Enterprise class manageable 10/100 layer 2/4 switches. Available in 24 and 48-port models with Gigabit connectivity, these switches provide resiliancy, flexibility, plus advanced security and traffic control features.

OVERVIEW

The award-winning 3Com® SuperStack® 3 Switch 4400 family switches provide wirespeed 10/100 Fast Ethernet connectivity with a choice of Gigabit downlinks and are specifically designed for Enterprise workgroup environments. Available in 24 and 48-port models covering important network interface types including Power over Ethernet(PoE), and 100BASE-LX10, with two Gigabit module slots on every unit, these switches display resiliency, flexibility in deployment, and advanced security features. The SuperStack 3 Switch 4400 Family also boasts advanced Quality of Service features that can reduce the latency of packets through the network, with specific traffic prioritization improving the delivery of converged data such as voice and high quality video over IP. Supported by 3Com Global Services and 3Com's outstanding Limited Lifetime Warranty, these switches are ideal for enterprises wanting flexible, resiliant, manageable and secure networks.
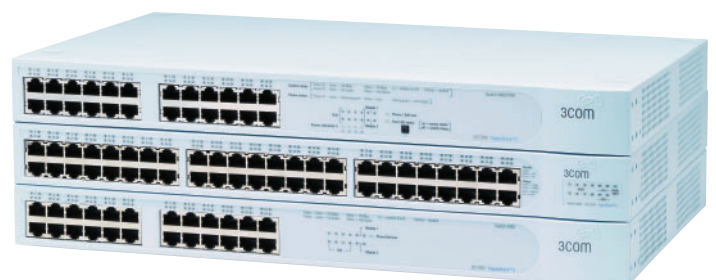
KEY BENEFITS

ADVANCED SECURITY

The Switch 4400 family provides advanced security features for network data and management traffic.

User network login with IEEE 802.1X and RADIUS, combined with RADIUS Authenticated Device Access (RADA), provides secure flexible network access control at the edge of the network. Local authentication for up to 50 IEEE 802.1X users and RADA devices offers added flexibility in the absence of a centralized RADIUS server, and supplies a backup solution in case of server failure or connectivity issues.

Authenticated users can be placed automatically into a specific VLAN, creating an even more secure network environment. The Private Ports feature can isolate edge ports to ensure user privacy. Access Control Lists (ACLs) allow or deny traffic based on specific subnet, or individual IP address. SNMP v3 secure encrypted management, Secure Shell (SSH), management VLAN, and management station "trusted IP address" lists help protect the network from rogue management threats.

RESILIANT NETWORKING

Hot-swappable stacking of up to eight units, or 384 10/100 ports, allows for scalable site expansion with continuous operation. Stack-wide link aggregation (LACP) enables high-performance connectivity of up to 4Gbps to the core of the network in a single aggregated link, with ports on different units for added resiliency to maximize network availability.

KEY BENEFITS
(CONTINUED)

NETWORK CONTROL

Network management is available through an embedded web and command line interface (CLI), or via an SNMP management station. Supported by the range of 3Com management offerings including 3Com Network Supervisor.

MULTILAYER TRAFFIC SHAPING

Advanced Multilayer packet classification enables prioritization of mission critical traffic and real-time applications, while freeing bandwidth by eliminating unwanted protocols and applications from the network. Through network login profiles, classification can be dynamically assigned on a per-user basis. Port based rate-limiting enables the maximum bandwidth on each port to be limited, allowing maximum control of network resources while maintaining the full benefit of the powerful traffic prioritization features.

EASY SETUP AND CONFIGURATION

The switches automatically select the optimal speed and duplex mode of connected cables to prevent mis-configuration of the network. They also detect and adjust to cross-over or straight-through cable connections—a feature called auto MDI/MDIX—eliminating the need for specific cables.

WARRANTY

Limited Lifetime Warranty, with Advance Hardware Replacement. See **www.3com.com/warranty** for details.

SERVICE

3Com products are backed by 3Com Global Services and authorized partners with demonstrated expertise in network assessment, implementation, and maintenance. Ask about 3Com's Network Health Check, installation services, and maintenance service packages available in your area.

Tolly Certified: Layer 2/4 Fast Ethernet Switch Performance Evaluation and Layer 2 Interoperability.

For details, see **www.3com.com/other/pdfs/products/ en_US/ss4400_tolly.pdf** and **www.3com.com/ other/ pdfs/products/en_US/tolly_test_4400.pdf**, respectively.

Tolly Verified for Switch Interoperability.

For details, see **www.tolly.com/ TVDetail.aspx?ProductID=93**

FEATURES

Performance

Switching Capacity	24-port models, 8.8 Gbps; 48-port model, 13.6 Gbps
Forwarding Rate	24-port models, 6.6 Mpps; 48-port model, 10.1 Mpps
Store-and-Forward Switching	Latency <2.6 μs

Layer 2 Switching

MAC Address	8K MAC addresses Secure MAC addresses (256 addresses)
VLAN	64 VLANs (IEEE 802.1Q)
Link Aggregation	IEEE 802.3ad (LACP) Four trunk groups (up to four ports in each) Link Aggregation across stack
Auto-negotiation	Auto-negotiation of port speed, duplex, and connection (MDI/MDIX)
Traffic Control	IEEE 802.3x full-duplex flow control Back pressure flow control for half-duplex Broadcast Storm Suppression (3,000 pps threshold)
Spanning Tree	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) • Fast-start mode • Spanning tree enable/disable per port
Multicast Snooping	IGMP v1, v2, and v3 snooping IGMP Querier Filtering for 128 multicast groups

Stacking

Stacking	Up to 384 ports Single IP address for stack management Resilient stacking (T-type) connectors Hot-swappable

Convergence

Priority Queues	Four hardware queues per port Strict priority queuing Weighted Round Robin queuing
Traffic Prioritization	CoS Marking / Remarking IEEE 802.1p to DSCP mapping Auto classification of 3Com NBX® telephony traffic Priority based on: • IEEE 802.1p CoS • DSCP (DiffServ Code Point) • TCP/UDP source or destination port number • Default port priority • IP Address / Protocol
Traffic Shaping	Egress rate limiting, port-based: • 1 Mbps increments (10/100 ports) • 8 Mbps increments (Gigabit ports) Application and protocol blocking

Security

Network Access and User Security	IEEE 802.1X user authentication • RADIUS authentication • Advanced security by locking a port to the MAC address of the authenticated user • Automatically assign VLANs and QoS profile to a port based on user • Guest VLAN option RADIUS Authenticated Device Access (RADA) • Authenticate devices based on MAC address against a RADIUS server • Authenticate multiple devices per port • Automatically assign VLANs and QoS to a port specific to the devices attached • Operates alongside IEEE 802.1X authentication to ensure user and device are allowed access • Local authentication for up to fifty IEEE 802.1X users and RADA devices in absence of a centralized RADIUS server • RADA "whitelist" support enhances flexibility for IEEE 802.1X/RADA deployment • Option to allow default VLAN access when RADIUS server is unavailable

FEATURES (CONTINUED)
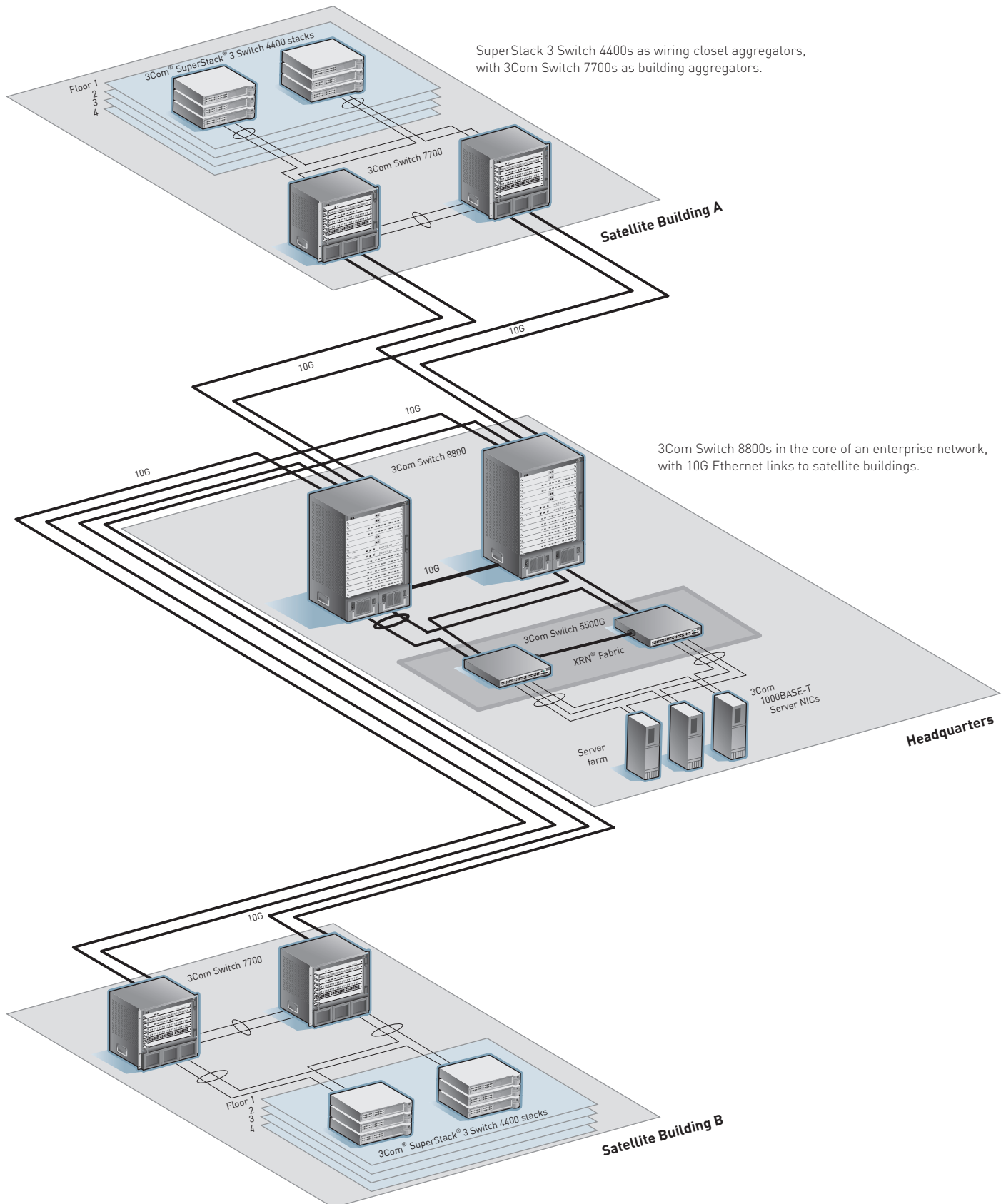
	Disconnect Unknown Device (DUD) Access Control Lists (ACLs) allow or deny traffic based on specific subnet or individual IP address Private Ports feature isolates edge ports at layer 2 to ensure user privacy.
Switch Management	Local or RADIUS management of switch passwords Trusted IP Management Addresses Syslog Telnet • SSH v2 (56 bit or 168 bit DES)

Management

Remote Management	SNMP v1, SNMP v2, SNMP v3 secure encrypted management User-selectable management VLAN
Software	Backup and restore TFTP configuration: upload/download TFTP agent: upload
Configuration	Command line Serial (9-pin, D-type connector) Telnet Web-based SNMP
Mirror Port / RAP (Roving Analysis Port)	One-to-one
RMON (Remote Monitoring)	Four groups: statistics, history, alarm, and events
IP Address Allocation	DHCP BootP Manual Auto IP
Network Time	Simple Network Time Protocol (SNTP) for time stamp of events captured via Syslog
Management Software	3Com Network Supervisor (copy provided with product) • Topology discovery • Change management reporting • Capacity planning • Event logging • Fault identification and troubleshooting • Utilization monitoring

OPTIONAL SERVICE AND SUPPORT
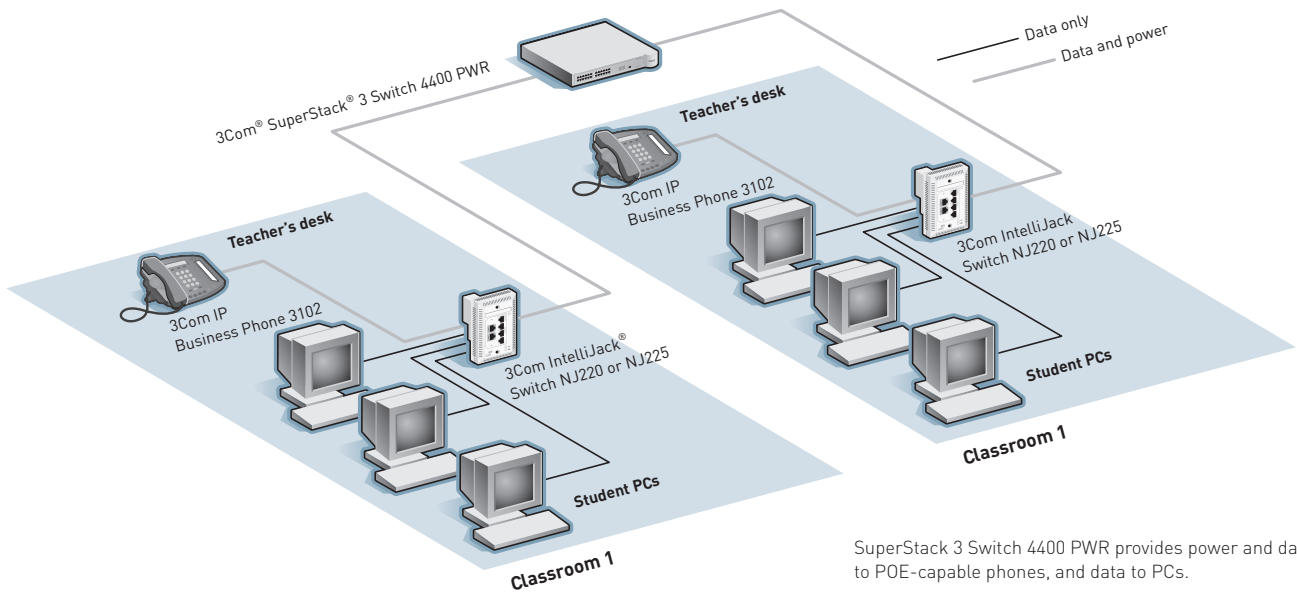
Network Health Check	An activity-auditing service focused on improving network performance and productivity Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations Extensive report provides blueprint for action
Network Design	Includes review of business plan, extensive inventory of requirements, and complete design document specifying implementation details
Network Installation	Experts set up and configure equipment and integrate technologies to maximize functionality and minimize business disruption Service may include physical site survey and network design and engineering based on evaluation of business objectives
Project Management	Provides extra focus and resources that special projects demand 3Com engineer(s) manage entire process from initial specifications to post-project review Using structured methodology, requirements are identified, projects planned, and progress of implementation activities tracked
3Com Guardian℠ Maintenance Service	Provides comprehensive onsite support, including advance hardware replacement, telephone technical support, and software upgrades: • Telephone support backed by powerful call-tracking database and replication laboratory • Software upgrades ensure access to pertinent patches
3Com Express℠ Maintenance Service	Benefits customers who prefer to maintain own hardware
	Bolsters in-house resources with convenient and speedy access to 3Com hardware replacements, software upgrades, and telephone support

For additional information, please visit www.3com.com/services
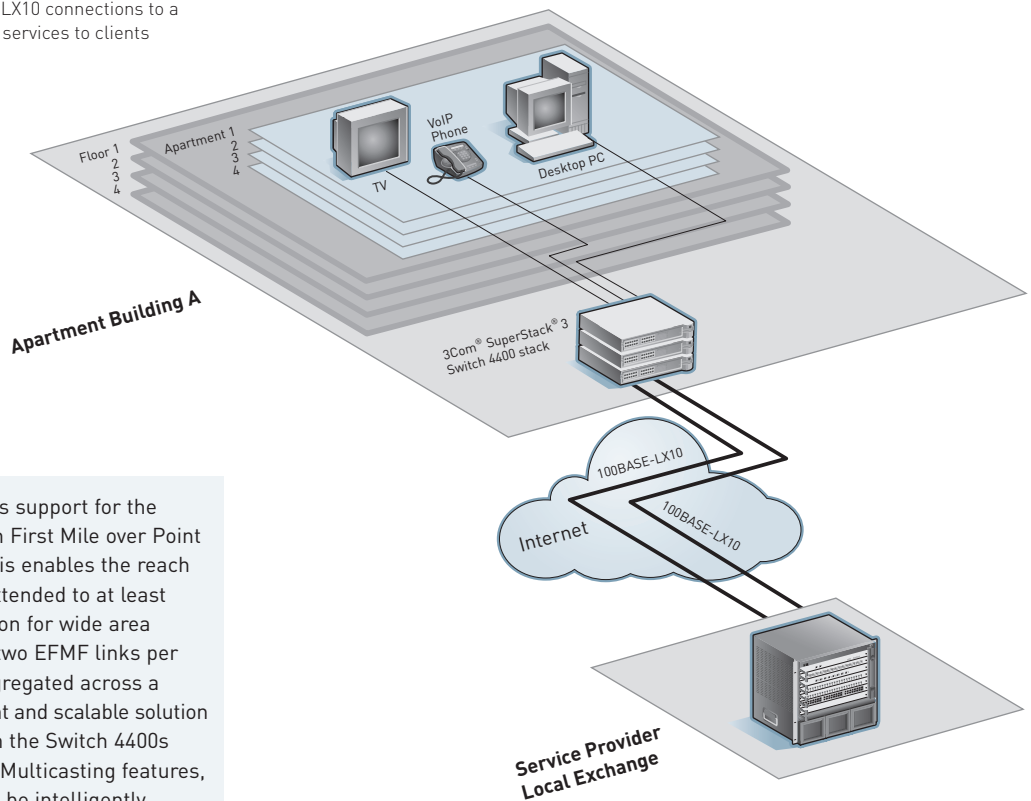
SUPERSTACK 3 SWITCH 4400s IN AN ENTERPRISE 10G NETWORK

SuperStack 3 Switch 4400s as wiring closet aggregators, with 3Com Switch 7700s as building aggregators.

3Com Switch 8800s in the core of an enterprise network, with 10G Ethernet links to satellite buildings.

SUPERSTACK 3 SWITCH 4400 PWR AND POWER OVER ETHERNET

Data only

Data and power

3Com® SuperStack® 3 Switch 4400 PWR

Teacher's desk

3Com IP
Business Phone 3102

3Com IntelliJack®
Switch NJ220 or NJ225

Student PCs

Classroom 1

Teacher's desk

3Com IP
Business Phone 3102

3Com IntelliJack
Switch NJ220 or NJ225

Student PCs

Classroom 1

SuperStack 3 Switch 4400 PWR provides power and data
to POE-capable phones, and data to PCs.

SuperStack 3 Switch 4400, with 100BASE-LX10 connections to a
local service provider, provides converged services to clients
within a 10km radius.

Floor 1
2
3
4

Apartment 1
2
3
4

TV

VoIP
Phone

Desktop PC

Apartment Building A

3Com® SuperStack® 3
Switch 4400 stack

100BASE-LX10

Internet

100BASE-LX10

Service Provider
Local Exchange

The SuperStack 3 Switch 4400 adds support for the
emerging IEEE 802.3ah Ethernet in First Mile over Point
to Point Fiber (EFMF) standard. This enables the reach
of Fast Ethernet over fiber to be extended to at least
10km, giving a cost effective solution for wide area
Ethernet distribution. Support for two EFMF links per
switch, or multiple EFMF links aggregated across a
stack of switches, enables a resilient and scalable solution
to be implemented. Combined with the Switch 4400s
powerful QoS, Traffic Shaping and Multicasting features,
the available uplink bandwidth can be intelligently
shared between users.

SPECIFICATIONS

CONNECTORS
24 or 48 auto-negotiating 10BASE-T/100BASE-TX ports configured as Auto MDI/MDIX

24 auto-negotiating In-Line Power 10BASE-T /100BASE-TX ports configured as Auto MDI/MDIX (24-port PWR only)

2 module slots accommodating media modules or stacking modules

All fiber connectors are MT-RJ (LC connector on SuperStack 3 Switch 4400 100BASE-LX10 Module, 3C17229)

SECURITY
RADIUS (RFC 2865, RFC 2869)

Session accounting (RFC 2866)

SSH v2 (SSH Secure Shell, 'PuTTY', OpenSSH)

IEEE 802.1X network login

STACKING
Up to 384 10/100 front panel ports

Mix and match Switch 4400 24-port (3C17203), 4400 48-port (3C17204), and 4400 PWR (3C17205)*

PERFORMANCE
24-port
8.8 Gbps forwarding bandwidth
6.6 million packets per second
8,000 MAC addresses supported
48-port
13.6 Gbps forwarding bandwidth
10.1 million packets per second
8,000 MAC addresses supported

RELIABILITY
(MTBF @ 40˚C)
24-port: 29 years (254,000 hours)
24-port PWR: 26 years (231,000 hours)
48-port: 20 years (179,000 hours)

DIMENSIONS
Height: 43.6 mm (1.7 in or 1U)
Width: 440 mm (17.3 in)
Depth:
24-port PWR: 304 mm (12.0 in)
all others: 274 mm (10.8 in)
Weight:
24-port: 2.8 kg (6.2 lb)
24-port PWR: 4.6 kg (10.1 lb)
48-port: 3.2 kg (7.1 lb)

ENVIRONMENTAL REQUIREMENTS
Operating temperature: 0° to 40°C (32° to 104°F)

Storage Temperature:
-40° to +70°C (-40° to +158°F)

Operating Humidity:
10% to 90% relative humidity noncondensing

Standards: EN60068 (IEC68)

INDUSTRY STANDARDS SUPPORTED
IEEE 802.1D (STP)
IEEE 802.1p (CoS)
IEEE 802.1Q (VLANs)
IEEE 802.1w (RSTP)
IEEE 802.1X (Security)
IEEE 802.3ab (1000BASE-T)
IEEE 802.3ad (Link Aggregation)
IEEE 802.3af (Power over Ethernet)
IEEE 802.3ah (Ethernet in First Mile over Point to Point Fiber - EFMF)
IEEE 802.3i (10BASE-T)
IEEE 802.3u (Fast Ethernet)
IEEE 802.3x (Flow Control)
IEEE 802.3z (Gigabit Ethernet)

SAFETY AGENCY CERTIFICATIONS
24-port: UL1950, EN60950, CSA22.2 No. 950, IEC 60950

24-port PWR, and 48-port: UL60950, EN60950, CSA2.2 No. 60950, IEC 60950

EMISSIONS
EN55022 Class A, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, AS/NZS 3548 Class A, CNS 13438 Class A

CISPR 22 CLASS A, EN61000-3-2, EN61000-3-3 (24-port PWR only)

Immunity: EN55024

Heat Dissipation:
24-port: 100 W maximum (341 BTU/hr maximum)
24-port PWR: 275 W maximum (938 BTU/hr maximum)
48-port: 120 W maximum (410 BTU/hr maximum)

POWER SUPPLY
AC Line Frequency 50/60 Hz
Input Voltage 90-240 VAC
Current Rating:
24-port: 2.3A maximum
48-port: 2.8A maximum

SNMP STANDARDS
SNMP Protocol (RFC 1157)
MIB-II (RFC 1213)
Bridge MIB (RFC 1493)
RMON MIB II (RFC 2021)
Remote Monitoring MIB (RFC 1757)
Interface MIB (RFC 2233)
Remote Poll MIB (RFC 2925)
MAU MIB (RFC 2668)
SNTP (RFC 2030)
PoE MIB (RFC 484) (24-port PWR only)

MANAGEMENT
Web interface
Command line interface
SNMP compatibility
Management through 3Com management applications
- 3Com Network Supervisor
- 3Com Network Director
- 3Com Network Administrator
- 3Com Enterprise Management Suite

WARRANTY
Limited Lifetime Hardware Warranty. Limited Software Warranty for ninety (90) days. See www.3com.com/warranty for details.

OTHER BENEFITS
Other Service Benefits: Advance hardware replacement with same day shipment for North America and Western Europe. Next day shipment for rest of world. Calls must be received by published cut-off times.

90 days of telephone technical support. Limited software updates.

See www.3com.com/warranty for more detail.

Register products at http://eSupport.3com.com.

SERVICE
Americas:
www.3com.com/products/en_US/global_services

International:
http://emea.3com.com/globalservices

* Stacking compatibility also for previously sold Switch 4400 FX model (3C17210). With the purchase of new Switch 4400s on or after May 1, 2006 and subsequent product registration, includes right and license to upgrade Switch 4400 SE model units (3C17206) for compatible stacking.

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com SuperStack 3 Switch 4400 24-port	3C17203
3Com SuperStack 3 Switch 4400 48-port	3C17204
3Com SuperStack 3 Switch 4400 PWR	3C17205

Optional Modules and Accessories

3Com SuperStack 3 Switch 4400 1000BASE-T Module	3C17220
3Com SuperStack 3 Switch 4400 1000BASE-SX Module	3C17221
3Com SuperStack 3 Switch 4400 100BASE-FX Module	3C17222
3Com SuperStack 3 Switch 4400 1000BASE-LX Module	3C17223
3Com SuperStack 3 Switch 4400 100BASE-LX10 Module*	3C17229
3Com SuperStack 3 Switch 4400 Stacking Kit	3C17227
(Two stacking modules and cable to stack two Switch 4400s)	
3Com SuperStack 3 Switch 4400 Stack Extender Kit	3C17228
(One stacking module, one cascade module and one cable for adding more Switch 4400s to an existing Switch 4400 stack)	

Express℠ Service Plans†	Americas	EMEA / AP‡
3Com SuperStack 3 Switch 4400 24-port	3CS-EXP-05E	3CS-EXP-X305
3Com SuperStack 3 Switch 4400 48-port	3CS-EXP-08E	3CS-EXP-X309
3Com SuperStack 3 Switch 4400 PWR	3CS-EXP-06E	3CS-EXP-X307

* Switch 4400 software version 5.1, minimum, required for operation.

† Includes telephone support, advance hardware replacement, and software upgrades.

‡ Europe, Middle East, Africa and Asia Pacific

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

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