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# 3300 OSM

Metro/Regional



3300 OSM

- Metro access component of Xtera's Agile Optical Networking Solution
- Cost-efficient optical access platform
- Modular and expandable architecture
- Common management and controlplane with 7200 OSP
- Flexible topology support
- Transparent wavelength networking
- Sub-rate multiplexing for Ethernet, Fibre Channel and ESCON
- Out-of-the-box WDM™ simplified engineering
- Carrier-class metro platform
- Intelligent network management.

## Extending high-speed services to the access network

### 3300 OSM (Optical Services Multiplexer)

Demand for high bandwidth services in the metro is increasing and the access network is the bottleneck. The Xtera 3300 OSM (Optical Services Multiplexer) provides relief with a WDM services platform that has a low startup cost, single or multiple add/drop wavelength capability, scalable from 8 CWDM channels to 40 DWDM channels and universal interfaces that support client interfaces from 100 Mb/s to 10 Gb/s. The 3300 OSM universal client interfaces support Fast Ethernet to 10 Gigabit Ethernet interfaces, OC-3/STM-1 to OC-192/STM-64 TDM interfaces, ESCON, FICON and fiber channel for storage area networks interfaces and D1 Video and HDTV interfaces.

### Cost-efficient platform

Starting with a single client interface and a single wavelength line drop, the 3300 OSM has a low startup cost that removes the financial barrier to entering new markets with wavelength services. The flexible add/drop capability also allows linear cost growth as additional services are provided.

### Modular architecture

The 3300 OSM architecture scales from 8 CWDM channels to 40 DWDM channels to ensure ample room for growth on a single platform. Service interface cards and plug-in optical interface modules can be hot inserted into the shelf to add capacity.

### Common management with 7200 OSP

For network management, the 3300 OSM seamlessly integrates with the Xtera 7200 OSP (Optical Switching Platform) under the Xtera 8600 NMS (Network Management System) to provide an end-to-end managed metro network for wavelength services.

### Flexible topology support

The 3300 OSM can be deployed in a ring topology that is found in many of today's access fiber networks. As well, the 3300 OSM can be deployed in a point-to-point application with a diverse path protection scheme to reach a single building, or a linear network to string together multiple sites.

### Transparent wavelength networking

The 3300 OSM provides intelligent and efficient transport for multiple layer 1 signals across the access and customer premises. The 3300 OSM is a bit-rate and protocol independent transparent OADM (Optical Add-Drop Multiplexer) that is capable of data rates ranging from 100 Mb/s to 10 Gb/s.



# 3300 OSM

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## Sub-rate multiplexing

The 3300 OSM further increases the service density and optical efficiency with transparent sub-rate multiplexing interfaces. The GFP protocol is used to multiplex multiple services that can be different protocols onto a 2.5G or 10G wavelength. For example, any nine Gigabit Ethernet/Fiber Channel optical signals can be multiplexed into a single 10 Gb/s signal, any two Gigabit Ethernet/Fibre Channels can be multiplexed into a single 2.5G signal, or eight ESCON/100BaseFX can be multiplexed into a 2.5 Gb/s signal.

## Simplified network engineering

Similar to SONET/SDH, the 3300 OSM can be engineered in a link-by-link fashion. Link engineering is very simple to implement and can significantly reduce a carrier's time-to-revenue. Xtera's simplified engineering is also very cost-effective for doing adds, moves and changes, with minimum impact to existing customers.

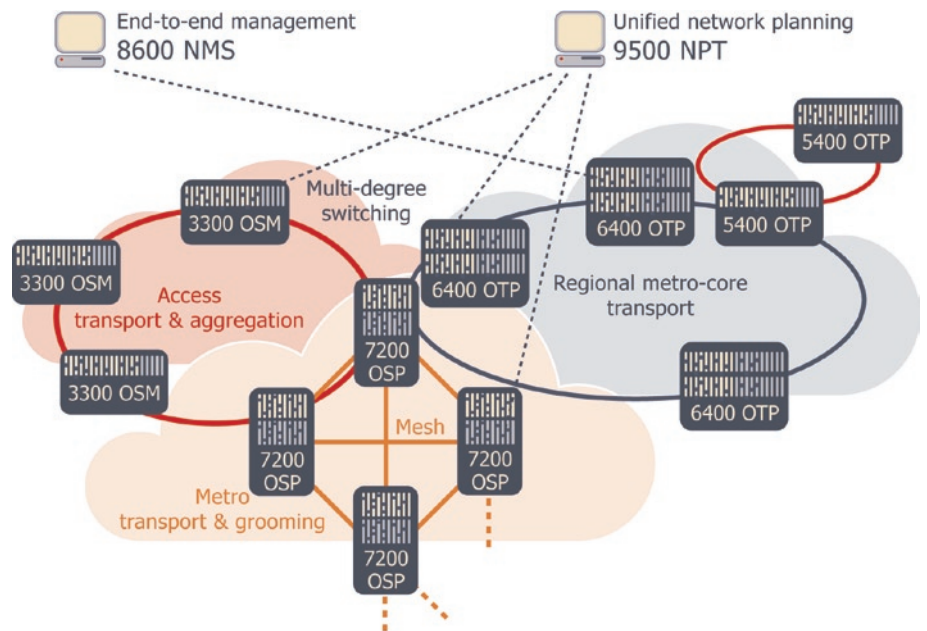
## 7200 OSP direct interworking

The 3300 OSM interworks directly with the 7200 OSP over CWDM or DWDM interfaces. The elimination of additional OADM nodes and back to back optical interfaces at the hub site greatly simplifies the network deployment and offers substantial cost savings.

## Intelligent network management

Operators can manage the 3300 OSM using either a text-based command line interface or the graphical user interface of the 8600 NMS or the 8300 EMS (Element Management System). The 8600 NMS simplifies management of optical networks by integrating element and network management functions, and automating common operational tasks, including setup, maintenance and teardown of optical paths. This enables the operator to efficiently manage the equipment as well as the services running on an Xtera OSM/OSP network.

Xtera's Agile Optical Networking portfolio comprises the 3300 OSM, at the access layer, 7200 OSP for multi-degree switching in the metro core and the 6400 OTP for flexible transport in metro core-regional networks, all supported by unified network planning and management systems.



## Specifications

### System architecture and shelf

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- Up to eight protected or sixteen unprotected transparent channels
- Supports data signals and optical channels up to 10 Gb/s
- Linear, point-to-point, ring, and mesh topologies supported
- In-service hardware and software upgrades
- Front alarm panel (critical, major and minor)
- Supports multiple WDM interface cards per shelf (up to 10 WDM degrees) for multiple ring termination and mesh networking.

### Lightpath management and protection

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- Centralized point-and-click path setup
- 1+1 protected and unprotected channels
- Multi-segment protection
- Auto-discovery of equipment.

### Node and network management

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- TL1, SNMP
- 8300 Graphical User Interface Support
- 8600 Network Management Support
- Standards-based CORBA interface (via 8600 NMS).

### Regulatory approvals

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- Environmental/NEBS: GR-63-CORE, ETS 300 019-1-1, Class 1.2; ETS 300 019-1-2, Class 2.2; ETS 300 019-1-3, Class 3.1
- EMC: FCC part 15, ICES-003, EN 300 386-2/EN 55022/EN 55024, GR-1089-CORE
- Safety: CAN/CSA-C22.2 No. 60950-1-03, ANSI/UL 60950-1, GR-1089-CORE, IEC/EN 60950-1.

### Physical dimensions

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#### Enterprise shelf

- Height 26.6 cm (10.5')
- Width 44.5 cm (17.5')
- Depth 36.2 cm (14.25')

#### Carrier shelf

- Height 44.5 cm (17.5')
- Width 44.5 cm (17.5')
- Depth 29.2 cm (11.5').



## Americas

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## Optical interface cards (OIC)

- 850 nm, 1310 nm, and 1550 nm tributary interfaces
- Bit-rate and protocol independent client signal transport
- Fixed, max, or auto bit-rate service mode
- 8-channel CWDM networks
- Modular Growth CWDM Networks Supported(1-9 Ch)
- Modular Growth DWDM Networks Supported(1-41 Ch)
- 4 Port Transparent 100 to 200 Mb/s Sub-Rate
- Multiplexing Card (supports Fast Ethernet, and ESCON)
- 4 Port Transparent 100Mbps/s Sub-rate Multiplexing Card  
2 Port Gigabit Ethernet/Fibre Channel Sub-Rate
- 9 Port GFP 1 Gb/s Sub-Rate Multiplexing Card  
supports Gigabit Ethernet, and 1 Gigabit Fiber Channel
- 10G Transponder Card for OC-192/STM-64/10GigE LAN

## Maintenance and diagnostics

- Per-channel optical performance monitoring
- In-service layer 1 performance monitoring
- Lightpath trace, list, and busy-out
- Line loopbacks.

## Operating environment

- -40 to -60 VDC
- 5° to 40° C (41° to 104° F)
- 5% to 85% relative humidity, non-condensing
- -60 m to 1800 m above sea level (-196.8" to 5905").

## Laser safety

- Complies with FDA CDRH 21-CFR1040 and IEC 60825-1:1993+A1:1997+A2:2001 and IEC 60825-2:2000
- CLASS 1M laser product
- Invisible laser radiation. Do not view directly with optical instruments (magnifiers) within a distance of 100 mm of the source when open.

## Power options

- Redundant -48 VDC (-40 to -60 VDC) or 115-230 VAC.



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