OCU 45

T3/E3/STS-1 Fiber Optic Converter

Product Features

- Ideal for extending T3/E3/STS-1 services over private fiber
- Distances up to 40 km
- Single-mode/multi-mode fiber optics
- 1 U high standalone, rack-mount, or wallmount
- Transparent to T3/E3/STS-1 signals
- External alarm relay contacts
- SC or ST connectors
- -48 VDC powered
- NEBS Level 3
- Optical and electrical loopbacks
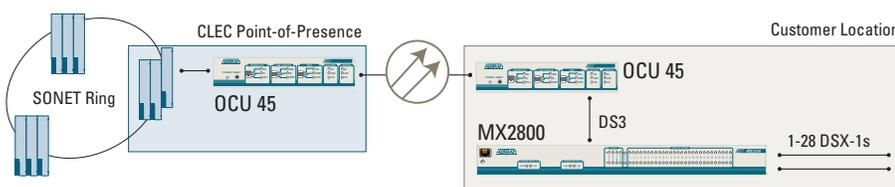- Standard 10 year warranty

ADTRAN has applied its industry-leading carrier class expertise to the OCU 45, creating a product that meets the most stringent carrier class requirements. The OCU 45 offers transparent transport of T3/E3/STS-1 services over a fiber transport, at distances up to 40km. The OCU 45 is available in single-mode and multi-mode versions. Measuring only one rack unit high, the OCU 45 can be used standalone, wall mounted or mounted in 19-inch or 23-inch racks using an optional mounting tray. This compact device gives NSPs a convenient way to extend T3/E3/STS-1 services from their point-of-presence to their customer and provides enterprise users a powerful tool for extending T3/E3/STS-1 services over fiber in a campus environment.

Configuration of the OCU 45 is accomplished through two switches on the front of the unit, which configure the metallic interface to T3, E3 or STS-1 and sets metallic line length to short or long. The OCU 45 has both normally-open and normally-closed alarm relay contacts, with a front panel alarm cutoff switch.
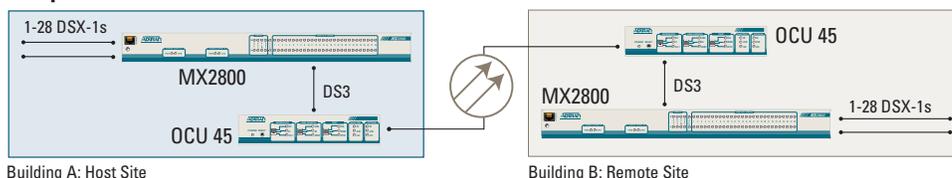
Diagnostics include metallic and optical loopbacks initiated via a front panel switch. Three LEDs monitor the status of the metallic and optical interfaces.

The OCU 45 is DC powered from a -48 volt source. An optional AC to -48 VDC converter is available to allow the OCU 45 to be AC powered.

Fiber Extension

Campus Environment

Building A: Host Site

Building B: Remote Site

ADTRAN

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Product Specifications

Optical Interface
Single-mode
- **Connector:** SC
- **Transmitter:** Class 1 laser
- **Wavelength:** 1310 nm
- **Transmission code:** Manchester
- **Distance:** Up to 40 km @ 9/125m
- **Transmitter output:** -3 dBm
- **Receiver sensitivity:** -36 dBm
- Complies with IEC 60825-1
- Complies with FDA 21CFR 1040.10 & 1040.11

Multi-mode
- **Connector:** ST
- **Transmitter:** ELED
- **Wavelength:** 1310 nm
- **Transmission code:** Manchester
- **Distance:** Up to 2 km @ 62.5/125m
- **Transmitter output:** -16 dBm
- **Receiver sensitivity:** -33 dBm
- Complies with IEC 825-1

T3 Interface
- **Line interface:** Dual 75 Ohm BNC female connectors
- **Line rate:** 44.736 Mbps
- **Line code:** B3ZS
- **Framing format:** M13 and C-Bit
- **Line buildout:** 0-50 ft and 51-450 ft

E3 Interface
- **Line interface:** Dual 75 Ohm BNC female connectors
- **Line rate:** 34.368 Mbps
- **Line code:** HDB3
- **Line buildout:** 0-450 ft

STS-1 Interface
- **Line interface:** Dual 75 Ohm BNC female connectors
- **Line rate:** 51.84 Mbps
- **Line code:** B3ZS
- **Framing:** STS-1
- **Line buildout:** 0-50 ft and 51-450 ft

Configuration
Metallic Interface
- T3
- E3
- STS-1

Metallic Line Buildout
- Short
- Long

Diagnostics
- Built-in self test
- Metallic loopback
- Optical loopback

Alarms
- External alarm contacts for critical and non-critical alarms
- Normally-open and normally-closed pinouts
- Front panel alarm cut-off (ACO) switch

Agency approvals
- **Emissions:** Part 15 Class A
- **Bellcore:** NEBS Level 3
- **Safety:** UL 1950, CUL

Environment
- **Operating:** 0° to 50° C (32° to 122° F)
- **Storage:** -20° to 70° C (-4° to 158° F)
- **Relative humidity:** Up to 95%, non-condensing

Physical
- **Dimensions:** 1.7" H x 6.7" W x 9.1" D
- **Weight:** 2.0 lbs.
- **Power:** -48 VDC, 5 watts

Product Includes
- OCU 45 User Manual

Ordering Information

Equipment	Part #
OCU 45 Single-mode SC	1200664L1
OCU 45 Multi-mode ST	1200664L4
OCU 45 Single-mode SC w/AC	4200664L1
OCU 45 Multi-mode SC w/AC	4200664L4
19" Mounting Tray	1200468L1
23" Extension Brackets	1200293L1
19" Vertical Mounting Bars	1200469L1
23" Vertical Mounting Bars	1200469L2
Wall Mount Brackets	1200233L2
Vertical Mounting Brackets	1200233L1
48 VDC Power Supply	1200470L1