

3Com® SuperStack® 3 Switch 4900 Family

DATA SHEET



- Layer 2/3/4 Gigabit switching ideal for server aggregation
- Choose from among 12- and 24-port models with fiber or copper connectivity
- Combine multiple units using 3Com XRN technology for resiliency without complexity

Key Benefits

Unbeatable Resilience

The SuperStack 3 Switch 4900 family of products supports 3Com's XRN® technology providing outstanding resilience and reliability, at double the performance of traditional resilient solutions. With XRN technology, Layer 2 and Layer 3 networks can be created with no single point of failure, but still utilizing the full performance of the network.

Performance

3Com's custom ASIC architecture delivers wirespeed, non-blocking Gigabit Ethernet switching across all ports, minimizing server farm and network congestion. Further scale performance using XRN technology, with two units operating together as a single management switching entity.

Advanced Network Control

Advanced Layer 2/4 functionality such as multicast filtering, virtual LANs, and multilayer traffic classification and prioritization improve traffic control across the network. XRN technology supports two geographically distributed switches managed as a single Layer 2 / Layer 3 entity.

Layer 3

Switches support RIP v1/v2, OSPF, CIDR and UDP helper; the resilient capabilities of XRN technology allow two units to share IP interfaces eliminating the need for complex implementations such as VRRP.

Advanced Security Capabilities

Secure network resources from unauthorized access with RADIUS client support and Access Control Lists.

High Availability

Robust features include link aggregation, support for Rapid Spanning Tree protocol, an optional Redundant Power Supply system, and e-mail or pager status notification, all ensuring maximum uptime for critical applications.

Powerful Management

Comprehensive support within the 3Com management application software suite, including within the standalone package 3Com Network Director and with 3Com Network Administrator for HP OpenView-based management.

Gigabit Ethernet is Ideal for Server Farm Aggregation

The 3Com SuperStack 3 Switch 4900 Family consists of four high-performance, wire-speed, Layer 2 / Layer 3 / Layer 4 Gigabit switches. These enterprise-class devices are ideal for server farm aggregation in enterprise environments.

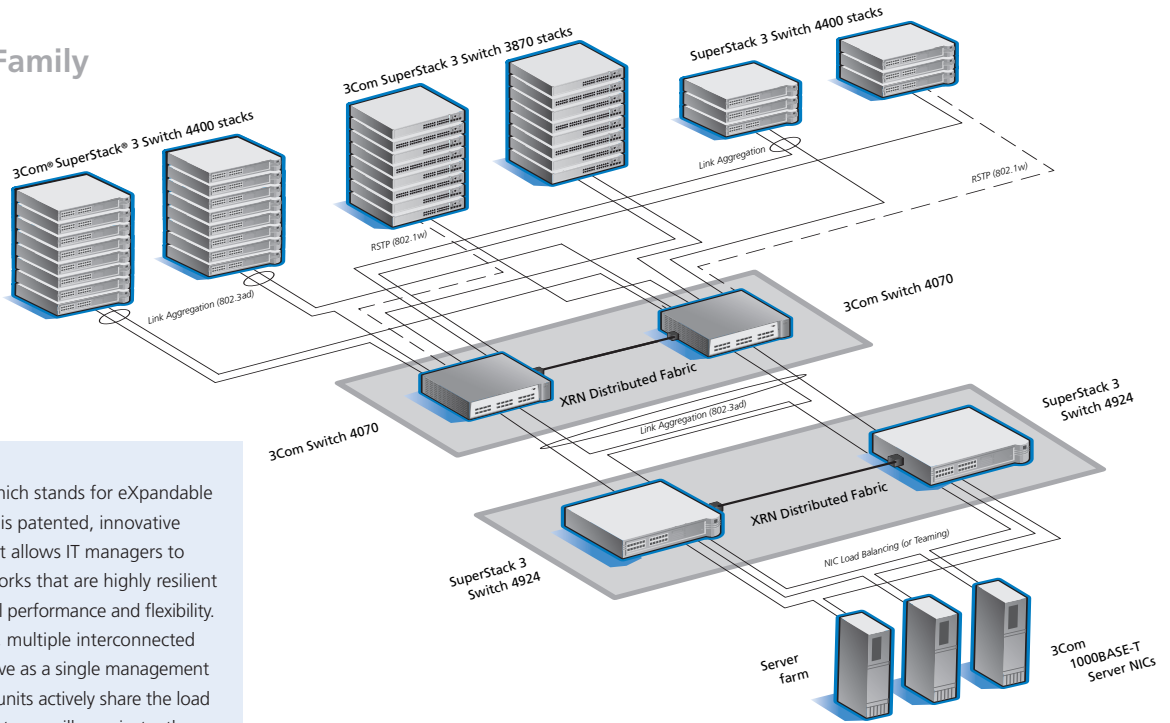
- 3Com SuperStack 3 Switch 4900 comes with 12 100/1000 copper ports.
- 3Com SuperStack 3 Switch 4900 SX has 12 1000BASE-SX ports.
- 3Com SuperStack 3 Switch 4924 comes with 24 10/100/1000 copper ports.
- 3Com SuperStack 3 Switch 4950 has 12 10/100/1000 copper ports, six 1000BASE-SX ports, and six flexible GBIC ports.

All these switches optionally support 3Com's patented XRN technology allowing you to quickly build a fully redundant aggregation or network core solution out of a pair of 3Com Gigabit switches—delivering high resiliency without complexity.

The Gigabit Multilayer Switching (GMS) Software is the operating software of the 3Com SuperStack 3 Switch 4900 Family. Now included with all new switches are advanced features of the GMS Software, formerly sold separately, features such as OSPF routing and support for geographically distributed XRN configurations.

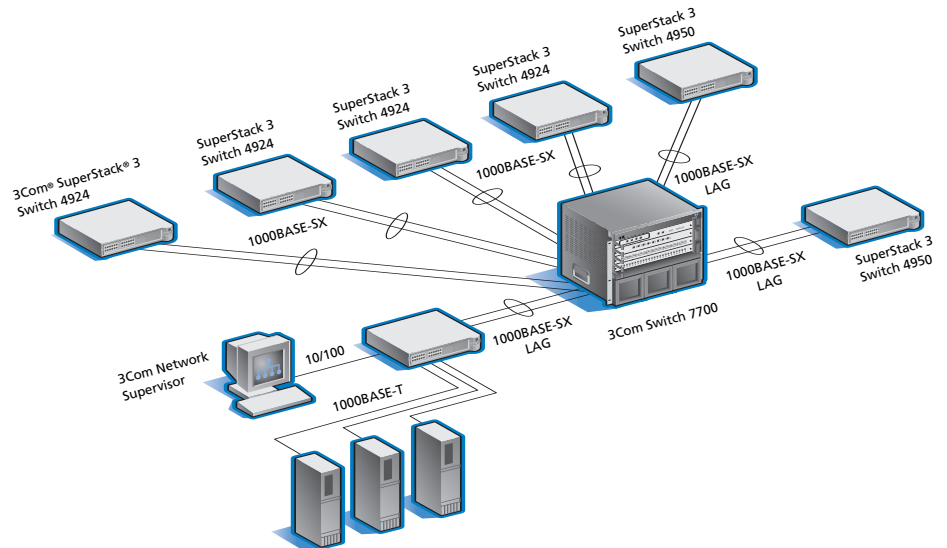
Sample configurations supported by the SuperStack 3 Switch 4900 Family

3Com SuperStack 3 Switch 4900 supporting a server farm



XRN™ technology, which stands for eXpandable Resilient Networking, is patented, innovative 3Com technology that allows IT managers to build affordable networks that are highly resilient and deliver exceptional performance and flexibility. With XRN technology, multiple interconnected Gigabit switches behave as a single management switching entity. The units actively share the load in normal operation yet one will near-instantly recover all connections should the other unit or its connections have a failure. XRN technology is supported by the 3Com SuperStack 3 Switch 4900 for server aggregation and by the 3Com Switch 40x0 for building core networking. It is high resiliency without complexity.

SuperStack 3 Switch 4900 family switches can deliver Gigabit-to-the-desktop with Layer 2/3/4 switching for bandwidth-intensive networks.



Features

PERFORMANCE	
Switching Capacity	32Gbps for SuperStack 3 Switch 4900 and 4900 SX; 56Gbps for SuperStack 3 Switch 4924 and 4950
Forwarding Rate	23.8Mpps for SuperStack 3 Switch 4900 and 4900 SX; 41.6Mpps for SuperStack 3 Switch 4924 and 4950
Store and Forward Switching	Latency 2.7 microseconds for all models
LAYER 2 SWITCHING	
MAC Addresses	12K MAC addresses
VLAN	30 VLANs (IEEE 802.1Q)
Link Aggregation	Manual and LACP Link Aggregation (IEEE 802.3ad). 13 groups/4 ports in each
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 Supports Broadcast Storm Suppression
Spanning Tree	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), backward-compatible with STP Fast-start mode Spanning tree enable/disable per port or per VLAN
LAYER 3 SWITCHING	
Routes	Hardware-based routing 2,000 IP routes 100 Static Routes 5,000 ARP entries 64 IP interfaces
IP Routing	IP Multinetting (multiple IP interfaces per VLAN) CIDR (Classless Internet Domain Routing) RIP (Routing Information Protocol), v1 and v2 OSPF (Open Shortest Path First) <ul style="list-style-type: none"> 4 areas with 64 adjacencies ASBR support for static and default routes
Multicast	Filtering for 128 multicast groups IGMP (Internet Group Management Protocol) snooping on Layer 2 interfaces IGMP v1 and v2 IGMP Querier
Network Protocol	DHCP Relay (Dynamic Host Configuration Protocol Relay) UDP (User Datagram Protocol) Helper ARP (Address Resolution Protocol)
Access Control Lists	VLAN-based ACLs <ul style="list-style-type: none"> Filtered on destination IP address / mask
CONVERGENCE	
Priority Queues	Four hardware queues per port Weighted Round Robin queuing
Traffic Prioritization	Priority based on: <ul style="list-style-type: none"> IP address* IEEE 802.1p Class of Service (CoS) VLAN priority TCP/UDP destination port number DSCP (DiffServ Code Point) Ethertype* Default port priority Auto classification of 3Com NBX® telephony traffic

* Only available on SuperStack 3 Switch 4924 and 4950 models.

Features *(continued)*

RESILIENCY	
	3Com XRN Technology support Dual software images Backup and restore of switch settings
MANAGEMENT	
Device Management	Local or RADIUS management of switch passwords Web-based management Command line interface (CLI) Serial (9-pin D-type connector) Telnet SNMP v1 3Com Management Applications <ul style="list-style-type: none"> • 3Com Network Supervisor for basic, turn-key network management for small and medium businesses • 3Com Network Director for comprehensive, turn-key network management for the enterprise • 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments
Software	Dual software images Backup and restore TFTP configuration: upload/download TFTP agent: upload Mirror Port /RAP (Roving Analysis Port): one-to-one
RMON	Seven Groups: Statistics, History, Alarms, Host, HostTopN, Matrix, Events
IP Address allocation	DHCP BOOTP Manual Auto IP
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 SM Maintenance Service	Provides comprehensive onsite support, including advance hardware replacement, telephone technical support, and software upgrades: <ul style="list-style-type: none"> • Telephone support backed by powerful call-tracking database and replication laboratory • Software upgrades ensure access to pertinent patches
3Com Express SM 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

Specifications

All information is for SuperStack 3 Switch 4900 Family unless stated otherwise.

Connectors

SuperStack 3 Switch 4900:

12 10/100/1000 copper ports

SuperStack 3 Switch 4900 SX:

12 1000BASE-SX ports (MT-RJ)

SuperStack 3 Switch 4924:

24 10/100/1000 copper ports

SuperStack 3 Switch 4950:

12 10/100/1000 copper ports, 6 1000BASE-SX ports (MT-RJ), 6 GBIC ports

All have one module slot accommodating Switch 4900 family expansion modules

All have Advanced Redundant Power System Type 3 connector

SuperStack 3 Switch 4900 Expansion Modules:

3C17710: 4 x 1000BASE-SX ports (MT-RJ)

3C17711: 4 x 1000BASE-T ports (MT-RJ)

3C17712: 4 x 1000BASE-LX ports (MT-RJ)

3C17714: 4 x GBIC ports

Dimensions

Height: 6.6 cm (2.6 in)

Width: 44 cm (17.3 in)

Depth:

SuperStack 3 Switch 4900 & 4900 SX: 37 cm (14.5 in)

SuperStack 3 Switch 4924 & 4950: 41 cm (16.3 in)

Weight:

SuperStack 3 Switch 4900 & 4900 SX: 6.5 kg (14.3 lb)

SuperStack 3 Switch 4924: 6.3 kg (13.9 lb)

SuperStack 3 Switch 4950: 6.7 kg (14.8 lb)

Performance

SuperStack 3 Switch 4900 & 4900 SX

23 million packets per second

SuperStack 3 Switch 4924 & 4950

41.6 million packets per second

Reliability

SuperStack 3 Switch 4900: 317,000 hours

SuperStack 3 Switch 4900 SX: 340,000 hours

SuperStack 3 Switch 4924: 208,000 hours

SuperStack 3 Switch 4950: 266,000 hours

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 non-condensing

Standards: EN60068 (IEC68)

Safety Agency Certifications

EN60950, IEC 60950 UL60950, CSA22.2 No. 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

Immunity: EN55024

Heat Dissipation:

4900 & 4900 SX: 50 W maximum (168 BTU/hr)

4924: 254 W maximum (870 BTU/hr)

4950: 200 W maximum (683 BTU/hr)

Power Supply

AC Line Frequency 50/60 Hz

Input Voltage Options 90-240 VAC

Current Rating 4.5A maximum

Industry Standards Supported

Ethernet Protocols

IEEE 802.1D (STP)

IEEE 802.1p (CoS)

IEEE 802.1Q (VLANs)

IEEE 802.1w (RSTP)

IEEE 802.3ad (Link Aggregation)

IEEE 802.3i (10BASE-T)

IEEE 802.3u (Fast Ethernet)

IEEE 802.3x (Flow Control)

IEEE 802.3z (Gigabit Ethernet)

Administration Protocols

RFC768 (UDP)

RFC791 (IP)

RFC792 (ICMP)

RFC793 (TCP)

RFC826 (ARP)

RFC854 (Telnet)

RFC1350 (TFTP)

RFC1542 (BOOTP/DHCP)

RFC2616 (HTTP)

SNMP Standards

RFC1157 (SNMP Protocol)

RFC1213 (SNMP MIB II)

RFC1215 (SNMP MIB II Traps)

RFC1493 (Bridge MIB)

RFC1659 (RS232 MIB)

RFC1757 (RMON I)

RFC2021 (RMON II Probe Config)

RFC2233 (Interfaces MIB)

RFC2618 (RADIUS Authentication Client MIB)

RFC2665 (EtherLike-MIB)

RFC2620 (RADIUS Accounting Client MIB)

RFC2674 (Bridge MIB Extensions)

RFC2668 (MAU MIB)

RFC2925 (Traceroute, Remote PING, Lookup MIB)

Routing Protocols

RFC1058 (RIP)

RFC1519 (CIDR)

RFC1723 (RIP v2)

RFC 1724 (RIP v2 Extensions)

RFC1850 (OSPF MIB)

RFC2328 (OSPF Version 2)

RFC2096 (IP Forwarding Table)

RFC2131 (BOOTP/DHCP Relay)

Management

Web interface

Command line interface

SNMP compatibility

Management through 3Com management applications

- 3Com Network Supervisor

- 3Com Network Director

- 3Com Enterprise Management Suite

Warranty

Limited Lifetime Hardware Warranty. Limited

Software Warranty for ninety (90) days. See

www.3com.com/warranty for details.

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/>

Ordering Information

PRODUCT DESCRIPTION	3COM SKU	
Switches		
3Com SuperStack 3 Switch 4900	3C17700	
3Com SuperStack 3 Switch 4900 SX	3C17702	
3Com SuperStack 3 Switch 4924	3C17701	
3Com SuperStack 3 Switch 4950	3C17706	
Optional Modules and Accessories		
3Com XRN Interconnect Kit	3C17715	
3Com 5m XRN Interconnect Cable	3C17722	
3Com 4-Port 1000BASE-SX Module for SuperStack 3 Switch 4900 and Switch 40x0	3C17710	
3Com 4-Port 1000BASE-T Module for SuperStack 3 Switch 4900 and Switch 40x0	3C17711	
3Com 4-Port 1000BASE-LX Module for SuperStack 3 Switch 4900 and Switch 40x0	3C17712	
3Com 4-Port GBIC Module for SuperStack 3 Switch 4900 and Switch 40x0	3C17714	
Transceivers		
3Com 1000BASE-SX GBIC	3CGBIC91	
3Com 1000BASE-LX GBIC	3CGBIC92	
3Com 1000BASE-T GBIC	3CGBIC93A	
3Com 1000BASE-LH70 GBIC	3CGBIC97	
Redundant Power		
3Com SuperStack Advanced Redundant Power System Chassis	3C16071B	
3Com SuperStack Advanced Redundant Power System Type 3 325W	3C16075	
Network Management		
3Com Network Director	3C15500	
3Com Enterprise Management Suite	3C15600	
3Com ExpressSM Service Plans¹	Americas	EMEA / AP²
3Com SuperStack 3 Switch 4900	3CS-EX7N-08E	3CS-EXP4-X17
3Com SuperStack 3 Switch 4900SX	3CS-EX7N-11E	3CS-EXP4-X20
3Com SuperStack 3 Switch 4924	3CS-EX7N-10E	3CS-EXP4-X19
3Com SuperStack 3 Switch 4950	3CS-EX7N-13E	3CS-EXP4-X21

¹Includes telephone support, advance hardware replacement, and software upgrades

²Europe, Middle East, Africa and Asia Pacific



3Com Corporation, Corporate Headquarters, 350 Campus Drive, Marlborough, MA 01752-3064

To learn more about 3Com solutions, visit www.3com.com. 3Com is publicly traded on NASDAQ under the symbol COMS.

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