

Huawei-OptiX-OSN-1800-V Datasheet

Overview

The Huawei OptiX OSN 1800 is a new-generation packet enhanced multi-service optical transport platform that supports unified switching of OTN/PKT/SDH services and access of any 2M to 100G services such as Ethernet, TDM, and private line services. In addition, the OSN 1800 integrates the Multiprotocol Label Switching traffic policing (MPLS-TP) functions to optimize fiber resource usage in metro networks, and provides cost-effective, efficient service transmission solutions for sectors such as finance, media, government, energy, and education.

Quick Specs

Table 1 shows the Quick Specs.

Product Code	Huawei OptiX OSN 1800 V
Dimensions (mm)	221 x 442 x 224 (H x W x D) (excluding mounting ears)
Number of service board slots	<ul style="list-style-type: none">• DC chassis: 15• AC chassis: 12
Optical-layer cross-connect capability	1-degree to 9-degree ROADM
Easy O&M	OD and FD systems
Synchronization	<ul style="list-style-type: none">• Physical-layer clock (OTN&packet&SDH)• IEEE 1588v2 (OTN&packet)• ITU-T G.8275.1/G.8273.2 (OTN&packet)
ASON	OTN network: electrical-layer ASON (only for Z series cross-connections)
Power supply	<ul style="list-style-type: none">• DC power input: standard operating voltage: -48 V DC/-60 V DC• AC power input: standard operating voltage: 110 V AC/220 V AC

Product Details

Huawei OptiX OSN 1800 V provides these features:

- MS-OTN product with a 5 U height, supporting ultra-high integration and access of any service
- Supports up to 700G OTN cross-connect capacity, 700G packet cross-connect capacity, 280G SDH higher-order cross-connect capacity, and 40G SDH lower-order cross-connect capacity per subrack, greatly increasing line bandwidth utilization.
- Supports universal line boards, allowing services groomed on the OTN, SDH, and PKT service planes to seamlessly share line transmission bandwidth.
- Eco-friendly, easy O&M, and easy deployment
- Energy-saving design, reducing OPEX
- Easy to deploy, supporting installation in a 19-inch or ETSI cabinet and using AC or DC power supplies.
- Built-in PCM features, providing an all-in-one solution to meet requirements for low-rate service access of industry customers
- Avoids device stacking and simplifies network architecture.
- Provides unified management, easy network expansion, and smooth evolution on the multi-service transport platform.

Compare to Similar Items

Table 2 shows the comparison.

Product Code	Huawei OptiX OSN 1800 I Compact	Huawei OptiX OSN 1800 I Enhanced	Huawei OptiX OSN 1800 II Compact	Huawei OptiX OSN 1800 II Enhanced	Huawei OptiX OSN 1800 V
Dimensions (mm)	44 x 442 x 220 (H x W x D) (excluding mounting ears)	44 x 442 x 220 (H x W x D) (excluding mounting ears)	88 x 442 x 220 (H x W x D) (excluding mounting ears)	88 x 442 x 220 (H x W x D) (excluding mounting ears)	221 x 442 x 224 (H x W x D) (excluding mounting ears)
Number of service board slots	DC chassis: 3 AC chassis: 1	2	DC chassis: 7 AC chassis: 5	6	<ul style="list-style-type: none">• DC chassis: 15• AC chassis: 12

Maximum rate per channel	200 Gbit/s	10 Gbit/s	200 Gbit/s	200 Gbit/s	200 Gbit/s
Supported service type	SDH/SONET, PDH, OTN, Ethernet, CPRI, OBSAI, SAN, video, and others	SDH services: STM-1/4/16/64 PDH services: E1, T1, E3, and T3 ETH services: FE (optical/electrical), GE (optical/electrical), and 10GE	SDH/SONET, PDH, OTN, Ethernet, CPRI, OBSAI, SAN, video, and others	SDH service (STM-1/4/16/64), PDH service (E1/T1/E3/T3/E4), OTN service (OTU1/2/2e/4), Ethernet service (FE/GE/10GE/40GE/100GE), CPRI service, OBSAI service, PCM service, SAN service, video, and others	SDH service (STM-1/4/16/64), PDH service (E1/T1/E3/T3/E4), OTN service (OTU1/2/2e/4), Ethernet service (FE/GE/10GE/40GE/100GE), PCM service, CPRI service, OBSAI service, SAN service, video, and others
Synchronization	<ul style="list-style-type: none"> Physical-layer clock (OTN&SDH) IEEE 1588v2 (OTN) ITU-T G.8275.1/G.8273.2 (OTN) 	Physical-layer clock (OTN&packet&SDH)	<ul style="list-style-type: none"> Physical-layer clock (OTN&SDH) IEEE 1588v2 (OTN) ITU-T G.8275.1/G.8273.2 (OTN) 	<ul style="list-style-type: none"> Physical-layer clock (OTN&packet&SDH) IEEE 1588v2 (OTN&packet) ITU-T G.8275.1/G.8273.2 (OTN&packet) 	<ul style="list-style-type: none"> Physical-layer clock (OTN&packet&SDH) IEEE 1588v2 (OTN&packet) ITU-T G.8275.1/G.8273.2 (OTN&packet)
Power supply	<ul style="list-style-type: none"> DC power input Standard operating voltage: -48 V DC/-60 V DC Operating voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V AC power input Standard operating voltage: 110 V AC/220 V AC Operating voltage range: 100 V AC to 240 V AC 	<ul style="list-style-type: none"> DC power input Standard operating voltage: -48 V DC/-60 V DC Operating voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V AC power input Standard operating voltage: 110 V AC/220 V AC Operating voltage range: 100 V AC to 240 V AC 	<ul style="list-style-type: none"> DC power input Standard operating voltage: -48 V DC/-60 V DC Operating voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V AC power input Standard operating voltage: 110 V AC/220 V AC Operating voltage range: 100 V AC to 240 V AC 	<ul style="list-style-type: none"> DC power input Standard operating voltage: -48 V DC/-60 V DC 	<ul style="list-style-type: none"> DC power input: standard operating voltage: -48 V DC/-60 V DC AC power input: standard operating voltage: 110 V AC/220 V AC



Specification

Huawei OptiX OSN 1800 V Specification		
Dimensions (mm)	221 x 442 x 224 (H x W x D) (excluding mounting ears)	
Number of service board slots	<ul style="list-style-type: none"> DC chassis: 15 AC chassis: 12 	
Optical-layer cross-connect capability	1-degree to 9-degree ROADM	
Device capacity	OTN	OTN capacity: 700 Gbit/s
	Packet	Packet capacity: 700 Gbit/s
	TDM	280 Gbit/s higher-order capacity, 40 Gbit/s lower-order capacity

Maximum number of wavelengths	DWDM	80
	CWDM	8
Maximum rate per channel		200 Gbit/s
Supported service type		SDH service (STM-1/4/16/64), PDH service (E1/T1/E3/T3/E4), OTN service (OTU1/2/2e/4), Ethernet service (FE/GE/10GE/40GE/100GE), PCM service, CPRI service, OBSAI service, SAN service, video, and others
PCM interface		FXS/FXO, 2/4 line audio+E&M, G.703 64 kbit/s codirectional, V.35/V.24(synchronous/asynchronous RS232)/X.21, RS449(RS423A/RS422A)/RS530/RS530A/RS485/Dry Contact
Network application		Pure packet networking, pure OTN networking, pure TDM networking, MS-OTN networking (OTN+packet+TDM), hybrid networking (packet+TDM), OTN+packet networking, and OTN+TDM networking
Redundancy and protection	Network-level protection (OTN)	Client 1+1 protection, intra-board 1+1 protection, ODUk SNCP, optical line protection, tributary SNCP, and LPT
	Network-level protection (packet)	Tunnel APS, PW APS/FPS, MC-PW APS, MC-LAG, LPT, LAG, ERPS, MRPS, LMSP, and packet SNCP
	Network-level protection (TDM)	<ul style="list-style-type: none"> • SDH protection: SNCP, linear MSP, ring MSP, TPS, E1 SNCP, 64K SNCP, and hitless protection switching • EoS protection: LAG, DLAG, LCAS, LPT, STP/RSTP • PCM protection: E1 SNCP, 64K SNCP, and hitless protection switching
	Equipment-level protection	<ul style="list-style-type: none"> • Backup of cross-connect, system control, and clock units • Power supply backup • Fan backup
Easy O&M		OD and FD systems
Synchronization		<ul style="list-style-type: none"> • Physical-layer clock (OTN&packet&SDH) • IEEE 1588v2 (OTN&packet) • ITU-T G.8275.1/G.8273.2 (OTN&packet)
ASON		OTN network: electrical-layer ASON (only for Z series cross-connections)
Power supply		<ul style="list-style-type: none"> • DC power input: standard operating voltage: -48 V DC/-60 V DC • AC power input: standard operating voltage: 110 V AC/220 V AC