



## CISCO ONS 15454 SONET MSPP RELEASE 5.0

### PRODUCT OVERVIEW

The Cisco<sup>®</sup> ONS 15454 Multiservice Provisioning Platform (MSPP) provides a solid foundation for building service provider or enterprise optical transport networks that deliver voice, video, storage, and data services. The Cisco ONS 15454 SONET MSPP offers the following capabilities:

- Scalable platform supporting networks from OC-3 (155 Mbps) to OC-192 (10 Gbps) plus 32-channel DWDM capabilities
- Comprehensive offering of multiservice interfaces supporting TDM, Ethernet, storage and data applications needs
- Robust design to support carrier-class deployments
- SDH and Intelligent DWDM configuration options
- Comprehensive, multilayer management capabilities enabled through the Cisco Transport Controller craft management system, Transaction Language one (TL-1) interface, Simple Network Management Protocol (SNMP), and Cisco Transport Manager element management system with northbound interfaces to network management and operational support systems.

### RELEASE 5.0 FEATURES

New hardware and software features provided by the Cisco ONS 15454 SONET MSPP Release 5.0 are outlined in Table 1 and Table 2.

**Table 1.** Cisco ONS 15454 SONET MSPP Release 5.0 Hardware Features

Feature	Description
48-Port DS3/EC-1 Interface card	This new high-density card improves the Cisco ONS 15454 shelf utilization by enabling a single chassis to scale up to 192 DS-3 interfaces, or by freeing up shelf slots for other revenue generating services improving system density and flexibility.
12-Port DS-3 Transmultiplexer card with portless interface mode	Provides support for transmuxing channelized DS-3 signals to VT-mapped STS signals. Provisionable DS-3 termination capabilities support ported-interfaces for traditional chassis terminated DS-3 hand-offs, or portless-interfaces for STS transported DS-3 terminations delivering increased networking flexibility.
8-Port 10/100 Mbps Carrier-Ethernet (CE) card	Point-to-point transport of Ethernet and Fast Ethernet services over SONET for simplified provisioning and SLA management. Leverages standards-based general framing procedure (GFP) encapsulation for multivendor interoperability, low-order (LO) and high-order (HO) virtual concatenation (VCAT) with link capacity adjustment scheme (LCAS) or contiguous concatenation (CCAT) for service scalability with circuit resiliency.
Timing, Communications, and Control-version Two Plus card (TCC2P) with secure operating mode	Enables the 2 management LAN ports to be provisioned either with independent IP/MAC addresses for additional network security/segregation or with a single IP/MAC for simplicity. Fully interoperable with the TCC2 card and in all TCC2 deployed systems.

**Table 2.** Cisco ONS 15454 SONET MSPP Release 5.0 Software Features

Feature	Description
Protection upgrades from unidirectional-path switched ring (UPSR) to bidirectional line switched ring (BLSR)	Provides additional networking flexibility to match changing traffic patterns by allowing in-service ring protection migrations.
Dual ring interconnect (DRI) for BLSR	Additional level of circuit resiliency when a network segment traverses more than 1 ring.
SL-Series Fibre-Channel over SONET card enhancements for sub-rate circuit and extended distance support	Sub-rate Fibre Channel circuits using either contiguous concatenation or high-order (STS-1-Nv or STS-3c-Nv) virtual concatenation (VCAT). Distance extension up to 1150/2300 km (at 1 Gbps/2 Gbps line rates) using buffer-to-buffer flow control credit management.
Japan automatic protection switching (J-APS) and 64 kHz + 8 kHz building integrated timing supply (BITS) support	Enhances system flexibility to support global deployments.
Consolidation of the Cisco ONS 15454 MSPP and MSTP (Release 4.7) functionality	Single Cisco ONS 15454 software load to support MSPP and Multiservice Transport Platform (MSTP) applications for simplified operations and additional platform flexibility.

More detailed information can be found in the release notes for the Cisco ONS 15454 SONET MSPP available at:

[http://cisco.com/en/US/products/hw/optical/ps2006/prod\\_release\\_notes\\_list.html](http://cisco.com/en/US/products/hw/optical/ps2006/prod_release_notes_list.html)

Cisco ONS 15454 SONET Software Release 5.0 features are incremental additions to the Cisco ONS 15454 SONET MSPP. Previously supported Cisco ONS 15454 SONET MSPP hardware and software features will continue to be supported unless specified in the release notes, user documentation, or previously announced end-of-sale product bulletins.

## CISCO IOS SOFTWARE RELEASE INFORMATION

The Cisco ONS 15454 ML Series cards, which use Cisco IOS® Software to deliver Layer 2 and Layer 3 functions, are provisioned through the Cisco IOS Software command-line interface. Cisco IOS Software Release 12.2(18)SO is integrated into Cisco ONS 15454 Software Release 5.0, enabling a single, unified software image for installation and operation. The Cisco IOS Software image is not upgradable independently from Cisco ONS 15454 SONET MSPP Software.

For details about the capabilities offered by the Cisco IOS Software release on the Cisco ONS 15454 ML Series cards, review the Cisco ONS 15454 Software Release 5.0 user documentation, available at:

[http://www.cisco.com/en/US/products/hw/optical/ps2006/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/hw/optical/ps2006/products_installation_and_configuration_guides_list.html)

## UPGRADE PATHS

Direct software upgrades to Cisco ONS 15454 SONET Release 5.0 are supported from Cisco ONS 15454 SONET Release 4.0, 4.1, 4.5, 4.6, and 4.7 if the system is presently operating with the Cisco ONS 15454 Timing, Communications, and Control Version 2 (TCC2 or TCC2P) card. For details on the upgrade procedures, please review the appropriate upgrade guide found at the following URL:

[http://www.cisco.com/en/US/products/hw/optical/ps2006/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/hw/optical/ps2006/prod_installation_guides_list.html)

## COMPATIBILITY INFORMATION

Table 3 outlines the Cisco ONS 15454 SONET system deployment requirements for hardware and software functionality being announced within this bulletin.

**Table 3.** Cisco ONS 15454 SONET System Requirements

Feature	Cisco ONS 15454 SONET Software	Cisco ONS 15454 SONET Timing, Communications, and Control Card	Cisco ONS 15454 SONET Cross-Connect Card <sup>4</sup>	Cisco ONS 15454 SONET Shelf Assembly
Cisco ONS 15454 SONET Software Release 5.0	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any
48-Port DS3 (EC-1 <sup>2</sup> ) Interface Card	Release 5.0	TCC2 or TCC2P	XC-10G	SA-HD
12-port DS-3 Transmultiplexer card with portless interface mode	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any <sup>1</sup>
8-Port 10/100 Mbps carrier Ethernet (CE) card	Release 5.0 <sup>5</sup>	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any <sup>1</sup>
Timing, Communications, and Control-version Two Plus card (TCC2P) with secure operating mode	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any
Protection upgrades from UPSR to BLSR	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any
DRI for BLSR	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	Any
J-APS and 64 kHz + 8 kHz BITS support	Release 5.0	TCC2 or TCC2P <sup>3</sup>	XC, XC-VT, or XC-10G	Any
Consolidate Cisco ONS 15454 MSTP Release 4.7 features	Release 5.0	TCC2 or TCC2P	XC, XC-VT, or XC-10G	SA-HD SA-ANSI

1. Cross-connect card dependent.

2. EC-1 is supported by the 48-Port DS-3/EC-1 interface card but not supported in Cisco ONS 15454 SONET Software Release 5.0. Support for EC-1 is planned for a future Cisco ONS 15454 SONET MSPP software release.

3. TCC2P required for timing support.

4. Not required in DWDM-only node.

5. CE-Series card will be supported with future R5.0.x software maintenance release.

Before inserting a new node into an operating network, all existing Cisco ONS 15454 nodes connected with active optical section-data-communication-channel (SDCC) interfaces should be upgraded to a consistent level of system software to ensure proper operation.

## AVAILABILITY

The Cisco ONS 15454 SONET MSPP products outlined in Table 4 is currently orderable with equipment shipments starting in approximately 30 days. Contact your Cisco sales representative for more details.

## ORDERING INFORMATION

**Table 4.** Ordering Information for Cisco ONS 15454 SONET MSPP Products

Part Number	Description	Common Language Equipment Identifier (CLEI) Code
15454-R5.0.0SWK9	System software, SONET, Release 5.0.0, ONS 15454, CD-ROM	Not applicable
SF15454-R5.0.0K9	System software, SONET, Release 5.0.0, ONS 15454, ordered with TCC2 card (pre-loaded)	Not applicable
15454-LIC-R5.0.0K9	Software upgrade license, SONET, used for upgrading and existing node to another system software release, ordered using assemble-to-order (ATO) part number 15454-LIC-UPG	Not applicable
15454-DOC5.0.0PP	User document, ONS 15454, SONET, Release 5.0.0, paper version	Not applicable
15454-DOC5.0.0CD	User document, ONS 15454, SONET, Release 5.0.0, CD-ROM version	Not applicable
15454-DS3EC1-48	DS-3 (EC-1) electrical interface card, 48-port, industrial temperature rated	WMUCAD3FAA
15454-DS3XM-12	DS-3 transmultiplexer card, 12-port, ported or portless operation	WMOMAFVBAA
15454-CE-100T-8 <sup>1</sup>	10/100 Mbps Ethernet card, 8-port, point-to-point, HO and LO VCAT, LCAS, GFP-encapsulation	WMUCAEMFAA
15454-TCC2P-K9	Timing, communications, and control-version 2 plus card, provisionable secure-mode, industrial temperature rated	WMUCAD2FAA
15454-EIA-BNC-A96	Electrical interface adapter (EIA), Mini-BNC, A-side (slots 1, 2, 3, 4, 5, 6), supports DS-3/EC-1	WMOTAUNAAA
15454-EIA-BNC-B96	Electrical interface adapter (EIA), Mini-BNC, B-side (slots 12, 13, 14, 15, 16, 17), supports DS-3/EC-1	WMOTAUPAAA
15454-CA-HDBNC-30=	Cable assembly, Mini-BNC, 30 feet, for Mini-BNC EIA panels, Mini-BNC to BNC, supports 1 DS-3/EC-1 transmit or receive signal	Not applicable
15454-CA-HDBNC-75=	Cable assembly, Mini-BNC, 75 feet, for Mini-BNC EIA panels, Mini-BNC to BNC, supports 1 DS-3/EC-1 transmit or receive signal	Not applicable

1. CE-Series card will be made orderable and supported with a future R5.0.x software maintenance release.

## FOR MORE INFORMATION

For more information about the Cisco ONS 15454 SONET MSPP, visit

<http://www.cisco.com/en/US/products/hw/optical/ps2006/ps2010/index.html> or contact your local account representative.

**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 International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands  
www-europe.cisco.com  
Tel: 31 0 20 357 1000  
Fax: 31 0 20 357 1100

**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.  
168 Robinson Road  
#28-01 Capital Tower  
Singapore 068912  
www.cisco.com  
Tel: +65 6317 7777  
Fax: +65 6317 7799

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Pa/LW7352 01/05

