



Cisco ONS 15454 SDH Software Release 4.6.0

Cisco Systems® announces Cisco® ONS 15454 Software Release 4.6.0 for the industry-leading Cisco ONS 15454 SDH Multiservice Provisioning Platform (MSPP). Cisco ONS 15454 Software Release 4.6.0 increases its multiservice support through the addition of Fibre Channel service interfaces. As well, software consolidation has been completed for the intelligent DWDM functionality (MSTP) with the industry leading MSPP to deliver unprecedented transport capabilities from a single platform.

Cisco ONS 15454 SDH Software Release 4.6.0 Hardware Features and Benefits

Cisco Systems® announces the Cisco® ONS 15454 Software Release 4.6.0. Table 1 outlines the new hardware features supported by this release.

Table 1 New Cisco ONS 15454 SDH Software Release 4.6.0 Hardware Features

Feature	Benefit
Cisco 15454 SL Series Fibre Channel-over-SDH (FCoS) Card	The Cisco 15454 SL Series FCoS Card enables the support for storage-area-network (SAN) transport over a converged, multiservice SDH network. The 4-port card supports 1- or 2-Gbps Fibre Channel encapsulated using ITU-T G.707 General Framing Procedure (GFP) and transported over contiguously concatenated or virtually concatenated SDH-protected circuits.
10-Gbps multirate transponder card	The 10-Gbps multirate transponder card enables efficient mapping of STM-64 or 10-Gigabit Ethernet LAN physical sublayer (PHY) signals to an ITU-T compliant, 100-GHz spaced, 50-GHz stabilized, tunable, 10-Gbps wavelength for multiplexing over a dense wavelength-division multiplexing (DWDM) network. The card uses G.709 digital wrapper technology with provisionable Forward Error Correction (FEC) for improved performance and management capabilities.



Table 1 New Cisco ONS 15454 SDH Software Release 4.6.0 Hardware Features

Feature	Benefit
4 x STM-16 muxponder card	The 4 x STM-16 muxponder card expands the interface density of the platform, lowering the cost per bit for high-count, 2.5-Gbps interface requirements. Four STM-16 client interfaces are mapped to an ITU-T compliant, 100-GHz spaced, 50-GHz stabilized, tunable, STM-64 wavelength for multiplexing over a DWDM network. Small Form-Factor Pluggable (SFP) client optics provide user flexibility and lower networking cost. The card uses G.709 digital wrapper technology with provisionable FEC for improved performance and management capabilities.
12-port STM-1/E4 electrical card	This card provides 12 cost-effective STM-1 electrical ports per card for high-speed, 155-Mbps carrier interconnection between voice switches, digital cross-connects (DXCs), add/drop multiplexers (ADMs), and other existing network equipment. Four ports can be provisioned to support E4 services. This module is either unprotected or belongs to a 1:1 or 1:3 protection group. Related front-mount electrical connections (FMECs) are released for front access to the connectors.

Cisco ONS 15454 SDH Software Release 4.6.0 Features and Benefits

Table 2 outlines the marquis-software-based features supported by Cisco ONS 15454 Software Release 4.6.0.

Table 2 Cisco ONS 15454 SDH Software Release 4.6.0 Features and Benefits

Feature	Benefit
Consolidated intelligent DWDM and multiservice provisioning platform (MSPP) software image	A consolidated software load allows the Cisco ONS 15454 to be deployed as an MSPP node, a multiservice transport platform (MSTP) intelligent DWDM node, or as a hybrid node. This simplifies networking and operations through a common user interface.
Cisco ONS 15454 ML Series Ethernet Card feature enhancements	Software enhancements enable existing Cisco ONS ML Series 10/100BASE-T and Gigabit Ethernet cards to support virtual concatenation (VCAT), a software-based link capacity adjustment scheme (SW-LCAS), a subinterface, per-VLAN performance statistics, as well as Ethernet over Multiprotocol Label Switching (EoMPLS). These new features expand the network applications supported by the Cisco 15454 ML Series card in addition to simplifying operations.
Cisco ONS 15454 Timing, Communications, and Control Version 2 (TCC2) Processor Card feature enhancements	Software enhancements enable existing TCC2-equipped network elements to support up to 68 data-communications-channel (DCC) terminations, providing hosting of up to 34 subnetwork-connection-protection (SNCP) rings, five multiplex section-shared protection rings (MS-SPRs), or a combination of the two. These enhancements support user-provisionable regenerator section or multiplexer section DCC usage. They further strengthen the networking capabilities of the Cisco ONS 15454 SDH and drive significant reductions in capital expenditures (CapEx).



More detailed information can be found in the Cisco ONS 15454 SDH Software Release 4.6.0 release notes, available at:

http://www.cisco.com/en/US/products/hw/optical/ps2006/prod_release_notes_list.html.

Cisco ONS 15454 SDH Software Release 4.6.0 features are incremental additions to the Cisco ONS 15454 SDH platform. Cisco ONS hardware and software features previously supported in Release 4.x will continue to be supported unless specified in the Cisco ONS 15454 Software Release 4.6.0 release notes.

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 12.1(20)EO is integrated into Cisco ONS 15454 Software Release 4.6.0, enabling a single, unified software image for installation and operation. The Cisco IOS Software image is not upgradable independently from Cisco ONS 15454 SDH Software.

For details on the capabilities offered by the Cisco IOS Software release on the Cisco ONS 15454 ML Series cards, review the Cisco ONS 15454 Software Release 4.6.0 user documentation, available at:

http://www.cisco.com/en/US/products/hw/optical/ps2006/products_installation_and_configuration_guides_list.html

Compatibility Information

Table 3 outlines the system requirements for hardware and software related to Cisco ONS 15454 SDH Software Release 4.6.0.

Table 3 Hardware and Software Compatibility Matrix

Product Code	Cisco ONS 15454 SDH Software	Processor	Cross-Connect	Shelf Assembly
Cisco ONS 15454 SDH Release 4.6.0 Software	Release 4.6.0	TCC2	XC-10G, XC-VXL-2.5G, XC-VXL-10G	Any
Cisco ONS 15454 SL Series FCoS Card	Release 4.6.0	TCC2	XC-10G, XC-VXL-2.5G, XC-VXL-10G	Any
10-Gbps multirate transponder card	Release 4.6.0	TCC2	XC-10G, XC-VXL-2.5G, XC-VXL-10G (not required for pure DWDM system)	Any
4 x STM-16 muxponder card	Release 4.6.0	TCC2	XC-10G, XC-VXL-2.5G, XC-VXL-10G (not required for pure DWDM system)	Any
12 x STM-1/E4 electrical card	Release 4.6.0	TCC2	XC-10G, XC-VXL-2.5G, XC-VXL-10G	Any

All other previously released Cisco ONS 15454 SDH interface and common-control hardware, supported in software releases 4.0.x, 4.1.x, and 4.5.x, is compatible with this software load. Before inserting a new node into an operating ring or linear network, all existing Cisco ONS 15454 SDH nodes connected with optical RSDCC interfaces should be upgraded to a consistent level of system software to ensure proper operation.

Cisco Systems, Inc.



Availability

Equipment for Cisco ONS 15454 Software Release 4.6.0 will be orderable on January 7, 2004, with equipment shipment beginning approximately 30 days after orderability. Contact your Cisco sales representative for more details.

Ordering Information

The Cisco ONS 15454 SDH Software Release 4.6.0 can be ordered from your Cisco sales representative or through the Cisco.com online ordering tool. Specific product codes and descriptions are detailed in Table 4.

Table 4 Product Part Numbers and Descriptions

Product Part Number	Product Description
15454E-10T-xx.x	10-Gbps multirate transponder card, 1-port (Tx/Rx) intra-office reach, 1310-nm, single-mode client interface with LC connectors, 1-port (Tx/Rx) long-haul, ITU compliant, 100-GHz spaced, 50-GHz stabilized, two-channel tunable, DWDM wavelength (00.0) interface with LC connectors, SDH system
15454E-10M-xx.x1	4 x STM-16 muxponder card, 4 SFP pluggable client interface slots, STM-64 optics card, 1-port (Tx/Rx) long-haul, ITU compliant, 100-GHz spaced, 50-GHz stabilized, two-channel tunable, DWDM wavelength (00.0) interface with LC connectors, SDH system; SFPs sold separately
15454E-FC-MR-4	Fibre Channel card, 1- or 2-Gbps, four gigabit-interface-converter (GBIC) pluggable client interface slots, SDH system; GBICs sold separately
15454E-STM1E-12	12-port STM-1/E4 electrical interface card
15454E-STMNP-FMEC	STM-1E FMEC card, no protection
15454E-STM11-FMEC	STM-1E FMEC card, 1:1 protection
15454E-STM13-FMEC	STM-1E FMEC card, 1:3 protection
ONS-GX-2FC-MMI	GBIC optics module, 1- or 2-Gbps Fibre Channel, 850 nm, multimode, SC connectors
ONS-GX-2FC-SMI	GBIC optics module, 1- or 2-Gbps Fibre Channel, 1310 nm, single mode, SC connectors
15454E-R4.6.0SWCD	Cisco ONS 15454 SDH Software Release 4.6.0, SDH system
SF15454-R4.6.0	Cisco ONS 15454 SDH Software Release 4.6.0 preloaded on TCC cards and control cards, SDH system
15454E-LIC-R4.6.0	Software upgrade license used for upgrading an existing node to another system software release; used with assemble-to-order (ATO) part number 15454E-LIC-UPG

Table 4 Product Part Numbers and Descriptions

Product Part Number	Product Description
15454E-DOC4.6.0PP	User documentation (in paper format) for Cisco ONS 15454 SDH Software Release 4.6.0, SDH system
15454E-DOC4.6.0CD	User documentation (in CD-ROM format) for Cisco ONS 15454 SDH Software Release 4.6.0, SDH system
1 Orderable wavelengths can be found on the pricing tool located at Cisco.com: http://www.cisco.com/en/US/ordering/index.shtml .	

Note: Note: The systems and products described in this document are subject to new product hold, a status assigned to all new items that have not yet transacted through the Cisco manufacturing system and may not be available. Thus, product delivery dates can vary past the quoted first customer ship (FCS) date.

Cisco ONS 15454 SDH products may be ordered through the Cisco Networking Products Marketplace online order entry tool.

For More Information

For more information about the Cisco ONS 15454 SDH platform, visit:

<http://www.cisco.com/en/US/products/hw/optical/ps2006/index.html>.

To order Cisco equipment, visit:

<http://www.cisco.com/en/US/ordering/index.shtml>



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