

Tellabs[®] Titan[®] 5500 Digital Cross-Connect System — Consolidated Core Switch

Expanded capacity with a smaller footprint saves space and conserves power compared with standard configurations.

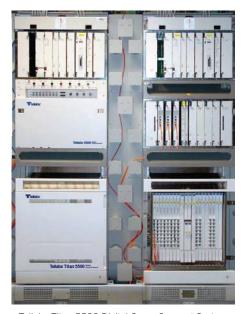
Overview

The Tellabs® Titan® 5500 Digital Cross-Connect System (DCS) Consolidated Core Switch (CCS) expands the maximum capacity to 4608 STS-1 equivalents (STS-1e) from the previous maximum of 3072, with the capability to expand up to 6144. It can be deployed as a standalone system or be used as an expansion switch matrix for existing Tellabs Titan 5500 DCS Standard Core Switch (SCS) systems.

The Tellabs Titan 5500 DCS 4608 CCS switch matrix resides in a single shelf, with 2 shelves required for redundancy. A fully redundant switch matrix, along with Administrative Complex (AC) shelves, fits into just 2 bays — compared to the 9 bays required for a SCS 3072 configuration. In addition, Tellabs continues the commitment to support existing equipment in customers' networks by providing the capability to expand any existing Tellabs 5500 SCS (256, 1024, 1536 and 3072 core sizes) to over 4K core size with as little as one additional bay of equipment. This capability offers significant savings in both floor space and power consumption compared to current standard density core configurations.

Features and Benefits

- 4608 STS-1 (240G) total capacity in 2 shelves
 - 100% Non-blocking matrix
 - Full STS-1 and VT1.5 grooming capability
 - Native support of DS1 interfaces no adjuncts
 - Supports STS-1e, DS1, DS3, OC-3, OC-12 and OC-48 interfaces
 - Full transmux capability
 - Centralized management
 - Consolidates 12 bays of equipment into 2 shelves
- Designed for high reliability
 - 1+1 redundant switch shelves
 - Physical separation of switch complexes
- Full suite of Tellabs Titan 5500 DCS features
 - ASIST, bridge & roll, performance monitoring, test access, trace route, etc.
- Designed for easy expansion of port capacity
- Tellabs Titan 5500 DCS reliability stats exceed 99.99975%



Tellabs Titan 5500 Digital Cross-Connect System Consolidated Core Switch (CCS) Rack



Tellabs Titan 5500 Digital Cross-Connect System Consolidated Core Switch (CCS) Shelf





General Specifications

Dimensions

Height: 22.75 in (57.8 cm) • Width: 21.5 in (54.6 cm) Depth: 15.0 in (38.1 cm) Mounts in 23-in rack

Power - fully equipped (per shelf)*

< 860 Watts at -48V DC</p>

< 17.8A at -48V DC</p>

< 20.4A at -42V DC</p>

■ Breaker size: 50 amp

Normal operating temperature range

41°F to 104°F (5°C to 40°C)

 Meets normal operating temperature range requirements specified in Telcordia GR-63-CORE (NEBS)

Short-term operating temperature range

■ 23°F to 122°F (-5°C to 50°C) for no more than 96 consecutive hours, and a total of no more than 15 days per year

Operating relative humidity range

■ 5%-85% (non-condensing)

Operating short-term relative humidity

• 5% to 90%, but not to exceed 0.024 pounds of water per pound of dry air for no more than 96 consecutive hours, and a total of no more than 15 days per year

Operating altitude range

- From 196 feet (60 m) below mean sea level up to 13,000 feet (4,000 m) above mean sea level — manufacturer will provide special requirements for installations above 1800 m
- * For current 4608 STS-1 configuration. Shelf is designed for up to 6144 STS-1 to allow for future expansion.

Standards Compliance

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- TR-NWT-000170, Digital Cross-Connect System Generic Requirements and Objectives, Issue 2, January, 1993
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- GR-820-CORE, Generic Digital Transmission Surveillance, Issue 1, November 1994
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- GR-63-CORE, "Network Equipment Building System (NEBS) Generic Requirements: Physical Protection," Issue 1, October 1995
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- GR-199-CORE, Operations Technology Generic Requirements (OTGR): Operations Application Messages — Memory Administration Messages, Issue 3, February 1999
- GR-2924-CORE, Generic Requirements for National MCUP Committee CSCANS, Issue 1, April 1996
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- GR-831-CORE: Operations Application Messages Language for Operations Application Messages, Issue 1, Bellcore, November 1996
- GR-474-CORE: Network Maintenance: Alarm and Control for Network Elements, Issue 1, Bellcore, December 1997
- GR-1089-CORE: Electromagnetic Compatibility and Electrical Safety — Generic Criteria for Network Telecommunications Equipment, Issue 2, December 1997, Revision 1, February 1999
- GR-1339-CORE, "Generic Reliability Requirements for Digital Cross-Connect Systems," Issue 1, March 1997, Bellcore
- GR-1250-CORE, "Generic Requirements for Synchronous Optical Network (SONET) File Transfer," Issue 1, June 1995, Bellcore
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- GR-78-CORE, General Requirements for the Physical Design and Manufacturing of Telecommunications Products and Equipment, Issue 1, Bellcore, September 1997
- GR-2996-CORE, Generic Requirements for SONET Digital Cross-Connect Systems, Issue 1, Bellcore, January 1999
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- ANSI T1.102-1993, American National Standard for Telecommunications, Digital Hierarchy — Electrical Interfaces
- ANSI T1.231-1993, American National Standard for Telecommunications, Digital Hierarchy — Layer 1 In-Service Digital Transmission Performance Monitoring
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- ANSI T1.105-1991, American National Standard for Telecommunications, Digital Hierarchy — Optical Interface Rates and Formats Specifications (SONET)
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- ITU-T Recommendation G.8010/Y.1306 (02/2004), Architecture of Ethernet Layer Networks
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- RFC 792, Internet Control Message Protocol, DARPA Internet Program Protocol Specification
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- RFC 814, Names, Addresses, Ports and Routes
- RFC 826, An Ethernet Address Resolution Protocol (ARP)
- RFC 854, TELNET Protocol Specification
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- RFC 950, Internet Standard Subnetting Procedure
- RFC 959, File Transfer Protocol (FTP)
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- RFC 4253 The Secure Shell (SSH) Transport Layer Protocol
- RFC 4254 The Secure Shell (SSH) Connection Protocol
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