

Cisco 7603-S Chassis

Extending Performance, Versatility, and Reliability to the Access Edge Cisco 7603-S Router

The Cisco® 7603-S Router is a compact, 3-slot, high-performance router designed for deployment at the access or aggregation edge, where a combination of performance and multiple services options is necessary to meet the requirements of both enterprises and service providers. It enables Carrier Ethernet service providers to deploy an advanced network infrastructure that supports a range of IP video and triple-play (voice, video, and data) system applications in both the residential and business services markets. The Cisco 7603-S also enables mobile operators to preaggregate time-division (TDM) and ATM circuits over a common pseudowire layer, tremendously reducing operating expenses (OpEx). The Cisco 7603-S also delivers WAN and metropolitan-area network (MAN) networking solutions at the enterprise edge.

With a powerful combination of speed and services, the Cisco 7603-S is an outstanding choice for multiple applications. Whether deployed as a mobile Radio Access Network (RAN) preaggregation device, as a triple-play residential broadband services aggregator, or as a device for Metro Ethernet aggregation and uplink, the Cisco 7603-S meets requirements at a small point of presence (POP) (Figure 1). The Cisco 7603-S delivers high performance with a forwarding rate of up to 96 Mpps, and 240-Gbps total throughput while delivering high-touch, hardware-accelerated IP services.

One of the most important benefits of using the Cisco 7603-S is its compliance with ETSI closed-cabinet requirements (600-mm depth) from a depth perspective. This feature, plus its inherent compact size, makes the Cisco 7603-S especially attractive for service providers working in a very restricted rack space environment, as is often true at the central office.

Figure 1. Cisco 7603-S Chassis



The inclusion of Gigabit Ethernet ports on the Cisco Supervisor Engine 720 or the new Cisco Route Switch Processor 720 (RSP 720) route processors eliminates the need to use a line-card slot for uplink ports. The result of this design is more efficient use of available line-card slots and increased deployment flexibility. Four Gigabit Ethernet ports are available for use in dual-route processor configurations.

The Cisco 7603-S enhanced chassis delivers numerous design improvements, including:

- Improved failover mechanisms in the hardware, which when paired with the proper Cisco IOS® Software image can achieve 100-ms failover
- Ability to deliver higher power of up to 600W per slot
- High-speed fan tray module on a side-to-side airflow design
- Better thermal flow measurement and management

The power supply supported on the Cisco 7603-S is the 1500 WDC power supply (refer to Table 1).

Shared port adaptors (SPAs) on the SPA interface processors (SIPs) are available on the Cisco 7600 Series with interface speeds ranging from OC-3 to OC-192 and from Fast Ethernet to 10 Gigabit Ethernet. The Cisco 7600 Series can also use the Cisco 7600 Series/Catalyst® 6500 Series Enhanced FlexWAN Module to take advantage of most Cisco 7200 and Cisco 7500 port adapters for terminating DS-0 to OC-3 speeds. By using the Cisco Catalyst 6000 Series of Ethernet line cards in conjunction with the SIP-based SPAs and the enhanced FlexWAN module, the Cisco 7600 provides a multitude of options to scale WAN connectivity from DS-0 to OC-192 and LAN connectivity from 10-Mbps Ethernet through 10 Gigabit Ethernet.

The Cisco 7603-S chassis accommodates a broad selection of line cards supporting numerous applications, including:

- SPAs and SIPs (Cisco 7600 Series SPA Interface Processor-200 [SIP 200], SIP 400, and SIP 600):
 - Channelized T1/E1, Channelized T3, and Channelized OC-3/STM-1
 - OC-3/STM-1, OC-12/STM-4, OC-48/STM-16 Packet over SONET/SDH (PoS), and OC-192/STM-64 PoS
 - OC-3/STM-1 ATM, OC-12/STM-4 ATM, and OC-48/STM-16 ATM
 - Fast Ethernet, Gigabit Ethernet, and 10 Gigabit Ethernet
- Enhanced FlexWAN module – Supporting Cisco 7200 and Cisco 7500 WAN port adapters from DS-0 to OC-3 for Channelized and ATM interfaces and also Fast Ethernet port adapters
- High-density Ethernet services modules – 10/100 Mbps, Gigabit Ethernet, and 10 Gigabit Ethernet
- Services modules – IP Security (IPsec), firewall, distributed denial of service, intrusion detection, network analysis, and content switching commonly used, for example, in the Cisco Mobile Exchange solution
- Supervisor support – Cisco Catalyst 6500 Supervisor Engine 32 (WS-SUP32-GE-3B and WS-SUP32-10GE-3B), Cisco Catalyst 6500 Series Supervisor Engine 720 (WS-SUP720-3B and WS-SUP720-3BXL), and the new Cisco RSP 720 (RSP720-3C and RSP720-3CXL)

Understanding the need to use rack space efficiently, Cisco designed the Cisco 7603-S to be a compact 7-inch-tall (4-rack-unit [4RU]) unit, with single-side connection management for both interface and power terminations. This setup allows placement of up to 11 Cisco 7603-S units per standard 7-foot rack. A new power supply has been designed, the 1500 WDC power supply (PWR-1500-DC), with the specific requirement of meeting the ETSI closed-cabinet compliance.

With a powerful combination of speed and services in a compact form factor, the Cisco 7603-S is an outstanding choice for deployment in applications such as peering where a small number of interfaces is needed, in a tier 2 or tier 3 POP where space is critical but high-speed aggregation is

necessary, or in the metropolitan area to provide high-performance Ethernet aggregation and uplink.

Quick-Look Feature Summary

Cisco 7603-S Chassis Features

- Four RU (7-inch) compact chassis, up to 11 chassis per 7-foot rack
- Two interface slots plus two supervisor-mounted Gigabit Ethernet ports (gigabit interface converters [GBICs])
- Network Equipment Building Standards (NEBS) Level 3 compliance
- Route processor protection capability: 1+1
- Power supply: 1500 WDC
- Single-side connection management for both interface and power terminations
- Side-to-side airflow

Cisco 7603-S System Features

- Hardware-based Cisco Express Forwarding at 15 Mpps (Cisco Express Forwarding, access control lists [ACLs]), classification, shaping, filtering, marking, etc.)
- Total throughput: 240 Gbps
- Interface flexibility for PoS, Channelized optical, Ethernet, and ATM connectivity

Technical Specifications

Table 1 gives specifications of the Cisco 7603-S.

Table 1. Product Specifications

Features	Descriptions
Physical specifications	4RU (7-in.) 3-slot chassis Metrics (H x W x D): (7 in. x 17.37 in. x 20.3 in.) Weight: 27 lb (12.25 kg) Power requirements: 110 to 240 VAC, -48 to -60 VDC Mean time between failure (MTBF): 7 years for system configuration
Environmental conditions	Operating temperature: 32 to 104°F (0 to 40°C) Storage temperature: -4 to 149°F (-20 to 65°C) Relative humidity, operating: 10 to 85% noncondensing Relative humidity, storage: 5 to 95% noncondensing Operating altitude: -500 to 6500 ft

Features	Descriptions
Regulatory compliance	<p>EMC</p> <p>FCC Part 15 (CFR 47) Class A ICES-003 Class A EN55022 Class A CISPR22 Class A AS/NZS 3548 Class A VCCI Class A EN55024 ETS300 386 EN50082-1 EN61000-3-2 EN61000-3-3</p> <p>Regulatory Compliance</p> <p>UL 60950 IEC 60825-1, -2 IEC 60950 EN 60950, EN 60825-1, -2 CAN/CSA-C22.2 No. 60950-00 AS/NZS 3260-1993 21CFR1040</p>
Safety and environmental standards compliance	<p>GR-63-Core NEBS Level 3 (post-FCS) GR-1089-Core NEBS Level 3 (post-FCS) ETSI 300 019 Storage Class 1.1 ETSI 300 019 Transportation Class 2.3 ETSI 300 019 Stationary Use Class 3.1</p>
Minimum software release	Cisco IOS Software Release 12.2(33)SRB1

Ordering Information

To place an order, visit the Cisco Ordering Home Page at http://www.cisco.com/public/ordering_info.shtml and refer to Table 2.

Table 2. Ordering Information

Chassis Bundles	Description
Spare Units	Note that "=" denotes a spare order
CISCO7603-S=	Cisco 7603-S Router, mounting kit, and cable guide
PWR-1500-DC=	DC Power supply for Cisco 7603-S
PEM-1500W-DC/03S=	Cisco 7603-S DC Power Entry Module
PWR-03S-CVR=	Blank Cover for Power supply slot on Cisco 7603-S
CAB-7513ACU	AC power cord (U.K.)
CAB-7513ACR	AC power cord (Argentina)
CAB-7513ACSA	AC power cord (South Africa)
CAB-ACS-10	AC power cord (Swiss)
CAB-AC-2500W-US1	Power cord, 250 VAC 16A, straight blade NEMA 6-20 plug, United States
CAB-AC-C6K-TWLK	Power cord, 250 VAC 16A, twist lock NEMA L6-20 plug, United States
CAB-AC-2500W-EU	Power cord, 250 VAC 16A, Europe
CAB-AC-2500W-INT	Power cord, 250 VAC 16A, International
CAB-ACS-16	AC power cord (Swiss) 16A
CAB-AC-16A-AUS	Power Cord, 250VAC, 16A, Australia C19
CAB-AC-2500W-ISRL	Power Cord, 250VAC, 16A, Israel
CAB-7513AC	AC Power Cord North America (110V)
CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors
FAN-MOD-3SHS=	Spare High-speed fan module for Cisco 7603-S Chassis
KIT-MNTG-CG19-3S=	Spare Mounting kit and cable guide for Cisco 7603-S for the 19" rack
CLK-7600=	Spare clock card for Cisco 7603, Cisco 7604, Cisco 7606, or Cisco 7609

Minimum Software Release

- Cisco IOS 12.2(33)SRB1



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