

DCP-M40-PAM4-ER

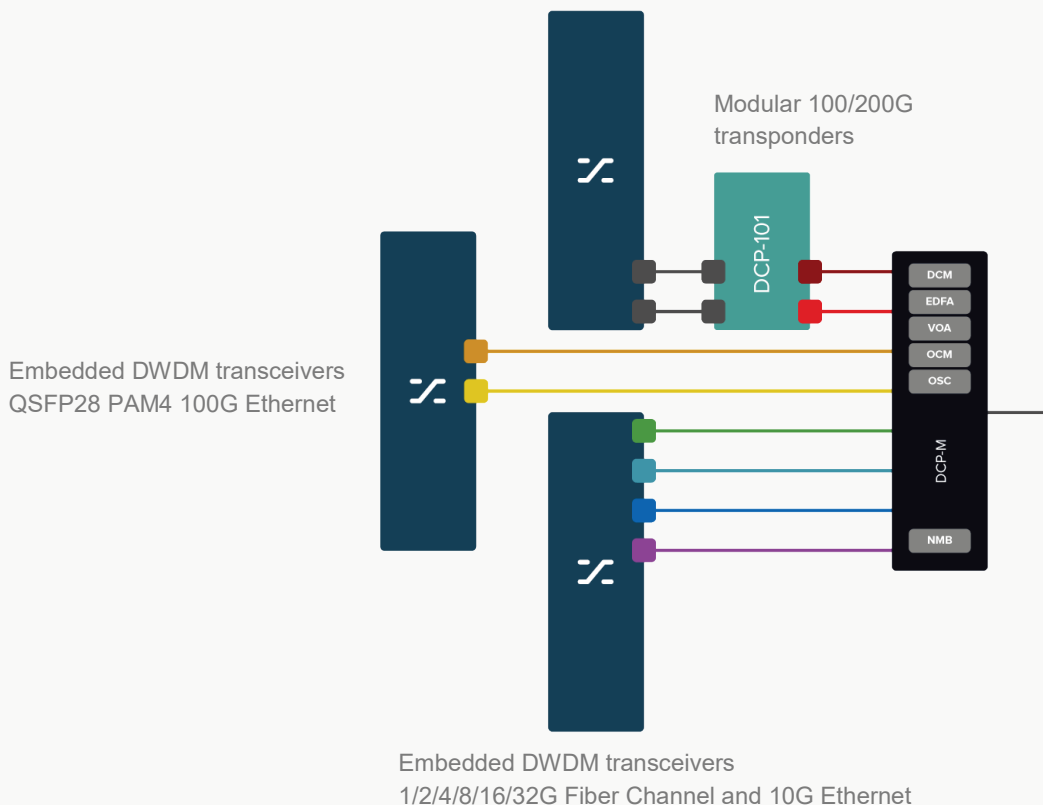
Multi-format 40 channel DWDM open line system (0-40 km)



DCP-M IN SHORT

- Accepts any DWDM signal format: PAM4 (40G/100G), NRZ(1-32G), Coherent (QPSK/8QAM/16QAM)
- Industry defining 1U open-line networking system
- Intelligence and distance extension in a 40 channel DWDM multiplexer
- Automatic fiber distance measurement and dispersion compensation
- Complete zero-touch automatic optical setup, just like using a passive multiplexer
- High speed multi-protocol DCI
- Modern REST based management architecture with standard and customizable APIs
- Unprecedented level of cost efficiency and ROI for 100G DCI

FLEXIBLE NETWORKING



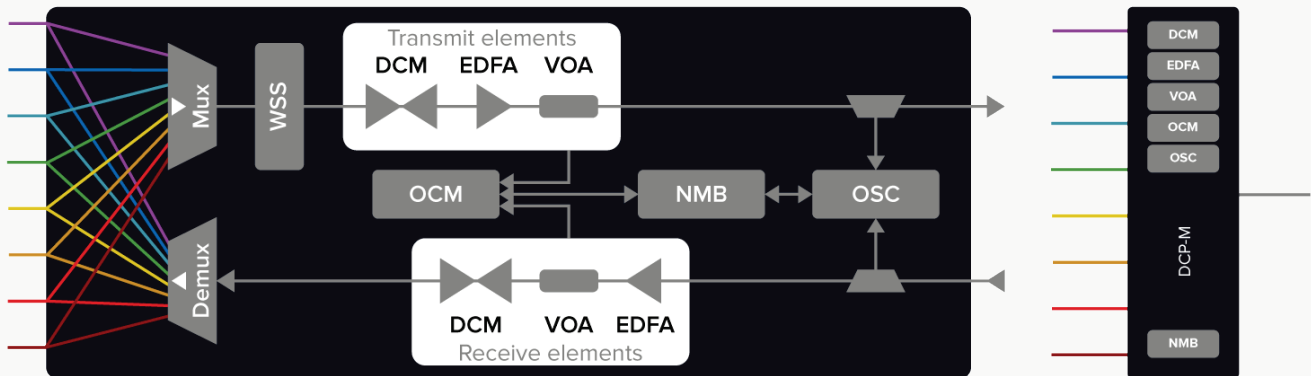
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BEST OF BOTH WORLDS

DCP-M is a true open line DWDM networking platform designed specifically for modern data center interconnect (DCI). DCP-M works with any combination of PAM4 and coherent DWDM interface types and offers an unparalleled level of plug and play simplicity regardless of traffic type and network application. DCP-M has the same form factor and simple plug and play usability of a passive multiplexer, but unlike a passive multiplexer it monitors the traffic, amplifies the signals for longer distances and can handle higher data rate protocols. A best of both worlds approach to DCI networking. This is because it has all the features usually reserved for the more complex DWDM platforms fully integrated in to a simple plug and play 1U module. No separate amplifier, management, dispersion compensation and traffic cards to configure. No messy wiring between modules. No additional knowledge or spares handling usually associated with the bigger systems. Instead, DCP-M provides everything required for an open line networking system: Simple • Reliable • Open DCI for all protocol types.



DCP-M, the simplicity of a passive multiplexer with the features of a telecom grade DWDM platform.

ZERO TOUCH FUNCTIONALITY

DCP-M brings an unprecedented level of plug and play simplicity to DWDM DCI networking, designed with ease of use in mind. Zero-touch optical configuration means the system sets itself up without any manual configuration in the GUI or CLI. Consequently, a minimum level of optical fiber knowledge is required to install the DCP-M. Power levels are automatically regulated on both sides when each channel is inserted – no manual setup required and a visual confirmation via LEDs shows that channel and line are set up correctly.

DCP-M measures the fiber length once an end to end connection is made and this allows an automatic setting of the tunable dispersion compensation. Pre-configuration of parameters in production like node name and IP address (if applicable) mean that this is a system that is installed in the field with zero touch. Only the power, Ethernet and optical LC patch cables from the DWDM signals to the DCP-M need to be connected.

MODERN MANAGEMENT ARCHITECTURE FOR TODAY'S DCI

Smartoptics' Smart Manager software platform is designed to easily handle all of today's DCI applications. Smart Manager is built on a modern REST based architecture from the ground up specifically for DCI and is integrated in to all DCP modules. In the same way that DCP-M is the simplest open line system on the market to operate, the same applies to the management platform. Standard north bound interfaces talk directly to each network element via a device handler. These device handlers provide specific interfaces to monitor and control the individual traffic units. Each DCP module is equipped with a common device handler and the same solution can therefore be used everywhere in the network. As it is based on standard REST architecture, there is no need for complex conversion or translation routines. Just straight forward communication between each DCP element. This DCI specific approach is also the simplest and robust approach to DCI networking without compromising on network control and functionality.

Command Line Interfaces are used to provision the various network elements. Configuration is minimal and straight forward and additional SNMP and REST interfaces expand this functionality. Standard and configurable REST commands are available for easy integration in to other network telemetry systems via APIs. A combination of industry standard and configurable SNMP alarms provides all the necessary web based monitoring functions for all DCP modules in the network. New services, elements or sites are seamlessly added with no impact on the network performance or visibility.

ORDERING INFORMATION

DCP-M Series product codes	
DCP-M40-PAM4-ER	40 channel DWDM OLS, D921-D960, OSC, 0-40km, PAM4, NRZ, Coherent
DCP-2-PSU-AC-FB	AC power supply for DCP platform, Front-to-Back airflow
DCP-2-PSU-DC-FB	DC power supply for DCP platform, Front-to-Back airflow
Spares	
DCP-2-FAN-FB	Spare fan unit, Front-to-Back

TECHNICAL SPECIFICATIONS

PRODUCT CONFIGURATION

40 channel DWDM open line system for metro DWDM, DCI and dark fiber connectivity.

Supported encodings:

- PAM4 (40G/100G)
- NRZ (1-32G)
- Coherent (QPSK/8QAM/16QAM)

Supported protocols:

- 1/10/40/100/200/400G Ethernet
- 1/2/4/8/16/32G Fiber Channel
- Other protocols may be supported, contact Smartoptics for more information.

FRONT SIDE CONNECTIONS

All ports are of LC connector type

40 x DWDM client channels D921 to D960
1 x Line input/output port

VISUAL INDICATORS

Status LED Power & Alarm status
Client LED: 40 x individual client Tx/Rx
Line LED: Line Tx/Rx

REAR SIDE CONNECTIONS

Management and console ports
4 x RJ45 Management ports 10/100/1000 Base-T
1 x SFP Management port 1000 Base-X
1 x RS-232 serial port
1 x RJ-45 Local craft 10/100/1000 Base-T

2 x Power supplies: Single/dual feeding. Hot swappable.
1 x Fan unit: Redundant plugin. Hot swappable.

MANAGEMENT PROTOCOLS

SSH/CLI, SNMP, REST, NTP, TFTP, Syslog

SOFTWARE UPGRADES

Traffic hitless software upgrades

DIMENSIONS

Size (WxDxH)
440mm x 510mm x 1RU
17.3" x 20" x 1RU
Weight: 13 Kg / 28.7 lbs.

EYE SAFETY

Laser safety class 1M

POWER CONSUMPTION

Typical consumption at 220VAC:
Normal operation: 45W
Max during power up: 65W

AC Fuse: 100-127 VAC (3A)
200-240 VAC (1.5A)

DC Fuse: -40 to -72 VDC (7A)

ENVIRONMENTAL

Operating temp: 0° C to +45° C
Cooling: Front to back
Humidity: 5% to 85%
Altitude: 3000 m (10.000 ft.)

OPTICAL SPECIFICATION

Fiber distance: 0 – 40 km
Fiber link loss: 0 – 14 dB
Fiber types: G.652 (SMF-28)