Cisco **ONS 15327 SONET**
Multiservice Provisioning Platform

The Cisco ONS 15327 SONET Multi-service Provisioning Platform (MSPP) is the first metro edge optical transport platform. This platform delivers supercharged SONET integrated optical networking, unprecedented multiservices on demand, and radical economics. The Cisco ONS 15327 is built on the proven technology pioneered by the Cisco ONS 15454, the industry's leading metro optical transport platform.

Figure 1

Cisco ONS 15327 SONET MSPP

Integrated Optical Networking

With the ability to seamlessly integrate into Synchronous Optical Network (SONET) and the modularity to evolve with changing network needs, the Cisco ONS 15327 helps transform today's TDM-based transport networks into flexible, data-intensive superhighways. The platform combines SONET interfaces with traditional and next generation data interfaces, providing unrivaled optical transport options and bandwidth to stay competitive.

Unprecedented Multiservices On Demand

The Cisco ONS 15327 efficiently aggregates data, voice, and video services for supercharged transport. The platform easily supports any service, including TDM, 10/100/Gigabit Ethernet, and provides integrated data switching and cross-connect functionality. Various data streams can be carried separately or together and transported in a one-for-one dedicated bandwidth mode or in a concentrated mode with no limit on the over-subscription ratio.

While many transport products claim to handle today's data and voice traffic, they lack the ability to provide effective bandwidth management for higher-speed IP-based data services. They are difficult and slow to provision, and they fail to provide more than a single optical interface speed. The Cisco ONS 15327 offers optimized bandwidth management, high-speed IP-based data services, rapid service provisioning, and multiple optical interfaces.

Figure 2
The ONS 15327 delivers unprecedented multiservices on demand to the metro edge.
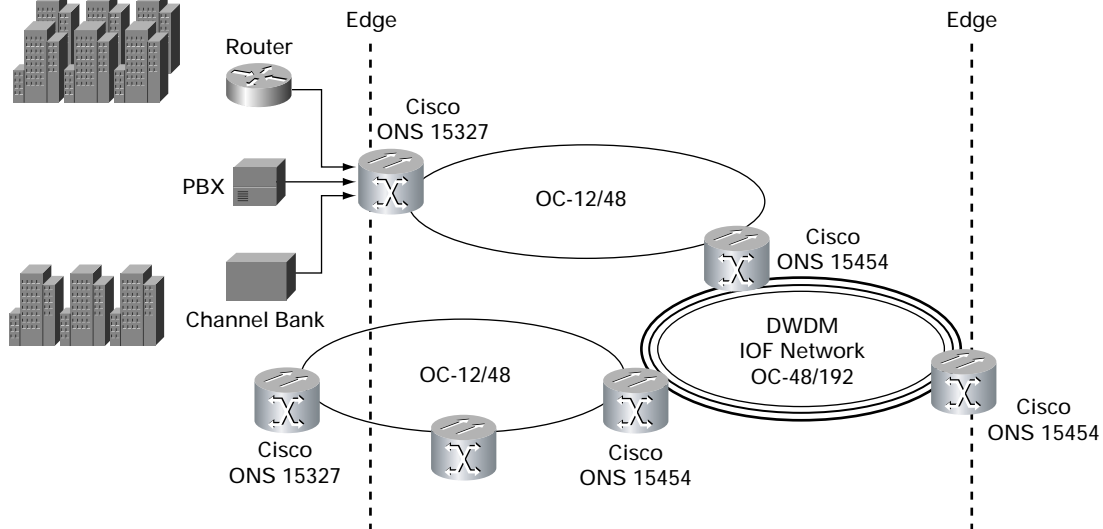
Supercharged SONET Transport

By extending the metro edge to customer premises and providing direct high-speed LAN connectivity, the Cisco ONS 15327 allows service providers to cost-effectively offer scalable, high-speed data services over their transport networks. For the enterprise the ONS 15327 offers the efficiency, scalability, and high availability to meet the bandwidth demands of the mission critical e-business infrastructure. These features are available without implementing new technology or upgrading the existing transport network infrastructure.

This evolutionary platform supports high optical bandwidth and has the ability to drop a DS1 from an OC-48 stream. With comprehensive STS- and VT-level bandwidth management, and integrated data switching, the Cisco ONS 15327 also serves as a digital cross-connect without the need for additional equipment.

Radical Network Economics

The Cisco ONS 15327 dramatically reduces service delivery costs with its state-of-the-art aggregation, unprecedented multiservices, and integrated optical-networking functionality. Packaged in a three rack-unit, industrially hardened NEBS-compliant assembly, the Cisco ONS 15327 delivers the fastest provisioning and low first cost, while maintaining the smallest footprint and lowest life cost in the industry.

Provisioning and Managing the Cisco ONS 15327

Each ONS 15327 is equipped with Cisco Transport Controller (CTC), a sub-network craft interface tool that simplifies node control. The application's graphical user interface (GUI) and point-and-click capabilities allow easy node turn-up, auto-routed A-Z circuit provisioning, and rapid service creation. CTC provides: element-level control; quick access to operation, administration, maintenance, and provisioning (OAM&P); a TL1 command window; and graphical representations of network topology, network conditions, and shelf configurations.

Cisco Transport Manager (CTM) is the comprehensive element management system for Cisco ONS 15000 series products, including the ONS 15327. Integrating fault, configuration, and performance management, CTM streamlines and strengthens optical network OAM&P. The client/server platform easily scales to manage up to 1000 network elements and 100 simultaneous users. CTM enables service providers to quickly identify and correct network problem areas and more rapidly deploy revenue-generating services.

Product Specifications

The following specifications apply to the Cisco ONS 15327.

Hardware

- XTC-28-3: (STS/VT Matrix, Timing/Control, 28 DS-1, 3DS-3)
- XTC 14 (STS/VT Matrix, Timing/Control, 14 DS-1)
- 4-port OC-3 IR 1310
- OC-12 IR 1310/OC-12 LR 1550
- OC-48 IR 1310/OC-48 LR 1550
- 4-port 10/100 BaseT Switched Ethernet
- 2-Port Line Rate Gigabit Ethernet
- MIC-28-3 (BITS, Alarms, Power, DS-1, DS-3)

Software

- SONET/DS-3/DS-1
- SDH tunneling
- UPSR, 2 fiber BLSR, PPMN, 1+1 Bi-directional and Unidirectional
- Complete equipment and facility maintenance
- Complete performance monitoring per GR-499, GR-253 and GR-820
- Full Ethernet switching (802.1p priority, 802.1q VLANs, 802.1d spanning tree)
- Protection Channel Access (Telcordia GR-1230-CORE)

Management

- Cisco Transport Manager
  - Scalable client/server element management system (EMS) for Cisco ONS 15000 series products
  - Integrated element management of the Cisco ONS 15327 and Cisco ONS 15454
  - Java-based client; Solaris-based server; Oracle database
  - Full fault, configuration, performance, and security management
  - Tree-based network explorer; topology map; graphical cross-connect map
  - CORBA, TL1, SNMP northbound interfaces for OSS integration
- Cisco Transport Controller
  - Java-based node and sub-network control
  - Unified GUI for the Cisco ONS 15327 and Cisco ONS 15454
  - Full node control: provisioning, alarm, maintenance, performance
  - Sub-net control: auto-discovery; topology map with drill-down; A-Z circuit provisioning; sub-net alarm control

Chassis

- Modular, 3RU chassis
- Dimensions: 5.16 in. x 16.94 in. x 11.06 in. (13.1 cm x 43.0 cm x 28.1 cm) (H x W x D)
- Fully redundant architecture
- 4 flexible high-speed slots
- Integrated Cross Connect/Timing/Control/DSn card (XTC)
- All front access
- No ring service interruption for tributary maintenance
- Wall- and rack-mount design (wall mount cabinet available)

- Regulatory (UL, CSA, FCC, NEBS III)

- Environmental (-40 to +65 C, non-condensing)

- DC power: 130-W (for average configuration)

- Alarm contacts

- BITS input and output

CISCO SYSTEMS

Corporate Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
     800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters
Cisco Systems Europe
11, Rue Camille Desmoulins
92782 Issy-les-Moulineaux
Cedex 9
France
www-europe.cisco.com
Tel: 33 1 58 04 60 00
Fax: 33 1 58 04 61 00

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

Asia Pacific Headquarters
Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: 65 317 7777
Fax: 65 317 7799

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