

High-Performance,
Secure Voice-Ready
Gigabit Power over
Ethernet Connectivity,
Ideal for Medium
Businesses and Small
Enterprises

OVERVIEW

The 3Com® Switch 4500G delivers flexible quad-speed performance—10/100/1000 and 10-Gigabit—and advanced voice-optimized features such as Power over Ethernet (PoE) and auto-voice VLAN and QoS. This makes the Switch 4500G ideal for medium businesses and small enterprises seeking to build a secure converged network.

KEY BENEFITS

MANAGED LAYER 2 AND LAYER 3 GIGABIT CONNECTIVITY

Wirespeed Layer 2 Gigabit switching with dynamic Layer 3 Gigabit routing make the Switch 4500G ideal for wiring closet, workgroup and small core connectivity requirements. In addition, four of the ports are dual-personality, operating either as 10/100/1000 or SFP-based fiber providing greater flexibility. These switches also accommodate up to four extra optional 10-Gigabit high-speed links, enabling connectivity to a core network or to high-performance servers.

SECURE

Enterprise-class security features include IEEE 802.1X network login, SSH/SSL encrypted device login, and Access Control Lists, protecting mission-critical business applications.

VOICE-READY

Minimize the cost and complexity associated with adding or moving IP telephones: the Switch 4500G detects the presence of IP phones and dynamically assigns switch ports to the voice VLAN, enabling automated configuration and prioritization of Voice over IP (VoIP) traffic. Optional PoE models provide electrical power and data connectivity over a single Ethernet cable—resulting in significant cost savings when deploying these phones.

INVESTMENT PROTECTION

10-Gigabit uplinks and robust IPv6 support future-proof your network. These switches come with a limited lifetime warranty covering the unit, power supply and fan. Also provided is Advanced Hardware Replacement, with next business day shipment available in most regions, and telephone support and limited lifetime software updates.



from top: 3Com Switch 4500G 24-Port, Switch 4500G 48-Port,
Switch 4500G PWR 24-Port, Switch 4500G PWR 48-Port

KEY BENEFITS (CONTINUED)

VARIETY OF MODELS

The Switch 4500G is available in four models, clusterable in any combination up to thirty-two units:

- › 3Com Switch 4500G 24-Port:
24 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports,
4 of which are dual-personality 10/100/1000 or SFP Gigabit;
two 10-Gigabit dual-port slots
- › 3Com Switch 4500G 48-Port:
48 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports,
4 of which are dual-personality 10/100/1000 or SFP Gigabit;
two 10-Gigabit dual-port slots
- › 3Com Switch 4500G 24-Port PWR:
24 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports,
4 of which are dual-personality 10/100/1000 or SFP Gigabit;
two 10-Gigabit dual-port slots; 10/100/1000 ports are PoE-enabled
- › 3Com Switch 4500G 48-Port PWR:
48 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports,
4 of which are dual-personality 10/100/1000 or SFP Gigabit;
two 10-Gigabit dual-port slots; 10/100/1000 ports are PoE-enabled

EMPOWERS APPLICATION CONVERGENCE

The Switch 4500G family combines high-performance Gigabit switching, QoS and traffic management features to help ensure essential applications get the appropriate priority for efficient utilization of network resources.

ENHANCES MANAGEMENT AND CONTROL

Easy to use and manage, the Switch 4500G is designed to increase business productivity by reliably supporting business applications. Cluster together up to 32 devices for easy administration, with single IP management across 3Com switching lines—with mixed clusters of Switch 4210, 4200G, 4500G and Switch 5500 and Switch 5500G switches.

DELIVERS HIGH PERFORMANCE

The Switch 4500G family provides wirespeed aggregate switching capacity of up to 176 Gbps and 131 Mpps performance on the 48-port model.

DYNAMIC LAYER 3 ROUTING

Easy-to-administer dynamic Layer 3 routing increases performance and enhances network security.

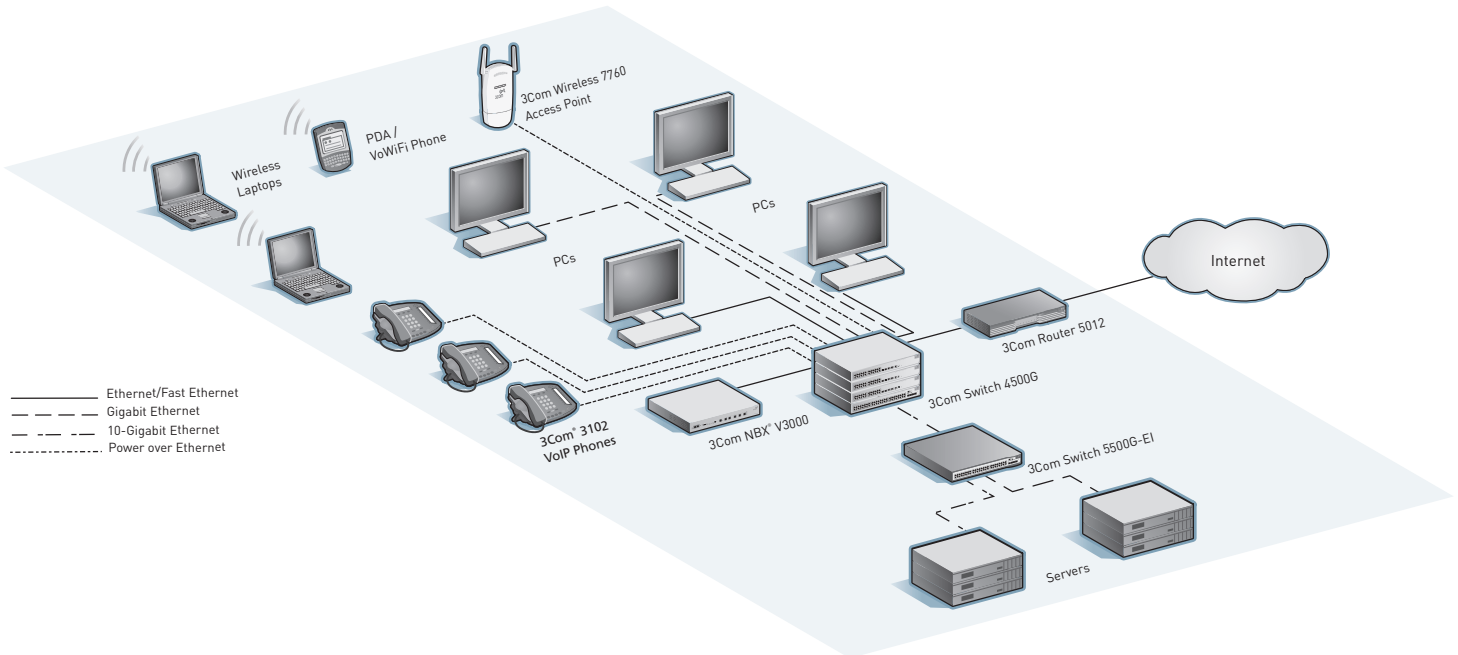
ROBUST IPV6 SUPPORT

Internet Protocol version 6 (IPv6) is the successor to today's IPv4, bringing many more IP addresses and higher levels of security. The Switch 4500G supports this important protocol, delivering IPv6 routing features like RIPng as well as comprehensive IPv6 management capabilities.

FEATURE HIGHLIGHTS

Feature	Description
Layer 3 dynamic (RIP) routing	Gives additional flexibility in deployment to boost network performance
Voice-ready networking	Automatic prioritization of voice traffic, secure voice traffic with voice VLAN, and Power over Ethernet models
IEEE 802.1X network access control	Standards-based security combined with RADIUS authentication
RADIUS Authenticated Device Access (RADA)	Authentication of attached devices via MAC address for an additional level of endpoint security
Access Control Lists (ACLs)	Enable usage policies at each point of access to the network via the switch
Bandwidth rate limiting and protocol filtering	Enforce controls on each port for efficient use of network resources and prioritization of delay-sensitive VoIP traffic
“Dual-personality” Gigabit Ethernet interfaces	Choice of copper or fiber media for flexible uplinks
100 MB and 1000 MB fiber connections	Use SFPs to add fiber connections to the network. Dual-speed support makes network migration easier.
Multicast filtering and Rapid Spanning Tree protocol support	Improve QoS, scalability and network availability
Secure management	Authentication and encryption of management traffic via Secure Shell (SSH v2), SSL/HTTPS, and SNMP v2
3Com Operating System	Proven software featured in 3Com premium enterprise switches such as the Switch 8800, 7700, 5500, 5500G and 4200G families and enterprise routers like the Router 6000, 5000 and 3000 families
Service and Support	Backed by 3Com Global Services and authorized partners with demonstrated expertise in network assessment, implementation and maintenance

MEDIUM LAN CONFIGURATION SUPPORTED BY THE SWITCH 4500G



In the above network, 3Com Switch 4500G and Switch 5500G-EI units are managed as a single cluster.

PRODUCT WARRANTY AND OTHER SERVICES

Warranty	3Com Limited Lifetime Warranty. For as long as the original end user owns the product, or for five years after 3Com discontinues the sale of the product, whichever occurs first.
Hardware coverage	Covers the complete unit including power supply and fan.
In-warranty hardware replacement*	Advanced Hardware Replacement of hardware for the duration of the warranty. In the US 48 contiguous states this is same-day ship with next business day delivery when call received before noon Pacific time. For Canada, Alaska and Hawaii, this is same-day ship when call received before noon Pacific time. For the rest of the world, it is next-business-day ship. Actual delivery times may vary depending on customer location. Reasonable commercial efforts apply.
Software coverage	90 days for media replacement.
Software updates*	Access to releases with incremental software features and bug fixes. For the Switch 4500G, updates are all releases within the licensed 3Com OS software level.
Telephone support*	Technical support via phone for 90 days.
Online Knowledgebase support*	Access to online troubleshooting tool for the duration of the warranty.

* These services are not included as part of the Warranty and 3Com reserves the right to modify or cancel this offering at any time, without advance notice. This offering is not available where prohibited by law. Services are effective at warranty start date, and are enabled with product registration. Customers receive a user ID with eSupport registration.

SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to maintain your competitive edge and remain strong.

Additional Service, Support and Training Offerings

3Com Guardian SM Maintenance Service	This service provides comprehensive on-site support and includes advance hardware replacement, expedited telephone technical support and software upgrades
3Com Express SM Maintenance Service	This service provides speedy access to 3Com shipment of advance hardware replacements (including a four-hour option), expedited telephone technical support and software upgrades
Network Health Check	<p>An activity-auditing service focused on improving network performance and productivity</p> <p>Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations</p> <p>Extensive report provides blueprint for action</p>
Network Installation and Implementation Services	<p>Experts set-up and configure equipment and integrate technologies to maximize functionality and minimize business disruption</p> <p>For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration</p>
Project Management	<p>Provides extra focus and resources that special projects demand</p> <p>3Com engineers manage entire process from initial specifications to post-project review</p> <p>Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked</p>
3Com University	Self-paced and instructor-led technology and product courses, plus certification programs

SPECIFICATIONS

All information in this section is relevant to all members of the 3Com Switch 4500G, unless otherwise stated.

CONNECTORS

24-port
24 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports, 4 of which are dual-personality 10/100/1000 or SFP Gigabit ports

48-port
48 auto-negotiating 10BASE-T/100BASE-TX/1000BASE-T ports, 4 of which are dual-personality 10/100/1000 or SFP Gigabit ports

PWR models

IEEE 802.3af in-line power on all 10/100/1000 ports
Support for redundant supplemental power supply (-48 VDC) connector

All models

2 rear slots for dual-port 10-Gigabit modules, XFP-based or CX4 local connection
RJ-45 console port

PERFORMANCE

24-port
128.0 Gbps switching capacity
95.2 Mpps forwarding rate

48-port
176.0 Gbps switching capacity
131.0 Mpps forwarding rate

All models

Wirespeed performance across ports
Store-and-forward switching; latency <10 µs

LAYER 2 SWITCHING

8,196 MAC addresses in address table
128 static MAC addresses (in addition to default address)
256 Port-based VLANs (IEEE 802.1Q)
IEEE 802.3ad Link Aggregation Control Protocol (LACP); automated and manual aggregation
12 trunk groups per switch
Auto-negotiation of port speed and duplex
IEEE 802.1D Spanning Tree Protocol (STP)
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
Bridge Protocol Data Unit (BPDU) protection
Internet Group Management Protocol (IGMP v3) snooping on Layer 2 interfaces
Filtering for 128 multicast groups
IPv6-ready hardware

LAYER 3 SWITCHING

Hardware based routing
64 static routes
Dynamic routing (RIP v2)
DHCP snooping
DHCP querier (Layer 2)
DHCP tracker

CONVERGENCE

Eight hardware queues per port
Weighted Round Robin queuing
Strict Priority queuing
IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress
Ingress and egress rate limiting
Port-based traffic shaping
Application and protocol blocking
Auto VLAN assignment for voice traffic determined by vendor OUI

SECURITY

IEEE 802.1X network login:

- EAP over LAN (EAPoL) transport with EAP-MD5, PAP, CHAP, PEAP, and EAP-TLS authentication
- Multiple users per port
- 1024 max online users

 TACACS+ network login
Local and RADIUS server authentication
RADIUS session accounting
Automatic VLAN assignment via RADIUS server
Wirespeed packet filtering in hardware
ACLs filter at Layers 2, 3 and 4:

- Source/destination MAC address
- Ethernet type
- Source/destination IP address
- Source/destination TCP port
- Source/destination UDP port

 RADIUS Authenticated Device Access (RADA): authenticate devices based on MAC address against RADIUS server, and assign VLAN
ID and ACL
Port-based MAC address Disconnect Unknown Device (DUD)
IEEE 802.1X user authentication of switch management on switch Telnet and console sessions; four access privilege levels
Hierarchical management and password protection for management interface
SNMP v3 encryption
SSH v2 secure CLI access
Secure FTP
SSL/HTTPS secure web access
Denial of Service protection

CLUSTERED STACKING

Single IP address and management interfaces for centralized control
Compatibility with 4200G, 5500 and 5500G clustering
Up to 32 devices per cluster, or 1,536 Gigabit front panel ports

MANAGEMENT

CLI via console or Telnet
Embedded web management interface
System configuration with SNMP v1, 2c and 3
Comprehensive statistics, including ACL/QoS and IP interface
Remote Monitoring (RMON) groups statistics, history, alarm and events
Many-to-1 port mirroring
Detailed alarm and debug information
Syslog log-host
Supports ping, remote ping and traceroute
Configuration file for backup and restore; multiple configuration files available
DHCP Relay and UDP Helper
System file transfer mechanisms: Xmodem, FTP, Trivial FTP (TFTP), Secure FTP (SFTP)
3Com management applications:

- 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments
- 3Com Network Director for comprehensive, turn-key network management for the enterprise
- 3Com Network Supervisor for basic, turn-key network management for mid-market businesses
- 3Com Network Access Manager for IEEE 802.1X and RADA integration with IAS/Active Directory
- 3Com Switch Manager for virtual clustering support across 3Com switch families

SPECIFICATIONS (CONTINUED)

DIMENSIONS

Height: 43.6 mm (1.7 in or 1 RU)
 Width: 440.0 mm (17.4 in)
 Depth:
 non-PWR: 300.0 mm (11.8 in)
 PWR: 420.0 mm (16.5 in)
 Weight:
 24-port: 4.0 kg (8.8 lbs)
 48-port: 4.5 kg (9.9 lbs)
 24-port PWR: 6.0 kg (13.2 lbs)
 48-port PWR: 6.5 kg (14.3 lbs)

POWER SUPPLY

AC Line Frequency: 50/60 Hz
 Input Voltage: 90-240 VAC
 Current Rating:
 24-port: 1.5A
 48-port: 2.0A
 24-port PWR: AC 8.0A; DC 15.0A
 48-port PWR: AC 8.0A; DC 18.0A

ENVIRONMENTAL REQUIREMENTS

Operating temperature: 0° to 40°C
 (32° to 104°F)
 Storage temperature: -10° to 70°C
 (14° to 158°F)
 Humidity (operating and storage):
 10% to 95% non-condensing
 Standard: EN 60068 (IEC 68)

RELIABILITY

(MTBF @ 25°C)
 24-port: 46 years
 (401,000 hours)
 48-port: 35 years
 (310,000 hours)
 24-port PWR: 41 years
 (362,000 hours)
 48-port PWR: 28 years
 (245,000 hours)
 2-port 10-Gigabit module: 371 years
 (3,255,000 hours)
 2-port Local Connect module:
 1,798 years (15,758,000 hours)

IEEE STANDARDS SUPPORTED

IEEE 802.1D (STP)
 IEEE 802.1p (CoS)
 IEEE 802.1Q (VLANs)
 IEEE 802.1w (RSTP)
 IEEE 802.1X (Security)
 IEEE 802.3 (Ethernet)
 IEEE 802.3ab (1000BASE-T)
 IEEE 802.3ad (Link Aggregation)
 IEEE 802.3af (Power over Ethernet)
 IEEE 802.3i (10BASE-T)
 IEEE 802.3u (Fast Ethernet)
 IEEE 802.3x (Flow Control)
 IEEE 802.3z (1000BASE-X)

RFC STANDARDS

RFC 783 (TFTP)
 RFC 791 (IP)
 RFC 793 (TCP)
 RFC 826 (ARP)
 RFC 951 (BootP)
 RFC 1157 (SNMP)
 RFC 1723 (RIP)
 RFC 2080 RIP for IPv6/RIPng
 RFC 2131 (DHCP client)
 RFC 2236 (IGMP Snooping)
 RFC 2284 (EAP over LAN)
 RFC 2452 IP Version 6 MIB for the
 Transmission Control Protocol
 RFC 2454 IP Version 6 MIB for the
 User Datagram Protocol/UDP6
 RFC 2460 IPv6 Specification
 RFC 2461 Neighbor Discovery for IPv6
 RFC 2462 IPv6 Stateless Address
 Autoconfiguration
 RFC 2463 ICMP & Path Discovery
 RFC 2464 Transmission of IPv6 over
 Ethernet
 RFC 2710 Multicast Listener Discovery
 (MLD) IPv6
 RFC 2767 Dual stacks IPv4 & IPv6
 RFC 2819 (RMON)
 RFC 3513 IPv6 Addressing
 Architecture
 RFC 3587 IPv6 Global Unicast Address

Management, including MIBs

Supported
 RFC 1212 (Concise MIB definitions)
 RFC 1213/2233 (MIB II)
 RFC 1493 (Bridge MIB)
 RFC 1724 (RIP Version 2 MIB
 Extension)
 RFC 1907 (SNMP v2c, SMI v2 and
 Revised MIB-II)
 RFC 2021 (RMON II Probe Config
 MIB)
 RFC 2233 (Interfaces MIB)
 RFC 2571 (SNMP Framework)
 RFC 2572-2575 (SNMP)
 RFC 2665 (EtherLike MIB)
 RFC 2667 (IP Tunnel MIB)
 RFC 2674 (VLAN MIB Extension)
 RFC 2737 (Entity MIB)
 RFC 2819 (RMON MIB)

EMISSIONS / AGENCY APPROVALS

EN 55022 :1998+A1:2000+A2:2003
 Class A
 FCC Part 15 :2004 Class A
 ICES-003 :2004 Class A
 VCCI :2004 Class A
 CISPR 22 :2003 Class A
 IEC 61000-3-2:2001/EN 61000-3-2
 2000
 IEC 61000-3-3:2002/EN 61000-3-
 3:1995
 +A1:2001
 Korean EMI Class A
 ETSI EN 300 386V1.3.3 :2005

IMMUNITY

EN 55024: 1998+A1:2001+A2:2003
 ETSI EN 300 386 V1.3.3 :2005

SAFETY AGENCY CERTIFICATIONS

UL 60950-1:2003
 EN 60950-1:2001
 CSA 2.22 # 60950-1:2003
 IEC 60950-1:2001
 EU RoHS Compliant

WARRANTY AND OTHER SERVICES

Limited Lifetime Hardware Warranty,
 including fans and power supply
 Limited Software Warranty for 90 days
 Advance Hardware Replacement
 with Next Business Day shipment in
 most regions
 Limited Lifetime software updates
 90 days of telephone technical support
 Refer to www.3com.com/warranty
 for details.

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Switch 4500G 24-Port	3CR17761-91
3Com Switch 4500G 48-Port	3CR17762-91
3Com Switch 4500G PWR 24-Port	3CR17771-91
3Com Switch 4500G PWR 48-Port	3CR17772-91
Modules	
3Com Switch 4500G 2-Port 10-Gigabit Module (XFP)	3C17766
3Com Switch 4500G 2-Port 10-Gigabit Local Connection Module	3C17767
3Com Switch 4500G 1-Port 10-Gigabit Module (XFP)	3C17768
Gigabit SFP Transceivers	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH SFP	3CSFP97
Fast Ethernet SFP Transceivers	
3Com 100BASE-FX SFP (Dual-Mode)	3CSFP9-81
3Com 100BASE-LX SFP (Dual-Mode)	3CSFP9-82
10-Gigabit XFP Transceivers	
3Com 10GBASE-LR	3CXFP92
3Com 10GBASE-SR	3CXFP94
3Com 10GBASE-CX4	3CXFP95
3Com 10GBASE-ER	3CXFP96
Cables	
3Com CX4 Local Connection Cable – 50 cm	3C17775
3Com CX4 Local Connection Cable – 100 cm	3C17776
3Com CX4 Local Connection Cable – 300 cm	3C17777
3Com Global Services	
3Com Network Health Check, Installation Services, and Express Maintenance	www.3com.com/services_quote
3Com University Courses	www.3com.com/3comu

Visit www.3com.com for more information about 3Com secure converged network solutions.

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