]

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

Email: sales@finisar.com
Blog: www.finisar.com/blogs/lightspeed
www.finisar.com

© 2018 Finisar Corporation. All rights reserved. Finisar, SFPwire, Quadwire, Cwire, and Connectivity Diagnostics are registered trademarks and LynkFind, LynkGuardian, and LynkCommander are pending trademarks of Finisar Corporation. All other marks are property of their respective owners. Features and specifications are subject to change without notice. 02/18



Visit Our Website



Optical Engines



Coherent



XFP



X2



Endurance



SFF

FINISAR

www.finisar.com
+1 408-548-1000

CFP/CFP2/CFP4

FTLC1141SDNL (CFP4)		Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	112 Gb/s	10 km
FTLC8221RFNM (CFP2)	✓	Parallel MMF	850nm Band	10x VCSEL	PIN	103 Gb/s	300 m ⁽²⁾
FTLC8221SCNM (CFP2)		Parallel MMF	850nm Band	10x VCSEL	PIN	112 Gb/s	100 m ⁽²⁾
FTLC1122RDNL (CFP2)		Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	103.1 Gb/s	10 km
FTLC1122SDNL (CFP2)		Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	112 Gb/s	10 km
FTLC8281RCNM (CFP)		Parallel MMF	850nm Band	VCSEL	PIN	103.1 Gb/s	100 m ⁽¹⁾
FTLC8281SCNM (CFP)		Parallel MMF	850nm Band	10x VCSEL	PIN	112 Gb/s	100 m ⁽¹⁾
FTLC1183RDNx (CFP)	✓	Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	103.1 Gb/s	10 km
FTLC1183SDNx (CFP)	✓	Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	112 Gb/s	10 km

QSFP+/QSFP28

Part Number	RoHS Subject	Media Type	Wavelength (nm)	Transmitter	Receiver	Data Rate (Gb/s)	Reach
FTL4100E4C (QSFP+)		Parallel MMF	850nm Band	4x VCSEL	PIN	41.2 Gb/s	100 m
FTL4100D4C (QSFP+)		Parallel MMF	850nm Band	4x VCSEL	PIN	41.2 Gb/s	300 m
FTL4100E2N (QSFP+)		Parallel MMF	850nm Band	4x VCSEL	PIN	41.2 Gb/s	100 m
FTL4140B2C (QSFP+)		Parallel MMF	850nm Band	4x VCSEL	PIN	56 Gb/s	60 m
FTL4C2QE2C (QSFP+)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	41.2 Gb/s	160 m
FTL4C3QE2C (QSFP+)		Duplex SMF/MMF	1310nm Band	4x CWDM DFB Laser	PIN	41.2 Gb/s	1 km
FTL4S1QE1C (QSFP+)		Duplex MMF	850nm Band	4x SWDM VCSEL	PIN	41.2 Gb/s	240 m ⁽¹⁾
FTL4C1QL2C (QSFP+) ⁽⁵⁾		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	41.2 Gb/s	2 km
FTL4C1QE2C (QSFP+) ⁽⁵⁾		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	41.2 Gb/s	10 km
FTL4C1QM2C (QSFP+)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	44.6 Gb/s	10 km
FTL4E1QE1C (QSFP+)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	APD	41.2 Gb/s	40 km
FTL4E1QM1C (QSFP+)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	APD	44.6 Gb/s	40 km
FTLC9152RGL6 (QSFP28) ⁽³⁾		Duplex MMF	850nm Band	4x SWDM VCSEL	PIN	103.1 Gb/s	100 m
FTLC9551REPM (QSFP28) ⁽³⁾		Parallel MMF	850nm Band	4x VCSEL	PIN	103.1 Gb/s	100 m ⁽³⁾
FTLC9551SEPM (QSFP28)		Parallel MMF	850nm Band	4x VCSEL	PIN	112.2 Gb/s	100 m ⁽³⁾
FTLC9554REPM (QSFP28)		Parallel MMF	850nm Band	4x VCSEL	PIN	103.1 Gb/s	30/50/70 m ⁽⁴⁾
FTLC1152RGL6 (QSFP28)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	103.1 Gb/s	2 km
FTLC1152RGL6 (QSFP28)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	103.1 Gb/s	500 m
FTLC1152WGL6 (QSFP28)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	103.1 Gb/s	10 km
FTLC1152RGLA (QSFP28)		Duplex SMF	1310nm Band	4x CWDM DFB Laser	PIN	103.1 Gb/s	10 km
FTLC1151RDPL (QSFP28)		Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	103.1 Gb/s	10 km
FTLC1151SDPL (QSFP28)		Duplex SMF	1310nm Band	4x LWDM DFB Laser	PIN	112.2 Gb/s	10 km

CXP

FTLD10CE1C		Parallel MMF	850nm Band	12x VCSEL	PIN	126 Gb/s	100 m ⁽¹⁾
FTLD10CE3C		Parallel MMF	850nm Band	12x VCSEL	PIN	135.6 Gb/s	100 m ⁽¹⁾
FTLD10CD3C		Parallel MMF	850nm Band	12x VCSEL	PIN	135.6 Gb/s	300 m ⁽¹⁾
FTLD12CL3C		Parallel MMF	850nm Band	12x VCSEL	PIN	150 Gb/s	100 m ⁽¹⁾

Active Optical Cables

SFPwire (10G SFP+ based AOC)		Duplex MMF	850nm Band	VCSEL	PIN	10.3 Gb/s	30 m
SFPwire (25G SFP+ based AOC)		Duplex MMF	850nm Band	VCSEL	PIN	25.78 Gb/s	30 m
Quadwire (40G QSFP-based AOC)		Parallel MMF	850nm Band	4x VCSEL	PIN	42 Gb/s	300 m
Quadwire Fanout (40G QSFP to 4xSFP+ AOC)		Duplex/Parallel MMF	850nm Band	4x VCSEL	PIN	42 Gb/s	30 m
Quadwire (56G QSFP-based AOC)		Parallel MMF	850nm Band	4x VCSEL	PIN	56 Gb/s	100 m
Quadwire (100G QSFP28-based AOC)		Parallel MMF	850nm Band	4x VCSEL	PIN	112 Gb/s	100 m
Quadwire Fanout (100G QSFP28 to 4xSFP28 AOC)		Parallel MMF	850nm Band	4x VCSEL	PIN	112 Gb/s	100 m
C.wire (CXP-based AOC)		Parallel MMF	850nm Band	12x VCSEL	PIN	150 Gb/s	100 m

Optical Engines

FBOTD10SL1C00 (with heatsink)		Parallel MMF	850nm Band	12x VCSEL	PIN	12 x 11.3 Gb/s	100 m
FBOTD10FL1C00 (flat-top)		Parallel MMF	850nm Band	12x VCSEL	PIN	12 x 11.3 Gb/s	100 m
FBOTD25FL3C00 (Finisar pinout)		Parallel MMF	850nm Band	12x VCSEL	PIN	12 x 25 Gb/s	70 m
FBOTD25MT3C00 (MBOM pinout)		Parallel MMF	850nm Band	12x VCSEL	PIN	12 x 25 Gb/s	70 m

Coherent

FTLC3321x3NL (CFP2-ACO)		Duplex SMF	C-Band DWDM Tunable	Tunable DP-QPSK/16QAM	Coherent	256 Gb/s	2,000 km
-------------------------	--	------------	---------------------	-----------------------	----------	----------	----------

XFP

FTLX8512D3BCL		Duplex MMF	850nm Band	VCSEL	PIN	10.5 Gb/s	300 m ⁽¹⁾
FTLX8512D3BTL		Duplex MMF	850nm Band	VCSEL	PIN	10.5 Gb/s	300 m ⁽¹⁾
FTLX1413D3BCL		Duplex SMF	1310nm Band	DFB Laser	PIN	10.5 Gb/s	10 km
FTLX1413D3BTL		Duplex SMF	1310nm Band	DFB Laser	PIN	11.3 Gb/s	10 km
FTLX1413M3BCL		Duplex SMF	1310nm Band	DFB Laser	PIN	11.3 Gb/s	10 km
FTLX1413M3BTL		Duplex SMF	1310nm Band	DFB Laser	PIN	11.3 Gb/s	10 km
FTLX1612M3BCL		Duplex SMF	1550nm	EML	PIN	11.3 Gb/s	40 km
FTLX1612M3BTL		Duplex SMF	1550nm	EML	PIN	11.3 Gb/s	40 km
FTLX1812M3BCL		Duplex SMF	1550nm	EML	APD	11.3 Gb/s	80 km
FTLX1812M3BTL		Duplex SMF	1550nm	EML	APD	11.3 Gb/s	80 km
FTLX3612M3xxx		Duplex SMF	C-Band DWDM Fixed	DWDM EML	PIN	11.3 Gb/s	40 km
FTLX3912M3xxx		Duplex SMF	C-Band DWDM Fixed	DWDM EML	APD	11.3 Gb/s	40 km
FTLX3813F3xxx		Duplex SMF	C-Band DWDM Fixed	DWDM EML	APD	8.8 Gb/s	80 km
FTLX3813M3xxx		Duplex SMF	C-Band DWDM Fixed	DWDM EML	APD	11.3 Gb/s	80 km
FTLX3815M3xxx		Duplex SMF	C-Band DWDM Fixed	Tunable + InP MZM	APD	11.3 Gb/s	80 km
FTLX4213M3BCL		Duplex SMF	1550nm	CML™	APD	10.5 Gb/s	120 km
FTLX4213xxxxxxx		Duplex SMF	C/L-Band DWDM Fixed	CML™	APD	11.3 Gb/s	200 km
FTLX6624MCC		Duplex SMF	C-Band DWDM Tunable	Tunable + InP MZM	PIN	11.3 Gb/s	40 km
FTLX6824MCC		Duplex SMF	C-Band DWDM Tunable	Tunable + InP MZM	APD	11.3 Gb/s	80 km
FTLX6824MNC		Duplex SMF	C-Band DWDM Tunable	Tunable + InP MZM	APD	11.3 Gb/s	80 km
FTLX6825MCC		Duplex SMF	C-Band DWDM Tunable	Tunable + InP MZM, High Pwr	APD	11.3 Gb/s	80 km

Endurance X2

FTLX8541E2		Duplex SMF	850nm Band	VCSEL	PIN	10.3 Gb/s	300 m ⁽¹⁾
FTLX1442E2		Duplex MMF	1310nm Band	DFB Laser	PIN	10.3 Gb/s	10 km
FTE85xxxx	✓	Duplex MMF	850nm Band	VCSEL	PIN	14.025 Gb/s	550 m
FTE14xxxx	✓	Duplex SMF	1310nm Band	DFB Laser	PIN	10 Gb/s	10 km

SFF

FTLF8519F2xCL		Duplex MMF	850nm Band	VCSEL	PIN	2.125 Gb/s	550 m
FTLF8519F2xNL		Duplex MMF	850nm Band	VCSEL	PIN	2.125 Gb/s	550 m
FTLF8519F2xTL		Duplex MMF	850nm Band	VCSEL	PIN	2.125 Gb/s	550 m
FTLF8524E2xNV	✓	Duplex MMF	850nm Band	VCSEL	PIN	4.25 Gb/s	550 m
FTLF1319F1xTL		Duplex SMF	1310nm Band	Fabry-Perot Laser	PIN	2.125 Gb/s	10 km
FTLF1321S1xTL		Duplex SMF	1310nm Band	Fabry-Perot Laser	PIN	2.67 Gb/s	2 km
FTLF1421S1xCL		Duplex SMF	1310nm Band	DFB Laser	PIN	2.67 Gb/s	15 km
FTLF1721S1xCL		Duplex SMF	1310nm Band	DFB Laser	APD	2.67 Gb/s	40 km
FTLF1621S1xCL		Duplex SMF	1550nm	DFB Laser	APD	2.67 Gb/s	80 km
FTLF1323F2xTR		Duplex SMF	1310nm Band	Fabry-Perot Laser	PIN	155 Mb/s	15 km
FTLF1322F2xTR		Duplex SMF	1310nm Band	Fabry-Perot Laser	PIN	622 Mb/s	15 km

⁽¹⁾ Using OM3 multimode fiber. ⁽²⁾ Extended case temperature ranges and reaches are available upon request. ⁽³⁾ 100m using OM4 multimode fiber and FEC. ⁽⁴⁾ 30m/50m/70m OM3 MMF

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Fiber Optic Transmitters, Receivers, Transceivers](#) category:

Click to view products by [Finisar](#) manufacturer:

Other Similar products are found below :

[FWLF-1521-7D-47](#) [FWLF-1521-7D-61](#) [HFBR-1532ETZ](#) [HFBR-2541ETZ](#) [HFBR-2602Z](#) [AFBR-0548Z](#) [AFBR-1639Z](#) [AFBR-1539Z](#) [AFBR-2634Z](#) [AFCT-5962ATLZ](#) [FTLX3813M354](#) [HFBR-2531ETZ](#) [STV.2413-574-00262](#) [TRPRG1VA1C000E2G](#) [TORX1952\(6M,F\)](#)
[TOTX1350\(F\)](#) [TOTX1350\(V,F\)](#) [FTLX3813M349](#) [HFBR-2542ETZ](#) [SCN-1428SC](#) [AFBR-POC406L](#) [HFBR-2506AFZ](#) [FTLX1871M3BNL](#)
[FWLF-1521-7D-49](#) [HFBR-1542ETZ](#) [FWLF-1519-7D-49](#) [HFBR-2532ETZ](#) [AFBR-1541CZ](#) [TORX1355\(V,F\)](#) [AFBR-1521CZ](#) [LTK-ST11MB](#)
[TORX1355\(F\)](#) [HFD8003-002/XBA](#) [HFD3020-500-ABA](#) [S6846](#) [SCN-2638SC](#) [FTL410QE4N](#) [SCN-1570SC](#) [SCN-1601SC](#) [SCN-1338SC](#)
[HFBR-1505CFZ](#) [AFBR-1528CZ](#) [AFBR-1531CZ](#) [HFD3081-108-XBA](#) [HFD8003-500-XBA](#) [SCN-1255SC](#) [SCN-1383SC](#) [1019682](#) [1019683](#)
[1019705](#)