



## Card Types

This appendix provides a list of interface and card types supported in Cisco Transport Planner, as well as the corresponding Cisco product ID (Tables B-1 to B-46).



**Note**

The card names in this appendix designated with “\_C” or “\_L” appear in Cisco Transport Planner with a “\_y” designation before network analysis. The “\_y” designation indicates that Cisco Transport Planner will use either a C- or L-band card, depending on the band selected during project creation.

**Table B-1 OC-192/STM-64 (9.953 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Line Card	10G_XR without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10G-XR=
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with EFEC <sup>1</sup>	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with FEC <sup>2</sup>	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)
Transponder	TXP_MR_10E with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)

**Table B-1 OC-192/STM-64 (9.953 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)
Transponder	TXP_MR_10G with FEC	Client 1+1 Y-Cable	15454-10T-L1-xx.y=
Transponder	TXP_MR_10G without FEC	Client 1+1 Y-Cable	15454-10T-L1-xx.y=
Line Card	OC-192 LR STM-64 LR	Client 1+1	15454-192L-1-xx.y= (ANSI) 15454E-64L-xx.y= (ETSI)
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	TXP_MR_10EX_C with EFEC and FEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=

**Table B-1 OC-192/STM-64 (9.953 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>4</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Enhanced forward error correction.

2. Forward error correction.
3. Supported only in standalone mode.
4. Supported only in standalone mode.

**Table B-2 OC-48/STM-16 (2.488 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G with FEC	Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G without FEC	Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	
Transponder	MXP_2.5_10E_C and MXP_2.5_10E_L with EFEC	Client 1+1	15454-10ME-L1-C= (C band)
		Y-Cable	15454-10ME-L1-L= (L band)
Transponder	MXP_2.5_10E_C and MXP_2.5_10E_L with FEC	Client 1+1	15454-10ME-L1-C= (C band)
		Y-Cable	15454-10ME-L1-L= (L band)
Transponder	MXP_2.5_10EX_C with EFEC	Client 1+1	15454-10EX-L1-C=
		Y-Cable	
Transponder	MXP_2.5_10EX_C with FEC	Client 1+1	15454-10EX-L1-C=
		Y-Cable	
Transponder	MXP_2.5_10E with EFEC	Client 1+1	15454-10ME-xx.y=
		Y-Cable	
Transponder	MXP_2.5_10ET with FEC	Client 1+1	15454-10ME-xx.y=
		Y-Cable	
Transponder	MXP_2.5_10G with FEC	Client 1+1	15454-10M-L1-xx.y=
		Y-Cable	
Transponder	MXP_2.5_10G without FEC	Client 1+1	15454-10M-L1-xx.y=
		Y-Cable	
Transponder	MXP_2.5G_10E with FEC	Client 1+1	15454-10ME-L1-xx.y=
		Y-Cable	
Transponder	MXP_2.5G_10E without FEC	Client 1+1	15454-10ME-L1-xx.y=
		Y-Cable	
Transponder	MXP_2.5G_10E_y with FEC	Client 1+1	15454-10ME-L1-xx.y=
		Y-Cable	
Transponder	MXP_2.5G_10E_y without FEC	Client 1+1	15454-10ME-L1-xx.y=
		Y-Cable	
Line Card	OC48ELR / SMT-16ELR	Client 1+1	15454-O48E-1-xx.y (ANSI)
			15454E-EL16HSxxyy= (ETSI)

**Table B-2 OC-48/STM-16 (2.488 Gbps) (continued)**

Line Card	MRC-I-12	Client 1+1	15454E-MRC-I-12=
PL	DWDM ITU-T SFP	Client 1+1	ONS-SC-4G=
Transponder	ADM-10G with EFEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G with FEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G without FEC	Client 1+1	15454-ADM-10G=
Transponder	MXP_2.5G_10EX_C with EFEC and FEC	Client 1+1 Y-Cable PSM OCH	15454-10MEX-L1-C=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Y-Cable Client 1+1 PCM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Y-Cable Client 1+1 PCM OCH	AR-MXP - MXP-2.5G-10G (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Y-Cable Client 1+1 PCM OCH Fiber-Switched	AR-XP - MXP-2.5G-10G (HR) AR-XP - MXPP-2.5G-10G (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Y-Cable Client 1+1 PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-3 OTU1**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-2.5G-10G (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-2.5G-10G (HR) AR-XP - MXPP-2.5G-10G (HR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-4 OTU2**

Interface Type	Card Type	Protection Type	Product ID
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=

**Table B-4 OTU2 (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	WSE with FEC	Client 1+1 PSM OCH	15454-M-WSE-K9
Transponder	WSE with EFEC	Client 1+1 PSM OCH	15454-M-WSE-K9
Transponder	WSE with No FEC	Client 1+1 PSM OCH	15454-M-WSE-K9
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)

Table B-4 OTU2 (continued)

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.
2. Supported only in standalone mode.



Table B-5 OTU2e

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	WSE with FEC	Client 1+1 PSM OCH	15454-M-WSE-K9 (RGN-10G)
Transponder	WSE with EFEC	Client 1+1 PSM OCH	15454-M-WSE-K9 (RGN-10G)
Transponder	WSE with No FEC	Client 1+1 PSM OCH	15454-M-WSE-K9 (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

**Table B-5 OTU2e (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.

2. Supported only in standalone mode.

**Table B-6 OTU3**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=
Transponder	40G CP-DQPSK TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=
Transponder	40G CP-DQPSK ME TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=
Transponder	40G CP-DQPSK ME TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=
Muxponder	100G-LC-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-LC-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)

**Table B-6 OTU3 (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-LC-C + CFP-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-ME-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-ME-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-LC-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-LC-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-LC-C + CFP-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-ME-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-ME-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)

1. Supported only in standalone mode.

2. Supported only in standalone mode.

**Table B-7 OTU4**

Interface Type	Card Type	Protection Type	Product ID
Transponder	100G-LC-C with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-LC-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-LC-C with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-ME-C with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= (TXP-100G)
Transponder	100G-ME-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= (TXP-100G)
Transponder	100G-LC-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-LC-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)

**Table B-7 OTU4 (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	100G-LC-C + CFP-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-ME-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-ME-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-LC-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Transponder	100G-CK-LC-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Transponder	100G-CK-LC-C + CFP-LC with HG-FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Transponder	100G-CK-ME-C + CFP-LC with FEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Transponder	100G-CK-ME-C + CFP-LC with EFEC	Client 1+1 PSM OCH <sup>3</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Line Card	1-100GE-DWDM with EFEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=
Line Card	1-100GE-DWDM with FEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=
Line Card	1-100GE-DWDM with HG-FEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=

1. Supported only in standalone mode.

2. Supported only in standalone mode.

**Table B-8 OC-12/STM-4 (622 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G with FEC	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	
Transponder	TXP_MR_2.5G TXPP_MR_2.5G without FEC	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	
Transponder	ADM-10G with EFEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G with FEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G without FEC	Client 1+1	15454-ADM-10G=

**Table B-8 OC-12/STM-4 (622 Mbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-9 OC-3/STM-1 (155 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G with FEC	Y-Cable Fiber-Switched	15454-MRP-L1-xx.y= (Prot)
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G without FEC	Y-Cable Fiber-Switched	15454-MRP-L1-xx.y= (Prot)
Transponder	ADM-10G with EFEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G with FEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G without FEC	Client 1+1	15454-ADM-10G=

**Table B-9 OC-3/STM-1 (155 Mbps) (continued)**

Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-10 OC-768/STM-256 (40 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Line Card	CRS-1 40G DPSK ITU-T LC	Client 1+1 PSM-OCH	1OC768-DPSK/C=
Line Card	CRS-1 40G ITU-T LC	Client 1+1 PSM-OCH	1OC768-ITU/C
Transponder	40G DWDM ITU-T TXP	Client 1+1 PSM-OCH	40G-DWDM-ITU-T-TXP-C
Transponder	40G CP-DQPSK TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=

**Table B-10 OC-768/STM-256 (40 Gbps) (continued)**

Transponder	40G CP-DQPSK TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=
Transponder	40G CP-DQPSK ME TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=
Transponder	40G CP-DQPSK ME TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=

**Table B-11 100 Gigabit Ethernet Local Area Network ATM Physical Layer (100 GE LAN PHY)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	100G-LC-C with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-LC-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-LC-C with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= (TXP-100G)
Transponder	100G-ME-C with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= (TXP-100G)
Transponder	100G-ME-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= (TXP-100G)
Transponder	100G-LC-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-LC-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-LC-C + CFP-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-ME-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)

**Table B-11 100 Gigabit Ethernet Local Area Network ATM Physical Layer (100 GE LAN PHY)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	100G-ME-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-LC-C with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= (TXP-100G)
Transponder	100G-CK-LC-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= (TXP-100G)
Transponder	100G-CK-LC-C with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= (TXP-100G)
Transponder	100G-CK-ME-C with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= (TXP-100G)
Transponder	100G-ME-C with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= (TXP-100G)
Transponder	100G-CK-LC-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-LC-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-LC-C + CFP-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-ME-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Transponder	100G-CK-ME-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-TXP)
Line Card	1-100GE-DWDM with EFEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=
Line Card	1-100GE-DWDM with FEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=
Line Card	1-100GE-DWDM with HG-FEC	Client 1+1 PSM OCH	1-100GE-DWDM/C=

1. Supported only in standalone mode.

2. Supported only in standalone mode.



**Table B-12 40 Gigabit Ethernet Local Area Network ATM Physical Layer (40 GE LAN PHY)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=
Transponder	40G CP-DQPSK TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-TXP-C=
Transponder	40G CP-DQPSK ME TXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=
Transponder	40G CP-DQPSK ME TXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-TXP-C=
Muxponder	100G-LC-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-LC-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-LC-C + CFP-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-ME-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-ME-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-LC-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-LC-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)

**Table B-12 40 Gigabit Ethernet Local Area Network ATM Physical Layer (40 GE LAN PHY)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-LC-C + CFP-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-ME-C + CFP-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)
Muxponder	100G-CK-ME-C + CFP-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-CFP-LC= (TRK-COMP-MXP)

1. Supported only in standalone mode.
2. Supported only in standalone mode.

**Table B-13 10 Gigabit Ethernet Wide Area Network ATM Physical Layer (10 GE WAN PHY) (9.953 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)

**Table B-13 10 Gigabit Ethernet Wide Area Network ATM Physical Layer (10 GE WAN PHY) (9.953 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10G with FEC	Client 1+1 Y-Cable	15454-10T-L1-xx.y=
Transponder	TXP_MR_10G without FEC	Client 1+1 Y-Cable	15454-10T-L1-xx.y=
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	TXP_MR_10EX_C with EFEC and FEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=

**Table B-13 10 Gigabit Ethernet Wide Area Network ATM Physical Layer (10 GE WAN PHY)  
(9.953 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC=(RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC=(RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC=(RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC=(MXP-10x10G)

**Table B-13 10 Gigabit Ethernet Wide Area Network ATM Physical Layer (10 GE WAN PHY) (9.953 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.
2. Supported only in standalone mode.

**Table B-14 10 Gigabit Ethernet Local Area Network ATM Physical Layer (10 GE LAN PHY)(10.3 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with EFEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with FEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L without FEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with EFEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with FEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E without FEC	Client 1+1	15454-10E-L1-C= (C band)
		Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_y with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-L= (L band)

**Table B-14 10 Gigabit Ethernet Local Area Network ATM Physical Layer (10 GE LAN PHY)(10.3 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E_y with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_y without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-L= (L band)
Transponder	10GE_XP with EFEC	Client 1+1 Y-Cable	15454-10GE-XP = (Unprot) 15454-10GE-XP = (Prot)
Transponder	10GE_XP with FEC	Client 1+1 Y-Cable	15454-10GE-XP = (Unprot) 15454-10GE-XP = (Prot)
Transponder	10GE_XP without FEC	Client 1+1 Y-Cable	15454-10GE-XP = (Unprot) 15454-10GE-XP = (Prot)
Transponder	10GE_XPE with EFEC	Client 1+1 Y-Cable	15454-10GE-XPE=
Transponder	10GE_XPE with FEC	Client 1+1 Y-Cable	15454-10GE-XPE=
Transponder	10GE_XPE without FEC	Client 1+1 Y-Cable	15454-10GE-XPE=
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	10GE_EXP with EFEC	Y-Cable Client 1+1	15454-10GE-XPE=
Transponder	10GE_EXP with FEC	Y-Cable Client 1+1	15454-10GE-XPE=

**Table B-14 10 Gigabit Ethernet Local Area Network ATM Physical Layer (10 GE LAN PHY)(10.3 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	10GE_EXP without FEC	Y-Cable Client 1+1	15454-10GE-XPE=
Transponder	TXP_MR_10EX_C with EFEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=
Transponder	TXP_MR_10EX_C with FEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=
Line Card	4-10GE-ITU with EFEC	Client 1+1 PSM OCH	4-10GE-ITU/C=
Line Card	4-10GE-ITU with FEC	Client 1+1 PSM OCH	4-10GE-ITU/C=
Line Card	4-10GE-ITU without FEC	Client 1+1 PSM OCH	4-10GE-ITU/C=
Line Card	10GE-ITU with EFEC	Client 1+1 PSM OCH	10GE-ITU/C=
Line Card	10GE-ITU with FEC	Client 1+1 PSM OCH	10GE-ITU/C=
Line Card	10GE-ITU without FEC	Client 1+1 PSM OCH	10GE-ITU/C=
Line Card	DWDM XENPAK without FEC	Client 1+1 PSM OCH	DWDM-XENPAK-xx.yy=
PL	DWDM XFP on Cat with EFEC	Client 1+1 PSM OCH	DWDM-XFP-xx.yy=
PL	DWDM XFP on Cat with FEC	Client 1+1 PSM OCH	DWDM-XFP-xx.yy=
PL	DWDM XFP on Cat without FEC	Client 1+1 PSM OCH	DWDM-XFP-xx.yy=
PL	DWDM X2 without FEC	Client 1+1 PSM OCH	DWDM-X2-xx.yy=
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=

**Table B-14 10 Gigabit Ethernet Local Area Network ATM Physical Layer (10 GE LAN PHY)(10.3 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - TXP-MR (HR)
Transponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-XP - TXP-MR (HR)
Transponder	10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	WSE with FEC	Client 1+1 PSM OCH	15454-M-WSE-K9
Transponder	WSE with EFEC	Client 1+1 PSM OCH	15454-M-WSE-K9



**Table B-14 10 Gigabit Ethernet Local Area Network ATM Physical Layer (10 GE LAN PHY)(10.3 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	WSE with No FEC	Client 1+1 PSM OCH	15454-M-WSE-K9
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.

2. Supported only in standalone mode.

**Table B-15 10 Gigabit Ethernet LAN-to-WAN**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	OTU-2_XP with EFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with out EFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	15454-OTU2-XP=

**Table B-16 Gigabit Ethernet (1.25 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G with FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G without FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Pluggable	GE DWDM GBIC	Client 1+1	15454-GBIC-xx.y=
Transponder	GE_XP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XP = (Unprot) 15454-GE-XP = (Prot)
Transponder	GE_XP with FEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XP = (Unprot) 15454-GE-XP = (Prot)
Transponder	GE_XP without FEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XP = (Unprot) 15454-GE-XP = (Prot)
Transponder	GE_XPE with EFEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XPE=
Transponder	GE_XPE with FEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XPE=
Transponder	GE_XPE without FEC	Client 1+1 Y-Cable PSM OCH	15454-GE-XPE=
Transponder	ADM-10G with EFEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G with FEC	Client 1+1	15454-ADM-10G=
Transponder	ADM-10G without FEC	Client 1+1	15454-ADM-10G=

**Table B-16 Gigabit Ethernet (1.25 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	10GE_EXP with EFEC	Y-Cable Client 1+1	15454-10GE-XPE=
Transponder	10GE_EXP with FEC	Y-Cable Client 1+1	15454-10GE-XPE=
Transponder	10GE_EXP without FEC	Y-Cable Client 1+1	15454-10GE-XPE=
Transponder	GE_EXP with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-GE-XPE=
Transponder	GE_EXP with FEC	Y-Cable Client 1+1 PSM-OCH	15454-GE-XPE=
Transponder	GE_EXP without FEC	Y-Cable Client 1+1 PSM-OCH	15454-GE-XPE=
Transponder	MXP_MR_10DMEX_C with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
PL	DWDM GBIC without FEC	Client 1+1	15454-GBIC-xx.y=
PL	DWDM ITU-T SFP without FEC	Client 1+1 PSM-OCH	ONS-SC-4G=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-DME (HR)

**Table B-16 Gigabit Ethernet (1.25 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-17 Fast Ethernet (100 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G 2R	Y-Cable Fiber-Switched	15454-MRP-L1-xx.y= (Prot)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-MR (HR)

**Table B-17 Fast Ethernet (100 Mbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-18 Fiber Channel 10 G (10.5 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_C and TXP_MR_10E_L without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)

**Table B-18 Fiber Channel 10 G (10.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E TXP_MR_10E_y	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-C= (C band) 15454-10E-L1-L= (L band)
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	TXP_MR_10EX_C with EFEC and FEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=

**Table B-18 Fiber Channel 10 G (10.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)



**Table B-18** *Fiber Channel 10 G (10.5 Gbps) (continued)*

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.
2. Supported only in standalone mode.

**Table B-19** *Fiber Channel 8 G (8.5 Gbps)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - TXP-MR (HR)
Transponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-XP - TXP-MR (HR)

Table B-19 Fiber Channel 8 G (8.5 Gbps) (continued)

Interface Type	Card Type	Protection Type	Product ID
Transponder	10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)

**Table B-19 Fiber Channel 8 G (8.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.
2. Supported only in standalone mode.

**Table B-20 Fiber Channel 4 G (4.25 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DMEX_C with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)

**Table B-20 Fiber Channel 4 G (4.25 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	AR-MXP with NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-21 Fiber Channel 2 G (2.125 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DMEX_C with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
PL	DWDM ITU-T SFP without FEC	Client 1+1 PSM-OCH	ONS-SC-4G=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)

**Table B-21 Fiber Channel 2 G (2.125 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-22 Fiber Channel 1 G (1.062 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G with FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G without FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	MXP_MR_10DMEX_C with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
PL	DWDM ITU-T SFP without FEC	Client 1+1 PSM-OCH	ONS-SC-4G=

**Table B-22 Fiber Channel 1 G (1.062 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-23 2 Gbps Fiber Connectivity (2.125 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)

**Table B-23 2 Gbps Fiber Connectivity (2.125 Gbps) (continued)**

Transponder	MXP_MR_10DME with FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G with FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	TXP_MR_2.5G TXPP_MR_2.5G without FEC	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	MXP_MR_10DMEX_C with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
PL	DWDM ITU-T SFP without FEC	Client 1+1 PSM-OCH	ONS-SC-4G=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)

**Table B-23 2 Gbps Fiber Connectivity (2.125 Gbps) (continued)**

Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-24 FICON-10G (10.5 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	OTU-2_XP with EFEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP with FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	OTU-2_XP without FEC	Y-Cable Client 1+1 PSM-OCH Fiber-Switched	15454-OTU2-XP=
Transponder	TXP_MR_10E_y with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_y with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10E_y without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10E-L1-L= (L band)
Transponder	TXP_MR_10EX_C with EFEC and FEC	Client 1+1 Y-Cable PSM OCH	15454-10EX-L1-C=



Table B-24 FICON-10G (10.5 Gbps) (continued)

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_10E with EFEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)
Transponder	TXP_MR_10E with FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)
Transponder	TXP_MR_10E without FEC	Client 1+1 Y-Cable PSM-OCH	15454-10E-L1-xx.y= (C band) 15454-10E-L1-xx.y= (L band)
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	10x10G-LC with FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

**Table B-24 FICON-10G (10.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.
2. Supported only in standalone mode.

**Table B-25 FICON 8G (8.5 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-MXP-C=
Transponder	40G CP-DQPSK MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-MXP-C=
Transponder	40G CP-DQPSK ME MXP with FEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=

**Table B-25 FICON 8G (8.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	40G CP-DQPSK ME MXP with EFEC	Client 1+1 Y-Cable PSM OCH	15454-40G-CP-DQPSK-ME-MXP-C=
Transponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - TXP-MR (HR)
Transponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-XP - TXP-MR (HR)
Transponder	10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Transponder	10x10G-LC without FEC	Client 1+1 Y-Cable PSM OCH	15454-M-10X10G-LC= (RGN-10G)
Muxponder	100G-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

**Table B-25 FICON 8G (8.5 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	100G-CK-LC-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>2</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-LC-C + 10x10G-LC with HG-FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-LC-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with FEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)
Muxponder	100G-CK-ME-C + 10x10G-LC with EFEC	Client 1+1 Y-Cable PSM OCH <sup>1</sup>	15454-M-100G-CK-ME-C= + 15454-M-10x10G-LC= (MXP-10x10G)

1. Supported only in standalone mode.

2. Supported only in standalone mode.

**Table B-26 FICON-4G (4.25 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)

**Table B-26 FICON-4G (4.25 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	AR-MXP with NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-27 FICON-1G (1.062 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 Y-Cable	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DMEX_C with EFEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX with FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	MXP_MR_10DMEX_C without FEC	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=
PL	DWDM ITU-T SFP without FEC	Client 1+1 PSM-OCH	ONS-SC-4G=
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-DME (HR)

**Table B-27 FICON-1G (1.062 Gbps) (continued)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-DME (HR) AR-XP - MXPP-DME (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-28 Enterprise System Connection (ESCON) (200 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G 2R	Client 1+1 Y-Cable Fiber-Switched	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH	AR-MXP - MXP-MR (HR)

**Table B-28 Enterprise System Connection (ESCON) (200 Mbps) (continued)**

Muxponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-MXP - MXP-MR (LR) AR-MXP - MXPP-MR (LR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)
Muxponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PCM OCH Fiber-Switched	AR-XP - MXP-MR (LR) AR-XP - MXPP-MR (LR)
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-29 ISC-3 Compatibility Mode (1.062 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G without FEC	Client 1+1	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)
Transponder	MXP_MR_10DME with EFEC	Client 1+1	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DMEX	Y-Cable Client 1+1 PSM-OCH	15454-10DMEX-C=

**Table B-29** *ISC-3 Compatibility Mode (1.062 Gbps) (continued)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-30** *ISC-Peer 2R*

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)

**Table B-31** *ISC-3 Peer-1G (1.062 Gbps)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DMEX_C with EFEC and FEC	Client 1+1 PSM-OCH	15454-10DMEX-C=

**Table B-32** *ISC-3 Peer-2G (2.125 Gbps)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	MXP_MR_10DME with EFEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME with FEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)
Transponder	MXP_MR_10DME without FEC	Client 1+1 PSM-OCH	15454-10DME-C= (C band) 15454-10DME-L= (L band)



**Table B-32** *ISC-3 Peer-2G (2.125 Gbps) (continued)*

Transponder	MXP_MR_10DMEX_C with EFEC and FEC	Client 1+1 PSM-OCH	15454-10DMEX-C=
Transponder	AR-MXP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-MXP - TXP-MR (LR) AR-MXP - TXPP-MR (LR)
Transponder	AR-XP with FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - TXP-MR (LR) AR-XP - TXPP-MR (LR)

**Table B-33** *Sysplex External Throughput Rate (8 Mbps)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)

**Table B-34** *Sysplex Control Link Oscillator (8 Mbps)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot) 15454-MRP-L1-xx.y= (Prot)

**Table B-35** *Serial Data Input (SDI)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G 2R	Y-Cable Fiber-Switched	15454-MRP-L1-xx.y= (Prot)

**Table B-36** *Digital Video Broadcast-Asynchronous Serial Interface (DVB-ASI)*

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G	Client 1+1	15454-MR-L1-xx.y= (Unprot)
	TXPP_MR_2.5G 2R	Y-Cable Fiber-Switched	15454-MRP-L1-xx.y= (Prot)

**Table B-37 D1-Video (270 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	

**Table B-38 High Definition Television (HDTV) (1.48 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	

**Table B-39 DV-6000 (2.38 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	

**Table B-40 2R Any Rate**

Interface Type	Card Type	Protection Type	Product ID
Transponder	TXP_MR_2.5G TXPP_MR_2.5G 2R	Client 1+1	15454-MR-L1-xx.y= (Unprot)
		Y-Cable	15454-MRP-L1-xx.y= (Prot)
		Fiber-Switched	

**Table B-41 ONS 15530 2.5G ITU-T**

Interface Type	Card Type	Protection Type	Product ID
TXP	MR MM TXP	Client 1+1	15530-TSP1-xx21 (MM Unprot)
	MR SM TXP	Fiber-Switched	15530-TSP1-xx22 (SM Unprot)
	MR MM TXP with splitter		15530-TSP1-xx11 (MM Prot)
	MR SM TXP with splitter		15530-TSP1-xx12 (SM Prot)
LC	2.5-Gbps Aggregation	Client 1+1	15530-ITU3-xx20 (Unprot)
	2.5-Gbps Aggregation with splitter	Fiber-Switched	15530-ITU3-xx10 (Prot)

**Table B-42 SD-SDI (270 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)

**Table B-43 HD-SDI (1.485 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-MXP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-MXP - MXP-MR (HR)
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH Fiber-Switched	AR-XP - MXP-MR (HR) AR-XP - MXPP-MR (HR)

**Table B-44 3G-SDI (2.970 Gbps)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	AR-XP with EFEC, FEC, NOFEC	Client 1+1 Y-Cable PSM OCH	AR-XP - MXP-VAD-10G (HR)

**Table B-45 ONS 15530 10G ITU-T**

Interface Type	Card Type	Protection Type	Product ID
LC	10-Gbps Aggregation	Client 1+1	15530-ITU2-xx20 (Unprot)
	10-Gbps Aggregation with splitter	Fiber-Switched	15530-ITU2-xx10 (Prot)
MXP	Data Muxponder	Client 1+1	15530-MSMP-xx22 (Unprot)
	Data Muxponder with splitter	Fiber-Switched	15530-MSMP-xx12 (Prot)

**Table B-46 E3/ T3/DS3 (100 Mbps)**

Interface Type	Card Type	Protection Type	Product ID
Muxponder	GE_XPE with EFEC	Client 1+1 PSM-OCH	15454-GE-XPE=
Muxponder	GE_XPE without EFEC	Client 1+1 PSM-OCH	15454-GE-XPE=
Muxponder	GE_XPE with FEC	Client 1+1 PSM-OCH	15454-GE-XPE=

**Table B-47 Supported Pluggables**

Card	Pluggables Supported	Default Pluggable
10G-XR	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> </ul>	ONS-XC-10G-C
GE-XP	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> </ul>	ONS-XC-10G-C
GE-XPE	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-SC-EOP1</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> <li>• ONS-SI-GE-EX</li> </ul>	ONS-XC-10G-C
10GE-XP	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> </ul>	ONS-XC-10G-C
10GE-XPE	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> </ul>	ONS-XC-10G-C

**Table B-47 Supported Pluggables (continued)**

ADM-10G	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> <li>• ONS-SI-GE-EX</li> </ul>	ONS-XC-10G-C
OTU-2_XP	<ul style="list-style-type: none"> <li>• ONS-XC-10G</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> </ul>	ONS-XC-10G-C
40G DQPSK MXP	<ul style="list-style-type: none"> <li>• ONS-XC-10G-1470 through ONS-XC-10G-1610</li> <li>• ONS-XC-10G-S1</li> <li>• ONS-XC-10G-I2</li> <li>• ONS-XC-10G-L2</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-8G-SM</li> <li>• ONS-XC-8G-MM</li> <li>• ONS-XC-10G-SR-MM</li> <li>• ONS-XC-10G-EP30.3= through ONS-XC-10G-EP61.4=</li> </ul>	ONS-XC-10G-C
40G CP-DQPSK MXP	<ul style="list-style-type: none"> <li>• ONS-XC-10G-1470 through ONS-XC-10G-1610</li> <li>• ONS-XC-10G-S1</li> <li>• ONS-XC-10G-I2</li> <li>• ONS-XC-10G-L2</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-8G-SM</li> <li>• ONS-XC-8G-MM</li> <li>• ONS-XC-10G-SR-MM</li> <li>• ONS-XC-10G-EP30.3= through ONS-XC-10G-EP61.4=</li> </ul>	ONS-XC-10G-C

**Table B-47 Supported Pluggables (continued)**

40G CP-DQPSK ME MXP	<ul style="list-style-type: none"> <li>• ONS-XC-10G-1470 through ONS-XC-10G-1610</li> <li>• ONS-XC-10G-S1</li> <li>• ONS-XC-10G-I2</li> <li>• ONS-XC-10G-L2</li> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-8G-SM</li> <li>• ONS-XC-8G-MM</li> <li>• ONS-XC-10G-SR-MM</li> <li>• ONS-XC-10G-EP30.3= through ONS-XC-10G-EP61.4=</li> </ul>	ONS-XC-10G-C
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**Table B-47 Supported Pluggables (continued)**

AR-MXP AR-XP	<ul style="list-style-type: none"> <li>• ONS-XC-10G-C</li> <li>• ONS-XC-10G-96C</li> <li>• ONS-XC-10G-S1</li> <li>• ONS-XC-10G-I2</li> <li>• ONS-XC-10G-L2</li> <li>• ONS-XC-8G-SM</li> <li>• ONS-XC-8G-MM</li> <li>• ONS-XC-10G-EP30.3 through ONS-XC-10G-EP61.4</li> <li>• ONS-SE-200-MM</li> <li>• ONS-SI-155-SR-MM</li> <li>• ONS-SI-622-SR-MM</li> <li>• ONS-SC-2G-xx.x</li> <li>• ONS-SC-2G-xxxx=</li> <li>• ONS-SE-4G-MM</li> <li>• ONS-SE-4G-SM</li> <li>• ONS-SE-100BX10U</li> <li>• ONS-SE-100BX10D</li> <li>• ONS-SE-GE-BXU</li> <li>• ONS-SE-GE-BXD</li> <li>• ONS-SE-ZE-EL</li> <li>• ONS-SI-100-FX</li> <li>• ONS-SI-100-LX10</li> <li>• ONS-SI-GE-LX</li> <li>• ONS-SI-GE-SX</li> <li>• ONS-SI-GE-ZX</li> <li>• ONS-SI-GE-EX (AR-XP only)</li> </ul>	ONS-XC-10G-C
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**Table B-47 Supported Pluggables (continued)**

AR-MXP AR-XP	<ul style="list-style-type: none"> <li>• ONS-SI-155-I1</li> <li>• ONS-SI-155-L2</li> <li>• ONS-SI-622-I1</li> <li>• ONS-SI-622-L1</li> <li>• ONS-SI-622-L2</li> <li>• ONS-SC-4G-xx.x</li> <li>• ONS-SI-2G-L1</li> <li>• ONS-SI-2G-L2</li> <li>• ONS-SI-2G-S1</li> <li>• ONS-SE-Z1</li> <li>• ONSSI-155-L1</li> <li>• ONS-SE-155-xxxx</li> <li>• ONS-SC-155-EL</li> <li>• ONS-SC-4G-xx.x</li> <li>• ONS-SC-HD3GV-TX</li> <li>• ONS-SC-HD3GV-RX</li> <li>• ONS-SI-155-L1</li> <li>• ONS-SE-100-BX10U</li> <li>• ONS-SE-100-BX10D</li> </ul>	—
100G-LC-C 100G-ME-C 100G-CK-LC-C 100G-CK-ME-C	<ul style="list-style-type: none"> <li>• ONS-CXP-100G-SR10</li> </ul>	ONS-CXP-100G-SR10
10x10G-LC	<ul style="list-style-type: none"> <li>• ONS-SC+-10G-ER</li> <li>• ONS-SC+-10G-LR</li> <li>• ONS-SC+-10G-SR</li> <li>• ONS-SC+-10G-ZR</li> <li>• ONS-SC+-10G-30.3 through ONS-SC+-10G-61.4</li> <li>• ONS-SC+-10GEP-30.3 through ONS-SC+-10GEP-61.4</li> <li>• ONS-SC+-10G-CU-1</li> <li>• ONS-SC+-10G-CU-3</li> <li>• ONS-SC+-10G-CU-5</li> <li>• ONS-SC+-10G-CU-7</li> <li>• ONS-SC+-10G-C</li> </ul>	ONS-SC+-10G-SR



**Table B-47 Supported Pluggables (continued)**

WSE	<ul style="list-style-type: none"> <li>• ONS-SC+-10G-ER</li> <li>• ONS-SC+-10G-LR</li> <li>• ONS-SC+-10G-SR</li> <li>• ONS-SC+-10G-ZR</li> <li>• ONS-SC+-10G-30.3 through ONS-SC+-10G-61.4</li> <li>• ONS-SC+-10GEP-30.3 through ONS-SC+-10GEP-61.4</li> <li>• ONS-SC+-10G-CU-1</li> <li>• ONS-SC+-10G-CU-3</li> <li>• ONS-SC+-10G-CU-5</li> <li>• ONS-SC+-10G-CU-7</li> <li>• ONS-SC+-10G-C</li> </ul>	ONS-SC+-10GEP-XX
CFP-LC	<ul style="list-style-type: none"> <li>• ONS-CC-100G-LR4</li> <li>• ONS-CC-100GE-LR4</li> <li>• ONS-CC-40G-LR4</li> <li>• ONS-CC-40G-FR</li> <li>• CFP-40G-SR4</li> <li>• CFP-100G-SR10</li> </ul>	ONS-CC-100G-LR4 for OTU4 ONS-CC-100GE-LR4 for 100GE LAN PHY ONS-CC-40G-LR4= for 40GE LAN PHY or OTU3
MXP_MR_10DMEX	<ul style="list-style-type: none"> <li>• ONS-SE-G2F-SX</li> <li>• ONS-SE-G2F-LX</li> <li>• ONS-SI-GE-ZX</li> <li>• ONS-SE-4G-MM</li> <li>• ONS-SE-4G-SM</li> <li>• ONS-SI-GE-EX</li> </ul>	ONS-SE-G2F-SX for Gigabit ethernet, Fiber Channel 2G, 2G-FICON, 1G-FICON, Fiber Channel. ONS-SE-4G-MM for 4G-FICON, Fiber Channel 4G. ONS-SE-G2F-LX for ISC-Compact, ISC-Peer-1G, ISC-Peer-2g
MXP_MR_10DME	<ul style="list-style-type: none"> <li>• ONS-SE-G2F-LX</li> <li>• ONS-SE-G2F-SX</li> <li>• ONS-SE-ZE-EL</li> <li>• SFP-GE+-LX</li> <li>• SFP-GEFC-SX</li> <li>• ONS-SI-GE-ZX</li> <li>• ONS-SI-GE-EX</li> <li>• ONS-SE-4G-MM</li> <li>• ONS-SE-4G-SM</li> </ul>	ONS-SE-G2F-LX for Gigabit ethernet, Fiber Channel 2G, 2G-FICON, 1G-FICON, Fiber Channel, ISC-Compact, ISC-Peer-1G, ISC-Peer-2g. ONS-SE-4G-MM for 4G-FICON, Fiber Channel 4G.

