

# Product Line Card

## Optical Devices - SFPs

### Duplex

Fast Ethernet		Fiber Type	Compatability	Hardened	Distance	CWDM Wavelength
100Base-FX multimode (LC)	TN-JX-GE-100FX	MM	Juniper		2KM	
100Base-FX/OC-3 multimode (LC) with DMI	TN-SFP-OC3M Series	MM	MSA		500m - 2KM	
100Base-FX (LC)	TN-GLC-FE-100xX Series	MM / SM	Cisco	X	10KM - 120KM	
100Base-FX/OC-3 single mode (LC) with DMI	TN-SFP-OC3Sx Series	SM	MSA		20KM - 80KM	
100Base-FX/OC-3 single mode (LC) with DMI	TN-SFP-OC3S8-Cxx Series	SM	MSA		80KM	X
<b>Gigabit Ethernet</b>						
1000Base-SX multimode (LC)	TN-SFP-SX Series	MM	MSA		220/550m	
1000Base-SX multimode (LC)	TN-GLC-SX-MM Series	MM	Cisco	X	220m - 2KM	
1000Base-X (LC)	TN-EX-SFP-1GE Series	MM / SM	Juniper		220m - 10KM	
1000Base-X (LC)	TN-J48xxC Series	MM / SM	HP		220m - 80KM	
1000Base-X (LC) with DMI	TN-SFP-GE-x Series	MM / SM	Cisco	X	220m - 80KM	
1000Base-X (LC) with DMI with Conformal Coating	TN-SFP-GE-x-C Series	MM / SM	Cisco	X	220m - 80KM	
1000Base-SX multimode (LC) with DMI	TN-SFP-ESxx Series	MM	MSA		2KM	
1000Base-LX single mode (LC)	TN-GLC-LH-SM Series	SM	Cisco	X	10KM - 40KM	
1000Base-LX single mode (LC)	TN-SFP-LX Series	SM	MSA	X	10KM - 200KM	
1000Base-LX/ZX Fiber Channel single mode (LC) with DMI	TN-CWDM-SFP-1xx0-40 Series	SM	Cisco		40KM	X
1000Base-LX/Fiber Channel 1x single mode (LC) with DMI	TN-SFP-LX8-Cxxx Series	SM	MSA	X	80KM	X
1000Base-LX/ZX Fiber Channel single mode (LC) with DMI	TN-CWDM-SFP-1xx0 Series	SM	Cisco		80KM	X
1000Base-LX single mode (LC) with DMI	TN-GLC-ZX-SM Series	SM	Cisco	X	80KM - 150KM	
1000Base-LX/Fiber Channel 1x single mode (LC) with DMI	TN-SFP-LX16-Cxx Series	SM	MSA		160KM	X
<b>Gigabit Ethernet / 10 Gigabit Ethernet</b>						
10GBase-X/1000Base-X, SFP+ with DMI single mode (LC)	TN-10GSFP-LRxM Series	SM	MSA		10KM-80KM	
10GBase-ZR/1000Base-ZX, SFP+ with DMI single mode (LC)	TN-10GSFP-LR8M-Cxx Series	SM	MSA		80KM	X

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Fiber Type Note: MM = Multimode Fiber, SM = Single Mode Fiber



TN-JX-GE-100FX



TN-GLC-FE-100FX



TN-CWDM-10G-1xx0-40

# Optical Devices - SFPs

		Fiber Type	Compatability	Hardened	Distance	CWDM Wavelength
<b>10 Gigabit Ethernet</b>						
10GBase-SR/1000Base-SX, SFP+ With DMI Multimode (LC)	TN-10GSFP-SRM	MM	MSA		33m - 300m	
10GBase-X, SFP+ with DMI (LC)	TN-10GSFP-xRx Series	MM / SM	MSA	X	33m - 10KM	
10GBase-X, SFP+ with DMI (LC) for HP X130	TN-JD09xB Series	MM / SM	HP		220m - 10KM	
10GBase-X, SFP+ with DMI (LC) for HP X132	TN-J915xA Series	MM / SM	HP		220m - 40KM	
10GBase-X, SFP+ with DMI (LC)	TN-SFP-10G-xR Series	MM / SM	Cisco		220m - 80KM	
10GBase-LR/LW/10G Fiber Channel, SFP+ with DMI single mode (LC)	TN-CWDM-10G-1xx0-40 Series	SM	Cisco		40KM	X
XFP, 10GBase-ER/10G Fiber Channel single mode (LC) with DMI	TN-XFP-LR4-Cxx Series	SM	MSA		40KM	X
10GBase-ER/ZR or 1000Base-LX/ZX, SFP+ With DMI Single Mode (LC)	TN-10GSFP-LRxM-Dxx Series	SM	MSA		40KM - 80KM	DWDM
10GBase-LR/LW/10G Fiber Channel, SFP+ with DMI single mode (LC)	TN-CWDM-10G-1xx0-80 Series	SM	Cisco		80KM	X
<b>25 Gigabit Ethernet</b>						
25GBase-X, SFP28 with DMI (LC)	TN-SFP-xx25G-xR-S Series	MM / SM	Cisco	X	100m - 40KM	
<b>40 Gigabit Ethernet</b>						
QSFP+ 40GBase-X with DMI	TN-QSFP-40G Series	MM / SM	Cisco		100m - 30KM	
<b>100 Gigabit Ethernet</b>						
QSFP+ 100GBase-X with DMI	TN-QSFP-100G Series	MM / SM	Cisco		70m - 10KM	
<b>Simplex</b>						
<b>Fast Ethernet</b>						
100Base-FX multimode (SC) with DMI	TN-SFP-OC3MB Series	MM	MSA		2KM	
100Base-BX single fiber single mode (LC)	TN-GLC-FE-100BX Series	SM	Cisco		10KM - 40KM	
100Base-FX/OC-3 single fiber single mode (LC) with DMI	TN-SFP-OC3SB Series	SM	MSA		20KM - 200KM	
<b>Gigabit Ethernet</b>						
1000Base-SX multimode (LC) with DMI	TN-SFP-SXB Series	SM	MSA		500m	
1000Base-LX/100Base-FX single fiber (LC / SC) with OTDR	Ax6-155G1-xU-NE Series	SM	MSA		40KM	
1000Base-BX single fiber single mode (LC) with DMI	TN-GLC-BX Series	SM	Cisco		10KM - 120KM	
1000Base-LX single fiber single mode (LC) with DMI	TN-SFP-LXB Series	SM	MSA	X	10KM - 80KM	
<b>10 Gigabit Ethernet</b>						
10GBase-X, SFP+ With DMI, Single Fiber Single Mode (LC)	TN-SFP-10G-x-xx Series	SM	Cisco		220m - 80KM	

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Fiber Type Note: MM = Multimode Fiber, SM = Single Mode Fiber



TN-10GSFP-LRxM Series



TN-QSFP-100G Series



TN-QSFP-40G Series

# Product Line Card

## Optical Devices - SFPs & CWDM Mux/Demux

### Copper

Fast Ethernet		Compatability	Hardened	Distance
100Base-TX (RJ-45)	TN-SFP-TX	MSA		100m
Gigabit Ethernet				
1000Base-T (RJ-45)	TN-GLC-T Series	Cisco		100m
1000Base-T (RJ-45)	TN-SFP-GE-T	Cisco	X	100m
10/100/1000Base-T (RJ-45)	TN-SFP-T-MG	MSA		100m
10 Gigabit Ethernet				
10GBase-T (RJ-45)	TN-SFP-10G-T	Cisco		30m

### CWDM Mux/Demux

Add/Drop Mux		Channels
1 Channel with E/W lines	CWDM-A2A8xxLCR-B Series	1
Mux/Demux		
4 Channel + OSC Duplex LC	CWDM-M551LCR-B	4
8 Channel + OSC Duplex LC	CWDM-M947LCR-B	8
16 Channel + OSC Duplex LC	CWDM-M1631LCR-B	16



TN-GLC-T Series



TN-SFP-TX



CWDM-M551LCR-B & CWDM-M947LCR-B