



Shelf Assembly Specifications



Note

The terms "Unidirectional Path Switched Ring" and "UPSR" may appear in Cisco literature. These terms do not refer to using Cisco ONS 15xxx products in a unidirectional path switched ring configuration. Rather, these terms, as well as "Path Protected Mesh Network" and "PPMN," refer generally to Cisco's path protection feature, which may be used in any topological network configuration. Cisco does not recommend using its path protection feature in any particular topological network configuration.

This appendix contains hardware and software specifications for the ONS 15454.

Bandwidth

- Total bandwidth: 240 Gbps
- Data plane bandwidth: 160 Gbps
- SONET plane bandwidth: 80 Gbps

Slot Assignments

- Total card slots: 17
- Multispeed slots [any traffic (optical) card except OC48 IR 1310, OC48 LR/ELR 1550, and all OC192 cards]: Slots 1–4, 14–17
- High-speed slots [any traffic (optical) card including OC48 IR 1310, OC48 LR/ELR 1550, and all OC192 cards]: Slots 5, 6, 12, 13
- TCC+, TCC2 (Timing Communication and Control): Slots 7, 11
- XC/XCVT/XC10G (Cross Connect): Slots 8, 10
- AIC, AIC-I (Alarm Interface Card): Slot 9

Cards

- TCC+
- TCC2

- XC
- XCVT
- XC10G
- AIC
- AIC-I
- AEP
- EC1-12
- DS1-14
- DS1N-14
- DS3-12
- DS3N-12
- DS3-12E
- DS3N-12E
- DS3XM-6
- OC3 IR 4/STM1 SH 1310
- OC3 IR/STM1 SH 1310-8
- OC12 IR 1310
- OC12 LR 1310
- OC12 LR 1550
- OC12 IR/STM4 SH 1310-4
- OC48 IR 1310
- OC48 LR 1550
- OC48 IR/STM16 SH AS 1310
- OC48 LR/STM16 LH AS 1550
- OC192 SR/STM64 IO 1310
- OC192 IR/STM64 SH 1550
- OC192 LR 1550
- OC192 LR/STM64 ELH 15xx.xx
- OC48 ELR 200 Ghz ITU
- OC48 ELR 100 Ghz ITU
- 10T-L1-xx.x (10Gbps Transponder)
- 10M-L1-xx.x (2.5Gbps/10Gbps Muxponder)
- E100T-12
- E1000-2
- E100T-G
- E1000-2-G
- G1000-4
- G1K-4

- ML100T-12
- ML1000-2

**Note**

The OC-3, OC-12, OC-48, and E1000-2 cards are Class 1 laser products (IEC 60825-1 2001-01/Class I laser product (21CFR 1040.10 and 1040.11)).

**Note**

The OC-192 card is a Class 1M laser product ((IEC 60825-1 2001-01)/Class I laser product (21CFR 1040.10 and 1040.11)).

Configurations

- Two-fiber path protection configuration
- Path protected mesh network (PPMN)
- Two-fiber BLSR
- Four-fiber BLSR
- Add-drop multiplexer
- Terminal mode
- Regenerator mode

Cisco Transport Controller

- 10 Base-T
- TCC+, TCC2 access: RJ-45 connector
- Backplane access: LAN pin field

External LAN Interface

- 10 Base-T Ethernet
- Backplane access: LAN pin field

TL1 Craft Interface

- Speed: 9600 bps
- TCC+, TCC2 access: RS-232 DB-9 type connector
- Backplane access: CRAFT pin field

Modem Interface

- Hardware flow control
- TCC+, TCC2: RS-232 DB-9 type connector

Alarm Interface

- Visual: Critical, Major, Minor, Remote
- Audible: Critical, Major, Minor, Remote
- Alarm contacts: 0.045mm, -48V, 50 mA
- Backplane access: Alarm pin fields

EIA Interface

- SMB: AMP #415504-3 75-Ohm 4 leg connectors
- BNC: Trompeter #UCBJ224 75-Ohm 4 leg connector (King or ITT are also compatible)
- AMP Champ: AMP#552246-1 with #552562-2 bail locks

Nonvolatile Memory

64 MB, 3.0V FLASH memory

BITS Interface

- 2 DS-1 BITS inputs
- 2 derived DS-1 outputs
- Backplane access: BITS pin field

System Timing

- Stratum 3 per Telcordia GR-253-CORE
- Free running accuracy: ± 4.6 ppm
- Holdover stability: 3.7×10^{-7} /day, including temperature (< 255 slips in first 24 hours)
- Reference: External BITS, line, internal

Power Specifications

- Input power: -48 VDC

- Power consumption: 55W (fan tray only); 650W (maximum draw w/cards)
- Power requirements: –42 to –57 VDC
- Power terminals: #6 Lug
- ANSI shelf: 100 Amp fuse panel (minimum 30 Amp fuse per shelf)
NEBS3 shelf: 80 Amp fuse panel (minimum 20 Amp fuse per shelf)

Environmental Specifications

- Operating Temperature: 0 to +55 degrees Celsius; –40 to +65 degrees Celsius with industrial temperature rated cards
- Operating Humidity: 5 – 95%, non-condensing

Dimensions

- Height: 18.5 inches (40.7 cm)
- Width: 19 or 23 inches (41.8 or 50.6 cm) with mounting ears attached
- Depth: 12 inches (26.4 cm) (5 inch or 12.7 cm projection from rack)
- Weight: 55 lbs. (24.947 kg) empty

