Product Brochure

Huawei OptiXtrans E9600 series

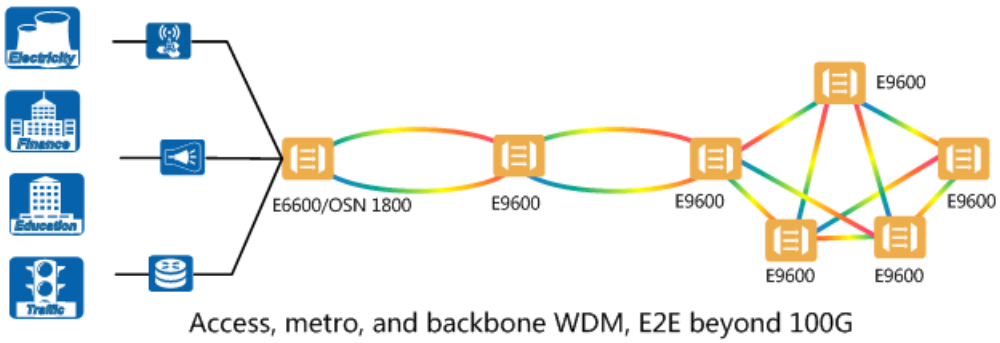
Huawei OptiXtrans E9600 Series

The Huawei OptiXtrans E9600 series are intelligent all-optical transmission platforms designed for enterprises. The OptiXtrans E9600 series can be widely used in industries such as ISP, energy, electric power, transportation, education, and finance that are crucial to national economy and people's livelihood, guaranteeing that a large amount of production data is securely and reliably transmitted between backbone, aggregation, and data center (DC) networks in major cities.

OptiXtrans E9624

OptiXtrans E9612

OptiXtrans E9605



Access, metro, and backbone WDM, E2E beyond 100G

Product Highlights

Ultra-Large Capacity: New Rate + New Spectrum

- Ultra-large capacity, 100‑800G/wavelength programmable
- Ultra-wide spectrum: C+L-band integrated grooming, covering both C band@6 THz and L band@6 THz, a maximum of 96T/fiber
- Optical+Electrical flexible grooming, creating a 3D-mesh high-speed interconnection network

Simplified Architecture: 6-in-1 Platform

- Optical/Ponder/OTN/SDH/PKT/OSU, 6-in-1, fewer device types required
- Unified grooming and transmission of OTN/VC/PKT services, simplifying network architecture and improving bandwidth utilization

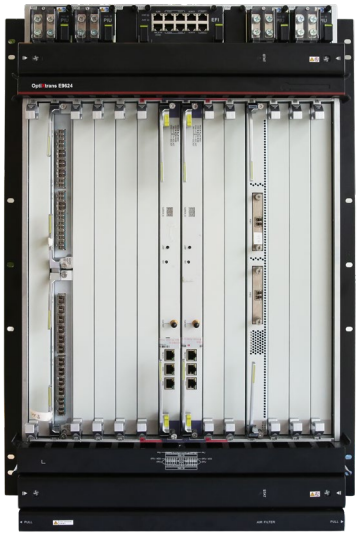
Intelligent O&M, shifting O&M mode from reactive to proactive

Virtualized bandwidth operation services based on the SDN design support the transition of WDM networks towards new transmission networks in the cloud era. Online, intelligent, visualized, and big data-based fault prediction is achieved, shifting O&M mode from reactive to proactive, improving service quality, and reducing OPEX.

Product Specifications (E9624/E9612/E9605)

The next-generation E9600 series subracks feature large capacity, optical-electrical integration, and small size. The E9600 series subracks apply to integrated bearing scenarios, such as broadband video, mobile backhaul, enterprise private line, and DCI, and provide an optimal end-to-end transmission solution from the backbone layer, aggregation layer, to access layer.

The specifications are as follows:

Specifications		E9624	E9612	E9605
Product appearance				
Subrack dimensions (mm)		747.2 (H) x 442 (W) x 295 (D)	347.2 (H) x 442 (W) x 295 (D)	177 (H) x 442 (W) x 295 (D)
Suitable cabinet[a]		• ETSI 300/600 cabinets, such as A63B • 19-inch cabinet		
Max. number of service board slots		1:1 cross-connect mode: 12 large slots or 24 small slots 1:3 cross-connect mode: 10 large slots or 20 small slots **NOTE** The E9624 subrack supports slot splitting. One 11 U slot of the E9624 subrack can be split into two 5.5 U slots.	13	5
Switching capability	Optical	1 to 20-degree reconfigurable optical add/drop multiplexer (ROADM)		
	Electrical	• 1:1 cross-connect mode: – 4.8 Tbit/s OSUflex/ODUk	N/A	

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		– 4.8 Tbit/s packet services – 1.92 Tbit/s VC-4 – 160 Gbit/s VC-3/VC-12 • 1:3 cross-connect mode: – 10 Tbit/s OSUflex/ODUk – 4 Tbit/s packet services – 1.6 Tbit/s VC-4 – 160 Gbit/s VC-3/VC-12		
Max. number of wavelengths		• Fixed grid: – C band: 120 wavelengths@50GHZ – L band: 120 wavelengths@50GHZ • Flexible grid: The maximum number of wavelengths is related to the width of the flex channel.		
Wavelength range		DWDM system: 1524.50 nm to 1572.06 nm (C120 band) DWDM system: 1575.37 nm to 1626.21 nm (L120 Band) CWDM system: 1471 nm to 1611 nm (S+C+L band)		
Max. rate per channel		800 Gbit/s (OTUC8)		
Service type		SDH, SONET, PDH, Ethernet, SAN, OTN, Video, OSU	SDH, SONET, Ethernet, SAN, OTN, Video	
Packet service capacity		• Support for E-Line/E-LAN (MEF) and VPWS/VPLS (IETF) • Support for MPLS-TP • Number of MPLS tunnels: 64 x 1024 • Number of PWs: 64 x 1024 • Number of E-Line services: 32 x 1024 • Number of E-LAN services: 8 x 1024	N/A	
Line rate		1.25 Gbit/s, 2.5 Gbit/s, 10 Gbit/s, 25 Gbit/s, 100 Gbit/s, 200G bit/s, 300Gbit/s, 400G bit/s, 500G bit/s, 600G bit/s, 700G bit/s, 800G bit/s	10 Gbit/s, 100 Gbit/s, 200G bit/s, 300Gbit/s, 400G bit/s , 500G bit/s, 600G bit/s, 700G bit/s, 800G bit/s	
Supported pluggable optical modules		eSFP, SFP+, TSFP+, CFP, CSFP, CFP2, QSFP28, SFP28, TSFP28, QSFP+, QSFP-DD	eSFP, SFP+, TSFP+, CFP, CSFP, CFP2, QSFP28, SFP28, QSFP+, QSFP-DD	
Topology		Point-to-point, chain, star, ring, ring-with-chain, tangent ring, intersecting ring, and mesh		
Redundancy and protection	Network level protection (OTN)	Optical line protection, client 1+1 protection, ODUk SNCP, OSUflex SNCP, tributary SNCP, intra-board 1+1 protection, LPT	Optical line protection, client 1+1 protection, intra-board 1+1 protection, LPT, intra-board ODUk SNCP, tributary SNCP	
	Network level protection (Packet)	ERPS, LAG, PW APS/FPS, Tunnel APS, MC-LAG, MC-PW APS, LPT	N/A	
	Network Level	SNCP, linear MSP, ring MSP, TPS	N/A	

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	Protection (SDH)			
	Network level protection (EoS)	LAG, DLAG, LCAS, LPT, STP/RSTP, BPS, PPS	N/A	
	Equipment level protection	Power supply redundancy, fan redundancy, cross-connect board redundancy, communication control and clock processing unit redundancy	Power supply redundancy, fan redundancy, communication control unit redundancy, clock processing unit redundancy	
Encryption type		Client-side service encryption		
Optical power management		ALS, ALC, IPA, IPA of the Raman system, IPC		
Easy O&M		Optical Doctor (OD) system, Fiber Doctor (FD) system		
Synchronization		Synchronous Ethernet, IEEE 1588v2, ITU-T G.8275.1/G.8273.2, high-precision clock synchronization		
ASON		• Electrical-layer ASON • Optical-layer ASON • SDH ASON • 2M ASON	Optical-layer ASON	
TSDN		• Fast E2E Service Provisioning • Bandwidth Adjustment • Scheduled Service Provisioning • Resource Usage View • Latency Map		
Submarine cable features		Supports application of extended C band in submarine cable scenarios.	N/A	N/A
Power supply		DC power input • Standard working voltage: –48 V DC / –60 V DC • Working voltage range: –40 V to –72 V AC power input • Standard working voltage: 110V AC/220V AC • Working voltage range: – 110V AC: 90V ACto 175V AC – 220V AC: 175V AC to 264V AC High-voltage DC power input • Standard working voltage: 240V/336V HVDC • Working voltage range: 190V HVDC to 400V HVDC **NOTE** In IEEE1613-compliant scenarios: (There is no such requirement when other standards are used.): • The power supply to the equipment must be less than 50 V. • The communication equipment must use an independent backup power supply system. It cannot share the backup power supply system with the power equipment.		DC power input • Standard working voltage: –48 V / –60 V • Working voltage range: –40 V to –72 V AC power input • Standard working voltage: 110V AC/220V AC • Working voltage range: – 110V AC: 90V AC to 176V AC – 220V AC: 176V AC to 264V AC High-voltage DC power input • Standard working voltage: 240 V HVDC • Working voltage range: 190 V HVDC to 290 V

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			HVDC **NOTE** In IEEE1613-compliant scenarios: (There is no such requirement when other standards are used.): • The power supply to the equipment must be less than 50 V. • The communication equipment must use an independent backup power supply system. It cannot share the backup power supply system with the power equipment.
Operation environment	Subrack temperature: • Long-term operation: 0°C to 45°C • Short-term operation[b]: –5°C to +50°C Relative humidity: • Long-term operation: 5% to 85% • Short-term operation[b]: 5% to 90%	Subrack temperature: • Long-term operation: 0°C to 45°C • Short-term operation[b]: –5°C to +55°C Relative humidity: • Long-term operation: 5% to 85% • Short-term operation[b]: 5% to 90%	Subrack temperature: • Long-term operation: 0°C to 50°C • Short-term operation[b]: –5°C to +55°C Relative humidity: • Long-term operation: 5% to 85% • Short-term operation[b]: 5% to 90%
Mean Time To Repair (MTTR)	1 hours[c] **NOTE** Average time for only fault locating, board replacement, device restart, and service recovery, excluding component preparation and transportation time.		
Mean Time Between Failure (MTBF)	65.94 years[c]		
Availability	0.999993076[c]		

a: The ETSI/19-inch standard defines only part of the cabinet dimensions. Therefore, the distance between the cabinet column and door plate varies depending on cabinet manufacturers. For details about the dimensions of different subracks, see the detailed description of each subrack.

b: Short-term operation means that the continuous operating time does not exceed 96 hours and the accumulated time per year does not exceed 15 days.

c: The preceding parameters are calculated based on the typical product configuration. In actual use, these parameters vary according to the configured module.

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