

DRAGON PTN with HiProvision

MPLS-TP Product Family with Network Provisioning System

This backbone device, configured using HiProvision provisioning software, offers a reliable, packet-based MPLS-TP technology to transport mission-critical data through large networks.



Ensure **dedicated bandwidth** with low-cost, interoperable MPLS-TP technology.



Easily configure and manage complex networks with intuitive provisioning software.



Fully redundant system with multiple switching modules and power supply options.



Seamlessly integrate legacy systems through variety of redundant interface card options.

Key Features

- MPLS-TP technology delivers dedicated bandwidth for different services and 50ms protection switching
- HiProvision software for easy configuration and management of large transmission networks
- Industrial HiVision integration for backbone and access network
- Variety of interface modules and port types to ensure flexibility and seamless integration of legacy systems
- Resilient against harsh conditions with operating temperatures varying from -30 °C to +65 °C
- Redundant central switching modules and power supplies guarantee high network availability







Your Benefits

Complete, Future-Proof Networking System

DRAGON PTN with HiProvision offers a fully integrated Ethernet-based backbone transmission system. Due to Ethernet's simplicity, interoperability, predictability and cost efficiency, these networks are becoming more popular than legacy technologies.

MPLS-TP provisioning is similar to SDH/SONET provisioning, but comes with a powerful network management system that makes it easier to provision and maintain the network. It guarantees bandwidth with the same deterministic behavior as SDH/SONET eliminating their disadvantages for packet based communication. Using MPLS-TP engineers can gradually migrate networks using limited resources. The new DRAGON PTN with HiProvision solution enables engineers to configure their networks effectively and be better prepared for future technology changes.

The cost efficient DRAGON PTN network node is offered in fully modular variants and can be configured as a completely redundant system through central switching modules and power supplies, which means administrators can ensure network availability in case of device or path failure.

With DRAGON PTN, customers get a complete, integrated solution for managing their networks from a single vendor, with MPLS-TP in the backbone layer and Layer 2 and 3 technologies, like MRP, in the access layer. With its fully modular design, DRAGON PTN with HiProvision is ready for use in extreme and harsh industrial environments.



DRAGON PTN with HiProvision is extremely valuable for scenarios where engineers need the ability to predict the behavior of data as it goes across the network. MPLS-TP technology in the new device family guarantees bandwidth and makes it easy for engineers to deploy services inside the network including redundant data transmission.

Markets

Due to the device's impressive deterministic capabilities, DRAGON PTN with HiProvision is best suited for transportation environments, including mass transit systems, railway and metro stations. The device is also ideal for other harsh, industrial environments that rely on mission-critical data transfer, including power transmission and distribution and oil and gas applications.



DRAGON PTN with HiProvision is a complete solution for managing large transmission networks and supports deterministic data transfer in harsh, industrial environments.





Technical Information

Product Descripti	on pasic units						
Туре		DRAGON PTN2210	DRAGON PTN2209	DRAGON PTN2206	DRAGON PTN1104		
Order No.		942 228-004	942 228-003	942 228-002	942 228-001		
Description		Full Gigabit MPLS-TP Switch with 10 power supply	Gigabit XFP ports, Advanced Packet Ti	ransport features, optional redundant	design with redundant CPU and		
Port Type and Quanti	Id Quantity Up to 4 x 10 Gigabit Ethernet and 24 x 1 Gigabit Ethernet, modular desi hot pluggable modules and power supply, future proof 40 Gigabit Ether			gn with various module configurations (PTN-4-E1T1-L, PTN-7-SERIAL, etc.), net (available soon)			
Number of Interface Slots		Total Slots: 2 x CPU + 2 x Power Supply + 10 x Interface Cards	Total Slots: 2 x CPU + 2 x Power Supply + 9 x Interface Cards	Total Slots: 2 x CPU + 2 x Power Supply + 6 x Interface Cards	Total Slots: 1 x CPU + 1 x Power Supply + 4 x Interface Cards		
Network Size							
Line - / Star Topology	v	any					
Scalability		From 10/100 Mbps to 40 Gbps aggregation of traffic; Scalability through MPLS-TP; Scalable switching capacity from 64 Gbps to 720 Gbps; Nodes with 4 interface positions up to 15 interface positions					
Power Requireme	ents						
Operating Voltage		Built-in power supply - Internal and	redundant, 175 W up to 1000 W rated	d power. PoE up to 480 W			
Power Consumption (Watt / MTBF (years @25°C))		DRAGON PTN Chassis (- / 665 Y); PTN-NSM-A & B (2 W / 437 Y); PTN-CSM310-A (27 W / 71 Y); PTN-PSU > (- / 34 Y); PTN-4-GC-LW (6 W / 80 Y); PTN-4-GCB-LW (6 W / 80 Y); PTN-4-GCB-LW (6 W / 80 Y); PTN-9-L3EA-L (5 W / Pending); PTN-4-DSL-LW (7.3 W / 104 Y); PTN-4-E1(/T1)-L (7.7 W / 95 Y); PTN-16-E1(/T1)-L (9.2 W / 95 Y); PTN-2-C37.94 (8.1 W / 140 Y); PTN-7-SERIAL (6.5 W / 86 Y); PTN-6-GE-L (10 W / 80 Y)					
Mechanical Const	truction						
Mounting		19" Control Cabinet or DIN-Rail					
Protection Class		IP20					
Dimensions (W x H x	D)	434 mm x 132.5 mm x 210 mm	434 mm x 132.5 mm x 210 mm	354 mm x 132.5 mm x 210 mm	214 mm x 132.5 mm x 210 mm		
Software Features	S						
MPLS-TP Service Typ	oes	Point to point service (VPWS); Multi	point (VPLS); Logical Ethernet Ring; F	Protection schemes (1:1, Hitless Swit	ching, ERPS logical Rings)		
Layer 2 Ethernet Agg	regation	MSTP (multiple spanning tree); Multicast handling through IGMP; Virtual forwarding instances; VLAN handling; Broadcast and multicast storm control					
Quality of Service (QoS)		Service priority scheduling independent from user traffic to ensure transport functionality of all traffic; End to end traffic engineering through HiProvision; 8 Priorities (6 user definable) Per flow statistics and port counters; 4k Flexible queues; Handling of priority queues Strict Priority Based					
Network Security		Sticky MAC for easy locking of MAC address per service; MAC and IP based ACL; SNMPv3 encryption and authentication; Disable unsed ports Locked Node ID's; Logical separation of services; Centralized user authentication and central event logging; Audit trail					
Network Management		Auto provisioned and auto setup DCN for management; Full SNMP v3 management (no CLI needed); Management port on each CSM module; 2 input contacts allowing forwarding of local alarms to the TXCare platform; 2 output contacts for local triggering of alarms; Removable memory allowing easy replacement of CSM in the field; Hardware supported HiProvision; Automatic protection switching via BFD; LSP ping and LSP trace via BFD; Performance monitoring based on Y.1731 Loss and Delay					
Switching Performance		Sub 50ms protection switching in all network topologies (MPLS-TP); Non-blocking 64 Gbps; 95 Mpps (Layer 2 throughput); MTU up to 9k; 32k MAC addresses; 4k Layer 2 Multicast entries; 2k VFI; 4k MPLS entries; BFD hardware support					
Management Software		HiProvision platform for user friendly and fast deployment of the network. Supported by the automatic setup of the DCN and OAM features for continuous monitoring. SNMP v2/v3					
Diagnostics		Advanced monitoring capabilities ba	sed on MPLS-TP OAM enhancement	S			
HiProvision - Man	agement Syste	m Licences (ordered separately)				
PTN HiProvision 3.0 N	Node License	HiPro-R3x-PTN2210	HiPro-R3x-PTN2209	HiPro-R3x-PTN2206	HiPro-R3x-PTN1104		
PTN HiProvision Orde		942 252-001	942 252-002	942 252-003	942 252-004		
PTN HiProvision Description		HiProvision Node License for DRAGON PTN2210 - SW Release 3.0	HiProvision Node License for DRAGON PTN2209 - SW Release 3.0	HiProvision Node License for DRAGON PTN2206 - SW Release 3.0	HiProvision Node License for DRAGO		
HiPro-HAC-Node	942 255-001	HiProvision Hirschmann Node License (one per node)					
HiPro-GEN-Node	942 255-002	HiProvision Generic Node License (c	· , , , , , , , , , , , , , , , , , , ,				
HiPro-Redundancy	942 255-003	HiProvision Redundancy License (or	ie per serial key)				
HiPro-Large-Net	942 255-004	Large Network Monitor Function (one per serial key)					
Modules - Central	Building Block	s (ordered separately)					
PTN-NSM-A (Node Support Module)	942 229-001	Alarm contacts for local notification (2 output contacts) or alarm forwarding (2 input contacts) to HiProvision (NMS); Dual PoE power input for connecting an external power over Ethernet source					
PTN-NSM-B (Node Support Module)	942 229-002	Alarm contacts for local notification (2 output contacts) or alarm forwarding (2 input contacts) to HiProvision (NMS)					
PTN-CSM310-A (Central Switching Module)	942 230-001	Dual core CPU; 64 Gbps switching fabric; MPLS-TP compliant switching fabric; Synchronization via Sync-E; Y.1731 performance monitoring; Automatic Protection Switching based on BFD; ERPS ring protection for multipoint Ethernet services; Node configuration stored on swappable Micro Synchronization via Sync-E; Y.1731 performance monitoring; Automatic Protection Switching based on BFD; ERPS ring protection for multipoint Ethernet services; Node configuration stored on swappable Micro Synchronization via Sync-E; Y.1731 performance monitoring;					
PTN-XG-L860	942 233-001	2 233-001 Operating System License of Central Switch Module					
	-L862 942 233-002 Operating System Redundancy License of Central Switch Module						

Product Description	IN Basic Units	,			
Туре		DRAGON PTN2210	DRAGON PTN2209	DRAGON PTN2206	DRAGON PTN1104
Modules - Interfac	e Building Blo	cks (ordered separately)			
PTN-4-GC-LW	942 236-001	4-Port Gigabit TX/Combo LAN/WAN Interface Module with POE support 3 x 10/100/1000 TX Gigabit Ethernet ports;1 x Combo 10/100/1000 TX or 100/1000 Gigabit fiber port (SFP based); Sync-E; IEEE1588v2 transparent clocking; PoE according to 802.3at; Operation as WAN or LAN per port			
PTN-4-GO-LW	942 236-002	4-Port Gigabit SFP LAN/WAN Interface Module 4 x 100/1000 Gigabit fiber port (SFP based); Sync-E; IEEE1588v2 transparent clocking; Port mode is WAN or LAN			
PTN-6-GE-L	942 236-003	6-Port Gigabit TX Switching Interface Module 6 x 10/100/1000 TX Gigabit Ethernet ports; MSTP, ERPS compliant; IEEE1588v2 transparent clocking; LAG based on IP and MAC addresses; IGMI snooping; Port mode is LAN			
PTN-1-10G-LW	942 236-004	1-Port 10 Gig XFP Interface Module 1 x 10 Gig Ethernet port (XFP); Sync-E; IEEE1588v2 transparent clocking; MACSec ready; Port mode is WAN or LAN			
PTN-9-L3A-L	942 236-005	1 G/10 G Routing Interface Module 8 x 100/1000 Gigabit fiber port (SFP based); 1 x 10Gig Ethernet port (XFP); MSTP, ERPS compliant; IEEE1588v2 transparent clocking; LAG based on IP at MAC addresses; IGMP snooping; Static and dynamic Unicast/Multicast routing via VRF; Integrated FAN module; Port mode is LAN			
PTN-9-L3EA-L	942 236-006	1 G/10 G Routing Interface Extension Module 8 x 100/1000 Gigabit fiber port (SFP based); 1 x 10Gig Ethernet port (XFP); Port mode is LAN			
PTN-4-DSL-LW	942 236-007	4-Port SHDSL Interface Module 4 SHDSL ports; PAF (= PME aggregation function) or Bonding; Port mode is LAN			
PTN-4-GCB-LW	942 236-008	4-Port Gigabit TX/Combo LAN/WAN Interface Module 3 x 10/100/1000 TX Gigabit Ethernet ports; 1 x Combo 10/100/1000 TX or 100/1000 Gigabit fiber port (SFP based); Sync-E; IEEE1588v2 transparent clocking; Operation as WAN or LAN per port			
PTN-2-C37.94-E1	942 236-009	2 x C37.94 compliant SFP ports (LC, MM); 2 x E1 RJ45 ports; E1 (2.048 Mbps) compliant with ANSI T1.102, OFTEL OTR001 and ITU-T recommendations G.703 and G.823; 64 kbps cross connect per card; Up to 16 independent circuit emulated streams; CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zero packet loss with 1+1 protection); Support for hair pinning mode (C37.94 to E1) without circuit emulation on a single card; Testing: Loopback, BER1 LAN operation			
PTN-2-C37.94-T1	942 236-010	2 x C37.94 compliant SFP ports (LC, MM); 2 x T1 RJ45 ports; T1 (1.544 Mbps) compliant with Bellcore 000499, ANSI; T1.102, T1.403 and T1.408, and ITU-T recommendations 64 kbps cross connect per card; Up to 16 independent circuit emulated streams; CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zero packet loss with 1+1 protection); Testing: Loopback, BERT; LAN operation			
PTN-4-E1-L	942 236-011	4 x E1; E1 (2.048 Mbps) compliant with ANSI T1.102, OFTEL OTR001 and ITU-T recommendations G.703 and G.823; 64 kbps cross connect per card; Up to 16 independent circuit emulated streams; packet formats: CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zero packet loss with 1+1 protection); Testing: Loopback, BERT; LAN operation			
PTN-4-T1-L	942 236-012	4 x T1 ports; T1 (1.544 Mbps) compliant with Bellcore 000499, ANSI (T1.102, T1.403 and T1.408, and ITU-T recommendations); 64 kbps cross connect per card; Up to 16 independent circuit emulated streams; packet formats: CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zero packet loss with 1+1 protection); Testing: Loopback, BERT; LAN operation			
PTN-16-E1-L	942 236-013	16 x E1 ports; E1 (2.048 Mbps) compliant with ANSI T1.102, OFTEL OTR001 and ITU-T recommendations G.703 and G.823; 64 kbps cross connect per card; Up to 64 independent circuit emulated streams; CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zero packet loss switchover between active and backup connection); Testing: Loopback, BERT; LAN operation			
PTN-16-T1-L	942 236-014	16 x T1 ports; T1 (1.544 Mbps) compliant with Bellcore 000499, ANSI (T1.102, T1.403 and T1.408, and ITU-T recommendations); 64 kbps cros connect per card; Up to 64 independent circuit emulated streams; CESoPSN and SAToP circuit emulation packet formats; Hitless switching (zer packet loss switchover between active and backup connection); Testing: Loopback, BERT; LAN operation			
PTN-7-SERIAL	942 236-015	Up to 7 serial ports; Configurable per port: RS232/485 Async or X.21, V.35, RS232 Sync; Per port configurable: Serial to Ethernet / CES; Serial to Ethernet: (Async operation: RS232, RS422, RS485, Protocol agnostic, DCE / DTE configurable, Point to point and master slave bus structures (up to 2 masters and 156 slaves), Multi master operation for redundant control centers, Speeds: 1200, 2400, 4800, 9600, 19200, 38400, 76800 115200 (different port settings possible within a single service), Databits: 6,78, Parity: None, Odd, Even, Mark, Space, Support for handshaking signaling (RTS, CTS,), Fixed block, fixed timing, line terminating character, delimiter time); CES mode with mapping into time slots (Point to poi structure, Protocol agnostic, DCE / DTE configurable, Async operation: RS232, RS422, RS442, RS445 - Speeds: 1200, 2400, 4800, 9600, 19200, 38400 76800, 115200, Sync operation: RS232, RS422, X.21, V.35 - Speeds: nx64 kb (n=130), Support for handshaking signaling (RTS, CTS,))			
Power Supplies (o	rdered separat	tely)			
PTN-ACP-A	942 234-001	PSU, DIN Rail, Input range: 90-264	V AC, Output Power: 175 W		
PTN-DCP-A	942 234-002	PSU, DIN Rail, Input range: 18-60 \			
PTN-DCP-B	942 234-003	PSU, DIN Rail, Input range: 88-300 V DC, Output Power: 175 W			
PTN-ACPoE-A	942 235-001	PoE PSU, DIN Rail, Input range: 100-240 V AC, Output Power: 480 W			
PTN-DCPoE-A	942 235-002	PoE PSU, DIN Rail, Input range: 33.6 - 62.4 V DC, Output Power: 300 W			
Spare Parts (order	ed separately)				
PTN-BLANK-Module	942 237-001	Required number of blank panels for one node: PTN2210: 10 - #Interfaces / PTN2206: 6 - #Interfaces / PTN1104: 4 - #Interfaces PTN2209: 10 - #Interfaces (L3 position = 2)			
PTN-BLANK-PSU	942 237-002	Required number of PSU blank panels for one node: PTN2210 : 2 - #PSUs / PTN2209 : 2 - #PSUs / PTN2206 : 2 - #PSUs			
PTN-BLANK-CSM	942 237-003	Required number of CSM blank panels for one node: PTN2210 : 2 - #CSMs / PTN2209 : 2 - #CSMs / PTN2206 : 2 - #CSMs			

 $\textbf{NOTE:} \ These \ are \ the \ prominent \ technical \ specifications. \ For \ complete \ technical \ specifications \ visit: \ www.hirschmann.com$

Common Technical Data		
Туре	Basic Units, Media Modules and Power Supplies	
Ambient Conditions		
Operating Temperature	-30 °C to 65 °C (fanless)	
Storage Temperature	-30 °C to 75 °C	
Rel. Humidity (non-condensing)	95% (non-condensing), 25° (77°F) - 40°C (104°F), 6 cycles Db var 1	
Approvals		
Basic Standard	CE	
Safety of Industrial Control Equipment	IEC-61850-3, IEEE 1613	
Transportation	EN 50121-4	

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Accessories		
Туре		DRAGON PTN2210 / PTN2209 / PTN2206 / PTN1104
Mounting Kit (ordered separately)		
19" Mounting Kit PTN2206	942 256-001	19" mounting kit for PTN2206
19" Mounting Kit PTN1104	942 256-002	19" mounting kit for PTN1104
19" Mounting Kit for 2 x PTN1104	942 256-003	19" mounting kit for 2 x PTN1104
Heavy Duty DIN Rail Kit PTN2206	942 256-004	Heavy duty DIN Rail kit for PTN2206
Heavy Duty DIN Rail Kit PTN1104	942 256-005	Heavy duty DIN Rail kit for PTN1104
Power Cables (ordered separately)		
EU AC Power Cord	942 256-100	EU AC power cord with IEC lock - 2.5 m
JK AC Power Cord	942 256-101	UK AC power cord with IEC lock - 2.5 m
IS AC Power Cord	942 256-102	US AC power cord with IEC lock - 2.5 m
PSU Cable for 18-60 VDC PSU	942 256-103	PSU cable for 18-60 VDC power supply
PSU Cable for 88-200 VDC PSU	942 256-104	PSU cable for 88-200 VDC power supply
PSU Cable for PoE	942 256-105	PSU cable for PoE to NSM
rop Cables (ordered separately)		
1 Drop Cable, RJ48C	942 256-200	T1 Drop cable, 3 m, 100 Ohm, RJ48C to open end for PTN-4T1-L (1 per port)
1 Drop Cable, RJ48C	942 256-201	E1 Drop cable, 3 m, 120 Ohm, RJ48C to open end for PTN-4E1-L (1 per port)
op Cable, HPDB68	942 256-202	Drop cable, 1.5 m HPDB68 to open end for PTN-16T1-L / PTN-16E1-L (1 per card)
rop Cable, HPDB68 to 16 RJ-45 Coupler	942 256-203	Drop cable, 2 m HPDB68 to 16 RJ-45 with coupler for PTN-16T1-L / PTN-16E1-L (1 per card)
tch Panel 1HU Feedthrough 24 Ports	942 256-204	Patch panel 1HU feedthrough 24 ports
IC Patch Panel with Drop Cable	942 256-205	BNC Patch Panel with Drop cable, 2 m HPDB68 to 16 port Coax (1 per card)
ble Set for Connector 1-5	942 256-300	Cable set for connector 1-5 (open ended) for serial port 1-3
ble Set for Connector 6-10	942 256-301	Cable set for connector 6-10 (open ended) for serial port 4-7
Ps (ordered separately)		·
N-SFP-CWDM-EX-1471	942 245-001	SFP CWDM - EX - 1471 nm
N-SFP-CWDM-EX-1491	942 245-002	SFP CWDM - EX - 1491 nm
rn-sfp-cwdm-ex-1511	942 245-003	SFP CWDM - EX - 1511 nm
TN-SFP-CWDM-EX-1531	942 245-004	SFP CWDM - EX - 1531 nm
TN-SFP-CWDM-EX-1551	942 245-005	SFP CWDM - EX - 1551 nm
TN-SFP-CWDM-EX-1571	942 245-006	SFP CWDM - EX - 1571 nm
TN-SFP-CWDM-EX-1591	942 245-007	SFP CWDM - EX - 1591 nm
TN-SFP-CWDM-EX-1611	942 245-008	SFP CWDM - EX - 1611 nm
TN-SFP-CWDM-ZX-1471	942 245-009	SFP CWDM - ZX - 1471 nm
TN-SFP-CWDM-ZX-1491	942 245-010	SFP CWDM - ZX - 1491 nm
PTN-SFP-CWDM-ZX-1511	942 245-011	SFP CWDM - ZX - 1511 nm
PTN-SFP-CWDM-ZX-1531	942 245-012	SFP CWDM - ZX - 1531 nm
PTN-SFP-CWDM-ZX-1551	942 245-013	SFP CWDM - ZX - 1551 nm
PTN-SFP-CWDM-ZX-1571	942 245-014	SFP CWDM - ZX - 1571 nm

For further technical information see page 6.



Technical Information

Accessories (continued)				
Type		DRAGON PTN2210 / PTN2209 / PTN2206 / PTN1104		
SFPs (ordered separately)		DIAGON F1N2210 / F1N2200 / F1N1104		
PTN-SFP-CWDM-ZX-1591	942 245-015	SFP CWDM - ZX - 1591 nm		
PTN-SFP-CWDM-ZX-1611	942 245-016	SFP CWDM - ZX - 1611 nm		
PTN-SFP-SX-850	942 245-017	SFP 850 nm - SX (Multimode)		
PTN-SFP-LX-1310	942 245-018	SFP 1310 nm - LX		
PTN-SFP-EX-1310	942 245-019	SFP 1310 nm - EX		
PTN-SFP-ZX-1550	942 245-020	SFP 1550 nm - ZX		
PTN-SFP-0X-1550	942 245-021	SFP 1550 nm - 0X		
PTN-SFP-EZ-1550	942 245-022	SFP 1550 nm - EZ		
PTN-SFP-BIDI-1310-20	942 245-023	SFP 1310 nm - BIDI - 20 km		
PTN-SFP-BIDI-1550-20	942 245-024	SFP 1550 nm - BIDI - 20 km		
PTN-SFP-BIDI-1490-80	942 245-025	SFP 1490 nm - BIDI - 80 km		
PTN-SFP-BIDI-1550-80	942 245-026	SFP 1550 nm - BIDI - 80 km		
PTN-RJ45-SFP	942 245-027	Electrical Gigabit Ethernet SFP module RJ45		
SFP C37 (ordered separately)	·			
PTN-SFP-C37.94-850	942 245-028	SFP for C37.94 - 850 nm Multimode		
PTN-SFP-C37.94-1310	942 245-029	SFP for C37.94 - 1310 nm Singlemode		
Smart SFP (ordered separately)				
PTN-SMART-SFP-STM-1/0C-3	942 245-028	Smart SFP to transport STM-1/0C-3 transparent (S1 Optic)		
PTN-SMART-SFP-STM-4/0C-12	942 245-029	Smart SFP to transport STM-4/0C-12 transparent (S1 Optic)		
XFP DWDM (ordered separately)				
PPTN-SFP-DWDM-XR-xx (xx = Channel Number)	942 250-0xx	SFP DWDM - XR (Channel xx) (Channel 17-61)		
Smart SFP (ordered separately)				
PTN-XFP-SR-850	942 246-001	XFP 850 nm - SR (Multimode)		
PTN-XFP-LR-1310	942 246-002	XFP 1310 nm - LR		
PTN-XFP-ER-1550	942 246-003	XFP 1550 nm - ER		
PTN-XFP-ZR-1550	942 246-004	XFP 1550 nm - ZR		
PTN-XFP-XR-1550	942 246-005	XFP 1550 nm - XR		
XFP DWDM (ordered separately)				
PTN-XFP-DWDM-ER-xx (xx = Channel Number)	942 247-0xx	XFP DWDM - ER (Channel xx) (Channel 19-60)		
PTN-XFP-DWDM-ZR-xx (xx = Channel Number)	942 248-0xx	XFP DWDM - ZR (Channel xx) (Channel 17-61)		

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