

QuickSpecs

Smartoptics

Overview

Smartoptics

Smartoptics provides the DWDM platform to enable all traffic to be connected between multiple sites over a single dark fiber network at hugely reduced capex and opex compared to traditional DWDM platforms. It does not matter if it is a simple point to point connection or a multisite campus network and is applicable to both SAN and WAN protocols – any protocol in any combination. This is an extremely versatile solution to connect sites together. As long as there is a fiber network there is an opportunity for this solution.

Smartoptics are simple to set up, low cost to purchase and run yet delivers high capacity. Smartoptics solutions offer one of the lowest latency solutions on the market and with the unique Brocade approvals, means that any customer owning FC equipment and needing to replicate between sites can make use of the Smartoptics products.

Smartoptics has solutions for 100/32/16/10/8G connectivity, whether it is based on embedded or transponder based DWDM networking. The Open line system extends the usable range of embedded networking and maintains the benefits of operating at the pure physical layer; advantages which also benefit the switch usage by not having to be run in R_Ready mode. Regardless of the challenges faced in the network, Smartoptics has a suitable solution.

Smartoptics is available on HPE Catalog via HPE Complete program.

Intelligent DWDM solutions

Fibre Channel is the traffic protocol of choice for SANs (storage area networking). The ability to synchronously replicate 32/16/8G FC ISLs (inter switch links) between data centers is key to the successful implementation of a remote back or disaster recovery policy.

Smartoptics has been at the forefront of SAN connectivity for data centers and were first to market with 4G FC embedded CWDM solutions in 2007. Smartoptics has continued to provide simple, low cost Fibre Channel/Ethernet connectivity between geographically separated sites. With just a few simple building blocks: through multiplexers – passive or managed, transponders, and DWDM transceivers, most connectivity types are supported.



Figure 1. Smartoptics OLS

Overview

HPE Complete- Resell of Third Party Branded Products

The HPE Complete program enables the purchase of best in class third party branded products with the added reliability of the HPE interop assurance for a complete validated solution, all via one HPE purchase order.

Benefits

- One Stop Shop - Purchase complete solutions from Hewlett Packard Enterprise that include best in class third party branded products, all on a single HPE purchase order
- Validated solution - Confidence of HPE's interop assurance validation for third party branded products that complement HPE Storage & Server solutions
- Customer Experience - HPE Complete utilizes third-party expertise for installation, support, and warranty of their products. However, HPE Complete will step in to facilitate third-party issue resolution when required to assist in overall customer satisfaction. HPE products that are part of the overall solution are supported per HPE Pointnext services and support purchased.
- Unique Value – Minimize risk, complexity and cost when deploying multi-vendor products and technologies into the Hewlett Packard Enterprise ecosystem. Many solutions come with custom HPE/Partner configuration and integration guides and tools.

For more information please refer [HPE Complete](#) on HPE.com

Models

Hewlett Packard Enterprise is making the following Smartoptics SKUs available via HPE Complete:

Description

SKU

Hardware SKUs

100Gbps DWDM QSFP28 transceivers

Smartoptics D921 103G DWDM SM DDM QSFP28 Module	R0P24A
Smartoptics D922 103G DWDM SM DDM QSFP28 Module	R0P25A
Smartoptics D923 103G DWDM SM DDM QSFP28 Module	R0P26A
Smartoptics D924 103G DWDM SM DDM QSFP28 Module	R0P27A
Smartoptics D925 103G DWDM SM DDM QSFP28 Module	R0P28A
Smartoptics D926 103G DWDM SM DDM QSFP28 Module	R0P29A
Smartoptics D927 103G DWDM SM DDM QSFP28 Module	R0P30A
Smartoptics D928 103G DWDM SM DDM QSFP28 Module	R0P31A
Smartoptics D945 103Gb DWDM SM DDM QSFP28 Transceiver	R6L35A
Smartoptics D946 103Gb DWDM SM DDM QSFP28 Transceiver	R6L36A
Smartoptics D947 103Gb DWDM SM DDM QSFP28 Transceiver	R6L37A
Smartoptics D948 103Gb DWDM SM DDM QSFP28 Transceiver	R6L38A
Smartoptics D949 103Gb DWDM SM DDM QSFP28 Transceiver	R6L39A
Smartoptics D950 103Gb DWDM SM DDM QSFP28 Transceiver	R6L40A
Smartoptics D951 103Gb DWDM SM DDM QSFP28 Transceiver	R6L42A

100Gbps QSFP28 transceivers

Smartoptics 100GbE 1310nm SM LC DDM 10km QSFP28 Transceiver	R6L43A
Smartoptics 100GbE 850nm MM MPO OM4 DDM 100m QSFP28 Transceiver	R6L44A

16/8/4Gbps Fibre Channel SFP+ transceivers

Smartoptics 16/8/4G FC/FICON 850nm MM DDM 4dB 35m/OM2 100m/OM3 125m/OM4 SFP+ Module	R0P17A
Smartoptics 16/8/4G FC/FICON 1310nm SM DDM 8.9dB 10km SFP+ Module	R0P18A



QuickSpecs

Smartoptics

Overview

Description

SKU

16Gbps DWDM Fibre Channel SFP+ transceivers

Smartoptics 16G DWDM 1560.61nm 14dB 40km SFP+ Module	P9N35A
Smartoptics 16G DWDM 1559.79nm 14dB 40km SFP+ Module	P9N36A
Smartoptics 16G DWDM 1558.98nm 14dB 40km SFP+ Module	P9N37A
Smartoptics 16G DWDM 1558.17nm 14dB 40km SFP+ Module	P9N38A
Smartoptics 16G DWDM 1557.36nm 14dB 40km SFP+ Module	P9N39A
Smartoptics 16G DWDM 1556.55nm 14dB 40km SFP+ Module	P9N40A
Smartoptics 16G DWDM 1555.75nm 14dB 40km SFP+ Module	P9N41A
Smartoptics 16G DWDM 1554.94nm 14dB 40km SFP+ Module	P9N42A
Smartoptics 16G DWDM 1554.13nm 14dB 40km SFP+ Module	P9N43A
Smartoptics 16G DWDM 1555.33nm 14dB 40km SFP+ Module	P9N44A
Smartoptics 16G DWDM 1552.52nm 14dB 40km SFP+ Module	P9N45A
Smartoptics 16G DWDM 1551.72nm 14dB 40km SFP+ Module	P9N46A
Smartoptics 16G DWDM 1550.92nm 14dB 40km SFP+ Module	P9N47A
Smartoptics 16G DWDM 1550.12nm 14dB 40km SFP+ Module	P9N48A
Smartoptics 16G DWDM 1549.32nm 14dB 40km SFP+ Module	P9N49A
Smartoptics 16G DWDM 1548.51nm 14dB 40km SFP+ Module	P9N50A
Smartoptics 16G DWDM 1547.72nm 14dB 40km SFP+ Module	P9M97A
Smartoptics 16G DWDM 1546.92nm 14dB 40km SFP+ Module	P9M98A
Smartoptics 16G DWDM 1546.12nm 14dB 40km SFP+ Module	P9M99A
Smartoptics 16G DWDM 1545.32nm 14dB 40km SFP+ Module	P9N00A
Smartoptics 16G DWDM 1544.53nm 14dB 40km SFP+ Module	P9N01A
Smartoptics 16G DWDM 1537.40nm 14db 40km SFP+ Module	Q0G00A
Smartoptics 16G DWDM 1536.61nm 14db 40km SFP+ Module	Q0G01A
Smartoptics 16G DWDM 1535.82nm 14db 40km SFP+ Module	Q0G02A
Smartoptics 16G DWDM 1535.04nm 14db 40km SFP+ Module	Q0G03A
Smartoptics 16G DWDM 1534.25nm 14db 40km SFP+ Module	Q0G04A
Smartoptics 16G DWDM 1533.47nm 14db 40km SFP+ Module	Q0G05A
Smartoptics 16G DWDM 1532.68nm 14db 40km SFP+ Module	Q0G06A
Smartoptics 16G DWDM 1531.90nm 14db 40km SFP+ Module	Q0G07A
Smartoptics 16G DWDM 1531.12nm 14db 40km SFP+ Module	Q0G08A
Smartoptics 16G DWDM 1530.33nm 14db 40km SFP+ Module	Q0G09A
Smartoptics 16G DWDM 1529.55nm 14db 40km SFP+ Module	Q0G10A
Smartoptics 16G DWDM 1528.77nm 14db 40km SFP+ Module	Q0G11A
Smartoptics 16G DWDM 1543.73nm 14db 40km SFP+ Module	Q0G32A
Smartoptics 16G DWDM 1542.94nm 14db 40km SFP+ Module	Q0G33A
Smartoptics 16G DWDM 1542.14nm 14db 40km SFP+ Module	Q0G34A
Smartoptics 16G DWDM 1541.35nm 14db 40km SFP+ Module	Q0G35A
Smartoptics 16G DWDM 1540.56nm 14db 40km SFP+ Module	Q0G36A
Smartoptics 16G DWDM 1539.77nm 14db 40km SFP+ Module	Q0G37A
Smartoptics 16G DWDM 1538.98nm 14db 40km SFP+ Module	Q0G38A
Smartoptics 16G DWDM 1538.19nm 14db 40km SFP+ Module	Q0G39A

Overview

Description

SKU

Smartoptics D9210 16/8/4Gb FC/FICON DWDM 1560.61nm SM DDM 13dB 40km SFP+ Transceiver	R6K95A
Smartoptics D9220 16/8/4Gb FC/FICON DWDM 1559.79nm SM DDM 13dB 40km SFP+ Transceiver	R6K96A
Smartoptics D9230 16/8/4Gb FC/FICON DWDM 1558.98nm SM DDM 13dB 40km SFP+ Transceiver	R6K97A
Smartoptics D9240 16/8/4Gb FC/FICON DWDM 1558.17nm SM DDM 13dB 40km SFP+ Transceiver	R6K98A
Smartoptics D9250 16/8/4Gb FC/FICON DWDM 1557.36nm SM DDM 13dB 40km SFP+ Transceiver	R6K99A
Smartoptics D9260 16/8/4Gb FC/FICON DWDM 1556.55nm SM DDM 13dB 40km SFP+ Transceiver	R6L00A
Smartoptics D9270 16/8/4Gb FC/FICON DWDM 1555.75nm SM DDM 13dB 40km SFP+ Transceiver	R6L01A
Smartoptics D9280 16/8/4Gb FC/FICON DWDM 1554.94nm SM DDM 13dB 40km SFP+ Transceiver	R6L02A
Smartoptics D9290 16/8/4Gb FC/FICON DWDM 1554.13nm SM DDM 13dB 40km SFP+ Transceiver	R6L03A
Smartoptics D9300 16/8/4Gb FC/FICON DWDM 1553.33nm SM DDM 13dB 40km SFP+ Transceiver	R6L04A
Smartoptics D9310 16/8/4Gb FC/FICON DWDM 1552.52nm SM DDM 13dB 40km SFP+ Transceiver	R6L05A
Smartoptics D9320 16/8/4Gb FC/FICON DWDM 1551.72nm SM DDM 13dB 40km SFP+ Transceiver	R6L06A
Smartoptics D9330 16/8/4Gb FC/FICON DWDM 1550.92nm SM DDM 13dB 40km SFP+ Transceiver	R6L07A
Smartoptics D9340 16/8/4Gb FC/FICON DWDM 1550.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L08A
Smartoptics D9350 16/8/4Gb FC/FICON DWDM 1549.32nm SM DDM 13dB 40km SFP+ Transceiver	R6L09A
Smartoptics D9360 16/8/4Gb FC/FICON DWDM 1548.51nm SM DDM 13dB 40km SFP+ Transceiver	R6L10A
Smartoptics D9370 16/8/4Gb FC/FICON DWDM 1547.72nm SM DDM 13dB 40km SFP+ Transceiver	R6L11A
Smartoptics D9380 16/8/4Gb FC/FICON DWDM 1546.92nm SM DDM 13dB 40km SFP+ Transceiver	R6L12A
Smartoptics D9390 16/8/4Gb FC/FICON DWDM 1546.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L13A
Smartoptics D9400 16/8/4Gb FC/FICON DWDM 1545.32nm SM DDM 13dB 40km SFP+ Transceiver	R6L14A
Smartoptics D9410 16/8/4Gb FC/FICON DWDM 1544.53nm SM DDM 13dB 40km SFP+ Transceiver	R6L15A
Smartoptics D9420 16/8/4Gb FC/FICON DWDM 1543.73nm SM DDM 13dB 40km SFP+ Transceiver	R6L16A
Smartoptics D9430 16/8/4Gb FC/FICON DWDM 1542.94nm SM DDM 13dB 40km SFP+ Transceiver	R6L17A
Smartoptics D9440 16/8/4Gb FC/FICON DWDM 1542.14nm SM DDM 13dB 40km SFP+ Transceiver	R6L18A
Smartoptics D9450 16/8/4Gb FC/FICON DWDM 1541.35nm SM DDM 13dB 40km SFP+ Transceiver	R6L19A
Smartoptics D9460 16/8/4Gb FC/FICON DWDM 1540.56nm SM DDM 13dB 40km SFP+ Transceiver	R6L20A
Smartoptics D9470 16/8/4Gb FC/FICON DWDM 1539.77nm SM DDM 13dB 40km SFP+ Transceiver	R6L21A
Smartoptics D9480 16/8/4Gb FC/FICON DWDM 1538.98nm SM DDM 13dB 40km SFP+ Transceiver	R6L22A
Smartoptics D9490 16/8/4Gb FC/FICON DWDM 1538.19nm SM DDM 13dB 40km SFP+ Transceiver	R6L23A
Smartoptics D9500 16/8/4Gb FC/FICON DWDM 1537.40nm SM DDM 13dB 40km SFP+ Transceiver	R6L24A
Smartoptics D9510 16/8/4Gb FC/FICON DWDM 1536.61nm SM DDM 13dB 40km SFP+ Transceiver	R6L25A
Smartoptics D9520 16/8/4Gb FC/FICON DWDM 1535.82nm SM DDM 13dB 40km SFP+ Transceiver	R6L26A
Smartoptics D9530 16/8/4Gb FC/FICON DWDM 1535.04nm SM DDM 13dB 40km SFP+ Transceiver	R6L27A
Smartoptics D9540 16/8/4Gb FC/FICON DWDM 1534.25nm SM DDM 13dB 40km SFP+ Transceiver	R6L28A
Smartoptics D9550 16/8/4Gb FC/FICON DWDM 1533.47nm SM DDM 13dB 40km SFP+ Transceiver	R6L29A
Smartoptics D9560 16/8/4Gb FC/FICON DWDM 1532.68nm SM DDM 13dB 40km SFP+ Transceiver	R6L30A
Smartoptics D9570 16/8/4Gb FC/FICON DWDM 1531.90nm SM DDM 13dB 40km SFP+ Transceiver	R6L31A
Smartoptics D9580 16/8/4Gb FC/FICON DWDM 1531.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L32A
Smartoptics D9590 16/8/4Gb FC/FICON DWDM 1530.33nm SM DDM 13dB 40km SFP+ Transceiver	R6L33A
Smartoptics D9600 16/8/4Gb FC/FICON DWDM 1529.55nm SM DDM 13dB 40km SFP+ Transceiver	R6L34A



Overview

Description	SKU
10Gbps DWDM Fibre Channel SFP+ transceivers	
Smartoptics D9210 10G ZR DWDM 100GHz 1560.61nm 23dB 80km SFP+ Module	Q2S34A
Smartoptics D9220 10G ZR DWDM 100GHz 1559.79nm 23dB 80km SFP+ Module	Q2S35A
Smartoptics D9230 10G ZR DWDM 100GHz 1558.98nm 23dB 80km SFP+ Module	Q2S36A
Smartoptics D9240 10G ZR DWDM 100GHz 1558.17nm 23dB 80km SFP+ Module	Q9D24A
Smartoptics D9250 10G ZR DWDM 100GHz 1557.36nm 23dB 80km SFP+ Module	Q9D25A
Smartoptics D9260 10G ZR DWDM 100GHz 1556.55nm 23dB 80km SFP+ Module	Q9D26A
Smartoptics D9270 10G ZR DWDM 100GHz 1555.75nm 23dB 80km SFP+ Module	Q9D27A
Smartoptics D9280 10G ZR DWDM 100GHz 1554.94nm 23dB 80km SFP+ Module	Q9D28A
Smartoptics D9210 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L46A
Smartoptics D9220 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L47A
Smartoptics D9230 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L48A
Smartoptics D9240 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L49A
Smartoptics D9250 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L50A
Smartoptics D9260 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L51A
Smartoptics D9270 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L52A
Smartoptics D9280 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L53A
Smartoptics 10GBASE-ZR DWDM 80km SFP+ Transceiver	R6L45A
Smartoptics 10G ZR MR 9.95-11.1 G C Tunable DWDM C-Band 50GHz 2.0W 22db 80km SFP+ Module	R0P19A
Smartoptics 10G LR 1310nm SM DDM 6.2dB 10km SFP+ Module	R0P32A
Smartoptics 10G SR 850nm MM DDM 5.1dB 300m OM3 SFP+ Module	R0P33A
8Gbps DWDM Fibre Channel SFP+ transceivers	
Smartoptics 8G DWDM 1560.61nm 14dB 40km SFP+ Module	P9N10A
Smartoptics 8G DWDM 1559.79nm 14dB 40km SFP+ Module	P9N11A
Smartoptics 8G DWDM 1558.98nm 14dB 40km SFP+ Module	P9N12A
Smartoptics 8G DWDM 1558.17nm 14dB 40km SFP+ Module	P9N13A
Smartoptics 8G DWDM 1557.36nm 14dB 40km SFP+ Module	P9N14A
Smartoptics 8G DWDM 1556.55nm 14dB 40km SFP+ Module	P9N15A
Smartoptics 8G DWDM 1555.75nm 14dB 40km SFP+ Module	P9N16A
Smartoptics 8G DWDM 1554.94nm 14dB 40km SFP+ Module	P9N17A
Smartoptics 8G DWDM 1554.13nm 14dB 40km SFP+ Module	P9N18A
Smartoptics 8G DWDM 1555.33nm 14dB 40km SFP+ Module	P9N19A
Smartoptics 8G DWDM 1552.52nm 14dB 40km SFP+ Module	P9N20A
Smartoptics 8G DWDM 1551.72nm 14dB 40km SFP+ Module	P9N21A
Smartoptics 8G DWDM 1550.92nm 14dB 40km SFP+ Module	P9N22A
Smartoptics 8G DWDM 1550.12nm 14dB 40km SFP+ Module	P9N23A
Smartoptics 8G DWDM 1549.32nm 14dB 40km SFP+ Module	P9N24A
Smartoptics 8G DWDM 1548.51nm 14dB 40km SFP+ Module	P9N25A
Smartoptics D9210 8/4/2/1Gb FC/FICON DWDM 1560.61nm SM DDM 23dB 80km SFP+ Transceiver	R6K87A
Smartoptics D9220 8/4/2/1Gb FC/FICON DWDM 1559.79nm SM DDM 23dB 80km SFP+ Transceiver	R6K88A
Smartoptics D9230 8/4/2/1Gb FC/FICON DWDM 1558.98nm SM DDM 23dB 80km SFP+ Transceiver	R6K89A
Smartoptics D9240 8/4/2/1Gb FC/FICON DWDM 1558.17nm SM DDM 23dB 80km SFP+ Transceiver	R6K90A

QuickSpecs

Smartoptics

Overview

Description

Smartoptics D9250 8/4/2/1Gb FC/FICON DWDM 1557.36nm SM DDM 23dB 80km SFP+ Transceiver
 Smartoptics D9260 8/4/2/1Gb FC/FICON DWDM 1556.55nm SM DDM 23dB 80km SFP+ Transceiver
 Smartoptics D9270 8/4/2/1Gb FC/FICON DWDM 1555.75nm SM DDM 23dB 80km SFP+ Transceiver
 Smartoptics D9280 8/4/2/1Gb FC/FICON DWDM 1554.94nm SM DDM 23dB 80km SFP+ Transceiver

SKU

R6K91A
 R6K92A
 R6K93A
 R6K94A

Passive DWDM Multiplexers

Smartoptics 40-channel DWDM MUX/DEMUX 7.5dB 100GHz Device
 Smartoptics 16-channel DWDM MUX/DEMUX 5.3dB 100GHz Device
 Smartoptics 8-channel DWDM MUX/DEMUX 3.5dB Device
 Smartoptics 8-channel DWDM MUX/DEMUX 4.5dB Device
 Smartoptics 40-channel DWDM MUX/DEMUX 11.5db 100GHz Device
 Smartoptics 32-channel DWDM MUX/DEMUX 5.8db 100GHz Device

P9N32A
 P9N33A
 P9M83A
 P9N34A
 Q0G40A
 Q0G41A

Intelligent DWDM Multiplexers

Smartoptics 8-channel OSC/PAM4 0-70km Device
 Smartoptics 40-channel D921-D960 OSC/PAM4 0-80km Device
 Smartoptics 40-channel D921-D960 OSC/PAM4 0-40km NRZ Device
 Smartoptics 40-channel D921-D960 OSC/PAM4 15-55km NRZ Device
 Smartoptics 40-channel D921-D960 OSC/PAM4 40-80km Device
 Smartoptics 16-channel Expansion Port EDFA 80km Device
 Smartoptics M-3817-921936 16-channel DWDM MUX/DEMUX 4.6db 100GHz Device
 Smartoptics M-3809-921928 8-channel DWDM MUX/DEMUX 4.2db 100GHz Device
 Smartoptics M-3809-929936 8-channel DWDM MUX/DEMUX 4.2db 100GHz Device
 Smartoptics M-Series AC Power Supply Unit
 Smartoptics M-Series DC Power Supply Unit
 Smartoptics C13-C14 Power Cable
 Smartoptics C13 (US) Power Cable
 Smartoptics C13 (EU) Power Cable
 Smartoptics C13 (UK) Power Cable
 Smartoptics C13 (AU) Power Cable
 Smartoptics C13 (EU) Right Angle Power Cable
 Smartoptics 16-channel DWDM MUX/DEMUX 5.0db Pass Thru Device
 Smartoptics 16-channel DWDM MUX/DEMUX Transmitter EDFA 40km Device
 Smartoptics 16-channel DWDM MUX/DEMUX Receiver EDFA Device
 Smartoptics 16-channel DWDM MUX/DEMUX Receiver EDFA 40km Device
 Smartoptics 16-channel DWDM MUX/DEMUX Transmitter/Receiver EDFA 80km Device
 Smartoptics DCP-2 1U 2-slot Chassis with Management Board and Fan Units
 Smartoptics DCP-101 1-channel 100Gbps Transponder Device
 Smartoptics DCP-1610 10-channel 1G-16Gbps SFP+ to SFP+ PM Transponder
 Smartoptics DCP-1610 Firmware and Crypto LTU
 Smartoptics 103Gbps DWDM 25db CFP Module
 Smartoptics DCP-2-101 AC Power Supply
 Smartoptics 8x40/100Gb Transponder for QSFP28 to QSFP28 Device

R0P20A
 R0P21A
 R0P22A
 R0P23A
 R6L41A
 P9M85A
 Q0F90A
 Q0F91A
 Q0F92A
 P9M86A
 P9M87A
 P9M88A
 P9M89A
 P9M90A
 P9M91A
 P9M92A
 P9M93A
 Q0G43A
 Q0G45A
 Q0G46A
 Q0G47A
 Q0G49A
 Q0G51A
 Q0G52A
 Q2S31A
 Q9U88A
 Q0G54A
 Q0G53A
 R6L94A

Overview

Description

SKU

8Gbps CWDM Fibre Channel SFP+ transceivers

Smartoptics 8G CWDM 1470nm 23dB 70km SFP+ Module	P9N02A
Smartoptics 8G CWDM 1490nm 23dB 70km SFP+ Module	P9N03A
Smartoptics 8G CWDM 1510nm 23dB 70km SFP+ Module	P9N04A
Smartoptics 8G CWDM 1530nm 23dB 70km SFP+ Module	P9N05A
Smartoptics 8G CWDM 1550nm 23dB 70km SFP+ Module	P9N06A
Smartoptics 8G CWDM 1570nm 23dB 70km SFP+ Module	P9N07A
Smartoptics 8G CWDM 1590nm 23dB 70km SFP+ Module	P9N08A
Smartoptics 8G CWDM 1610nm 23dB 70km SFP+ Module	P9N09A

32Gbps DWDM Fibre Channel SFP+ transceivers

Smartoptics D210 32/16Gb DWDM 10km SFP28 Transceiver	R6L54A
Smartoptics D220 32/16Gb DWDM 10km SFP28 Transceiver	R6L55A
Smartoptics D230 32/16Gb DWDM 10km SFP28 Transceiver	R6L56A
Smartoptics D240 32/16Gb DWDM 10km SFP28 Transceiver	R6L57A
Smartoptics D250 32/16Gb DWDM 10km SFP28 Transceiver	R6L58A
Smartoptics D260 32/16Gb DWDM 10km SFP28 Transceiver	R6L59A
Smartoptics D270 32/16Gb DWDM 10km SFP28 Transceiver	R6L60A
Smartoptics D280 32/16Gb DWDM 10km SFP28 Transceiver	R6L61A
Smartoptics D290 32/16Gb DWDM 10km SFP28 Transceiver	R6L62A
Smartoptics D300 32/16Gb DWDM 10km SFP28 Transceiver	R6L63A
Smartoptics D310 32/16Gb DWDM 10km SFP28 Transceiver	R6L64A
Smartoptics D320 32/16Gb DWDM 10km SFP28 Transceiver	R6L65A
Smartoptics D330 32/16Gb DWDM 10km SFP28 Transceiver	R6L66A
Smartoptics D340 32/16Gb DWDM 10km SFP28 Transceiver	R6L67A
Smartoptics D350 32/16Gb DWDM 10km SFP28 Transceiver	R6L68A
Smartoptics D360 32/16Gb DWDM 10km SFP28 Transceiver	R6L69A
Smartoptics D370 32/16Gb DWDM 10km SFP28 Transceiver	R6L70A
Smartoptics D380 32/16Gb DWDM 10km SFP28 Transceiver	R6L71A
Smartoptics D390 32/16Gb DWDM 10km SFP28 Transceiver	R6L72A
Smartoptics D400 32/16Gb DWDM 10km SFP28 Transceiver	R6L73A
Smartoptics D410 32/16Gb DWDM 10km SFP28 Transceiver	R6L74A
Smartoptics D420 32/16Gb DWDM 10km SFP28 Transceiver	R6L75A
Smartoptics D430 32/16Gb DWDM 10km SFP28 Transceiver	R6L76A
Smartoptics D440 32/16Gb DWDM 10km SFP28 Transceiver	R6L77A
Smartoptics D450 32/16Gb DWDM 10km SFP28 Transceiver	R6L78A
Smartoptics D460 32/16Gb DWDM 10km SFP28 Transceiver	R6L79A
Smartoptics D470 32/16Gb DWDM 10km SFP28 Transceiver	R6L80A
Smartoptics D480 32/16Gb DWDM 10km SFP28 Transceiver	R6L81A
Smartoptics D490 32/16Gb DWDM 10km SFP28 Transceiver	R6L82A
Smartoptics D500 32/16Gb DWDM 10km SFP28 Transceiver	R6L83A
Smartoptics D510 32/16Gb DWDM 10km SFP28 Transceiver	R6L84A
Smartoptics D520 32/16Gb DWDM 10km SFP28 Transceiver	R6L85A



QuickSpecs

Smartoptics

Overview

Description

Smartoptics D530 32/16Gb DWDM 10km SFP28 Transceiver	R6L86A
Smartoptics D540 32/16Gb DWDM 10km SFP28 Transceiver	R6L87A
Smartoptics D550 32/16Gb DWDM 10km SFP28 Transceiver	R6L88A
Smartoptics D560 32/16Gb DWDM 10km SFP28 Transceiver	R6L89A
Smartoptics D570 32/16Gb DWDM 10km SFP28 Transceiver	R6L90A
Smartoptics D580 32/16Gb DWDM 10km SFP28 Transceiver	R6L91A
Smartoptics D590 32/16Gb DWDM 10km SFP28 Transceiver	R6L92A
Smartoptics D600 32/16Gb DWDM 10km SFP28 Transceiver	R6L93A

Passive CWDM Multiplexers

Smartoptics 8-channel CWDM MUX/DEMUX 2.8dB Device	P9N31A
Smartoptics Adjustable Mounting Bracket for T Series Module	Q0F34A
Smartoptics Adjustable Mounting Bracket for M Series Module	Q0F35A

Miscellaneous

Smartoptics 1m Duplex Single Mode Fiber Jumper Cable	P9M94A
Smartoptics 3m Duplex Single Mode Fiber Jumper Cable	P9M95A
Smartoptics 10m Duplex Single Mode Fiber Jumper Cable	P9M96A
Smartoptics 100GBASE-SR4 850nm QSFP+ Module	Q0G55A
Smartoptics MTP8 to 8xLC Fan-out Multi-mode OM4 3m Aqua Cable	R6L95A

Service SKUs

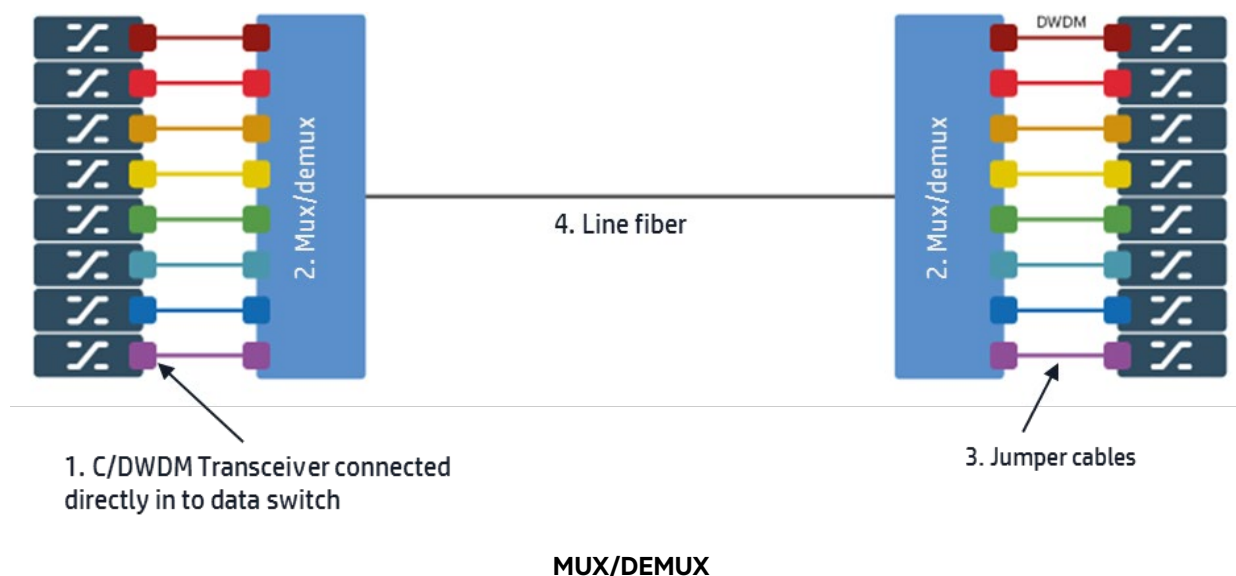
Smartoptics Advanced Product Replacement APR 1 Service	R5Z61A
Smartoptics Advanced Product Replacement APR 2 Service	R5Z62A
Smartoptics Advanced Product Replacement APR 3 Service	R5Z63A
Smartoptics Advanced Product Replacement APR 4 Service	R5Z64A
Smartoptics Advanced Product Replacement APR 5 Service	R5Z65A
Smartoptics Extended Warranty EWS 1 Service	R5Z66A
Smartoptics Extended Warranty EWS 2 Service	R5Z67A
Smartoptics Extended Warranty EWS 3 Service	R5Z68A
Smartoptics Extended Warranty EWS 4 Service	R5Z69A
Smartoptics Extended Warranty EWS 5 Service	R5Z70A
Smartoptics General Service	R5Z71A



Standard Features

Embedded xWDM networking

The ability to synchronously replicate sensitive and important data over a dark fiber network is key to the successful implementation of a remote back up or disaster recovery policy. Embedded xWDM (a technology that allows a vast quantity of data and storage traffic to be transported simultaneously over a fiber network) offers the most simple and reliable method to achieve this. Just four key elements are required for a successful implementation:



Four key elements are required for embedded xWDM networking

- **DWDM Transceiver**
A wavelength specific optical transceiver (SFP, SFP+, XFP, etc.) placed directly in to the data or storage switch. Up to 40 DWDM wavelengths are available and can all be used as independent traffic channels. Each channel can be any variety of 100/10/1G Ethernet and 32/16/8G Fibre Channel. There are no restrictions.
- **Mux/demux unit**
A "Patch panel" at the heart of a xWDM network that collects all of these individual traffic types together on to a single common output. Each of the 40 DWDM wavelength channels are combined together in a multiplexer so that it can be transported simultaneously over a single dark fiber network.
- **Jumper Cable**
The transceivers and multiplexer ports are labelled with the discrete wavelength channels. The jumper cable, usually an LC-LC patch cable connects between the transceiver and the corresponding channel on the multiplexer. They are colored in the diagram to highlight the different colored wavelength channels.
- **Line fiber**
The "dark fiber" linking the sites or data centers. Without access to a dark fiber there is no opportunity to build a dedicated fiber network.

Standard Features

Architectures

Passive embedded DWDM networking

Embedded solutions are based on a passive C/DWDM transceiver embedded in to data switch and the output connecting through a jumper cable to a C/DWDM multiplexer. With a passive multiplexer, up to 40 independent channels can be connected over a dark fiber. In this way fiber operating expenses can be drastically reduced for communication up to 25 kilometers.



- Unmanaged xWDM connectivity
- 40 DWDM channels 10 km 32GFC/ 25km 16GFC / 80km 10GE/8GFC
- Simple and cost effective
- Ultimate low power data center networking

Standard Features

Ethernet and Fibre Channel extension with OSI Layer 1 Encryption

The passive and managed embedded xWDM networking solutions described above are easily complemented by a transponder module, if the optics can not be placed embedded in the switches. The transponder module has the same modular 1U form factor as any other data equipment and can provide additional functionality, such as encryption, for each individual channel.



- 10 channel transponder module for Ethernet and Fibre Channel wide area extension
- Optional Layer 1 encryption (AES-256G-CM)
- Plug and play operation
- Interoperable with embedded DWDM networking

Key features and benefits

- Modular, ½ width, 1U, ten channel transponder
- 1/10 G Ethernet and 8/16G Fibre Channel support
- Low power consumption
- Optional Layer 1 encryption (AES-256-GCM)
- Comprehensive client and line side performance monitoring
- Plug and play operation

Standard Features

Cost efficient 16/32G FC and 100G transport, using embedded DWDM optics

Developed to support low cost 100G traffic and 16/32G FC, the DCP-M has all the features usually reserved for the more complex DWDM platforms fully integrated in to a simple plug and play 1U module. The DCP-M provides everything required for an open line networking system.



- Open Line System extends the distance between sites
- Contains all
- Automated – plug and play

Key features and benefits

- Embedded DWDM is extremely simple and versatile
- Perfect alternative to traditional DWDM platforms. (Complex and expensive)
- Low power consumption
- Attractive pricing
- Any combination of 1/4/8/16/40 and 100G traffic (DCP-M40-PAM4-ER, DCP-M40-PAM4-ER+, DCP-M40-PAM4-ZR)
- Optimized for 40/100G transport (DCP-M8-PAM4)

Service and Support

Service and Support for the Smartoptics product is provided directly by Smartoptics. When HPE's customer requires support for Smartoptics, HPE's customer can contact Smartoptics at HPE.support@Smartoptics.com or call the following numbers,

- Technical support US, Canada and South America + 1 612 807 1803
- Technical support, Rest of world +47 214 174 00

Smartoptics licensors service delivery organization will be responsible for responding with a call, assigning a Severity Level to the call, and determining the service Severity Level acceptable to HPE's customer. The support request will be processed by Smartoptics in accordance with the Severity Level agreed upon.

Warranty Hardware

SMARTOPTICS undertakes to repair or replace equipment or remedy Services or provide a credit where SMARTOPTICS determines that there is a material defect in materials or workmanship covered by the terms of this warranty. SMARTOPTICS shall not be liable under this warranty, unless it receives written notice of the defect, which notice must be given direct to SMARTOPTICS (not through a dealer or other third party) within the relevant warranty period set out below and within 14 days of the date the Customer discovered, or ought to have discovered, the defect. Prior to any return, Customer must provide any proof of warranty eligibility requested by SMARTOPTICS and receive a written return authorization. Upon receipt of the return authorization, the Customer shall return, at its own cost and risk and within 30 days, the relevant Equipment, properly packed, to a service facility designated by SMARTOPTICS. SMARTOPTICS reserves the right to return Equipment at Customer's expense if return authorization was not issued prior to return. If the repaired or replacement Equipment is to be shipped to a location which is not in the same country as the designated service facility, the cost and risk, including an duties and taxes, of shipment are for the Customer. All other costs are for SMARTOPTICS unless the claim is found to be outside the scope or duration of the warranty, when costs of transportation, investigation and repair are for the Customer.

Warranty Period

Warranty periods are as follows, commencing on the date of delivery:

- Three years for SMARTOPTICS optical transceiver products (with the exception of CFP transceivers which is one year).
- One year for all other SMARTOPTICS hardware products than optical transceiver products
- Ninety days for Software unless licensed separately, in which case the applicable license terms apply.
- Ninety days for SMARTOPTICS parts, assemblies and supplies to support hardware products previously sold to Customers, where the standard warranty period has expired.
- Ninety days for Services.

Repairs and replacements shall be carried out in accordance with the reasonable procedures advised to Customer by SMARTOPTICS. Hardware and Software products manufactured by third parties that are sold by SMARTOPTICS as components of Equipment or otherwise will carry the original manufacturer's warranty only to the extent rights thereunder are available to the Customer. Warranty support for SMARTOPTICS Software constituting or included in any Equipment or Services is limited to the version or release of the Software currently being provided by SMARTOPTICS to the Customer at the time service is requested, and the next version or release of the Software. The benefit of this SMARTOPTIC warranty may not be assigned or transferred in whole or in part under any circumstances. Repaired and replacement Equipment shall have the benefit of a warranty on the terms of this SMARTOPTICS warranty for the unexpired period of the original SMARTOPTICS warranty or 3 months from provision of the repair or replacement, whichever is longer. The SMARTOPTICS warranty set out above represents the sole remedy of SMARTOPTICS in respect of defective Equipment or Services and SMARTOPTICS has no other obligation to the Customer, and the Customer waives any rights it may otherwise be entitled to, by virtue of any warranties or conditions expressed or implied by operation of law or otherwise. No statement or recommendation made or assistance given by SMARTOPTICS to the Customer in connection with the Equipment or Services shall constitute or be construed as a representation or warranty of any kind. All product demonstrations are for illustrative purposes only. SMARTOPTICS reserves the right to discontinue or modify its list of products without notice to the Customer. If SMARTOPTICS replaces Equipment under the SMARTOPTICS warranty, SMARTOPTICS may substitute the Equipment with products determined by SMARTOPTICS to be of comparable quality and functionality in the event the original Equipment purchased is no longer available. In no event will SMARTOPTICS be liable to the Customer as a result of any discontinuance or modification of any product, or variance of any replaced product from Equipment supplied under a Contract.

Return Policy for Resellers

Stocking of Smartoptics products are not recommended. Please purchase accurate quantity required to fulfil the customer order.



Configuration Information

Configuration

Smartoptics offers 3 customers options.

- **Option 1:** 100/32/16/10/8G FC embedded DWDM Solution Select FC Transceivers (8, 10, 16 or 100 Gig)
- **Option 2:** 8G FC CWDM Solution
- **Option 3:** Custom 10/100G Ethernet DWDM Solution with possibility to encrypt 1/8/10/16G traffic

Option 1

Start with Step 1.0 (16G), 1.1 (10G), 1.2 (8G), 1.3 (100G) 1.4 (16/8/4G) or 1.5 (32G)

Step 1.0

16G FC Optics Transceivers

Select 16G FC Transceivers, select based on wave length desired (choose amongst (40) 14db or (40) 13db defined wave lengths from 1528.77 to 1560.61 nm or from a custom 14db wave lengths) 16G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes a PIN diode and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Descriptions

Descriptions	SKU
Smartoptics 16G DWDM 1528.77nm 14db 40km SFP+ Module	Q0G11A
Smartoptics 16G DWDM 1529.55nm 14db 40km SFP+ Module	Q0G10A
Smartoptics 16G DWDM 1530.33nm 14db 40km SFP+ Module	Q0G09A
Smartoptics 16G DWDM 1531.12nm 14db 40km SFP+ Module	Q0G08A
Smartoptics 16G DWDM 1531.90nm 14db 40km SFP+ Module	Q0G07A
Smartoptics 16G DWDM 1532.68nm 14db 40km SFP+ Module	Q0G06A
Smartoptics 16G DWDM 1533.47nm 14db 40km SFP+ Module	Q0G05A
Smartoptics 16G DWDM 1534.25nm 14db 40km SFP+ Module	Q0G04A
Smartoptics 16G DWDM 1535.04nm 14db 40km SFP+ Module	Q0G03A
Smartoptics 16G DWDM 1535.82nm 14db 40km SFP+ Module	Q0G02A
Smartoptics 16G DWDM 1536.61nm 14db 40km SFP+ Module	Q0G01A
Smartoptics 16G DWDM 1537.40nm 14db 40km SFP+ Module	Q0G00A
Smartoptics 16G DWDM 1538.19nm 14db 40km SFP+ Module	Q0G39A
Smartoptics 16G DWDM 1538.98nm 14db 40km SFP+ Module	Q0G38A
Smartoptics 16G DWDM 1539.77nm 14db 40km SFP+ Module	Q0G37A
Smartoptics 16G DWDM 1540.56nm 14db 40km SFP+ Module	Q0G36A
Smartoptics 16G DWDM 1541.35nm 14db 40km SFP+ Module	Q0G35A
Smartoptics 16G DWDM 1542.14nm 14db 40km SFP+ Module	Q0G34A
Smartoptics 16G DWDM 1542.94nm 14db 40km SFP+ Module	Q0G33A
Smartoptics 16G DWDM 1543.73nm 14db 40km SFP+ Module	Q0G32A
Smartoptics 16G DWDM 1544.53nm 14dB 40km SFP+ Module	P9N01A
Smartoptics 16G DWDM 1545.32nm 14dB 40km SFP+ Module	P9N00A
Smartoptics 16G DWDM 1546.12nm 14dB 40km SFP+ Module	P9M99A
Smartoptics 16G DWDM 1546.92nm 14dB 40km SFP+ Module	P9M98A
Smartoptics 16G DWDM 1547.72nm 14dB 40km SFP+ Module	P9M97A
Smartoptics 16G DWDM 1548.51nm 14dB 40km SFP+ Module	P9N50A
Smartoptics 16G DWDM 1549.32nm 14dB 40km SFP+ Module	P9N49A
Smartoptics 16G DWDM 1550.12nm 14dB 40km SFP+ Module	P9N48A
Smartoptics 16G DWDM 1550.92nm 14dB 40km SFP+ Module	P9N47A

Configuration Information

Descriptions

SKU

Smartoptics 16G DWDM 1551.72nm 14dB 40km SFP+ Module	P9N46A
Smartoptics 16G DWDM 1552.52nm 14dB 40km SFP+ Module	P9N45A
Smartoptics 16G DWDM 1554.13nm 14dB 40km SFP+ Module	P9N43A
Smartoptics 16G DWDM 1554.94nm 14dB 40km SFP+ Module	P9N42A
Smartoptics 16G DWDM 1555.33nm 14dB 40km SFP+ Module	P9N44A
Smartoptics 16G DWDM 1555.75nm 14dB 40km SFP+ Module	P9N41A
Smartoptics 16G DWDM 1556.55nm 14dB 40km SFP+ Module	P9N40A
Smartoptics 16G DWDM 1557.36nm 14dB 40km SFP+ Module	P9N39A
Smartoptics 16G DWDM 1558.17nm 14dB 40km SFP+ Module	P9N38A
Smartoptics 16G DWDM 1558.98nm 14dB 40km SFP+ Module	P9N37A
Smartoptics 16G DWDM 1559.79nm 14dB 40km SFP+ Module	P9N36A
Smartoptics 16G DWDM 1560.61nm 14dB 40km SFP+ Module	P9N35A
Smartoptics D9210 16/8/4Gb FC/FICON DWDM 1560.61nm SM DDM 13dB 40km SFP+ Transceiver	R6K95A
Smartoptics D9220 16/8/4Gb FC/FICON DWDM 1559.79nm SM DDM 13dB 40km SFP+ Transceiver	R6K96A
Smartoptics D9230 16/8/4Gb FC/FICON DWDM 1558.98nm SM DDM 13dB 40km SFP+ Transceiver	R6K97A
Smartoptics D9240 16/8/4Gb FC/FICON DWDM 1558.17nm SM DDM 13dB 40km SFP+ Transceiver	R6K98A
Smartoptics D9250 16/8/4Gb FC/FICON DWDM 1557.36nm SM DDM 13dB 40km SFP+ Transceiver	R6K99A
Smartoptics D9260 16/8/4Gb FC/FICON DWDM 1556.55nm SM DDM 13dB 40km SFP+ Transceiver	R6L00A
Smartoptics D9270 16/8/4Gb FC/FICON DWDM 1555.75nm SM DDM 13dB 40km SFP+ Transceiver	R6L01A
Smartoptics D9280 16/8/4Gb FC/FICON DWDM 1554.94nm SM DDM 13dB 40km SFP+ Transceiver	R6L02A
Smartoptics D9290 16/8/4Gb FC/FICON DWDM 1554.13nm SM DDM 13dB 40km SFP+ Transceiver	R6L03A
Smartoptics D9300 16/8/4Gb FC/FICON DWDM 1553.33nm SM DDM 13dB 40km SFP+ Transceiver	R6L04A
Smartoptics D9310 16/8/4Gb FC/FICON DWDM 1552.52nm SM DDM 13dB 40km SFP+ Transceiver	R6L05A
Smartoptics D9320 16/8/4Gb FC/FICON DWDM 1551.72nm SM DDM 13dB 40km SFP+ Transceiver	R6L06A
Smartoptics D9330 16/8/4Gb FC/FICON DWDM 1550.92nm SM DDM 13dB 40km SFP+ Transceiver	R6L07A
Smartoptics D9340 16/8/4Gb FC/FICON DWDM 1550.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L08A
Smartoptics D9350 16/8/4Gb FC/FICON DWDM 1549.32nm SM DDM 13dB 40km SFP+ Transceiver	R6L09A
Smartoptics D9360 16/8/4Gb FC/FICON DWDM 1548.51nm SM DDM 13dB 40km SFP+ Transceiver	R6L10A
Smartoptics D9370 16/8/4Gb FC/FICON DWDM 1547.72nm SM DDM 13dB 40km SFP+ Transceiver	R6L11A
Smartoptics D9380 16/8/4Gb FC/FICON DWDM 1546.92nm SM DDM 13dB 40km SFP+ Transceiver	R6L12A
Smartoptics D9390 16/8/4Gb FC/FICON DWDM 1546.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L13A
Smartoptics D9400 16/8/4Gb FC/FICON DWDM 1545.32nm SM DDM 13dB 40km SFP+ Transceiver	R6L14A
Smartoptics D9410 16/8/4Gb FC/FICON DWDM 1544.53nm SM DDM 13dB 40km SFP+ Transceiver	R6L15A
Smartoptics D9420 16/8/4Gb FC/FICON DWDM 1543.73nm SM DDM 13dB 40km SFP+ Transceiver	R6L16A
Smartoptics D9430 16/8/4Gb FC/FICON DWDM 1542.94nm SM DDM 13dB 40km SFP+ Transceiver	R6L17A
Smartoptics D9440 16/8/4Gb FC/FICON DWDM 1542.14nm SM DDM 13dB 40km SFP+ Transceiver	R6L18A
Smartoptics D9450 16/8/4Gb FC/FICON DWDM 1541.35nm SM DDM 13dB 40km SFP+ Transceiver	R6L19A
Smartoptics D9460 16/8/4Gb FC/FICON DWDM 1540.56nm SM DDM 13dB 40km SFP+ Transceiver	R6L20A
Smartoptics D9470 16/8/4Gb FC/FICON DWDM 1539.77nm SM DDM 13dB 40km SFP+ Transceiver	R6L21A
Smartoptics D9480 16/8/4Gb FC/FICON DWDM 1538.98nm SM DDM 13dB 40km SFP+ Transceiver	R6L22A
Smartoptics D9490 16/8/4Gb FC/FICON DWDM 1538.19nm SM DDM 13dB 40km SFP+ Transceiver	R6L23A
Smartoptics D9500 16/8/4Gb FC/FICON DWDM 1537.40nm SM DDM 13dB 40km SFP+ Transceiver	R6L24A
Smartoptics D9510 16/8/4Gb FC/FICON DWDM 1536.61nm SM DDM 13dB 40km SFP+ Transceiver	R6L25A



Configuration Information

Smartoptics D9520 16/8/4Gb FC/FICON DWDM 1535.82nm SM DDM 13dB 40km SFP+ Transceiver	R6L26A
Smartoptics D9530 16/8/4Gb FC/FICON DWDM 1535.04nm SM DDM 13dB 40km SFP+ Transceiver	R6L27A
Smartoptics D9540 16/8/4Gb FC/FICON DWDM 1534.25nm SM DDM 13dB 40km SFP+ Transceiver	R6L28A
Smartoptics D9550 16/8/4Gb FC/FICON DWDM 1533.47nm SM DDM 13dB 40km SFP+ Transceiver	R6L29A
Smartoptics D9560 16/8/4Gb FC/FICON DWDM 1532.68nm SM DDM 13dB 40km SFP+ Transceiver	R6L30A
Smartoptics D9570 16/8/4Gb FC/FICON DWDM 1531.90nm SM DDM 13dB 40km SFP+ Transceiver	R6L31A
Smartoptics D9580 16/8/4Gb FC/FICON DWDM 1531.12nm SM DDM 13dB 40km SFP+ Transceiver	R6L32A
Smartoptics D9590 16/8/4Gb FC/FICON DWDM 1530.33nm SM DDM 13dB 40km SFP+ Transceiver	R6L33A
Smartoptics D9600 16/8/4Gb FC/FICON DWDM 1529.55nm SM DDM 13dB 40km SFP+ Transceiver	R6L34A

Notes:

- 16G DWDM Fiber Optical SFP+ transceiver operates at different wavelengths other than mentioned above (please refer Appendix).
- Transceivers can be plugged directly into FC switch.
- All are Brocade layer 1 tested and approved.
- 16/8/4 Gbps Fibre Channel/Ficon.

Step-1.1

Select 10G FC Transceivers

Select 10G FC Transceivers, select based on wave length desired (first determine if 23dB 80km or 14dB 40km is needed, then choose amongst 8 defined wave lengths from 1554.94 to 1560.61 nm or from custom wave lengths) 10G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes a PIN diode and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Smartoptics D9210 10G ZR DWDM 100GHz 1560.61nm 23dB 80km SFP+ Module	Q2S34A
Smartoptics D9220 10G ZR DWDM 100GHz 1559.79nm 23dB 80km SFP+ Module	Q2S35A
Smartoptics D9230 10G ZR DWDM 100GHz 1558.98nm 23dB 80km SFP+ Module	Q2S36A
Smartoptics D9240 10G ZR DWDM 100GHz 1558.17nm 23dB 80km SFP+ Module	Q9D24A
Smartoptics D9250 10G ZR DWDM 100GHz 1557.36nm 23dB 80km SFP+ Module	Q9D25A
Smartoptics D9260 10G ZR DWDM 100GHz 1556.55nm 23dB 80km SFP+ Module	Q9D26A
Smartoptics D9270 10G ZR DWDM 100GHz 1555.75nm 23dB 80km SFP+ Module	Q9D27A
Smartoptics D9280 10G ZR DWDM 100GHz 1554.94nm 23dB 80km SFP+ Module	Q9D28A
Smartoptics 10G ZR MR 9.95-11.1 G C Tunable DWDM C-Band 50GHz 2.0W 22db 80km SFP+ Module	R0P19A
Smartoptics D9210 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L46A
Smartoptics D9220 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L47A
Smartoptics D9230 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L48A
Smartoptics D9240 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L49A
Smartoptics D9250 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L50A
Smartoptics D9260 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L51A
Smartoptics D9270 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L52A
Smartoptics D9280 10GBASE-ER DWDM SM DDM 14dB 40km SFP+ Transceiver	R6L53A
Smartoptics 10GBASE-ZR DWDM 80km SFP+ Transceiver	R6L45A

Notes: 10G DWDM Fiber Optical SFP+ transceiver operates at different wavelengths other than mentioned above (please refer Appendix).



Configuration Information

Step-1.2

Select 8G FC Transceivers

Select 8G FC Transceivers, select based on wave length desired (first determine if 23dB 80km or 14dB 40km is needed, then choose amongst defined wave lengths from 1528.77 to 1548.51 nm or from custom wave lengths) 8G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes a PIN diode and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Descriptions

	SKU
Smartoptics 8G DWDM 1560.61nm 14dB 40km SFP+ Module	P9N10A
Smartoptics 8G DWDM 1559.79nm 14dB 40km SFP+ Module	P9N11A
Smartoptics 8G DWDM 1558.98nm 14dB 40km SFP+ Module	P9N12A
Smartoptics 8G DWDM 1558.17nm 14dB 40km SFP+ Module	P9N13A
Smartoptics 8G DWDM 1557.36nm 14dB 40km SFP+ Module	P9N14A
Smartoptics 8G DWDM 1556.55nm 14dB 40km SFP+ Module	P9N15A
Smartoptics 8G DWDM 1555.75nm 14dB 40km SFP+ Module	P9N16A
Smartoptics 8G DWDM 1554.94nm 14dB 40km SFP+ Module	P9N17A
Smartoptics 8G DWDM 1554.13nm 14dB 40km SFP+ Module	P9N18A
Smartoptics 8G DWDM 1555.33nm 14dB 40km SFP+ Module	P9N19A
Smartoptics 8G DWDM 1552.52nm 14dB 40km SFP+ Module	P9N20A
Smartoptics 8G DWDM 1551.72nm 14dB 40km SFP+ Module	P9N21A
Smartoptics 8G DWDM 1550.92nm 14dB 40km SFP+ Module	P9N22A
Smartoptics 8G DWDM 1550.12nm 14dB 40km SFP+ Module	P9N23A
Smartoptics 8G DWDM 1549.32nm 14dB 40km SFP+ Module	P9N24A
Smartoptics 8G DWDM 1548.51nm 14dB 40km SFP+ Module	P9N25A
Smartoptics 8G DWDM Custom Wavelength SFP+ Module	QOF38A
Smartoptics D9210 8/4/2/1Gb FC/FICON DWDM 1560.61nm SM DDM 23dB 80km SFP+ Transceiver	R6K87A
Smartoptics D9220 8/4/2/1Gb FC/FICON DWDM 1559.79nm SM DDM 23dB 80km SFP+ Transceiver	R6K88A
Smartoptics D9230 8/4/2/1Gb FC/FICON DWDM 1558.98nm SM DDM 23dB 80km SFP+ Transceiver	R6K89A
Smartoptics D9240 8/4/2/1Gb FC/FICON DWDM 1558.17nm SM DDM 23dB 80km SFP+ Transceiver	R6K90A
Smartoptics D9250 8/4/2/1Gb FC/FICON DWDM 1557.36nm SM DDM 23dB 80km SFP+ Transceiver	R6K91A
Smartoptics D9260 8/4/2/1Gb FC/FICON DWDM 1556.55nm SM DDM 23dB 80km SFP+ Transceiver	R6K92A
Smartoptics D9270 8/4/2/1Gb FC/FICON DWDM 1555.75nm SM DDM 23dB 80km SFP+ Transceiver	R6K93A
Smartoptics D9280 8/4/2/1Gb FC/FICON DWDM 1554.94nm SM DDM 23dB 80km SFP+ Transceiver	R6K94A

Notes:

- 8G DWDM Fiber Optical SFP+ transceiver operates at different wavelengths other than mentioned above (please refer Appendix).
- Transceivers can be plugged directly into FC switch.
- All are Brocade layer 1 tested and approved.
- 8/4/2/1 Gbps Fibre Channel/Ficon.



Configuration Information

Step-1.3

Select 100G DWDM QSFP28 Transceivers

Select 100G FC Transceivers, select based on switch channel desired 100G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes a PIN diode and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Descriptions

	SKU
Smartoptics D921 103G DWDM SM DDM QSFP28 Module	R0P24A
Smartoptics D922 103G DWDM SM DDM QSFP28 Module	R0P25A
Smartoptics D923 103G DWDM SM DDM QSFP28 Module	R0P26A
Smartoptics D924 103G DWDM SM DDM QSFP28 Module	R0P27A
Smartoptics D925 103G DWDM SM DDM QSFP28 Module	R0P28A
Smartoptics D926 103G DWDM SM DDM QSFP28 Module	R0P29A
Smartoptics D927 103G DWDM SM DDM QSFP28 Module	R0P30A
Smartoptics D928 103G DWDM SM DDM QSFP28 Module	R0P31A
Smartoptics D945 103Gb DWDM SM DDM QSFP28 Transceiver	R6L35A
Smartoptics D946 103Gb DWDM SM DDM QSFP28 Transceiver	R6L36A
Smartoptics D947 103Gb DWDM SM DDM QSFP28 Transceiver	R6L37A
Smartoptics D948 103Gb DWDM SM DDM QSFP28 Transceiver	R6L38A
Smartoptics D949 103Gb DWDM SM DDM QSFP28 Transceiver	R6L39A
Smartoptics D950 103Gb DWDM SM DDM QSFP28 Transceiver	R6L40A
Smartoptics D951 103Gb DWDM SM DDM QSFP28 Transceiver	R6L42A

Step-1.4

Select 16/8/4G FC Transceivers

Select 16/8/4G FC Transceivers, select based on wave length and distance desired. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Smartoptics 16/8/4G FC/FICON 850nm MM DDM 4dB 35m/OM2 100m/OM3 125m/OM4 SFP+ Module	R0P17A
Smartoptics 16/8/4G FC/FICON 1310nm SM DDM 8.9dB 10km SFP+ Module	R0P18A

Step-1.5

Select 32G FC Transceivers

Select 32G FC Transceivers, select based on wave length desired. 32G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes a PIN diode and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Smartoptics D210 32/16Gb DWDM 10km SFP28 Transceiver	R6L54A
Smartoptics D220 32/16Gb DWDM 10km SFP28 Transceiver	R6L55A
Smartoptics D230 32/16Gb DWDM 10km SFP28 Transceiver	R6L56A
Smartoptics D240 32/16Gb DWDM 10km SFP28 Transceiver	R6L57A
Smartoptics D250 32/16Gb DWDM 10km SFP28 Transceiver	R6L58A
Smartoptics D260 32/16Gb DWDM 10km SFP28 Transceiver	R6L59A
Smartoptics D270 32/16Gb DWDM 10km SFP28 Transceiver	R6L60A
Smartoptics D280 32/16Gb DWDM 10km SFP28 Transceiver	R6L61A
Smartoptics D290 32/16Gb DWDM 10km SFP28 Transceiver	R6L62A



Configuration Information

Descriptions

	SKU
Smartoptics D300 32/16Gb DWDM 10km SFP28 Transceiver	R6L63A
Smartoptics D310 32/16Gb DWDM 10km SFP28 Transceiver	R6L64A
Smartoptics D320 32/16Gb DWDM 10km SFP28 Transceiver	R6L65A
Smartoptics D330 32/16Gb DWDM 10km SFP28 Transceiver	R6L66A
Smartoptics D340 32/16Gb DWDM 10km SFP28 Transceiver	R6L67A
Smartoptics D350 32/16Gb DWDM 10km SFP28 Transceiver	R6L68A
Smartoptics D360 32/16Gb DWDM 10km SFP28 Transceiver	R6L69A
Smartoptics D370 32/16Gb DWDM 10km SFP28 Transceiver	R6L70A
Smartoptics D380 32/16Gb DWDM 10km SFP28 Transceiver	R6L71A
Smartoptics D390 32/16Gb DWDM 10km SFP28 Transceiver	R6L72A
Smartoptics D400 32/16Gb DWDM 10km SFP28 Transceiver	R6L73A
Smartoptics D410 32/16Gb DWDM 10km SFP28 Transceiver	R6L74A
Smartoptics D420 32/16Gb DWDM 10km SFP28 Transceiver	R6L75A
Smartoptics D430 32/16Gb DWDM 10km SFP28 Transceiver	R6L76A
Smartoptics D440 32/16Gb DWDM 10km SFP28 Transceiver	R6L77A
Smartoptics D450 32/16Gb DWDM 10km SFP28 Transceiver	R6L78A
Smartoptics D460 32/16Gb DWDM 10km SFP28 Transceiver	R6L79A
Smartoptics D470 32/16Gb DWDM 10km SFP28 Transceiver	R6L80A
Smartoptics D480 32/16Gb DWDM 10km SFP28 Transceiver	R6L81A
Smartoptics D490 32/16Gb DWDM 10km SFP28 Transceiver	R6L82A
Smartoptics D500 32/16Gb DWDM 10km SFP28 Transceiver	R6L83A
Smartoptics D510 32/16Gb DWDM 10km SFP28 Transceiver	R6L84A
Smartoptics D520 32/16Gb DWDM 10km SFP28 Transceiver	R6L85A
Smartoptics D530 32/16Gb DWDM 10km SFP28 Transceiver	R6L86A
Smartoptics D540 32/16Gb DWDM 10km SFP28 Transceiver	R6L87A
Smartoptics D550 32/16Gb DWDM 10km SFP28 Transceiver	R6L88A
Smartoptics D560 32/16Gb DWDM 10km SFP28 Transceiver	R6L89A
Smartoptics D570 32/16Gb DWDM 10km SFP28 Transceiver	R6L90A
Smartoptics D580 32/16Gb DWDM 10km SFP28 Transceiver	R6L91A
Smartoptics D590 32/16Gb DWDM 10km SFP28 Transceiver	R6L92A
Smartoptics D600 32/16Gb DWDM 10km SFP28 Transceiver	R6L93A

Step-2

Select passive (unmanaged) Or intelligent (monitored and amplified) DWDM MUX/DEMUX

Passive DWDM system (no monitoring or distance extension capabilities)

Smartoptics 40-channel DWDM MUX/DEMUX 7.5dB 100GHz Device P9N32A

Notes: 40-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 7.5dB. Passive, no electric power required.

Smartoptics 16-channel DWDM MUX/DEMUX 5.3dB 100GHz Device P9N33A

Notes: 16-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 5.35dB. Passive, no electric power required.

Smartoptics 8-channel DWDM MUX/DEMUX 3.5dB Device P9M83A



Configuration Information

Notes: 8-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 3.5dB. Passive, no electric power required.

Descriptions

SKU

Smartoptics 8-channel DWDM MUX/DEMUX 4.5dB Device P9N34A

Notes: 8-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 4.5dB. Passive, no electric power required.

Smartoptics 40-channel DWDM MUX/DEMUX 11.5db 100GHz Device Q0G40A

Notes: 40-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 11.5dB. Passive, no electric power required.

Passive DWDM system (no monitoring or distance extension capabilities)

Smartoptics 32-channel DWDM MUX/DEMUX 5.8db 100GHz Device Q0G41A

Notes: 32-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 5.8dB. Passive, no electric power required.

Smartoptics M-3809-921928 8-channel DWDM MUX/DEMUX 4.2db 100GHz Device Q0F91A

Notes: 8-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 4.2dB. Passive, no electric power required.

Smartoptics M-3809-929936 8-channel DWDM MUX/DEMUX 4.2db 100GHz Device Q0F92A

Notes: 8-channel 100GHz DWDM protocol transparent Mux/Demux unit. Channels operate in the standard C-band of the fiber with Insertion Loss of 4.2dB. Passive, no electric power required.

Smartoptics M-3817-921936 16-channel DWDM MUX/DEMUX 4.6db 100GHz Device Q0F90A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux with DWDM expansion port up to 40km. M-3817 has an additional DWDM expansion port so that M-3816 can be seamlessly connected to increase capacity from 16 to 32 protocol transparent DWDM channels.

Intelligent DWDM system (Channel monitoring and distance extension capabilities)

Notes: Customers can reuse their existing muxes with the optics.

Smartoptics 16-channel Expansion Port EDFA 80km Device P9M85A

Notes: M-series 16 channel DWDM Intelligent Mux/Demux with DWDM expansion port up to 80km.

Smartoptics 16-channel DWDM MUX/DEMUX 5.0db Pass Thru Device Q0G43A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux with DWDM expansion port up to 40km, pass through mode.

Smartoptics 16-channel DWDM MUX/DEMUX Transmitter EDFA 40km Device Q0G45A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux transmitter EDFA with DWDM expansion port up to 40km, pass through mode.

Smartoptics 16-channel DWDM MUX/DEMUX Receiver EDFA Device Q0G46A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux receiver EDFA mode.

Smartoptics 16-channel DWDM MUX/DEMUX Receiver EDFA 40km Device Q0G47A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux receiver EDFA with DWDM expansion port up to 40km, pass through mode.

Smartoptics 16-channel DWDM MUX/DEMUX Transmitter/Receiver EDFA 80km Device Q0G49A

Notes: M-series 16 channel. DWDM Intelligent Mux/Demux transmitter/receiver EDFA with DWDM expansion port up to 80km, pass through mode.

Smartoptics 8-channel OSC/PAM4 0-70km Device R0P20A

Smartoptics 40-channel D921-D960 OSC/PAM4 0-80km Device R0P21A

Smartoptics 40-channel D921-D960 OSC/PAM4 0-40km NRZ Device R0P22A

Smartoptics 40-channel D921-D960 OSC/PAM4 15-55km NRZ Device R0P23A

Smartoptics 40-channel D921-D960 OSC/PAM4 40-80km Device R6L41A

Configuration Information

Step – 3

Select Accessories

Descriptions

SKU

Passive DWDM System

Mounting Bracket (if 8 channel T-Series DWDM module is selected)

Smartoptics Adjustable Mounting Bracket for T Series Module

Q0F34A

Notes: Mounting Bracket for 8 Channel T-series mux/demuxes.

Intelligent DWDM System

Smartoptics M-Series AC Power Supply Unit

P9M86A

Notes: AC Power Supply unit for M-series MUX/DEMUX device.

Smartoptics M-Series DC Power Supply Unit

P9M87A

Notes: AC Power Supply unit for M-series MUX/DEMUX device.

Smartoptics C13-C14 Power Cable

P9M88A

Notes: Device Power Cable, IEC C13 to C14 connectors, 13 amp rating.

Smartoptics C13 (US) Power Cable

P9M89A

Notes: Device Power Cable for US, IEC C13, 13 amp rating.

Smartoptics C13 (EU) Power Cable

P9M90A

Notes: Device Power Cable for Europe, IEC C13.

Smartoptics C13 (UK) Power Cable

P9M91A

Notes: Device Power Cable for UK, IEC C13.

Smartoptics C13 (AU) Power Cable

P9M92A

Notes: Device Power Cable for Australia, IEC C13.

Smartoptics C13 (EU) Right Angle Power Cable

P9M93A

Notes: Device Right Angle Power Cable for Europe, IEC C13.

Step – 4

Select Jumper cables

Notes: A jumper cable is required per transceiver to connect it to the multiplexer.

Smartoptics 1m Duplex Single Mode Fiber Jumper Cable

P9M94A

Notes: 1m Jumper Cable for transceivers.

Smartoptics 3m Duplex Single Mode Fiber Jumper Cable

P9M95A

Notes: 3m Jumper Cable for transceivers.

Smartoptics 10m Duplex Single Mode Fiber Jumper Cable

P9M96A

Notes: 10m Jumper Cable for transceivers.



Configuration Information

Option: 2 8G FC CWDM Solution

Step-1

Select Transceivers

Select 8G FC CWDM, 8 channels 70km Optics select based on wave length desired (choose from 1470 to 1610 nm) 8G DWDM Fiber Optical SFP+ transceiver operates at wavelength defined and includes an APD receiver and temperature stabilized DFB-EML transmitter. The module has a duplex LC optical interface and are compliant to RoHS-6/6.

Descriptions

	SKU
Smartoptics 8G CWDM 1470nm 23dB 70km SFP+ Module	P9N02A
Smartoptics 8G CWDM 1490nm 23dB 70km SFP+ Module	P9N03A
Smartoptics 8G CWDM 1510nm 23dB 70km SFP+ Module	P9N04A
Smartoptics 8G CWDM 1530nm 23dB 70km SFP+ Module	P9N05A
Smartoptics 8G CWDM 1550nm 23dB 70km SFP+ Module	P9N06A
Smartoptics 8G CWDM 1570nm 23dB 70km SFP+ Module	P9N07A
Smartoptics 8G CWDM 1590nm 23dB 70km SFP+ Module	P9N08A
Smartoptics 8G CWDM 1610nm 23dB 70km SFP+ Module	P9N09A

Notes:

- Transceivers can be plugged directly into FC switch.
- All are Brocade layer 1 tested and approved.
- 8/4/2/1 Gbps Fibre Channel/Ficon.

Step-2

Select MUX/DEMUX

CWDM MUX/DEMUX

Smartoptics 8-channel CWDM MUX/DEMUX 2.8dB Device	P9N31A
---	--------

Notes: T-Series 8 channel CWDM Mux/Demux model which has 1310nm expansion ports that allow either existing legacy 1310nm traffic or additional CWDM wavelength channels to be added. Multiplexing of up to 16 channels on fiber pair. Passive device, no electric power required.

Step-3

Select Accessories

Mounting Bracket

Smartoptics Adjustable Mounting Bracket for T Series Module	Q0F34A
---	--------

Notes: Mounting Bracket for T-series modules.

Jumper cables

Notes: One jumper cable is required per transceiver to connect it to the multiplexer.

Smartoptics 1m Duplex Single Mode Fiber Jumper Cable	P9M94A
--	--------

Notes: 1m Jumper Cable for transceivers.

Smartoptics 3m Duplex Single Mode Fiber Jumper Cable	P9M95A
--	--------

Notes: 3m Jumper Cable for transceivers.

Smartoptics 10m Duplex Single Mode Fiber Jumper Cable	P9M96A
---	--------

Notes: 10m Jumper Cable for transceivers.



Configuration Information

Option: 3

Custom 10/100G Ethernet CWDM Solution with possibility to encrypt 1/8/10/16G traffic

In cases of mixed FC and Ethernet traffic a transponder can complement the embedded Fiber Channel solution to transport the Ethernet signals. In this case the hand off between switch/router and transponder is done using 1310 or 850 “grey” optics. The same transponder can also be used to encrypt traffic. In this case the same hardware are used, but in addition an encryption license is needed. The transponder can encrypt 1/8/10/16G traffic.

Step-1

Select Transponder

Description	SKU
Smartoptics M-Series AC Power Supply Unit	P9M86A
Smartoptics M-Series DC Power Supply Unit	P9M87A
Notes: AC Power Supply unit for M-series MUX/DEMUX device.	
Smartoptics C13-C14 Power Cable	P9M88A
Notes: Device Power Cable, IEC C13 to C14 connectors, 13 amp rating.	
Smartoptics C13 (US) Power Cable	P9M89A
Notes: Device Power Cable for US, IEC C13, 13 amp rating.	
Smartoptics C13 (EU) Power Cable	P9M90A
Notes: Device Power Cable for Europe, IEC C13.	
Smartoptics C13 (UK) Power Cable	P9M91A
Notes: Device Power Cable for UK, IEC C13.	
Smartoptics C13 (AU) Power Cable	P9M92A
Notes: Device Power Cable for Australia, IEC C13.	
Smartoptics C13 (EU) Right Angle Power Cable	P9M93A
Notes: Device Right Angle Power Cable for Europe, IEC C13.	
Smartoptics DCP-2 1U 2-slot Chassis with Management Board and Fan Units	Q0G51A
Notes: DCP-2 1U 2-slot Chassis with Management Board and Fan Units.	
Smartoptics DCP-101 1-channel 100Gbps Transponder Device	Q0G52A
Notes: DCP-101 single channel 100Gbps transponder device.	
Smartoptics DCP-1610 10-channel 1G-16Gbps SFP+ to SFP+ PM Transponder	Q2S31A
Notes: DCP-1610, 10 x 1-16G transponder device.	
Smartoptics 8x40/100Gb Transponder for QSFP28 to QSFP28 Device	R6L94A
Smartoptics 100GbE 1310nm SM LC DDM 10km QSFP28 Transceiver	R6L43A
Smartoptics 100GbE 850nm MM MPO OM4 DDM 100m QSFP28 Transceiver	R6L44A
Notes: 8x40/100Gb Transponder for QSFP28 to QSFP28 Device, Select Transceivers as required	
Smartoptics DCP-1610 Firmware and Crypto LTU	Q9U88A
Notes: Encryption licence for DCP-1610. This is a license to be used with SKU Q2S31A.	
Smartoptics 103Gbps DWDM 25db CFP Module	Q0G54A
Notes: Smartoptics 103Gbps DWDM 25db CFP Module.	
Smartoptics 100GBASE-SR4 850nm QSFP+ Module	Q0G55A
Notes: Smartoptics 100GBASE-SR4 850nm QSFP+ Module.	
Smartoptics DCP-2-101 AC Power Supply	Q0G53A
Notes: AC Power Supply unit for DCP-2-101 MUX/DEMUX device.	

Configuration Information

Step – 2

Select Transceiver

Select CWDM or DWDM transceivers select based on wavelength desired. The intention is to use CWDM or DWDM transceivers as line side interfaces on the transponder. When the line side is selected, choose client facing optics, either 850 MM or 1310 SM. These modules has a duplex LC optical interface and are compliant to RoHS-6/6.

Description

SKU

DWDM transceivers

Smartoptics D9210 10G ZR DWDM 100GHz 1560.61nm 23dB 80km SFP+ Module	Q2S34A
Smartoptics D9220 10G ZR DWDM 100GHz 1559.79nm 23dB 80km SFP+ Module	Q2S35A
Smartoptics D9230 10G ZR DWDM 100GHz 1558.98nm 23dB 80km SFP+ Module	Q2S36A
Smartoptics D9240 10G ZR DWDM 100GHz 1558.17nm 23dB 80km SFP+ Module	Q9D24A
Smartoptics D9250 10G ZR DWDM 100GHz 1557.36nm 23dB 80km SFP+ Module	Q9D25A
Smartoptics D9260 10G ZR DWDM 100GHz 1556.55nm 23dB 80km SFP+ Module	Q9D26A
Smartoptics D9270 10G ZR DWDM 100GHz 1555.75nm 23dB 80km SFP+ Module	Q9D27A
Smartoptics D9280 10G ZR DWDM 100GHz 1554.94nm 23dB 80km SFP+ Module	Q9D28A

Notes: 10G DWDM Fiber Optical SFP+ transceiver operates at different wavelengths other than mentioned above (please refer Appendix).

Client side optics

Smartoptics 10G LR 1310nm SM DDM 6.2dB 10km SFP+ Module	R0P32A
Smartoptics 10G SR 850nm MM DDM 5.1dB 300m OM3 SFP+ Module	R0P33A

Notes: Module used as client side optics on the DCP-1610.

Step – 3

Select CWDM MUX/DEMUX

Smartoptics 8-channel CWDM MUX/DEMUX 2.8dB Device	P9N31A
---	--------

Notes: T-Series 8 channel CWDM Mux/Demux model which has 1310nm expansion ports that allow either existing legacy 1310nm traffic or additional CWDM wavelength channels to be added. Multiplexing of up to 16 channels on fiber pair. Passive device, no electric power required.

Step – 4

Select Accessories

Mounting Bracket

Smartoptics Adjustable Mounting Bracket for T Series Module	Q0F34A
---	--------

Notes: Mounting Bracket for T-series modules.

Jumper cables

Notes: One jumper cable is required per transceiver to connect it to the multiplexer.

Smartoptics 1m Duplex Single Mode Fiber Jumper Cable	P9M94A
--	--------

Notes: 1m Jumper Cable for transceivers.

Smartoptics 3m Duplex Single Mode Fiber Jumper Cable	P9M95A
--	--------

Notes: 3m Jumper Cable for transceivers.

Smartoptics 10m Duplex Single Mode Fiber Jumper Cable	P9M96A
---	--------

Notes: 10m Jumper Cable for transceivers.



Configuration Information

Step – 5

Select Services

Description

	SKU
Smartoptics Advanced Product Replacement APR 1 Service	R5Z61A
Smartoptics Advanced Product Replacement APR 2 Service	R5Z62A
Smartoptics Advanced Product Replacement APR 3 Service	R5Z63A
Smartoptics Advanced Product Replacement APR 4 Service	R5Z64A
Smartoptics Advanced Product Replacement APR 5 Service	R5Z65A
Smartoptics Extended Warranty EWS 1 Service	R5Z66A
Smartoptics Extended Warranty EWS 2 Service	R5Z67A
Smartoptics Extended Warranty EWS 3 Service	R5Z68A
Smartoptics Extended Warranty EWS 4 Service	R5Z69A
Smartoptics Extended Warranty EWS 5 Service	R5Z70A
Smartoptics General Service	R5Z71A

Notes:

- The Advanced Product Replacement and Extended Warranty SKUs are segmented into 1-5 levels, which is based on the total value of the order based on list prices. The levels are defined as noted below in US \$:
 - 1) \$0 to \$20,000
 - 2) \$20,001 to \$50,000
 - 3) \$50,001 to \$150,000
 - 4) \$150,001 to \$400,000
 - 5) For order values over \$400,000
- General Service provides flexibility to meet customer service needs, it requires working with Smartoptics to develop custom proposal
- For **Advanced Product Replacement**, please select for the applicable level as defined above with the quantity of SKUs to meet the number of years coverage desired as defined in this data sheet:
https://www.smartoptics.com/wp-content/uploads/2019/08/SO-DS-APR_R5.0.pdf
- For **Extended Warranty Service**, please select for the applicable level as defined above with the quantity of years coverage desired as defined in this data sheet:
https://www.smartoptics.com/wp-content/uploads/2019/08/SO-DS-EWS_R5.0.pdf
- For **General Service**, please use this link for more information: <https://www.smartoptics.com/services-support/>



Configuration Information

Appendix

DWDM wavelength table and mux/demux selection guide

M-Series channel plan	40ch Mux/Demux	32ch Mux/Demux	16ch M-Series	16ch Mux/Demux	8ch Mux/Demux	DWDM over CWDM	16/8G Trx Sept release	16/8G Trx Novrelease
9600	T-3840	M-3832-M	M-160x	M-3817-943958-M	M-3809-951958-M	T-3810 fits into 1530 CWDM	September release Custom 16/8G wavelengths	Custom replaced by the remaining 16/8G DWDM wavelengths
9590								
9580								
9570								
9560								
9550								
9540								
9530								
9520								
9510								
9500								
9490								
9480								
9470								
9460								
9450								
9440								
9430								
9420								
9410								
9400								
9390								
9380								
9370								
9360								
9350								
9340								
9330								
9320								
9310								
9300								
			Unused wavelength area 9370 to 9420 Note that M-3832 does not cover these wavelengths			T-3809 fits into 1550 CWDM	September release wavelengths	
			M-160x	M3817-921936-M	M-3809-929936-M	T-3808 fits into 1550 CWDM		



Configuration Information

DWDM wavelength table and mux/demux selection guide							
9290					M-3809-921928-M		
9280							
9270							
9260							
9250							
9240							
9230							
9220							
9210							

CWDM wavelength table

CWDM wavelength plan (nm)	8 Channel Mux/Demux
1470	T-3009
1490	
1510	
1530	
1550	
1570	
1590	
1610	



Summary of Changes

Date	Version History	Action	Description of Change
06-Jul-2020	Version 7	Changed	Added 32G Transievers, additional 100G, 16G, 10G and 8G switch channel transceivers
04-May-2020	Version 6	Changed	Overview, Features and Benefits, Configuration Information were revised.
03-Sep-2019	Version 5	Changed	Updated product name
05-Nov-2018	Version 4	Changed	Overview, Features and Benefits, Configuration Information were revised. Added 100G Transievers, and 40Ch PAM Devices along with support options
07-May-2018	Version 3	Changed	Overview, Features and Benefits, Configuration Information, Service, Support and Warranty Information were revised.
		Removed	Obsolete SKUs were removed from the QuickSpecs.
28-Nov-2016	Version 2	Changed	Changes made to the entire document.
26-Sep-2016	Version 1	New	New QuickSpecs



Copyright

Make the right purchase decision.
Contact our presales specialists.



Chat



Email



Call



Get updates



Hewlett Packard
Enterprise

© Copyright 2020 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows NT are US registered trademarks of Microsoft Corporation. Intel is a US registered trademark of Intel Corporation. Unix is a registered trademark of The Open Group.

c05205226 - 15649 - Worldwide - V7 - 06-July-2020