



Compliance

This appendix lists ONS 15454 compliance with regulatory and industry standards relevant to Class A, Type 2 and Type 4 devices.

The following topics are covered in this chapter:

- [Compliance Matrix, page A-1](#)
- [OSMINE Process, page A-3](#)

Compliance Matrix

Table A-1 *Compliance Matrix*

Discipline	Country	Specification
EMC Emissions - Class A Digital Device	Canada	ICES-003 Issue 3, 1997
		Telcordia GR-1089-CORE
	USA	Telcordia GR-1089-CORE
		FCC 47CFR15
	Japan	VCCIV3/2000.04
	Korea	CISPR22
	Mexico	EN55022
Europe	EN 300-386-TC	
EMC Immunity	Canada	Telcordia GR-1089-CORE
	USA	Telcordia GR-1089-CORE
	Japan	NA
	Korea	CISPR24
	Mexico	EN55024
	Europe	EN50082-2, EN 300-386-TC

Table A-1 Compliance Matrix (continued)

Discipline	Country	Specification
Safety	Canada	CAN/CSA-C22.2 No. 950-95, 3rd Ed/
		Telcordia GR-1089-CORE
		Telcordia GR-63-CORE
	USA	UL 1950 3rd Ed.
		Telcordia GR-1089-CORE
		Telcordia GR-63-CORE
	Japan	EN60950 (to A4)
	Korea	EN60950 (to A4)
Mexico	Certified	
Europe	IEC60950/EN60950, 3rd Ed.	
Telecommunications	Canada	NA
	USA	NA
	Japan	Blue Book 1996, Green Book 1997
	Korea	OC-12, OC-48
	Mexico	Certified
	Europe	NA
Environmental	Canada	Telcordia GR-63-CORE NEBS Level 3
	USA	Cisco Mechanical Environmental Design and Qualification Guideline ENG-3396
		AT&T Network Equipment Development Standards (NEDS)
Structural Dynamics (Mechanical)	Canada	Telcordia GR-63-CORE NEBS Level 3
	USA	Cisco Mechanical Environmental Design and Qualification Guideline ENG-3396
		AT&T Network Equipment Development Standards (NEDS)
Power and Grounding	Global	SBC Local Exchange Carriers, Network Equipment Power, Grounding, Environmental, and Physical Design Requirements-TLP76200MP

The ONS 15454 cards listed in Table A-2 have received certification from Japan.

Table A-2 *Japan Card Approvals*

Card	Certificate Number
15454-DS1-14	L02-0014
15454-DS3E-12	L02-0013
DS3N-12	L02-0285
15454-OC3-4IR 1310	L02-0265
15454-OC312IR 1310	L02-0266
15454-OC48IR 1310	L02-0267
15454-OC48IR 1310AS	L02-0012

The ONS 15454 system received the certification listed in Table A-3 from Korea.

Table A-3 *Korea Certification of Information and Communication Equipment*

Model	Certification Number
ONS 15454	T-C21-00-1434

OSMINE Process

Cisco is actively involved in the OSMINE process with Telcordia to ensure compatibility with Telcordia's OSSs. The following is a summary of completion of the OSMINE process for the ONS 15454.

ONS 15454 Software Release 1.0

- TIRKS
 - Inserted in Catalog
 - OSIA in Release 2.0
 - CLEI Codes completed
 - Function Coding completed
- NMA
 - Not supported
- Transport
 - Not supported

ONS 15454 Software Release 2.0 and 2.1

- Content
 - Hybrid
- TIRKS (19.2)

- Final OSIA for the Release 2.0 is available
 - CLEI Codes completed
- NMA (9.1)
 - R2.0 OSIA is available
 - R2.1 OSIA is available
 - System Test Report is available
- Transport
 - Not supported

ONS 15454 Software Release 2.2 - Not Tested

This release has not been tested with OSMINE processes.

ONS 15454 Software Release 3.0

- Content
 - DS3
- TIRKS (19.4)
 - Final OSIA (R3.0/R3.1 Issue 2 is available
 - CLEI Codes completed
 - Supports non-adjacent optical slot protection
 - Does not support Limited VT Matrix
- NMA (10.1)
 - Final OSIA is available
 - NMA Test Plan is available)
 - Templates and M&P are available
 - System Test Report is available
- Transport (2.0)
 - Test Report is available
- Transport
 - Does not support non-adjacent optical slot protection until Software Release 3.3

ONS 15454 Software Release 3.1

- Content
 - OC192 LR, OC48 AS, XC10G, 10G Backplane/FTA, Limited VT Matrix
- TIRKS (19.4)
 - Final OSIA (R3.0/R3.1 Issue 2) is available

- Final OSIA (R3.0/R3.1 Issue 3) for HECIG changes (see Hybrid HECIG Issue) is available
- Final OSIA (R3.0/R3.1 Issue 4) to correct the 1+1 protection CD (Section 7.9) and to add explanatory information to Table 6-3 is available.
- CLEI Codes completed
- Support for Limited VT matrix for path protection, 1+1 and Linear Chain
- VT Matrix Circuit Descriptions
- NMA (10.1)
 - Support for Limited VT matrix for path protection, 1+1 and Linear Chain
 - Final OSIA is available
 - NMA Test Plan is available)
 - Templates and M&P are available
 - System Test Report is available
- Transport (2.1) (2.2.1)
 - Transport R2.1 Test Report is available
 - HECIG retest in Transport 2.2.1, Release Content Letter is available
 - No support for Limited VT matrix for path protection, 1+1 and Linear Chain until Software Release 3.2
 - Does not support non-adjacent optical slot protection until Software Release 3.3

ONS 15454 Software Release 3.2

This release has not been tested with the OSMINE process.

ONS 15454 Software Release 3.3

- Content
 - OC48 ITU, G1000-4, OC12-4
- LFACS
 - Supported in the LFACS quarterly release available 5/31/02
 - Final LFACS Requirements Document for Table Changes is available
- TIRKS (19.5)
 - CLEI Codes completed
 - Supports "Add a Hybrid Node" feature
 - Final OSIA Issue 1 is available
 - Final OSIA Issue 2 for STS-STX example and G10004 HECIG changes is available
- NMA (11.1)
 - Supports "Multi-Gateway (Dual TL1)" feature
 - Final OSIA is available
 - NMA Test Plan is available

- Templates and M&P are available
 - System Test Report is available
- Transport (2.4)
 - Support for Limited VT matrix for path protection, 1+1 and Linear Chain
 - Transport R2.4 Test Report is available

ONS 15454 Software Release 3.4

- Content
 - AIC-I, PCA, FTP, TL1 Enhancements, ESM AINS, Interconnecting Rings
- TIRKS (19.7) (19.7.0.3)
 - Final OSIA Issue 1 (19.7) supports Limited VT Matrix BLSR GFDS and is available
 - Final OSIA Issue 2 (19.7.0.3) supports 1+1 VT Matrix usage is available
 - Final OSIA Issue 3 (19.7.0.3) supports Backplane EIA change and Interconnecting Rings is available
- NMA (12.0)
 - Final OSIA is available
- NMA Test Plan is available
 - System Test Report is available
- Transport (2.6)
 - Transport R2.6 supports FTP Software Download
 - Transport R2.6 Test Report is available

ONS 15454 Software Release 4.0

- Content
 - OC192 SR/IR/ITU, TCC2, OC3-8, G1K, M400T-12, M4000-2, 10G to OC192 Trans, 4x2.5G to OC192 Mux, DS1 FDL, PDI-P, DRI path protection, Multi-shelf/Single TID, Universal Backplane
- TIRKS (19.8)
 - Final OSIA Issue 1 is available
 - Final OSIA Issue 2 available
- NMA (12.1)
 - Final OSIA is available
- NMA Test Plan is available
 - System Test Report available
- Transport (2.8)
 - Transport R2.8 Test Report is available

ONS 15454 Software Release 4.1

This release has not been tested with the OSMINE processes. However, R4.0 OSMINE can be reused for R4.1.

ONS 15454 Software Release 4.5

- Content
 - Multi-rate (100 Mb/s to 2.5 Gb/s) 100GHz Transponder (32 versions), Preamplifier, Booster Amplifier, 32 channel Multiplexer - C Band - Odd channels, 32 channel Demultiplexer - C Band - Odd channels, 4-channel Mux/Demux - C Band -OADM node (8 versions), 1channel (32 versions) OADM filter at 100GHz grid, 2 channels (16 versions) OADM filter at 100 GHz grid, 4 channels (8 versions) OADM filter at 100 GHz grid, 1Band OADM filter (8 versions), 4 Bands OADM filter (2 versions), Optical Service Channel Module, Optical Service Channel Module + Combiner/Separator, Dispersion Compensator negative - C band (7 versions), 2.5 Gb/s 100GHz Escon Data Mux, GE and FC 2.5 Gb/s 100GHz Data Mux, Dual-Port GigE Transponder
- TIRKS (19.8)
 - Final OSIA Issue 1 is available
- NMA support for R4.5 is included with R4.6
- Transport support for R4.5 is included with R4.6

ONS 15454 Software Release 4.6

- Content
 - Multi-rate (100 Mb/s to 2.5 Gb/s) 100GHz Transponder, Preamplifier, Booster Amplifier, 32 channel Multiplexer - C Band - Odd channels, 32 channel Demultiplexer - C Band - Odd channels, 4-channel Mux/Demux - C Band -OADM node, 1channel OADM filter at 100GHz grid, 2 channels OADM filter at 100 GHz grid, 4 channels OADM filter at 100 GHz grid, 1Band OADM filter, 4 Bands OADM filter, Optical Service Channel Module, Combiner and Separator with OSC Module, DS3/DS1 Signal Degrade Alarm + E1/E3, 6 Char BLSR/MSSPRing ID, Alarm on Firewall turned off, FC-4, Dual-Port GigE Transponder WDM GBICs, Support/Testing of Hair-pinning, Support/Testing of Performance Monitoring, Retest of 10G to OC192/STM64 ITU Transponder, Retest of 4x 2.5G to OC192/STM64 ELR ITU Muxponder, VCAT on FC_MR-4, HD Shelf, UBIC-V
- TIRKS (19.9)
 - Final OSIA Issue 1 is available
 - Final OSIA Issue 2 for FC_MR-4 is available
- NMA (13.0)
 - Final OSIA is available
 - NMA Test Plan is available
 - Templates and M&P are available
 - System Test Report is available
- Transport (3.1)

- Transport Release 3.1 is available
- Transport R3.1 Final Requirements are available
- Transport R3.1 Test Report is available

ONS 15454 Software Release 4.7

This release has not been tested by OSMINE processes. However, this release is supported by R5.0 OSMINE processes.

ONS 15454 Software Release 5.0

- Content
 - TCC2P, 48 Port DS3/EC1, 2.5 Gbit/s 100Ghz Datamux, DS3XM-12, 10GE/OC192/STM64 Transponder & 4x2.5G 10G Muxponder, 96-port (TX and RX) mini-BNC EIA panels, UBIC-H, CE-100-8, OC48 SR SFP, DRI BLSR, In-Service Topology Upgrades, ROADM Operational Enhancements, 32-WSS, 32-DMX, Bidirectional OCH, SL (FC-4) Enhancements, VT 1+1 Matrix Enhancements, Diagnostics (NMA for diag alarms), TL1 Improvement - name of CC via TL1, ML GFP, ESM, Provisionable Patchcord, OSNR/Power Monitoring per channel
- GFDS
 - Client Signal Direct Connect WDM Network, 2 Path Circuit with Independent Routing for Optical Networks, VCAT Split Routing, Slot Bandwidth Management
- TIRKS (20.0)
 - Final OSIA Issue 1 is available
 - Final OSIA Issue 2 is available
 - Final OSIA Issue 3 for SBM GFDS, HD configuration, and OC3-4 slot restriction support will be available March 2005
- NMA (14.0)
 - Final OSIA is available
 - Final NMA deliverables delayed until March 2005 due to NMA System Retest
 - NMA Test Plan will be available March 2005
 - System Test Report will be available March 2005
 - Templates and M&P will be available March 2005
- Transport (3.4)
 - Transport R3.4 Test Report is available
 - Transport R3.4 Final Requirements document is available