PRODUCT BULLETIN NO. 2782

INTRODUCING CISCO CATALYST 4948-10GE SWITCH

10 Gigabit Ethernet Switching for High-Performance, Rack-Optimized Server Switching

Cisco Systems® announces the Cisco® Catalyst® 4948-10GE, a low-latency, 48-port 10/100/1000, 1-rack unit (RU), fixed-configuration switch with 2 wire-speed 10 Gigabit Ethernet uplinks for rack-optimized server switching applications. The Cisco Catalyst 4948-10GE (Figure 1) offers exceptional performance and reliability for Layer 2 and Layer 3 server switching deployments for enterprise customers.

The Cisco Catalyst 4948-10GE can be ordered immediately with first customer shipment (FCS) expected on March 8, 2005. Normal new product lead time (four weeks) will apply initially.

Figure 1. Cisco Catalyst 4948-10GE Switch

This bulletin contains the following information:

- Product overview
- New software features
- Product numbers
- FCS schedule and lead times
- Online documentation

PRODUCT OVERVIEW

The Cisco Catalyst 4948-10GE delivers wire-speed throughput with low latency for data-intensive applications using a 136-Gbps switching fabric with a 102-million packets per second (mpps) forwarding rate in hardware for Layer 2–4 traffic. High-performance switching is delivered regardless of the number of route entries or Layer 3 and 4 services enabled. Hardware-based Cisco Express Forwarding routing architecture allows for increased scalability and performance. X2 10 Gigabit Ethernet optics provide 20 Gigabit Ethernet wire-speed uplinks for maximum throughput of traffic.

Primary hardware features include:

- Wire-speed performance for 10/100/1000 connectivity and wire-speed 10 Gigabit Ethernet uplinks
  - 136-Gbps switching fabric with 102-Mpps forwarding rate for Layer 2 through 4
- Power-supply redundancy for nonstop operation
  - 1+1 redundant hot-swappable internal AC or DC power supplies

- Robust Security
  - Prevention of man-in-the-middle and IP-spoofing attacks
  - Access control lists (ACL)
  - Secure Shell (SSH) Protocol versions 1 and 2
  - Simple Network Management Protocol Version 3 (SNMPv3) for secure remote access and network management
- Comprehensive management
  - Dedicated 10/100 console port and dedicated 10/100 management port
  - Remote in-band management through SNMP

CISCO IOS SOFTWARE RELEASE 12.2(25)EWA SUPPORT

New Software Features

Per-Port, Per-VLAN Quality of Service

Per-port, per-VLAN quality of service (QoS) offers differentiated quality of services to individual VLANs on a trunk or access port. It allows service providers to rate-limit individual VLAN-based services on each trunk port to a business or a residence. Per-port, per-VLAN service policy can be separately applied to either ingress or egress traffic.

Trunk-Port Security

Trunk-port security extends the port security to trunk ports on a per-VLAN basis. It restricts the allowed MAC addresses or the maximum number of MAC addresses to individual VLANs on a trunk port. Trunk-port security helps service providers to block the access from a station with a different MAC address than the ones specified for that VLAN on that trunk port. When a trunk-port security violation occurs, the trunk port is either shut down, or an SNMP trap is generated. Trunk-port security is also supported on private VLAN trunk ports.

802.1x Private VLAN Assignment

The 802.1x private VLAN (PVLAN) assignment feature extends 802.1x VLAN assignment to the PVLAN environment for Layer 2 isolation. When a port is configured as a PVLAN host port, 802.1x PVLAN assignment authorizes a user to a specified secondary PVLAN. This feature can not be enabled concurrently on a port with a voice VLAN.

802.1x Private Guest VLAN

The 802.1x private guest VLAN feature extends 802.1x guest VLAN to the PVLAN environment for Layer 2 isolation. When a port is configured as a PVLAN host port, 802.1x private guest VLAN offers limited network access through a guest secondary PVLAN to users without a 802.1x supplicant.

802.1x RADIUS-Supplied Session Timeout

The 802.1x RADIUS-supplied timeout feature allows a switch to determine the duration of a session and the action to take when the session’s timer expires. Based on the value specified by a RADIUS server, a Cisco Catalyst 4500 Series Switch can reauthenticate a host when the timer expires. This offers a standard mechanism for periodic 802.1x reauthentication based on a configurable timer.

Dynamic Host Configuration Protocol Option 82 Pass Through

Option 82 in a Dynamic Host Configuration Protocol (DHCP) message is typically used to carry additional local information for user-access tracking. Option 82 is usually inserted or removed by an access switch or a DSL access multiplexer (DSLAM) in service provider environment. The DHCP option 82 pass-through feature helps enable the Cisco Catalyst 4900 Series to effectively transport these DHCP messages with option 82 in the aggregation layer. It can be activated through switch global configuration.

Routing Information Protocol Version 2 SNMP MIB

Read-only Routing Information Protocol (RIP) Version 2 SNMP MIB extension (RFC 1724) is supported. The optional peer table is not yet provided.

PRODUCT NUMBERS

Table 1 lists the part numbers for the Cisco Catalyst 4948-10GE.

Table 1. Ordering Information

Model Number	Product Description
WS-C4948-10GE-S	Cisco Catalyst 4948-10GE, Standard Multilayer Image (SMI), one AC power supply, fan tray
WS-C4948-10GE-E	Cisco Catalyst 4948-10GE, Enhanced Multilayer Image (EMI), one AC power supply, fan tray
WS-C4948-10GE	Cisco Catalyst 4948-10GE, optional software image, optional power supplies, fan tray
PWR-C49-300AC(=)	Cisco Catalyst 4948 300W AC power supply
PWR-C49-300AC/2	Cisco Catalyst 4948 300W AC power supply, redundant
PWR-C49-300DC(=)	Cisco Catalyst 4948 300W DC power supply
PWR-C49-300DC/2	Cisco Catalyst 4948 300W DC power supply, redundant
S49L3K9-12225EWA(=)	SMI: RIP, static routes, Internetwork Packet Exchange (IPX), Appletalk. Triple Data Encryption Standard (3DES) image
S49L3-12225EWA(=)	SMI: RIP, static routes, IPX, Appletalk
S49L3EK9-12225EWA(=)	EMI: Open Shortest Path First (OSPF), Intermediate System-to-Intermediate System (IS-IS) Protocol, Enhanced Interior Gateway Routing Protocol (EIGRP), Border Gateway Protocol (BGP). 3DES image
S49L3E-12225EWA(=)	EMI: OSPF, IS-IS, EIGRP, BGP
WS-X4991=	Cisco Catalyst 4948 fan tray (spare)
C4948-ACC-KIT=	Spare rack mount and cable guide
C4948-BKT-KIT=	C4900 front- and rear-mount brackets
X2-10GB-LR	10-GB LR X2 module

SOFTWARE REQUIREMENTS

Table 2 lists the software requirements for the Cisco Catalyst 4948-10GE.

Table 2. Software Requirements

Product	Software Type	Min Software Req.
Cisco Catalyst 4948-10GE	Cisco IOS® Software	Cisco IOS Software Release 12.2(25)EWA or later

ONLINE DOCUMENTATION

Cisco Catalyst 4948-10GE product information, including data sheet, Q&A, and architecture documents, is available at http://www.cisco.com/en/US/products/ps6021/index.html.

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

Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on **the Cisco Website at www.cisco.com/go/offices.**

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia • Cyprus Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland • Israel Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan Thailand • Turkey • Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

205309.CG_ETMG_JR_7.05

Printed in the USA