QSFP Breakout and port mapping for Cisco® NCS 1002

Fiber Mountain's LS-2720 is designed as the ideal multimode fiber breakout interface for the Cisco NCS 1002. The NCS 1002 provides eight (8) DWDM trunk ports and twenty (20) QSFP ports which are able to accept either QSFP+ transceivers for 40 Gbps & 10 Gbps applications or QSFP28 transceivers for 100 Gbps applications. This provides up to 2 Tbps capacity for transport both within and between data centers or Points-of-Presence (PoP).

Cisco NCS 1002

8-fiber cable

LS-2720 Rear View

LS-2720 Front View

2-fiber duplex LC cables
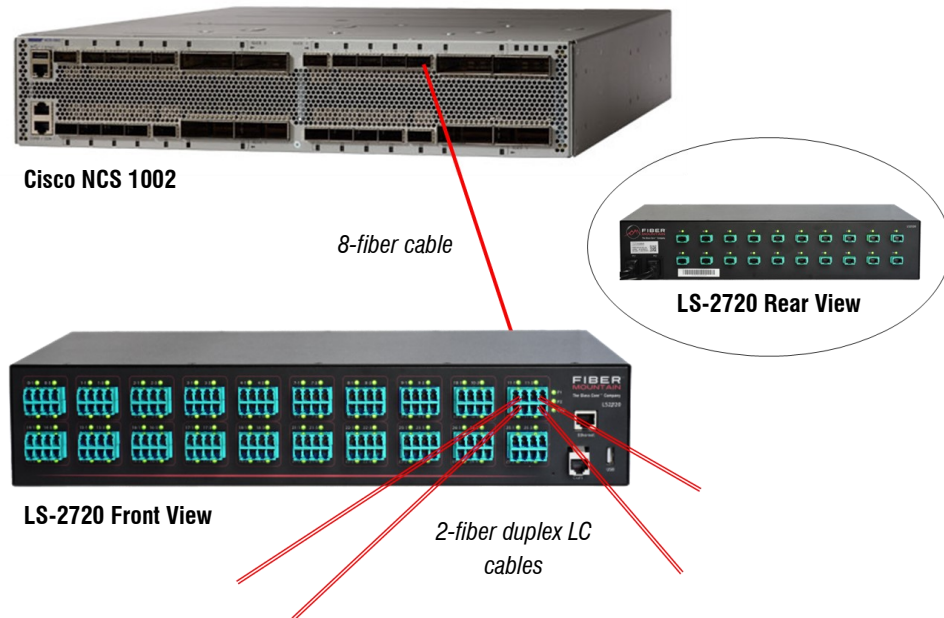
Occupying only two RU, the LS-2720 enables the orderly breakout of all 20 NCS 1002 QSFP ports into 80 duplex multimode LC ports. All ports and labels correspond directly to the NCS 1002 port labeling for simplified installation and ongoing maintenance. Controlled by the NCS 1002, LED indicators are associated with each MPO and duplex LC port. Dual power supplies provide for redundancy, port numbering matched to the NCS 1002 simplifies cable management, and the LED indicators enable technicians to verify port status at a glance. MPO connection cables that go between the Cisco NCS 1002 and the LS-2720 are available from Fiber Mountain in various lengths. (*see Accessories*)

The rear faceplate MPO ports of the LS-2720 map directly to the front faceplate, terminating into LC adaptors. The front faceplate port numbering is consistent with rear port numbering, mapping each rear MPO connector to a block of four duplex LC ports (eight LC connectors).
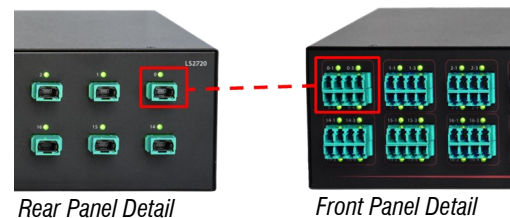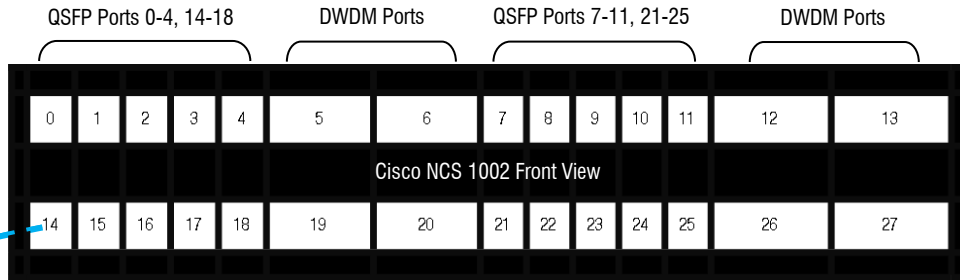
Rear Panel Detail
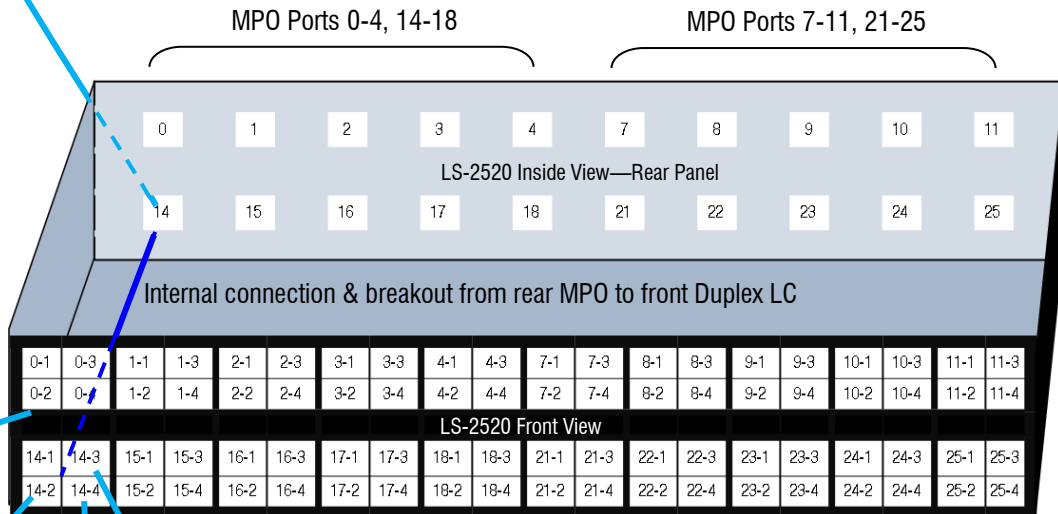
Front Panel Detail

DS-00115.01.03

How to connect LS-2720 with Cisco NCS 1002:

Fiber Mountain's LS-2720 provides breakout for all 20 of the NCS 1002's QSFP ports in two RU of space, while maintaining the same port numbering scheme. MPO-MPO cables are used to connect the NCS 1002 QSFP ports to the rear MPO ports of the LS-2720.

QSFP Ports 0-4, 14-18 | DWDM Ports | QSFP Ports 7-11, 21-25 | DWDM Ports

| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |

Cisco NCS 1002 Front View

| 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |

Twenty of: OM4 Multimode 12-fiber high density Type B cable
Fiber Mountain Part Number: FNM12-MF12-MF12-PAC-B0
Cables available in standard lengths of 3, 5 or 10 meters
Inquire for custom lengths.

MPO Ports 0-4, 14-18   MPO Ports 7-11, 21-25

| 0 | 1 | 2 | 3 | 4 | 7 | 8 | 9 | 10 | 11 |

LS-2520 Inside View—Rear Panel

| 14 | 15 | 16 | 17 | 18 | 21 | 22 | 23 | 24 | 25 |

Internal connection & breakout from rear MPO to front Duplex LC

| 0-1 | 0-3 | 1-1 | 1-3 | 2-1 | 2-3 | 3-1 | 3-3 | 4-1 | 4-3 | 7-1 | 7-3 | 8-1 | 8-3 | 9-1 | 9-3 | 10-1 | 10-3 | 11-1 | 11-3 |
| 0-2 | 0-4 | 1-2 | 1-4 | 2-2 | 2-4 | 3-2 | 3-4 | 4-2 | 4-4 | 7-2 | 7-4 | 8-2 | 8-4 | 9-2 | 9-4 | 10-2 | 10-4 | 11-2 | 11-4 |

LS-2520 Front View

| 14-1 | 14-3 | 15-1 | 15-3 | 16-1 | 16-3 | 17-1 | 17-3 | 18-1 | 18-3 | 21-1 | 21-3 | 22-1 | 22-3 | 23-1 | 23-3 | 24-1 | 24-3 | 25-1 | 25-3 |
| 14-2 | 14-4 | 15-2 | 15-4 | 16-2 | 16-4 | 17-2 | 17-4 | 18-2 | 18-4 | 21-2 | 21-4 | 22-2 | 22-4 | 23-2 | 23-4 | 24-2 | 24-4 | 25-2 | 25-4 |

Eighty of: OM4 Multimode duplex LC-LC, Type A-B cable
Fiber Mountain Part Number: FNM02-LCU-LCU-PAC-B0
Cables available in standard lengths of 5, 10, 15 or 20 meters
Inquire for custom lengths

DS-00115.01.03

FIBER MOUNTAIN™
The Glass Core™ Company

Multimode Fiber Specifications:
Internal fiber is multimode OM4.
Front and rear MPO connectors are aqua.

Characteristic	Multimode MPO	Multimode LC
Insertion Loss (Single Fiber Max.)	0.35dB	0.30dB
Insertion Loss (All Fibers Typ.)	0.10dB	0.10dB
Return Loss (Min.)	>20dB	>20dB

LS-2720 Chassis Specifications:	
Catalog Number	LS-2720-001
Weight	10.4 lbs
Rack Mounting	Fits 19", 21" and 23" racks
Dimensions (H/W/D)	3.46" x 17.65" x 8.72" (8.79 cm x 44.83 cm x 22.15 cm)
Redundant AC Power	<25 Watts
Regulatory and Certifications	UL 62368-1 IEC 62368-1 CSA C22.2#62368-1 EN 55032 EN 55024 FCC 47 CFR Part 15 Subpart B ICES-003 GR-63 Humidity, Temperature, Vibration testing
Chassis Fiber Guides	Front and rear chassis fiber guides are included with the LS-2520

Management Interfaces	Description
Craft Port (RS232)	Front Faceplate (RJ45). CLI access to kernel. CURL for API calls from CLI.
Ethernet Port	Front Faceplate (RJ45). LAN interface for management
USB Port	Front Faceplate. Can be used for software upgrades.
Graphical WEB Interface	Embedded Graphical Interface
API RESTful Interface	HTML JSON Format. GET and POST for LED control, LED status, power supply and processor status. Digest authentication.
HTTP WEB Server	For software updates via ETH connection. Digest authentication. SSL/TSL.
SNMP	Trap forwarding for trap listeners

Accessories:

Catalog Number	Description
FNM12-MF12-MF12-PAC-B0-003M FNM12-MF12-MF12-PAC-B0-005M FNM12-MF12-MF12-PAC-B0-010M	OM4 multimode 12-fiber high density type B cable. Standard lengths: 3, 5 or 10 meters. Inquire for custom lengths.
FNM02-LCU-LCU-PAC-B0-005M FNM02-LCU-LCU-PAC-B0-010M FNM02-LCU-LCU-PAC-B0-015M FNM02-LCU-LCU-PAC-B0-020M	OM4 multimode duplex LC-LC, Type A-B cable. Standard lengths: 5, 10, 15 or 20 meters. Inquire for custom lengths.

Contact Fiber Mountain, Inc. to order: Email: Sales@FiberMountain.com - Phone: 1-800-480-9424