OTNS8600-OLS: Open Line System

The OTNS8600-OLS is an open line DWDM platform designed specifically for DCI. It provides everything needed for a DWDM optical layer solution, integrating multiplexers/demultiplexers, optical amplifiers, dispersion compensation, optical protection, optical monitoring channels, equipped with integrated monitoring and diagnostics, and a high level of automation in a 1RU chassis, providing unmatched plug-and-play simplicity and ensuring flexible The OTNS8600-OLS supports up to 48 channels, is open and transparent to all signal formats, and is suitable for long-haul, high-bandwidth application scenarios.


Product features

- Designed in the simple form factor of a standard 1U 19'' box.
- Provides 48 DWDM open channels in C-band.
- Access to any DWDM signal format: NRZ (1-32G), PAM4 (40G/100G), Coherent (QPSK/8QAM/16QAM).
- 100G PAM4 signal format can transmit up to 80km, other signal formats can transmit longer distances.
- Auto-configuration and zero-contact configuration, similar to passive multiplexers.
- Automatic fiber distance measurement and dispersion compensation.
- With comprehensive operating status indicators on the client-side and line-side.
- In-band Optical Supervisory Channel (OSC), fiber-optic connectivity to manage devices at the opposite end.
- Web GUI, B/S and other management methods, providing open SNMP interface.
- Front panel LCD screen visualization O&M.
- Dual power supply configuration, Load Share 1+1 hot backup, AC, DC, high voltage DC power supply options.

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Application scenario

The OTNS8600-OLS solution is based on IP over DWDM (IPoDWDM) technology, which enables efficient transmission of IP traffic over fiber optic networks through pluggable fiber technology. The solution simplifies the network architecture, each IPoDWDM service requires only one colored optical module that plugs directly into the port of the network equipment, replacing multiple network elements required for traditional IP to DWDM conversion. This architecture reduces the number of network elements, lowers costs, simplifies the deployment process, and achieves sustainable growth in data demand while improving network performance. The OTNS8600-OLS can also carry third-party services such as Transponder and Muxponder.
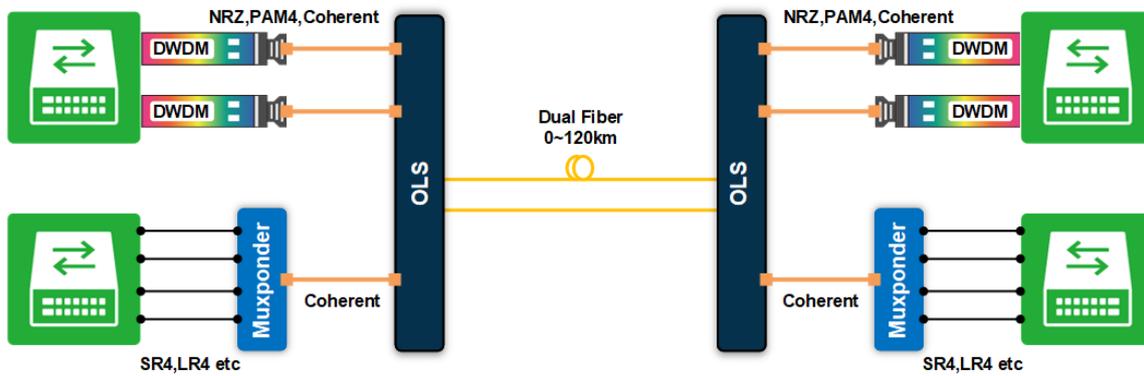
Product specification

Function		OLS104808	OLS404808	OLS404812
Accessed DWDM signal formats	NRZ(1~32G)	√	x	x
	PAM4(40G/100G)	√	x	x
	Coherent 100G_QPSK	√	√	√
	Coherent 200G_16QAM	√	√	√
	Coherent 200G_8QAM	x	√	√
	Coherent 200G_QPSK	x	√	√
	Coherent 300G_8QAM	x	√	√
	Coherent 400G_16QAM	x	√	√
C-band DWDM 48 channels (191.40~196.10 THz@100GHz interval)		√	√	√
Client-side-Automatic power equalization(APE) for DWDM channels		√	√	√
Client-side-DWDM channel input/output optical power monitoring and indicators		√	√	√
Line-side -Main channel automatic power control(ALC)		√	√	√
Line-side-Main channel optical power monitoring and indicators		√	√	√
In-Band Optical supervisory channel(OSC)		√	√	√
Automatic fiber distance measurement		√	√	√
Automatic dispersion compensation		√	x	x
Line-side 1+1 protection		x	√	x
Transmission distance		80km	80km	120km

Link budget	22dB	18dB(CFEC)	23.5dB(CFEC)
		20dB(OFEC)	25.5dB(OFEC)
Optical interface	All ports are LC connector type		
Management interface	● 2 *10/100/1000M adaptive RJ45 network ports ● 1*USB Type-C local debugging serial port		
Management mode	● Supports Web GUI and B/S centralized management. ● Provides open SNMP interface		
Power supply	Power supply 1+1 backup, hot-swappable		
	● AC: 100 ~ 130 V AC (50/60 Hz), 200 ~ 240 V AC (50/60 Hz) Maximum voltage range: 90 ~ 264 V AC (47 ~ 63 Hz) ● High Voltage DC: 192 ~ 288 VHVDC ● DC: -40 ~ -72 VDC		
Power consumption	<150W		
Fan	Fan 1+1 backup, hot-swappable, front airflow and rear airflow		
Device size	1U: 44 mm (H) x 440 mm (W) x 600 mm (D)		
Operating temperature	-5°C to 55°C (typical)		
Humidity	5~85% non-condensing		

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