Huawei OptiX OSN 8800 and Boards Datasheet

CONTENT

Contact Us

Tel: +1-626-239-8066 (USA) +852-3050-1066 / +852-3174-6166

Fax: +852-3050-1066 (Hong Kong)

Email: sales@router-switch.com (Sales Inquiries)

Overview

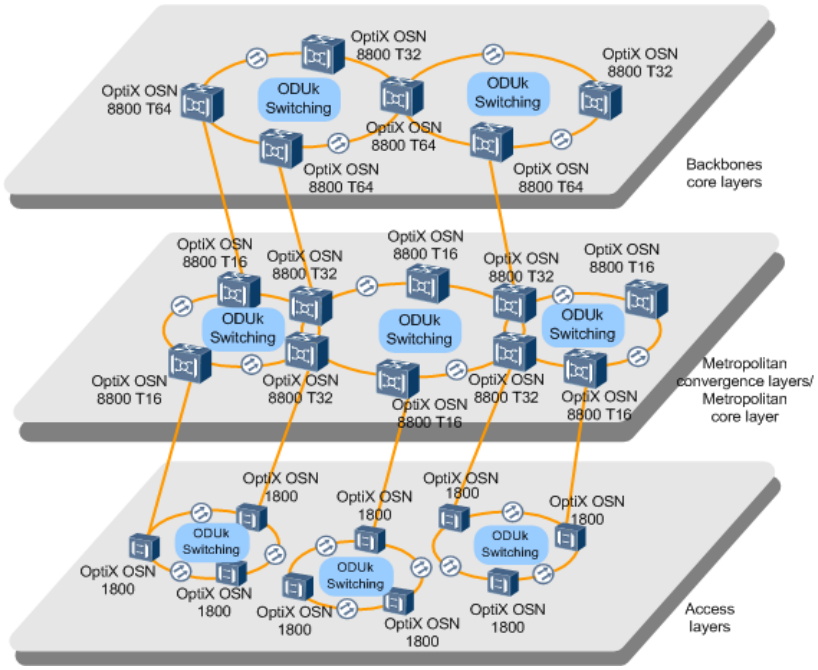
Huawei OptiX OSN 8800 Intelligent Optical Transport Platform (OptiX OSN 8800 for short) is a new generation of intelligent MS-OTN product. It is a future-proof product launched to address the IP-based metro network development trend. Using a new architecture, the product supports dynamic optical-layer grooming and flexible electrical-layer grooming. In addition, the product features high integration and reliability and supports multi-service transmission. The OptiX OSN 8800 is used for long haul backbone, area backbones, local networks, metropolitan convergence layers and metropolitan core layers. The OptiX OSN 8800 uses dense wavelength division multiplexing (DWDM) or coarse wavelength division multiplexing (CWDM) technologies to achieve transparent transmission with multiple services and large capacity.

OPTIX OSN 8800 UPS

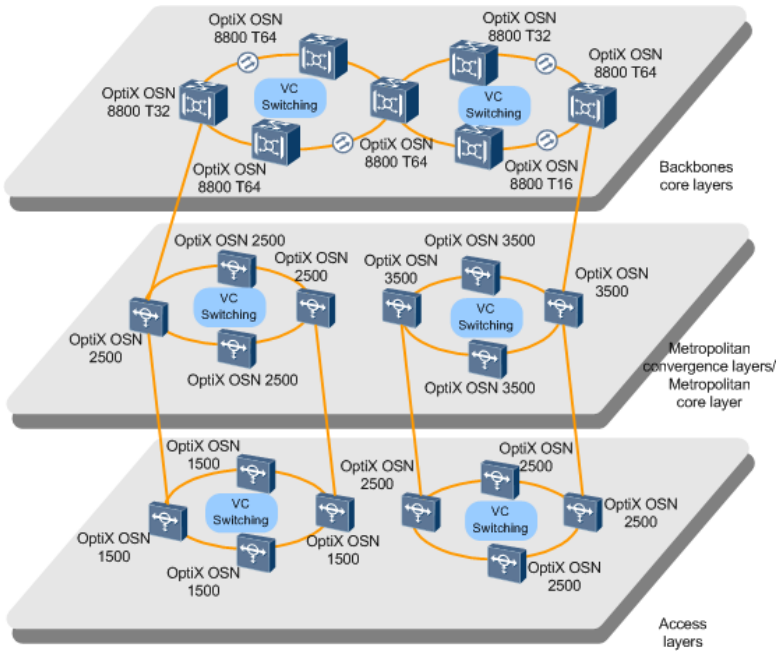
OPTIX OSN 8800 T16

OPTIX OSN 8800 T32

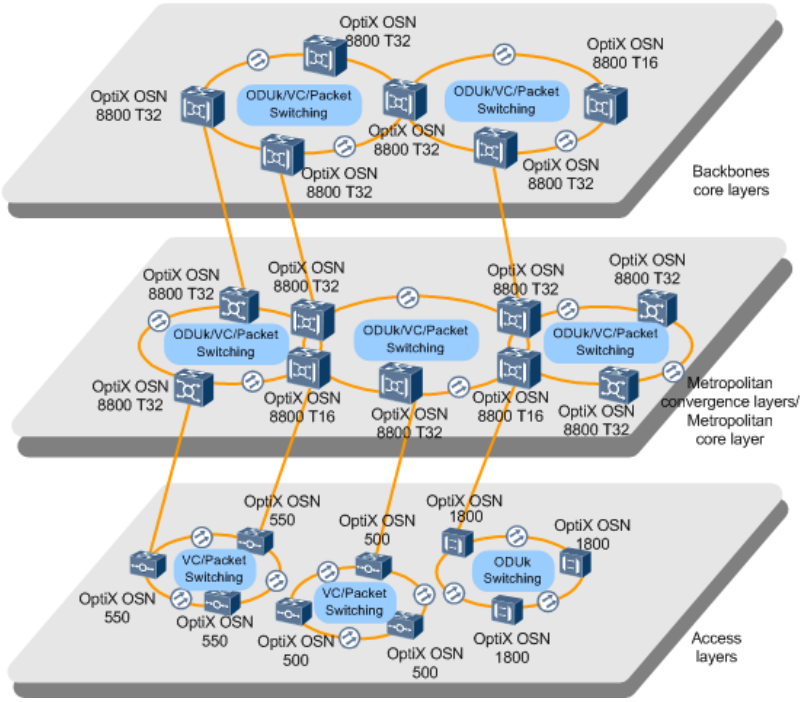
OPTIX OSN 8800 T64



Typical OTN networking of [OptiX OSN 8800]



Typical OCS(optical core switching) networking of [OptiX OSN 8800]



Typical MS-OTN networking of OptiX OSN 8800

Highlights of OptiX OSN 8800:

The OptiX OSN 8800 supports 40 Gbit/s, 100 Gbit/s and 200 Gbit/s line rates and a 6.4 Tbit/s cross-connect capacity. It features power saving, and high reliability and maintainability.

★ Highest Cross-Connect Capacity with Flexible Large-Capacity Service Grooming

- Features high cross-connect capacity. A single subrack supports a maximum of 6.4 Tbit/s cross-connect capacity, implementing large-capacity service grooming. Only one subrack is required for the large-capacity service grooming and therefore lowers power consumption and reduces the floor space.

- Supports multi-granularity OTN cross-connection, that is, ODUk cross-connection, where k can be 0, 1, 2, 2e, 3, 4, or flex.

- Supports encapsulation of VC, ODUk, and packet services by using universal line boards and unified switching of VC, ODUk, and packet services by using cross-connect boards, which achieves converged service grooming planes and flexible bandwidth allocation.

★ Huge Bandwidth Provisioning with Flexible High-Density Architecture

- Supports comprehensive soft decision (SDFEC and SDFEC2) and hard decision (HFEC) schemes to address various long-haul transmission requirements.

- Supports cost-effective metro 100G solutions to provide large-bandwidth and low-delay pipes for metro networks.

- Supports hybrid transmission of 10 Gbit/s, 40 Gbit/s, and 100 Gbit/s services, protecting carriers' investments.

- Supports flexible ROADM to provide the optical-layer platform for a beyond 100G system in future.

★ Tier 1 Reliability and Mass Data Transmission with Optimal Architecture

- Provides multiple network-level protection schemes and intelligent network management based on automatically switched optical network (ASON)/generalized multiprotocol label switching (GMPLS) technologies to protect all fibers and services.

- Provides protection for power supply devices, fans, communication control boards, and the cross-connection resource pool.

★ Low Power Consumption and High Maintainability, Providing the Minimizing OPEX

- Provides environment-friendly OTN solutions using various low-carbon technologies.

- Newly supports 19-inch subracks and can be installed in various types of cabinets, such as 19-inch cabinet or ETSI cabinet.

- Supports overall network performance monitoring using the user-friendly optical doctor (OD) system embedded in the U2000.

- Supports seamless interconnection with OptiX OSN 6800/3800/1800 and achieves end-to-end network management.

★ Submarine Features

- Supports the end-to-end flexible grid MUX/DEMUX solution.

- Supports ePDM-QPSK 100G boards with submarine features and flexible channel spacing to mitigate non-linear effects and address long-haul transmission requirements.

- Supports application of C band in submarine scenarios.

Specification

Table 1. OptiX OSN 8800 Specification.

Specifications		OptiX OSN 8800 T16	OptiX OSN 8800 T32[a]	OptiX OSN 8800 T64[a]	OptiX OSN 8800 UPS
Dimensions (mm)		498 (W) x 295 (D) x 450 (H)	498 (W) x 295 (D) x 900 (H)	498 (W) x 580 (D) x 900 (H)	442 (W) x 295 (D) x 397 (H)
Number of slots for service boards		16	32	64	DC: 16 AC: 15
Switch	**Optical**	1 to 20-degree ROADM			
	Electrical	1.6T ODUk(k=0, 1, 2, 2e, 3, 4, flex) 640G VC-4 and 20G VC-3/VC-12 800G Packet	Enhanced subrack: 3.2T ODUk(k=0, 1, 2, 2e, 3, 3e, 4, flex) 1.28T VC-4 and 80G VC-3/VC-12	Enhanced subrack: 6.4T ODUk(k=0, 1, 2, 2e, 3, 4, flex) 1.28T VC-4 and 80G VC-3/VC-12	N/A

			1.6T Packet General subrack: 2.56T ODUk(k=0, 1, 2, 2e, 3, 4, flex) 1.28T VC-4 and 80G VC-3/VC-12 640G Packet	General subrack: 2.56T ODUk(k=0, 1, 2, 2e, 3, flex) 1.28T VC-4 and 80G VC-3/VC-12	
Wavelength (max)		DWDM: 96-ch, CWDM: 8-ch		DWDM: 96-ch	
Center wavelength range		DWDM: 1529.16 nm to 1567.13 nm (extend C-band, ITU-T G.694.1) CWDM: 1471 nm to 1611 nm (Band S+C+L, ITU-T G.694.2)		DWDM: 1529.16 nm to 1567.13 nm (extended C-band, ITU-T G.694.1)	
Max. rate per channel		400 Gbit/s (OTUC4)			
Service types supported		SDH, SONET, Ethernet, SAN, OTN, Video			
Line rate		2.5 Gbit/s, 10 Gbit/s, 40 Gbit/s, 100 Gbit/s, 200 Gbit/s, 400 Gbit/s			
Supported pluggable optical modules		eSFP, SFP+, XFP, CFP, CFP2, QSFP28, QSFP+			
Max. capacity per PID group		200 Gbit/s		N/A	
Topology		Point-to-point, chain, star, ring, ring-with-chain, tangent ring, intersecting ring, mesh			
Redundancy and protection	**Network level protection (OTN)**	Optical line protection, intra-board 1+1 protection, client 1+1 protection, ODUk SNCP, tributary SNCP, SW SNCP, ODUk SPRing protection, OWSP		Optical line protection, intra-board 1+1 protection, client 1+1 protection, SW SNCP, OWSP	
	Network level protection (OCS)	Linear MSP, MSP ring, transoceanic MSP ring, SNCP, SNCTP		-	

	Network level protection (Ethernet and packet)	DBPS, DLAG, ERPS, LAG, LPT, MC-LAG, MSTP, PW APS, STP and RSTP, Tunnel APS, VLAN SNCP	DBPS, DLAG, ERPS, LAG, LPT, MC-LAG, MSTP, PW APS, STP and RSTP, Tunnel APS, VLAN SNCP	DBPS, DLAG, ERPS, LAG, LPT, MC-LAG, MSTP, STP and RSTP, VLAN SNCP	N/A
	Equipment level protection	Power redundancy, fan redundancy, cross-connect board redundancy, system control and communication board redundancy, centralized clock board redundancy, AUX board 1+1 redundancy		Power redundancy, fan redundancy, system control and communication board redundancy	
Optical power management		ALS, AGC, ALC, APE, IPA, OPA			
Synchronization		Synchronous Ethernet clock IEEE 1588v2 2 Mbit/s or 2 MHz (with the SSM function), ITU-T G.703-compliant external clock source External time source (1PPS+TOD) ITU-T G.8275.1/G.8273.2			
Simple O&M		Optical Doctor System, Fiber Doctor System			
ASON		An OTN network supports the Optical-Layer ASON and electrical-Layer ASON. An OCS network supports the SDH ASON feature. NOTE: The OptiX OSN 8800 T16 does not support the SDH ASON feature.		An OTN network supports the Optical-Layer ASON	
Submarine Features		Supports application of extended C band in submarine scenarios.			

Nominal working voltage	-48 V DC/-60 V DC Working voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V	-48 V DC/-60 V DC Working voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V	-48 V DC/-60 V DC Working voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V	DC Power: Nominal working voltage: -48 V DC/-60 V DC Working voltage range: -48 V DC: -40 V to -57.6 V -60 V DC: -48 V to -72 V AC Power: Nominal working voltage: 110V AC/220V AC Working voltage range: 90 V AC to 290 V AC
Typical configuration power consumption	OTN subrack: 700W OCS subrack: 821W	Enhanced 8800 T32 OTN subrack: 3300W OCS subrack: 1791W General 8800 T32 OTN subrack: 2000W OCS subrack: 1282W	Enhanced 8800 T64 OTN subrack: 6000W OCS subrack: 2135W General 8800 T64 OTN subrack: 3700W OCS subrack: 1748W	N/A

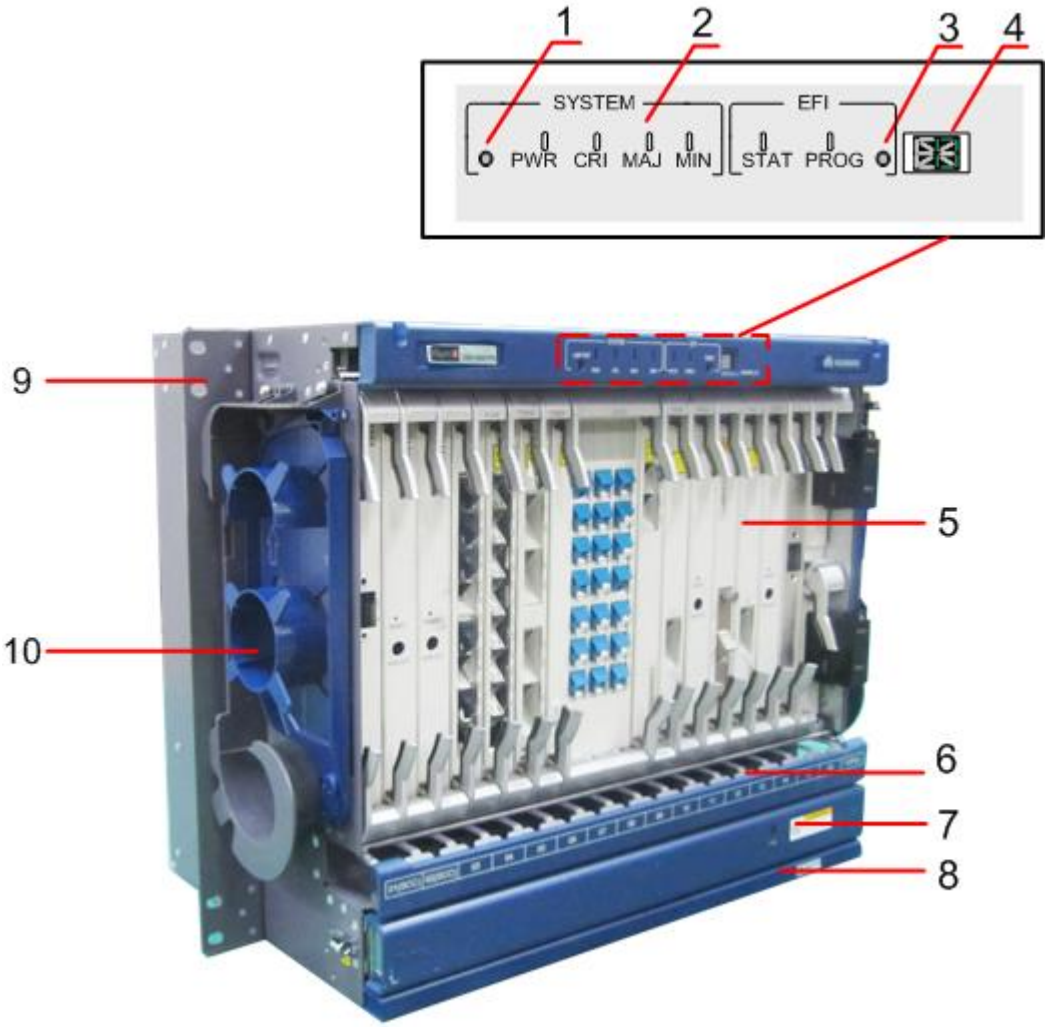
Maximum subrack power consumptionb	1800W	Enhanced 8800 T32: 4800W General 8800 T32: 4800W	Enhanced 8800 T64: 9600W General 8800 T64: 9600W	2400W
Operation environment	Subrack temperature: Long-term operation: 5°C (41 °F) to 45°C (113 °F) Short-term operation: -5°C (23 °F) to 55°C (131 °F) Relative humidity: Long-term operation: 5% to 85% Short-term operation: 5% to 95%			
Mean time to repair (MTTR)	4 hours	4 hours	4 hours	4 hours
Mean time between failures (MTBF)	62.80 years	60.40 years	58.68 years	51.64 years
a: There are two types of OptiX OSN 8800 T32 and 8800 T64 subracks: general and enhanced. Enhanced and general subracks are the same in appearance and technical specifications except for electrical cross-connect capacities and consumption. b: The maximum subrack power consumption refers to the theoretical power consumption obtained when boards with the highest power consumption are installed in every slot on the subrack.				

Hardware Description

OptiX OSN 8800 UPS Chassis

Structure

Subracks are the basic working units of the OptiX OSN 8800 universal platform subrack. The OptiX OSN 8800 universal platform subrack can operate with an independent DC or AC power supply. A universal platform subrack supports two mounting options: ETSI cabinet mounting and 19-inch rack mounting.



OptiX OSN 8800 universal platform subrack **structure diagram**

Table 2. Note

1. LAMP TEST Button	2. Indicator/Interface area	3. RESET Button
4. SubRACK_ID LED indicator	5. Board area	6. Fiber cabling area
7. Fan tray assembly	8. Air filter	9. Mounting ear
10. Fiber spool	-	-

NOTE:

The interface area is behind the indicator panel in the upper part of the subrack. Remove the indicator panel before you connect cables.

- LAMP TEST button: tests whether the indicators on the subrack are normal. After you press the button, all the indicators should be lit. It has the same function as the LAMP TEST button on the SCC board.

- Indicators: indicate the running status and alarm status of the subrack and EFI board software.

- RESET button: warm resets the EFI board.

- SubRack_ID LED indicator: displays the master/slave relationships between subracks when multiple subracks are cascaded. It has the same function as the subrack ID LED on the front panel of the SCC board. "0" indicates that the subrack housing the SCC board is the master subrack, "EE" indicates that the subrack ID is incorrect or the subrack ID fails to be obtained, and other values indicate slave subracks.

- Board area: All service boards are installed in this area. 18 slots are available.

- Fiber cabling area: Fiber jumpers from the ports on the front panel of each board are routed to the fiber cabling area before being routed on a side of the open rack.

- Fan tray assembly: Fan tray assembly contains eight fans that provide ventilation and heat dissipation for the subrack.

- Air filter: It protects the subrack from dust in the air and requires periodic cleaning.

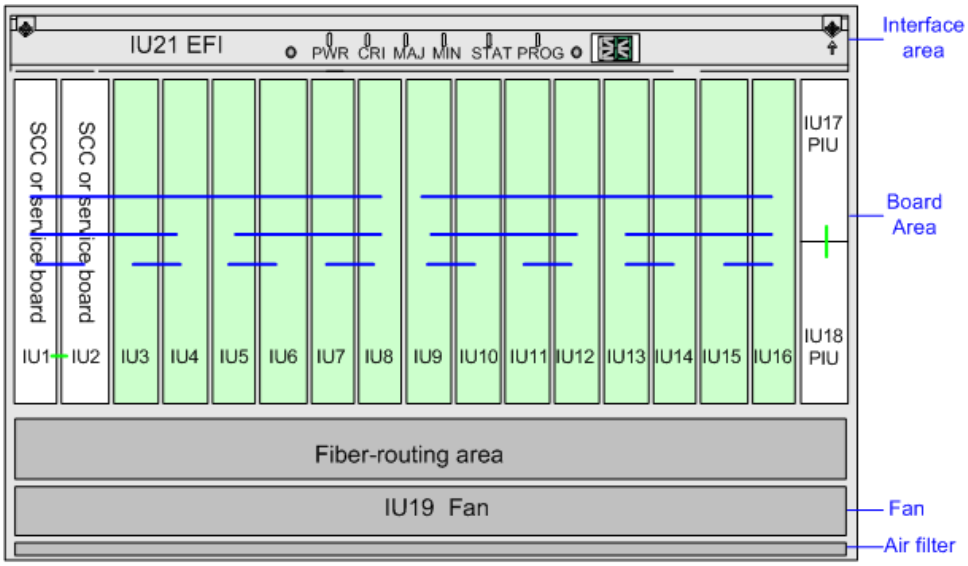
- Mounting ears: The mounting ears attach the subrack in the cabinet.

- Fiber spool: Rotable fiber spools are on two sides of the subrack. Extra fibers are coiled in the fiber spool on the open rack side before being routed to another subrack.

- The interface area provides functional interfaces, such as management interface, inter-subrack communication interface, alarm output and cascading interface, network management interface, alarm input and output interface. It is behind the subrack indicator panel.

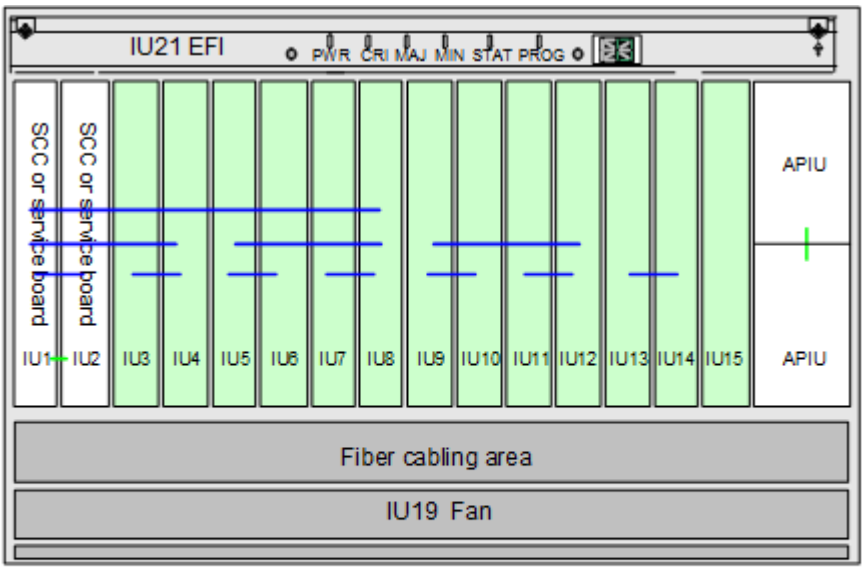
Slot Description

The OptiX OSN 8800 universal platform subrack provides 20 slots.



For one-slot boards, the paired slots must be configured as follows: slots IU1 and IU2, slots IU3 and IU4, and so on.
For two-slot boards, the paired slots must be configured as follows: slots IU1 to IU2 and slots IU3 to IU4, slots IU5 to IU6 and slots IU7 to IU8, and so on.
For four-slot boards, the paired slots must be configured as follows: slots IU1 to IU4 and slots IU5 to IU8, slots IU9 to IU12 and slots IU13 to IU16.

Slots of the subrack (DC power)



For one-slot boards, the paired slots must be configured as follows: slots IU1 and IU2, slots IU3 and IU4, ···, slots IU13 and IU14.
For two-slot boards, the paired slots must be configured as follows: slots IU1 to IU2 and slots IU3 to IU4, slots IU5 to IU6 and slots IU7 to IU8, slots IU9 to IU10 and slots IU11 to IU12.
For four-slot boards, the paired slots must be configured as follows: slots IU1 to IU4 and slots IU5 to IU8.

Slots of the subrack (AC power)

NOTE:

-  : houses service boards.

- Pair slots refer to a pair of slots whose resident boards' overhead can be processed by the buses on the backplanes.

Interface area: The EFI board provides maintenance and management interfaces.

Board area: IU1 to IU16 (DC power supply) or IU1 to IU15 (AC power supply) are reserved for the service boards.

- When a universal platform subrack serves as a master subrack, the subrack can be provisioned with two SCC board. When two SCC boards are provisioned, they are in mutual backup and are inserted in slots IU1 and IU2.

- When the universal platform subrack serves as a slave subrack, the SCC board is not required. In this case, slots IU1 and IU2 are used to hold service boards.

- When the universal platform subrack needs to use the IEEE 1588v2 or physical clock synchronization function, STG board must be configured. Two STG boards need to be configured. The two STG boards work in active/standby mode and are inserted in slots IU3 and IU4.

Fiber-routing area: Fiber jumpers from the ports on the front panel of each board are routed to the fiber cabling area before being routed on a side of the cabinet.

NOTE: The IEEE 1588v2 function is not supported by all services boards or ST2/AST2 boards in slots 3 and 4 in an OptiX OSN 8800 universal platform subrack.

OptiX OSN 8800 T16 Chassis

Structure

Subracks are the basic working units of the OptiX OSN 8800 T16. Each subrack has independent power supply.

Structure of OptiX OSN 8800 T16 subrack (subrack door excluded)

Table 3. Note

1. Board area	2. Fiber cabling area	3. Fan tray assembly
4. Air filter	5. Fiber spool	6. Mounting ear

- Board area: All the boards are installed in this area. 24 slots are available.

- Fiber cabling area: Fiber jumpers from the ports on the front panel of each board are routed to the fiber cabling area before being routed on a side of the open rack.

- Fan tray assembly: Fan tray assembly contains ten fans that provide ventilation and heat dissipation for the subrack. The front panel of the fan tray assembly has four indicators that indicate fan status and related information.

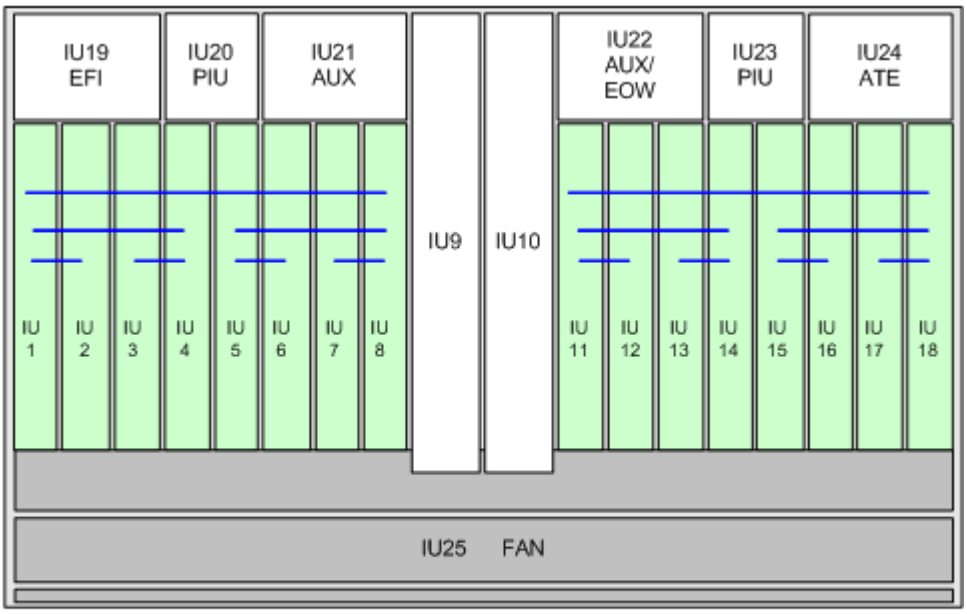
- Air filter: It protects the subrack from dust in the air and requires periodic cleaning.

- Fiber spool: Rotable fiber spools are on two sides of the subrack. Extra fibers are coiled in the fiber spool on the open rack side before being routed to another subrack.

- Mounting ears: The mounting ears attach the subrack in the cabinet.

Slot Description

The OptiX OSN 8800 T16 subrack provide 25 slots.



For one-slot boards, the paired slots must be configured as follows: slots IU1 and IU2, slots IU3 and IU4, and so on.
For two-slot boards, the paired slots must be configured as follows: slots IU1 to IU2 and slots IU3 to IU4, slots IU5 to IU6 and slots IU7 to IU8, and so on.
For four-slot boards, the paired slots must be configured as follows: slots IU1 to IU4 and slots IU5 to IU8, slots IU11 to IU14 and slots IU15 to IU18.

Slots of the OptiX OSN 8800 T16 subrack

- : houses service boards and supports service cross-connections.

- Pair slots refer to a pair of slots whose resident boards' overhead can be processed by the buses on the backplanes.

- IU9 and IU10 are reserved for the TN16UXCM/TN16XCH/TN16SCC or for the other service boards.

NOTE:

Slots IU9 and IU10 can be used to house service boards only when the OptiX OSN 8800 T16 functions as a slave subrack.

If slots IU9 and IU10 are used to house service boards, install a special filler panel in each slot first

Table 4. The slots for housing active and standby boards of the subrack.

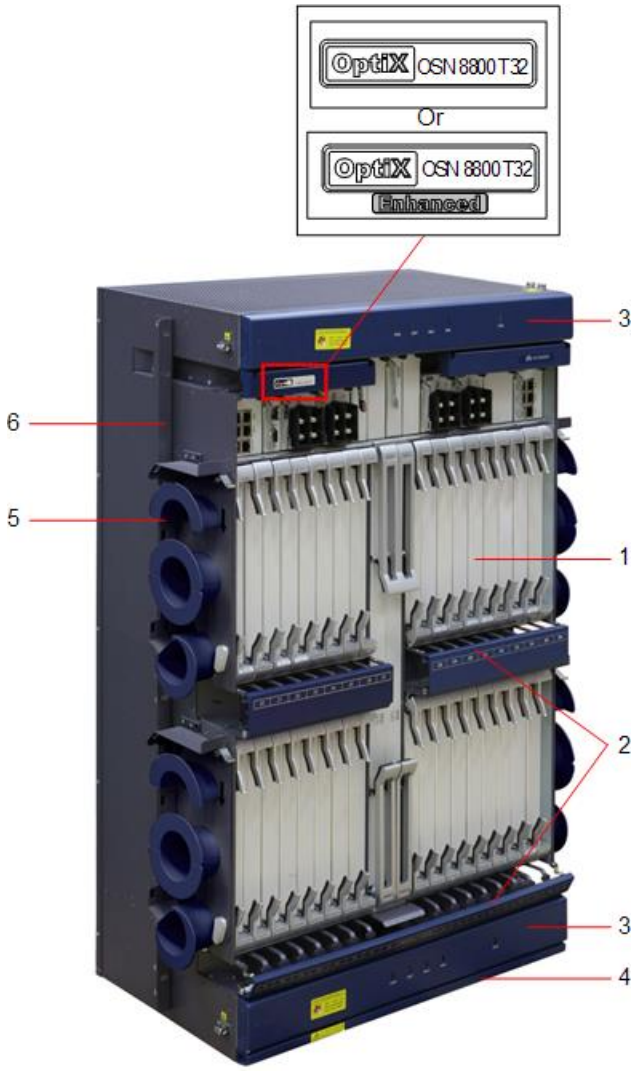
Board	Slots for Active and Standby Boards
AUX	IU21 & IU22
TN96EOW	IU22 NOTE:TN96EOW can be housed only in a master subrack.When slot IU22 houses a TN96EOW board, only one AUX board is required and is inserted in slot IU21. AUX spare

	boards need to be available at a site with only one AUX board so that the AUX board can be replaced immediately once it is faulty. In a subrack without a TN96EOW board, two AUX boards must be configured.
PIU	IU20 & IU23
TN16UXCM/TN16XCH/TN16SCC	IU9 & IU10

OptiX OSN 8800 T32 Chassis

Structure

Subracks are the basic working units of the OptiX OSN 8800 T32. Each subrack has independent power supplies.



Structure of OptiX OSN 8800 T32 subrack

Table 5. Note

1. Board area	2. Fiber cabling area	3. Fan tray assembly
4. Air filter	5. Fiber spool	6. Mounting ear

NOTE:

A subrack identified by "Enhanced" is an enhanced OptiX OSN 8800 T32 subrack, and the one that is not identified by "Enhanced" is a universal OptiX OSN 8800 T32 subrack. These two types of subracks are displayed as OSN8800 T32 Enhanced and OSN8800 T32 Standard

These two types of subracks cannot be exchanged.

- Board area: All the boards are installed in this area. 50 slots are available.

- Fiber cabling area: Fiber jumpers from the ports on the front panel of each board are routed to the fiber cabling area before being routed on a side of the open rack.

- Fan tray assembly: Fan tray assembly contains three fans that provide ventilation and heat dissipation for the subrack. The front panel of the fan tray assembly has four indicators that indicate subrack status.

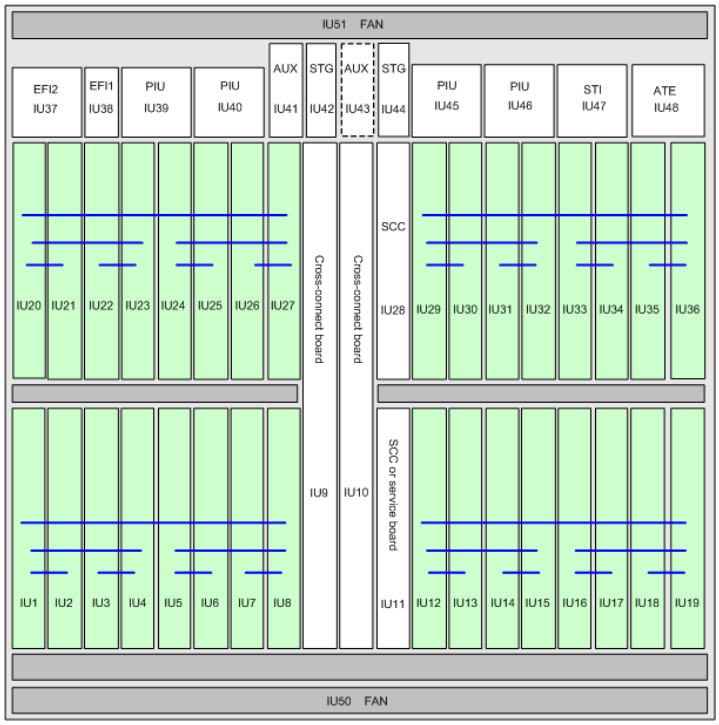
- Air filter: It protects the subrack from dust in the air and requires periodic cleaning.

- Fiber spool: Rotable fiber spools are on two sides of the subrack. Extra fibers are coiled in the fiber spool on the open rack side before being routed to another subrack.

- Mounting ears: The mounting ears attach the subrack in the cabinet.

Slot Description

The OptiX OSN 8800 T32 subrack provide 50 slots.



For one-slot boards, the paired slots must be configured as follows: slots IU1 and IU2, slots IU3 and IU4, and so on.
For two-slot boards, the paired slots must be configured as follows: slots IU1 to IU2 and slots IU3 to IU4, slots IU5 to IU6 and slots IU7 to IU8, and so on.
For four-slot boards, the paired slots must be configured as follows: slots IU1 to IU4 and slots IU5 to IU8, slots IU12 to IU15 and slots IU16 to IU19, and so on.

Slots of the OptiX OSN 8800 T32 subrack

- : houses service boards and supports service cross-connections.

- Pair slots refer to a pair of slots whose resident boards' overhead can be processed by the buses on the backplanes.

- Slot IU43 in a general OptiX OSN 8800 T32 is reserved for future use. Slot IU41 and slot IU43 in an enhanced OptiX OSN 8800 T32 subrack are used to house the active and standby AUX boards, respectively.

NOTE:

- Only the TN52AUX board supports 1+1 backup in an enhanced subrack.

- IU9 and IU10 are reserved for the cross-connect board: UXCH, UXCM, XCH or XCM

- **Table 6. The slots for housing active and standby boards of the subrack.**

Board	Slots for Active and Standby Boards
PIU	IU39 & IU45 and IU40 & IU46

SCC	IU28 & IU11
STG	IU42 & IU44a
XCH/XCM/UXCH/UXCM	IU9 & IU10a
TN52AUX	Enhanced OptiX 8800 T32: IU41 & IU43

a:

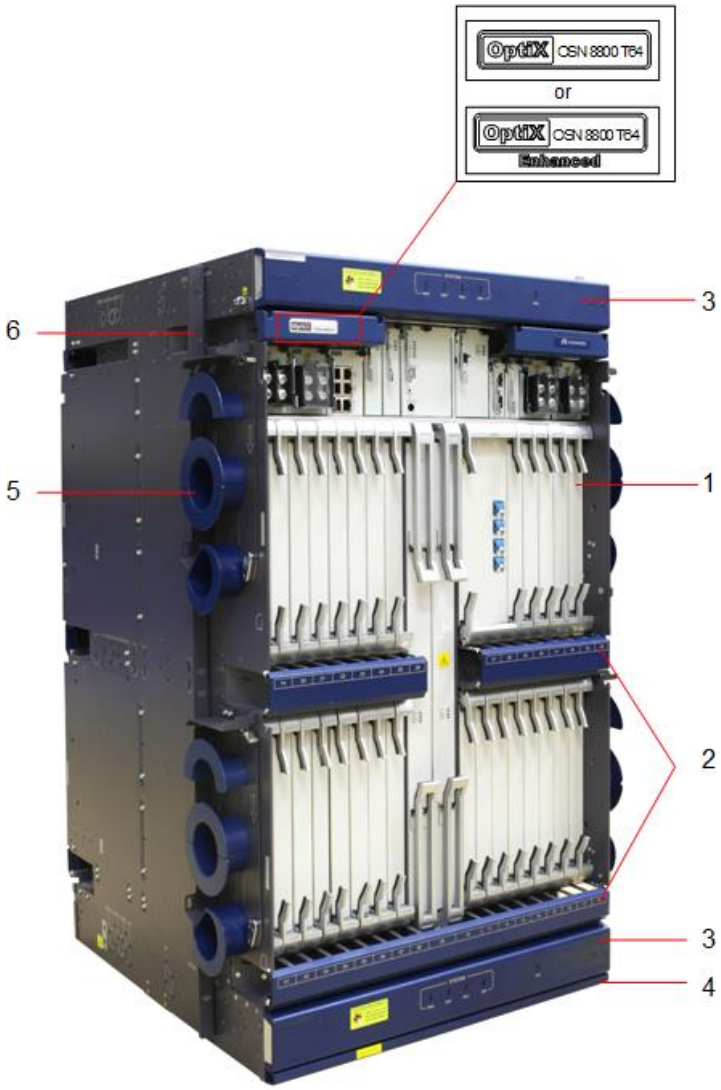
The switchovers of cross-connect boards and clock boards occur concurrently. The cross-connect board in slot 9 is forcibly bound with the clock board in slot 42, and the cross-connect board in slot 10 is forcibly bound with the clock board in slot 44. For example, if the cross-connect board in slot 9 is faulty, all services on the subrack will be switched to the cross-connect board in slot 10 and the clock board in slot 44 regardless of whether the clock board in slot 42 is faulty. This principle is also applicable when the clock board is faulty.

The 1+1 backup mechanism for cross-connect boards and clock boards take effect only when dual cross-connect boards and dual clock boards are configured. If dual cross-connect boards are configured but only one clock board is configured, the cross-connect boards cannot be switched over. If only one cross-connect board is configured but dual clock boards are configured, the clock boards cannot be switched over.

OptiX OSN 8800 T64 Chassis

Structure

Subracks are the basic working units of the OptiX OSN 8800 T64. Each subrack has independent power supplies.



Structure of [OptiX OSN 8800 T64 subrack]

Table 6. Note

1. Board area	2. Fiber cabling area	3. Fan tray assembly
4. Air filter	5. Fiber spool	6. Mounting ear

NOTE:

Both the front and rear sides of a subrack have mounting ears and fiber spools. Install mounting ears and fiber spools on the rear side of a subrack only after the subrack has been installed into a cabinet. The figure illustrates only the front side.

A subrack identified by "Enhanced" is an enhanced OptiX OSN 8800 T64 subrack, and the one that is not identified by "Enhanced" is a universal OptiX OSN 8800 T64 subrack. These two types of subracks are displayed as OSN8800 T64 Enhanced and OSN8800 T64 Standard respectively on the U2000.

These two types of subracks cannot be exchanged.

- Board area: All the boards are installed in this area. 93 slots are available.

- Fiber cabling area: Fiber jumpers from the ports on the front panel of each board are routed to the fiber cabling area before being routed on a side of the open rack.

- Fan tray assembly: Four fan tray assemblies are available for this subrack. Each fan tray assembly contains three fans that provide ventilation and heat dissipation for the subrack. The front panel of the fan tray assembly has four indicators that indicate fan status and related information.

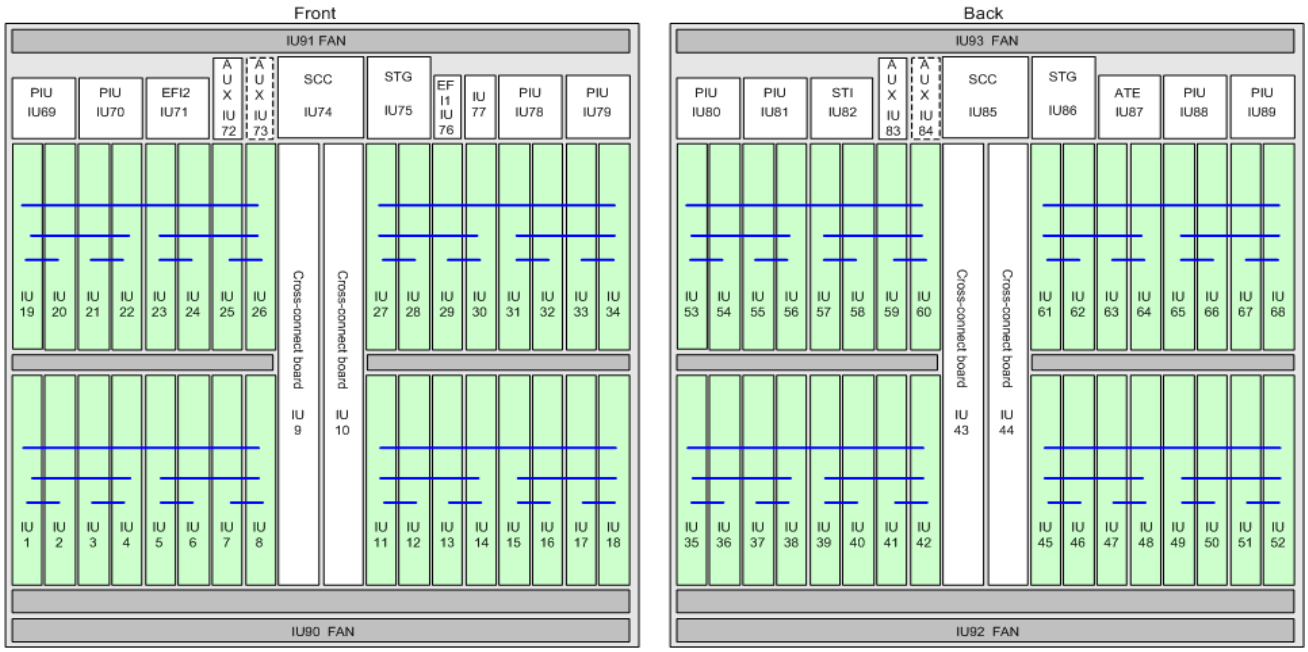
- Air filter: It protects the subrack from dust in the air and requires periodic cleaning.

- Fiber spool: Rotable fiber spools are on two sides of the subrack. Extra fibers are coiled in the fiber spool on the open rack side before being routed to another subrack.

- Mounting ears: The mounting ears attach the subrack in the cabinet.

Slot Description

The OptiX OSN 8800 T64 subrack provide 93 slots.



— Paired slots

For one-slot boards, the paired slots must be configured as follows: slots IU1 and IU2, slots IU3 and IU4, and so on.
For two-slot boards, the paired slots must be configured as follows: slots IU1 to IU2 and slots IU3 to IU4, slots IU5 to IU6 and slots IU7 to IU8, and so on.
For four-slot boards, the paired slots must be configured as follows: slots IU1 to IU4 and slots IU5 to IU8, slots IU11 to IU14 and slots IU15 to IU18, and so on.

Slots of the OptiX OSN 8800 T64 subrack

- : houses service boards and supports service cross-connections.

- Pair slots refer to a pair of slots whose resident boards' overhead can be processed by the buses on the backplanes.

- In a general OptiX OSN 8800 T64 subrack, IU73 and IU84 are reserved for future use, and IU72 and IU83 are used to house AUX boards. In an enhanced OptiX OSN 8800 T64 subrack, IU72 and IU83 are used to house the active AUX boards, and IU73 and IU84 are used to house the standby AUX boards.

NOTE:

Only the TN52AUX board supports 1+1 backup in an enhanced subrack.

- IU77 is reserved for future use.

- IU9 and IU43 are reserved for the cross-connect board.

· Enhanced OptiX OSN 8800 T64 subrack: TNK2UXCT or TNK4XCT.

· General OptiX OSN 8800 T64 subrack: TNK4XCT or TNK2XCT.

- IU10 and IU44 are reserved for the cross-connect board.

· Enhanced OptiX OSN 8800 T64 subrack: TNK2USXH, TNK4SXH or TNK4SXM.

· General OptiX OSN 8800 T64 subrack: TNK4SXH, TNK2SXH, TNK4SXM or TNK2SXM.

- Table 8. The slots for housing active and standby boards of the subrack.

Board	Slots for Active and Standby Boards
PIU	General OptiX 8800 T64: IU69 & IU78, IU70 & IU79, IU80 & IU88, and IU81 & IU89 Enhanced OptiX 8800 T64: IU69 & IU89, IU70 & IU88, IU78 & IU81, and IU79 & IU80
SCC	IU74 & IU85
STG	IU75 & IU86a
SXM/SXH/USXH	IU10 & IU44a

XCT/UXCT	IU9 & IU43a
TN52AUX	Enhanced OptiX 8800 T64: IU72 & IU73, IU83 & IU84

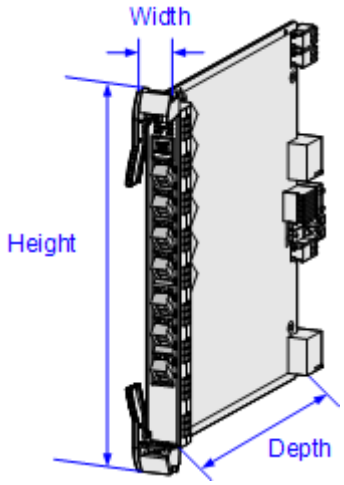
a:

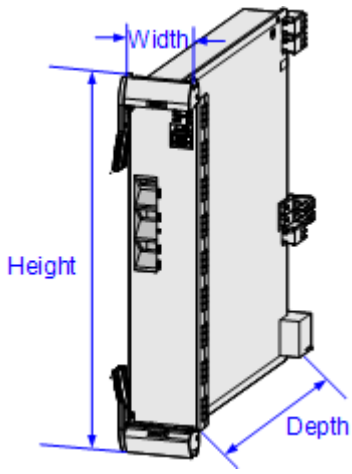
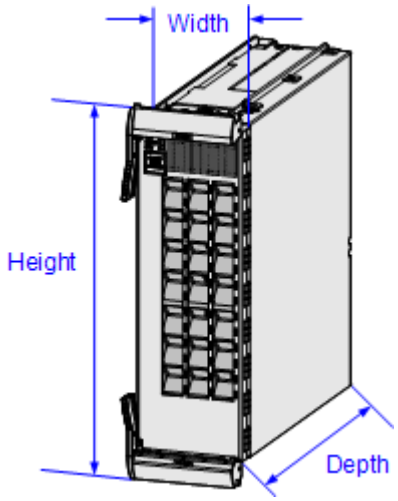
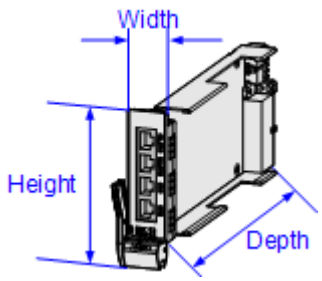
The switchovers of cross-connect boards and clock boards occur concurrently. The cross-connect boards in slots 9 and 10 are forcibly bound with the clock board in slot 75, and the cross-connect boards in slots 43 and 44 are forcibly bound with the clock board in slot 86. For example, if the cross-connect board in slot 9 or 10 is faulty, all services on the subrack will be switched to the cross-connect boards in slots 43 and 44 and the clock board in slot 86 regardless of whether the clock board in slot 75 is faulty. This principle is also applicable when the clock board is faulty.

The 1+1 backup mechanism for cross-connect boards and clock boards take effect only when dual cross-connect boards and dual clock boards are configured. If dual cross-connect boards are configured but only one clock board is configured, the cross-connect boards cannot be switched over. If only one cross-connect board is configured but dual clock boards are configured, the clock boards cannot be switched over.

Boards Description

Table 9. Appearance and Dimensions of Boards

Board Appearance	Board Name	Number of Slots Per Board	Height (mm)	Width (mm)	Depth (mm)
	TN11L4G	1	264.6	25.4	220.0

Board Appearance	Board Name	Number of Slots Per Board	Height (mm)	Width (mm)	Depth (mm)
	TN11OAU1	2	264.6	50.8	220.0
	TN11M40	3	264.6	76.2	220.0
	TN11AUX	1	107.6	25.4	220.0

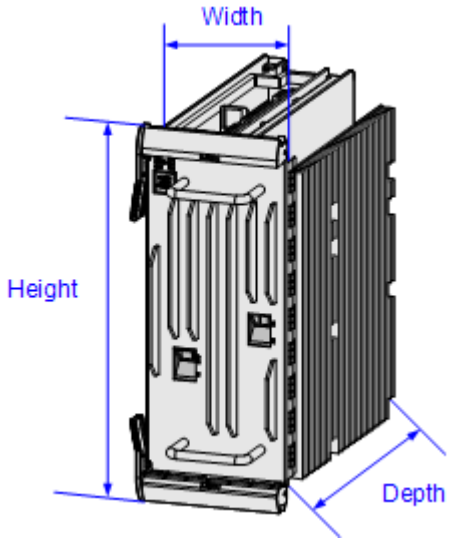
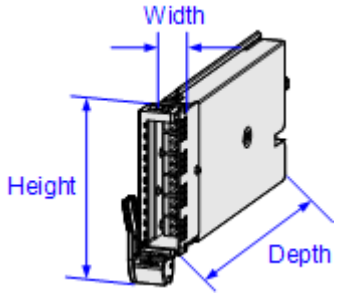
Board Appearance	Board Name	Number of Slots Per Board	Height (mm)	Width (mm)	Depth (mm)
	TN11LSXL	4	264.6	101.6	220.0
	TN21MR4	1	118.9	25.4	220.0

Table 10. OptiX OSN 8800 Board Category

Table 10-1. Boards for optical transponder unit							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN12LDM	2-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength	Y	Y	Y	Y	Y	N

	conversion board						
TN11LDMD	2-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength conversion board, dual fed and selective receiving	Y	Y	Y	Y	N	N
TN11LDMS	2-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength conversion board, single fed and single receiving	Y	Y	Y	Y	N	N
TN12LDX	2 x 10 Gbit/s wavelength conversion unit	Y	Y	Y	Y	Y	Y
TN11LEM24	22 x GE + 2 x 10GE and 2 x OTU2 Ethernet switch board	Y	Y	Y	Y	N	Y
TN11LEX4	4 x 10GE and 2 x OTU2	Y	Y	Y	Y	N	Y

	Ethernet switch board						
TN11LOA	8 x Any-rate MUX OTU2 Wavelength Conversion Board	Y	Y	Y	Y	Y	Y
TN11LOG	8 x Gigabit Ethernet unit	Y	Y	Y	Y	N	N
TN12LOG		Y	Y	Y	Y	Y	Y
TN11LOM	8-port multi-service multiplexing & optical wavelength conversion board	Y	Y	Y	Y	N	N
TN12LOM		Y	Y	Y	Y	Y	Y
TN13LQM	4-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength conversion unit	Y	Y	Y	Y	Y	N
TN12LQMD	4-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength conversion unit, dual fed and selective receiving	Y	Y	Y	Y	N	N

TN12LQMS	4-channel multi-rate (100Mbit/s-2.5Gbit/s) wavelength conversion unit, single fed and single receiving	Y	Y	Y	Y	N	N
TN12LSC	100Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN13LSC	100 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN15LSC	100 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN17LSC	100 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN18LSC	100 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN17LSCM	100 Gbit/s wavelength	Y	Y	Y	Y	Y	Y

	conversion board						
TN11LSQ	40 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	Y
TN12LSX	10 Gbit/s wavelength conversion unit	Y	Y	Y	Y	Y	Y
TN13LSX		Y	Y	Y	Y	Y	Y
TN14LSX		Y	Y	Y	Y	Y	Y
TN12LSXL	40 Gbit/s wavelength conversion board	Y	Y	Y	Y	Y	N
TN15LSXL		Y	Y	Y	Y	Y	Y
TN12LSXLR	40 Gbit/s wavelength conversion relay unit	Y	Y	Y	Y	Y	N
TN11LSXR	10 Gbit/s wavelength conversion relay unit	Y	Y	Y	Y	Y	N
TN11LTX	10-Port 10 Gbit/s Service Multiplexing & Optical Wavelength Conversion Board	Y	Y	Y	Y	Y	Y
TN12LTX		Y	Y	Y	Y	Y	Y
TN15LTX	10-Port 10G bit/s Service	Y	Y	Y	Y	Y	Y

	Multiplexing & Optical Wavelength Conversion Board						
TN17LTX	10-Port 10G bit/s Service Multiplexing & Optical Wavelength Conversion Board	Y	Y	Y	Y	Y	Y
TN11LWX2	arbitrary rate (16Mbit/s-2.7Gbit/s) dual-wavelength conversion board	N	N	N	N	Y	N
TN11LWXS	arbitrary rate (16Mbit/s-2.7Gbit/s) wavelength conversion board (single transmit)	N	N	N	N	Y	N
TN12LWXS	arbitrary rate (16Mbit/s-2.7Gbit/s) wavelength conversion board (single transmit)	Y	Y	Y	Y	Y	Y

TN11TMX	4 channels STM-16/OC-48/OTU1 asynchronism mux OTU-2 wavelength conversion board	Y	Y	Y	Y	N	N
TN12TMX		Y	Y	Y	Y	Y	Y
TN11LDC	2 x 100Gbit/s Service Multiplexing Into OTUC2 Wavelength Conversion Board	Y	Y	Y	N	Y	Y
TN12LDC	2 x 100Gbit/s Service Multiplexing Into OTUC2 Wavelength Conversion Board	Y	Y	Y	N	Y	Y
TN11LQCP	4*100Gbit/s or 16*10Gbit/s Service Programmable Wavelength Conversion Board	Y	Y	Y	N	Y	Y

Table 10-2. Boards for OTN tributary unit							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN52TDX	2 x 10G tributary service processing board	Y	Y	Y	Y	N	Y
TN53TDX		Y	Y	Y	Y	N	Y
TN54TEM28	24xGE+4x10GE Ethernet tributary unit	Y	Y	Y	Y	N	Y
TN54THA	16 Any-rate Ports Service Processing Board	Y	Y	Y	Y	N	Y
TN54TOA	8 Any-rate Ports Service Processing Board	Y	Y	Y	Y	N	Y
TN52TOG	8 x GE tributary service processing board	Y	Y	Y	Y	N	Y
TN52TOM	8 x multi-rate ports service processing board	Y	Y	Y	Y	Y	Y

TN55TOX TN56TOX	8 x 10 Gbit/s tributary service processing board	N	Y	Y	Y	N	Y
TN52TQX	4 x 10 Gbit/s tributary service processing board	Y	Y	Y	Y	N	Y
TN53TQX		Y	Y	Y	Y	N	Y
TN55TQX		Y	Y	Y	Y	N	Y
TN54TSC	100 Gbit/s tributary service processing board	N	Y	N	Y	N	Y
TN55TSC	100 Gbit/s Tributary Service Processing Board	N	Y	N	Y	N	Y
TN53TSXL	40 Gbit/s tributary service processing board	Y	Y	Y	Y	N	Y
TN54TSXL		Y	Y	Y	Y	N	Y
TN54TTX	10 x 10 Gbit/s tributary service processing board	N	Y	N	Y	N	Y
TN55TTX	10 x 10 Gbit/s tributary	N	Y	N	Y	N	Y

	service processing board						

Table 10-3. Boards for OTN line unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN12ND2	2 x 10G line service processing board	N	N	N	N	only supports relay mode	N
TN52ND2		Y	Y	Y	Y	only supports relay mode	Y
TN53ND2		Y	Y	Y	Y	only supports relay mode	Y
TN52NQ2	4 x 10G Line Service Processing Board	Y	Y	Y	Y	N	N
TN53NQ2		Y	Y	Y	Y	only supports relay mode	Y
TN54NQ2		Y	Y	Y	Y	N	Y
TN55NO2	8 x 10G Line Service Processing Board	only supports relay mode	Y	Y	Y	only supports relay mode	Y

TN52NS2	10G Line Service Processing Board	Y	Y	Y	Y	N	Y
TN53NS2		Y	Y	Y	Y	N	Y
TN52NS3	40G Line Service Processing Board	Y	Y	Y	Y	N	Y
TN54NS3		Y	Y	Y	Y	only supports relay mode	Y
TN55NS3		Y	Y	Y	Y	only supports relay mode	Y
TN56NS3		Y	Y	Y	Y	only supports relay mode	Y
TN54NS4	100G Line Service Processing Board	only supports relay mode	Y	only supports relay mode	Y	only supports relay mode	Y
TN56NS4	100G Line Service Processing Board	only supports relay mode	Y	Y	Y	only supports relay mode	Y
TN57NS4	100G Line Service Processing Board	only supports relay mode	Y	only supports relay mode	Y	only supports relay mode	Y
TN58NS4	100G Line Service Processing Board	only supports relay mode	Y	only supports relay mode	Y	only supports relay mode	Y

TN54NS4M	100G Line Service Processing Board	Y	Y	Y	Y	N	N

Table 10-4. General Service Processing Board							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN54GS4	100G General Service Processing Board	N	Y	N	Y	N	Y

Table 10-5. Boards for universal Line Board							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN54HUNQ2	4 x 10G Universal Line Service Processing Board	N	N	Y	Y	N	Y
TN54HUNS3	40G Universal Line Service	N	N	Y	Y	N	Y

	Processing Board						
TN54HSNS4	1 x 100G Universal Line Service Processing Board	Y	Y	Y	Y	Y	Y

Table 10-6. Boards for packet service unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN54EG16	16-port gigabit ethernet packet switch board	N	N	Y	Y	N	Y
TN55EG16	16-port gigabit ethernet packet switch board	N	N	Y	Y	N	Y
TN54EX2	2 x 10GE ethernet packet switch board	N	N	Y	Y	N	Y

TN54EX8	8 x 10GE ethernet packet switch board	N	N	Y	Y	N	Y
TN54PND2	2 x 10G bit/s packet switch line board	N	N	Y	Y	N	Y

Table 10-7. Boards for PID unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN54ENQ2	4 x 10G line service processing board	Y	Y	Y	Y	N	Y
TN54NPO2	12 x OTU2 PID board	Y	Y	Y	Y	N	Y
TN55NPO2		Y	Y	Y	Y	N	Y
TN55NPO2E	10G PID line service processing board, 20–channel extended	Y	Y	Y	Y	N	Y
TN54NPS4	1x100G PID Line Service	N	Y	N	Y	N	Y

	Processing Board						
TN54NPS4E	1 x 100G PID Line Service Processing Board, Extended	N	Y	N	Y	N	Y

Table 10-8. Boards for Submarine unit							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN96NS4 TN97NS4	100G line service processing board	only supports relay mode	Y	only supports relay mode	Y	only supports relay mode	Y
TN96OBU1	C-band Optical Booster Unit	Y	Y	Y	Y	Y	Y
TN96WSD9	9-port flexible wavelength selective demultiplexing board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN96WSM9	9-port wavelength selective multiplexing	Y	Y	Y	Y	Y	Y

	board(Extended C-band)						
TN97OPM8	8-channel optical power monitor board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN97MD2	2-port Multiplexing and Demultiplexing Board (Extended C Band)	Y	Y	Y	Y	Y	Y
TN96EOW	Engineering OrderWire Board	N	N	N	N	N	Y
TN97M48V	48-channel multiplexing board with VOA(Extended C-band)	Y	Y	Y	Y	Y	Y
TN97D48	48-channel demultiplexing board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN97FIU	Fiber interface board(Extended C-band)	Y	Y	Y	Y	Y	Y

TN97ITL	Interleaver board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN97TD20	20-ports Tunable DeMultiplexing Board(Extended C_band)	Y	Y	Y	Y	Y	Y
TN97TM20	20-ports Tunable Multiplexing Board(Extended C_band)	Y	Y	Y	Y	Y	Y
TN51HBA	High-power booster amplifier board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN51ROP	Extended C-band remote optical pump processing board	Y	Y	Y	Y	Y	Y
TN51RPC	Extended C-band forward raman processing board	Y	Y	Y	Y	Y	Y
TN97ASE	Extended C-band Amplified spontaneous emission board	Y	Y	Y	Y	Y	Y

	with pump protection						
TN97RPC	Extended C-band backward raman processing board	Y	Y	Y	Y	Y	Y
TN97OAU2	Extended C-band optical booster unit with pump protection	Y	Y	Y	Y	Y	Y
TN97OBU2	Extended C-band optical booster unit with pump protection	Y	Y	Y	Y	Y	Y
TN97ERPC	Extended C-band enhanced Raman processing board	Y	Y	Y	Y	Y	Y

Table 10-9. Boards for optical multiplexer and demultiplexer unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11D40		Y	Y	Y	Y	Y	Y

TN12D40	40-channel demultiplexing unit	Y	Y	Y	Y	Y	Y
TN97D48	48-channel demultiplexing board	Y	Y	Y	Y	Y	Y
TN11D40V	40-channel demultiplexing unit with VOA	Y	Y	Y	Y	N	N
TN11M40	40-channel multiplexing unit	Y	Y	Y	Y	Y	Y
TN12M40		Y	Y	Y	Y	Y	Y
TN11M40V	40-channel multiplexing unit with VOA	Y	Y	Y	Y	Y	Y
TN12M40V		Y	Y	Y	Y	Y	Y
TN97M48V	48-channel multiplexing board with VOA	Y	Y	Y	Y	Y	Y
TN12FIU TN13FIU TN14FIU TN15FIU TN16FIU	fiber interface unit	Y	Y	Y	Y	Y	Y
TN11ITL06	interleaver board(extended C-band)	Y	Y	Y	Y	Y	Y

TN11ITL01	interleaver board	Y	Y	Y	Y	Y	Y
TN11ITL04		Y	Y	Y	Y	Y	Y
TN12ITL		Y	Y	Y	Y	Y	Y
TN11SFIU	fiber interface unit for sync timing	Y	Y	Y	Y	Y	Y

Table 10-10. Board for fixed optical add and drop multiplexing unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11CMR2	CWDM 2-channel optical add/drop multiplexing unit	Y	Y	Y	Y	Y	Y
TN11CMR4	CWDM 4-channel optical add/drop multiplexing unit	Y	Y	Y	Y	Y	Y
TN11DMR1	CWDM 1-channel bidirectional optical add/drop	Y	Y	Y	Y	N	N

	multiplexing board						
TN11MR2	2-channel optical add/drop multiplexing unit	Y	Y	Y	Y	Y	Y
TN11MR4	4-channel optical add/drop multiplexing unit	Y	Y	Y	Y	Y	Y
TN11MR8	8-channel optical add/drop multiplexing unit	Y	Y	Y	Y	Y	N
TN11MR8V TN12MR8V	8-channel optical add/drop multiplexing unit with VOA	Y	Y	Y	Y	Y	Y
TN11SBM2	2-channel CWDM single-fiber bidirectional add/drop board	Y	Y	Y	Y	Y	N

Table 10-11. Boards for reconfigurable optical add and drop multiplexing unit							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11RDU9	9-port ROADM demultiplexing board(C-band)	Y	Y	Y	Y	Y	Y
TN12RDU9	9-port ROADM demultiplexing board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN11RMU9a	9-port ROADM multiplexing board	Y	Y	Y	Y	Y	Y
TN11ROAM	reconfigurable optical adding board	Y	Y	Y	Y	N	N
TN12TD20	20-ports Tunable Demultiplexing Board	Y	Y	Y	Y	Y	Y
TN97TD20	20-ports Tunable DeMultiplexing Board(extended C_band)	Y	Y	Y	Y	Y	Y
TN11TM20	20-ports Wavelength	Y	Y	Y	Y	Y	Y

TN13TM20 TN15TM20	Tunable Multiplexing Board						
TN97TM20	20-ports flexible and tunable wavelength multiplexing board (Extended C-band)	Y	Y	Y	Y	Y	Y
TN12WSD9	9-port wavelength selective switching demultiplexing board	Y	Y	Y	Y	Y	Y
TN13WSD9	9-port wavelength selective switching demultiplexing board	Y	Y	Y	Y	Y	Y
TN16WSD9	9-port wavelength selective switching demultiplexing board	Y	Y	Y	Y	Y	Y
TN17WSD9	9-port wavelength selective switching	Y	Y	Y	Y	Y	Y

	demultiplexing board						
TN96WSD9	9-ports flexible wavelength selective demultiplexing board (Extended C-band)	Y	Y	Y	Y	Y	Y
TN12WSM9	9-port wavelength selective switching multiplexing board	Y	Y	Y	Y	Y	Y
TN13WSM9	9-port wavelength selective switching multiplexing board	Y	Y	Y	Y	Y	Y
TN16WSM9	9-port wavelength selective switching demultiplexing board	Y	Y	Y	Y	Y	Y
TN17WSM9	9-port wavelength selective switching demultiplexing board	Y	Y	Y	Y	Y	Y

TN96WSM9	9-ports flexible wavelength selective multiplexing board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN11WSMD2	2-port wavelength selective multiplexer and demultiplexer board	Y	Y	Y	Y	Y	N
TN11WSMD4	4-port wavelength selective multiplexer and demultiplexer board	Y	Y	Y	Y	Y	N
TN12WSMD4	4-port wavelength selective multiplexer and demultiplexer board	Y	Y	Y	Y	Y	Y
TN13WSMD4	4-port wavelength selective multiplexer and	Y	Y	Y	Y	Y	Y

	demultiplexer board						
TN17WSMD4	4-port wavelength selective multiplexer and demultiplexer board	Y	Y	Y	Y	Y	Y
TN11WSMD9	9-port wavelength selective multiplexing and demultiplexing board	Y	Y	Y	Y	Y	Y
TN12WSMD9	9-port wavelength selective multiplexing and demultiplexing board	Y	Y	Y	Y	Y	Y
TN15WSMD9	9-port wavelength selective multiplexing and demultiplexing board	Y	Y	Y	Y	Y	Y
TN52WSMD9	9-port wavelength selective	Y	Y	Y	Y	Y	Y

	multiplexing and demultiplexing board						
TN15DWSS20	Dual 20-Port Wavelength Selective Switching Board Board(C-band)	Y	Y	Y	Y	Y	Y
TN51DWSS20 TN52DWSS20	Dual 20-ports wavelength selective multiplexing and demultiplexing board(Extended C-band)	Y	Y	Y	Y	Y	Y
TN51MCS0816	Dual Multicast Switching Board (Extended C-band, 8D, 16 add/drop multiplexing paired ports)	Y	Y	Y	Y	Y	Y
a: For TN11RMU9: OptiX OSN 8800 T16 only supports the TN11RMU902.							

Table 10-12. Boards for optical amplifier unit							
Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal	8800 T16 Subrack

						Platform Subrack	
SSN4BPA	optical booster and pre-amplifier board	Y	Y	Y	Y	N	Y
TN11CRPC	case-shape Raman pump amplifier unit for C-band	Y	Y	Y	Y	Y	Y
TN11DAS1	optical amplifier unit	Y	Y	Y	Y	Y	Y
TN11HBA	high-power booster amplifier board	Y	Y	Y	Y	Y	Y
TN51HBA	extended C-band high-power booster amplifier board	Y	Y	Y	Y	Y	Y
TN11OAU1	optical amplifier unit	Y	Y	Y	Y	N	N

TN12OAU1	optical amplifier unit	Y	Y	Y	Y	Y	Y
TN13OAU1	optical amplifier unit	Y	Y	Y	Y	Y	Y
TN11OBU1	optical booster unit	Y	Y	Y	Y	N	N
TN12OBU1	optical booster unit	Y	Y	Y	Y	Y	Y
TN13OBU1	optical booster unit	Y	Y	Y	Y	Y	Y
TN11OBU2	optical booster unit	Y	Y	Y	Y	N	N
TN12OBU2	optical booster unit	Y	Y	Y	Y	Y	Y
TN13OBU2	optical booster unit	Y	Y	Y	Y	Y	Y
TN14OBU2	optical booster unit	Y	Y	Y	Y	Y	Y
TN11RAU1	backward raman and erbium	Y	Y	Y	Y	Y	Y

	doped fiber hybrid optical amplifier unit						
TN12RAU1	backward raman and erbium doped fiber hybrid optical amplifier unit	Y	Y	Y	Y	Y	Y
TN11RAU2	backward raman and erbium doped fiber hybrid optical amplifier unit	Y	Y	Y	Y	Y	Y
TN12RAU2	backward raman and erbium doped fiber hybrid optical amplifier unit	Y	Y	Y	Y	Y	Y
TN51ROP	extended C-band remote optical pump	Y	Y	Y	Y	Y	Y

	processing board						
TN51RPC	Extended C-band forward raman processing board	Y	Y	Y	Y	Y	Y
TN11SRAU	C-band backward raman and erbium doped fiber hybrid optical amplifier unit	Y	Y	Y	Y	Y	Y
TN11SRAPXF	Extended C-band Super Backward Raman and Pluggable Erbium Doped Fiber Amplifier Hybrid Unit	Y	Y	Y	Y	Y	Y
TN52DAP	extended C-band optical amplifier base board with 2	Y	Y	Y	Y	Y	Y

	pluggable ports						
TN52DAPXF	extended C-band optical amplifier board with 2 pluggable ports (XFIU embedded)	Y	Y	Y	Y	Y	Y
TN52SRAPXF	Extended C-band Super Backward Raman and Pluggable Erbium Doped Fiber Amplifier Hybrid Unit	Y	Y	Y	Y	Y	Y

Table 10-13. Boards for cross-connect unit and system and communication unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN16XCH	High Cross-connection, System Control and Clock	N	N	N	N	N	Y

	Processing Board						
TNK2SXM	OptiX OSN 8800 T64 centralized cross connect board	Y	N	N	N	N	N
TNK4SXM		Y	Y	N	N	N	N
TN52UXCH	3.2T Universal Cross Connect Board	N	N	Y	Y	N	N
TN52XCH	OptiX OSN 8800 T32 centralized cross connect board	N	N	Y	Y	N	N
TN52UXCM	3.2T Universal Cross Connect Board	N	N	Y	Y	N	N
TN52XCM	Cross & connect process board (Support high-cross and low-cross)	N	N	Y	Y	N	N
TNK2UXCT	6.4T Universal Cross Connect Board	N	Y	N	N	N	N
TNK2XCT	OptiX OSN 8800 T64 centralized	Y	N	N	N	N	N
TNK4XCT		Y	Y	N	N	N	N

	cross connect board						
TN16UXCM	1.6T Universal Cross Connect, System Control and Clock Processing Board	N	N	N	N	N	Y
TN16SCC	system control and communication unit	N	N	N	N	N	Y
TN51SCC		N	N	Y	N	N	N
TN52SCC		N	N	Y	Y	Y	N
TNK2SCC		Y	Y	N	N	N	N
TN16AUX	system auxiliary interface board	N	N	N	N	N	Y
TN51AUX		Y	N	Y	N	N	N
TN52AUX		Y	Y	Y	Y	N	N
TNK2USXH	6.4T Universal Cross Connect Board	N	Y	N	N	N	N
TNK2SXH	OptiX OSN 8800 T64 centralized cross connect board	Y	N	N	N	N	N
TNK4SXH		Y	Y	N	N	N	N

Table 10-14. Boards for optical supervisory channel unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11HSC1	high power unidirectional optical supervisory channel board	Y	Y	Y	Y	Y	Y
TN12HSC1	high power unidirectional optical supervisory channel board	Y	Y	Y	Y	Y	Y
TN12SC1	unidirectional optical supervisory channel unit	Y	Y	Y	Y	Y	Y
TN12SC2	bidirectional optical supervisory channel unit	Y	Y	Y	Y	Y	Y
TN11ST2 TN12ST2 TN13ST2	bidirectional optical supervisory channel and timing	Y	Y	Y	Y	Y	Y

	transmission unit						
TN11AST2	bidirectional optical supervisory channel and timing transmission unit (with Advanced OTDR)	Y	Y	Y	Y	Y	Y
TN51LMU	Line Monitor Unit	Y	Y	Y	Y	Y	Y

Table 10-15. Boards for optical protection unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11DCP	Optical protection unit	Y	Y	Y	Y	Y	N
TN12DCP		Y	Y	Y	Y	Y	Y
TN13DCP		Y	Y	Y	Y	Y	Y
TN11OLP		Y	Y	Y	Y	Y	N
TN12OLP		Y	Y	Y	Y	Y	Y

TN13OLP	Optical line protection unit	Y	Y	Y	Y	Y	Y
TN11OLSP	Optical line switch protection board	Y	Y	Y	Y	Y	Y
TN11OLSPA/ TN11OLSPB	Optical line switch protection board that supports synchronous information transmission	Y	Y	Y	Y	Y	Y
TN11QCP	Optical protection unit	Y	Y	Y	Y	Y	Y
TN11SCS	Sync optical channel separator unit	Y	Y	Y	Y	Y	Y

Table 10-16. Boards for spectrum analyzer unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack

TN11MCA4	4-channel spectrum analyzer unit	Y	Y	Y	Y	Y	Y
TN11MCA8	8-channel spectrum analyzer unit	Y	Y	Y	Y	Y	Y
TN11OPM8	8-channel optical power monitoring board	Y	Y	Y	Y	Y	Y
TN12OPM8	8-channel optical power monitoring board	Y	Y	Y	Y	Y	Y
TN15OPM8	8-channel optical power monitoring board	Y	Y	Y	Y	Y	Y
TN97OPM8	8-channel flexible bandwidth optical power monitor board (Extended C-band)	Y	Y	Y	Y	Y	Y

TN11WMU	wavelength monitoring unit	Y	Y	Y	Y	Y	Y

Table 10-17. Boards for variable optical attenuator unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN12VA1 TN13VA1	1-channel variable optical attenuator unit	Y	Y	Y	Y	Y	Y
TN12VA4 TN13VA4	4-channel variable optical attenuator unit	Y	Y	Y	Y	Y	Y

Table 10-18. Boards for dispersion compensation unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11DCU	dispersion compensation board	Y	Y	Y	Y	Y	Y

TN11TDC	single-wavelength tunable-dispersion compensation board	Y	Y	Y	Y	Y	Y

Table 10-19. Boards for clock unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN12STG TN13STG	centralized clock board	N	N	N	N	Y	N
TN52STG	centralized clock board	N	N	Y	Y	N	N
TN54STG	centralized clock board	N	N	Y	Y	N	N
TNK2STG TNK3STG	centralized clock board	Y	Y	N	N	N	N

Table 10-20. Boards for TDM unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack

SSN3EAS2	2-port 10xGE switching and processing board	Y	Y	Y	Y	N	Y
SSN1EGSH	16 x GE Ethernet switching and processing board	Y	Y	Y	Y	N	Y
SSN4SF64	1 x STM-64 optical interface board with the FEC function	Y	Y	Y	Y	N	Y
SSN1SF64A	1 x STM-64 optical interface board with the FEC function	Y	Y	Y	Y	N	Y
SSN4SFD64	2 x STM-64 optical interface board with the FEC function	Y	Y	Y	Y	N	Y
SSN4SL64	1 x STM-64 optical	Y	Y	Y	Y	N	Y

	interface board						
SSN4SLD64	2 x STM-64 optical interface board	Y	Y	Y	Y	N	Y
SSN3SLH41	16 x STM-4/STM-1 optical interface board	Y	Y	Y	Y	N	Y
SSN4SLO16	8 x STM-16 optical interface board	Y	Y	Y	Y	N	Y
SSN4SLQ16	4xSTM-16 optical interface board	Y	Y	Y	Y	N	Y
SSN4SLQ64	4 x STM-64 line interface board	N	N	Y	Y	N	Y

Table 10-21. Boards for the interface area unit

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack

TN16ATE	interface board of alarm & timing & expanding	N	N	N	N	N	Y
TN51ATE		Y	Y	Y	Y	N	N
TN16EFI	EMI filter interface board	N	N	N	N	N	Y
TN51EFI1		Y	Y	Y	Y	N	N
TN51EFI2		Y	Y	Y	Y	N	N
TN18EFI		N	N	N	N	Y	N
TNL1STI	synchronous timing interface board	Y	Y	Y	Y	N	N
TN52STI		Y	Y	Y	Y	N	N
TN51PIU	power interface unit	Y	Y	Y	Y	N	N
TN16PIU		Y	Y	Y	Y	N	Y
TN18PIU/TN 18APIU		N	N	N	N	Y	N

Table 10-22. Boards for Fan

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN51FAN	Fan	Y	Y	Y	Y	N	N
TN16FAN	Fan	N	N	N	N	N	Y

TN18FAN	Fan	N	N	N	N	Y	N

Table 10-23. Boards for ROPA subsystem unita

Board Name	Board Description	General 8800 T64 Subrack	Enhanced 8800 T64 Subrack	General 8800 T32 Subrack	Enhanced 8800 T32 Subrack	8800 Universal Platform Subrack	8800 T16 Subrack
TN11GFU	gain flatness unit	Y	Y	Y	Y	Y	Y
TN11RGU	ROPA gain unit	Y	Y	Y	Y	Y	Y
TN11ROP	ROPA pumping unit	Y	Y	Y	Y	Y	Y
TN51ROP	extended C-band Remote optical pump processing Board	Y	Y	Y	Y	Y	Y

a: For details of the ROPA subsystem unit refer to ROPA Subsystem User Guide.

Table 11. Ordering information of Huawei OptiX OSN 8800 chassis.

Model	Description
Huawei Optix OSN 8800 T16	Huawei OptiX OSN 8800, supports 40 Gbit/s, 100 Gbit/s and 200 Gbit/s line rates and a 6.4 Tbit/s cross-connect capacity, provides power saving, and high reliability and maintainability
Huawei Optix OSN 8800 T32	Huawei OptiX OSN 8800, supports 40 Gbit/s, 100 Gbit/s and 200 Gbit/s line rates and a 6.4 Tbit/s cross-connect capacity, provides power saving, and high reliability and maintainability
Huawei Optix OSN 8800 T64	Huawei OptiX OSN 8800, supports 40 Gbit/s, 100 Gbit/s and 200 Gbit/s line rates and a 6.4 Tbit/s cross-connect capacity, provides power saving, and high reliability and maintainability
Huawei Optix OSN 8800 UPS	Huawei OptiX OSN 8800 universal platform subrack can operate with an independent DC or AC power supply. A universal platform subrack supports two mounting options: ETSI cabinet mounting and 19-inch rack mounting.

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Sources

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