



## Extending High-Speed Services to the Access Network

### 3300 OSM (OPTICAL SERVICES MULTIPLEXER)



**Metro access component of Meriton's Agile Optical Networking Solution**

**Cost-efficient optical access platform**

**Modular and expandable architecture**

**Common management and control plane 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**

Demand for high bandwidth services in the metro is increasing, and the access network is the bottleneck. The Meriton Networks 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 Fibre 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 Meriton 7200 OSP (Optical Switching Platform) under the Meriton 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 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.

### 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/Fibre Channel optical signals are multiplexed onto a single 10 Gb/s signal or two Gigabit Ethernet/Fibre Channel or eight ESCON/100BaseFX 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. Meriton's simplified engineering is also very cost effective for doing adds, moves and changes, with minimum impact to existing customers.



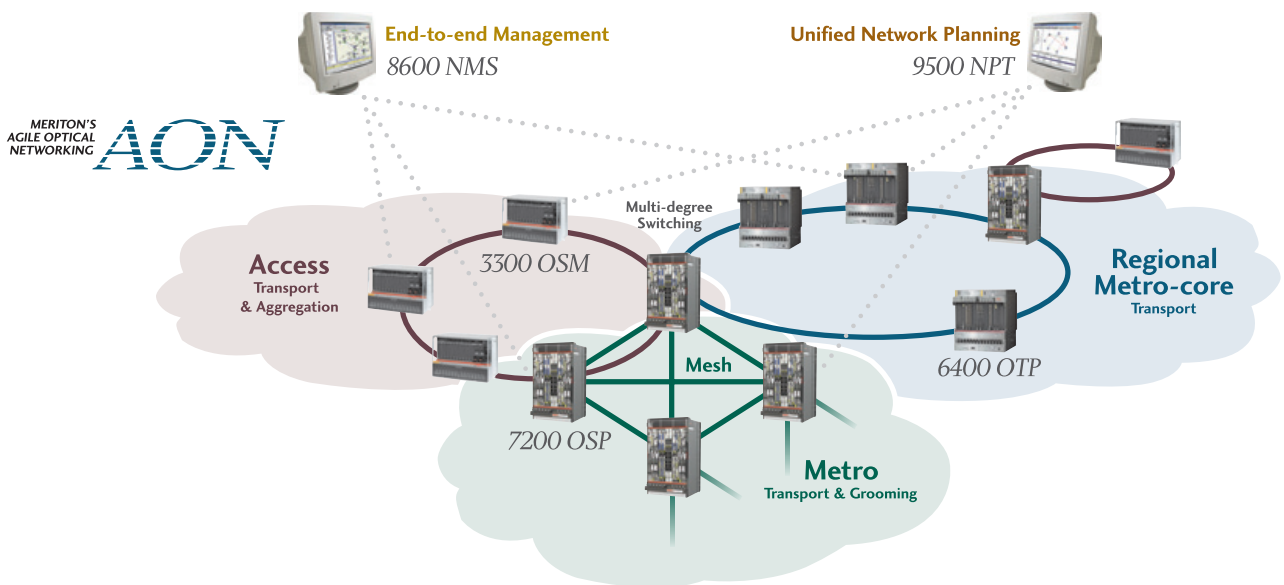
### 7200 OSP DIRECT INTERWORKING

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 a Meriton OSM/OSP network.

Meriton'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.



# 3300 OSM

## Technical Specifications



### SYSTEM ARCHITECTURE AND SHELF

- Up to eight protected or sixteen unprotected transparent channels
- Supports data signals and optical channels up to 10 Gb/s
- Ring, point-to-point, and linear topologies
- Fully redundant system infrastructure
- In-service hardware and software upgrades
- Front alarm panel (critical, major, and minor)

### 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
- 40-channel DWDM networks
- CWDM networks upgradeable to DWDM
- 4 Port Transparent 100 to 200 Mb/s Sub-Rate Multiplexing Card (supports Fast Ethernet, and ESCON)
- 2 Port Gigabit Ethernet/Fibre Channel Sub-Rate Multiplexing Card
- 9 Port GFP 1 Gb/s Sub-Rate Multiplexing Card supports (Gigabit Ethernet, and Fibre Channel)
- 10G Transponder Card for OC-192/STM-64/10 Gig E LAN

### LIGHTPATH MANAGEMENT AND PROTECTION

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

### MAINTENANCE AND DIAGNOSTICS

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

### NODE AND NETWORK MANAGEMENT

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

### OPERATING ENVIRONMENT

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

### REGULATORY APPROVALS

- 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

### 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

### PHYSICAL DIMENSIONS

#### ENTERPRISE SHELF

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

#### CARRIER SHELF

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

### POWER OPTIONS

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



#### **ABOUT MERITON NETWORKS INC.**

Meriton Networks Inc. has developed the industry's first unified end-to-end Agile Optical Networking (AON) architecture, a crucial element for carrier and enterprise migration to next-generation IP services networks. A flexible, scalable, future proof infrastructure capable of multi-service, multi-topology support, the Meriton AON architecture equips telecommunications networks with the capabilities needed for the Broadband Revolution, including rapid service deployment with one-time node engineering and zero-touch, automated provisioning under a unified control plane. With metro access, metro core and regional extension products, all fully managed by a best-in-class suite of network planning and management tools, Meriton Networks gives network operators a single source for the rapid, cost-effective delivery of high-speed services.

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Printed in Canada

Part No. MKTPRD-0003 Rev 2