3Com® SuperStack® 3 Switch 3800 Family

DATA SHEET

Key Benefits

Product Overview
Leveraging over 25 years of delivering innovative products that provide high availability, scalability, connectivity, application awareness, security, and management, the 3Com® SuperStack® 3 Switch 3800 family is ideal for high-performance networks that require industry-leading switching, comprehensive functionality, and applications and bandwidth control.

These fixed-configuration Gigabit-to-the-desktop switches position the network for the future at prices comparable to 10/100 switches. Tri-speed operation at 10, 100, and 1000Mbps allows easy migration to Gigabit speeds. The SuperStack 3 Switch 3800 family installs and operates straight out of the box, facilitating ease of use.

Connectivity & Performance
These switches are available in three configurations:

• SuperStack 3 Switch 3812: 12 10/100/1000 ports, four of which are dual-personality

• SuperStack 3 Switch 3824: 24 10/100/1000 ports, four of which are dual-personality

• SuperStack 3 Switch 3848: 48 10/100/1000 ports, four of which are dual-personality

The dual-personality ports support 10/100/1000BASE-T or, via small form-factor pluggable (SFP) transceivers, 1000BASE-SX, -LX, or -LH70 is supported in the four SFP ports. This flexibility makes it an ideal solution for high-performance desktops, server farms, or shared-access environments.

Through its advanced feature set, the SuperStack 3 Switch 3800 family is able to deliver wirespeed performance to the network.

Quality of Service
The SuperStack 3 Switch 3800 family helps enable maximum control of users and applications, thus providing for an optimized network infrastructure. QoS capabilities help assure optimal performance to real-time applications such as voice and video. Port-based rate limiting enables the bandwidth on each port to be restricted, so power users can receive the full bandwidth available, while other users can be throttled down, preserving network bandwidth and allowing maximum control of network resources. Built-in packet prioritization helps enable mission-critical applications to continue running in heavily loaded networks.

Security
User, network, and management security features of the SuperStack 3 Switch 3800 family make it the ideal solution for customers who want to enhance LAN security. These switches can help prevent unauthorized accessing of the network and Denial of Service attacks; secure management of the switches helps ensure that only authorized IT administrators have access to switch management.

Network Management
Network management is possible through the embedded web interface, command line interface, or an SNMP management station. This can be further simplified with the use of 3Com Network Supervisor for configuration and troubleshooting of multiple devices on the network.

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

• Fixed Gigabit Ethernet workgroup and wiring closet switch family

• Advanced features including QoS, Security, and Network Management

• Superior standards-based network resiliency

• Wirespeed, non-blocking performance in a 1U form factor

Features

PERFORMANCE	
Backplane Capacity	SuperStack 3 Switch 3812: 24 Gbps; Switch 3824: 48 Gbps; Switch 3848: 96 Gbps
Forwarding Rate	SuperStack 3 Switch 3812: 17.8 Mpps; Switch 3824: 35.7 Mpps; Switch 3848: 71.0 Mpps
	Store-and-forward switching
LAYER 2 SWITCHING	
MAC Address	16K MAC addresses
	Secure MAC addresses (1,024 addresses)
VLAN	255 VLANs (IEEE 802.1Q)
Link Aggregation	Manual and Automatic (LACP) as per IEEE 802.3ad
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
Jumbo Frames Support	9K packets
CONVERGENCE	
Priority Queues	Eight hardware queues per port
	Weighted Round Robin queuing
	Strict priority queuing
QoS	Priority based on:
	• User-specified MAC address range
	• User-specific IP address
	• DSCP (DiffServ Code Point)
	• IEEE 802.1p Class of Service (CoS) priority
	• TCP/UDP destination port number
	• Default port priority
	Auto classification of 3Com IP telephony solutions traffic
Rate Limiting	Ingress and egress rate limiting, port-based:
	• 1 Mbps increments from 1M to line rate
Multicast	Multicast snooping filtering
	256 multicast groups
	IGMP v1 and v2
	IGMP Query
SECURITY	
Network and Switch Login	IEEE 802.1X user authentication
	• RADIUS authentication
	• Secure mode (locks MAC address)
Packet Filtering	Wirespeed packet filtering in hardware
	Port-based Access Control Lists (ACLs)
	Supports a maximum of 100 ACL rules per system (DSCP and TCP/UDP port-based CoS)
	ACLs filter on source/destination IP address
Switch Management	RADIUS management of switch passwords
	Trusted IP management addresses
	Telnet
	SSH v1, v2 (56 bit DES)
	SSL (HTTPS)
	• 40 bit
	• 56 bit DES

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FREEDOM TO CHOOSE A BETTER NETWORK

Features *(continued)*

RESILIENCY	
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
Link Aggregation	IEEE 802.3ad (LACP):
	• Twelve groups (SuperStack 3 Switch 3812 and 3824)
	• Twenty-four groups (Switch 3848)
	• Eight ports in each group
	Support for 3Com Advanced Redundant Power Supply; provides backup power to the switch (Switch 3848 only)
	Dual software images
	Backup and restore of switch settings

MANAGEMENT	
Remote Management	SNMP v1 and v2
	User-selectable management VLAN
Switch Access Levels	Five user accounts
Software	Dual images
	Backup and restore
	TFTP configuration: upload/download
	TFTP agent: upload
Configuration	Command line
	Serial Console Port
	• SuperStack 3 Switch 3812 and Switch 3824: 9-Way D-Type
	• Switch 3848: RJ-45
	Telnet
	Web-based
Time	Simple Network Time Protocol (SNTP)
Mirror port / RAP (Roving Analysis Port)	One-to-one
RMON (Remote Monitoring)	Four groups: statistics, history, alarm, and events
IP Address Allocation	DHCP
	Manual
Graphical Management	3Com Network Management applications:
	• 3Com Network Director for comprehensive, turn-key network management for the enterprise.
	• 3Com Network Administrator for comprehensive management under HP OpenView for Windows.
	• 3Com Network Supervisor for basic, turn-key network management for small and medium businesses (copy provided with product):
	· Topology discovery
	· Change management reporting
	· Capacity planning
	· Event logging
	· Fault identification and troubleshooting
	· Utilization monitoring
	• 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments

Specifications

Port Capacities
SuperStack 3 Switch 3812: 12 10BASE-T/100BASE-TX/1000BASE-T ports; 4 SFP Gigabit ports
SuperStack 3 Switch 3824: 12 10BASE-T/100BASE-TX/1000BASE-T ports; 4 SFP Gigabit ports
SuperStack 3 Switch 3848: 48 10BASE-T/100BASE-TX/1000BASE-T ports; 4 SFP Gigabit ports
Four of the above 10/100/1000 ports are dual-personality: they or the SFP ports can be operational
SFP ports accommodate 1000BASE-SX, 1000BASE-LX or 1000BASE-LH70 SFPs (sold separately)

Dimensions
Height: 43.6 mm (1.7 in or 1U)
Width: 440 mm (17.3 in)
Depth:
Switch 3812 and 3824: 325 mm (12.7 in)
Switch 3848: 415 mm (16.4 in)
Weight:
Switch 3812: 3.7 kg (8.2 lb)
Switch 3824: 4.0 kg (8.8 lb)
Switch 3848: 5.0 kg (11.0 lb)

Performance
Switching capacity:
Switch 3812: 24 Gbps
Switch 3824: 48 Gbps
Switch 3848: 96 Gbps
Forwarding rate:
Switch 3812: 17.8 Mpps
Switch 3824: 35.7 Mpps
Switch 3848: 71.0 Mpps
Wirespeed performance
16,000 MAC addresses supported

Power Supply
Input voltage 90-240 VAC autoranging
Operating frequency: 47-63 Hz
Maximum current: 1.2A
Maximum power: 148 W
Heat dissipation: 717 BTU

CPU
MPC8245 (466Mhz)
32MB Flash memory
128MB Processor memory
4MB Packet buffer memory

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

MTBF
21 years (184,000 hours)

Industry Standards Supported
Ethernet Protocols
IEEE 802.1D (STP)
IEEE 802.1p (CoS)
IEEE 802.1Q (VLANs)
IEEE 802.1w (RSTP)
IEEE 802.1X (Security)
IEEE 802.3ab (Copper Gigabit)
IEEE 802.3ad (Link Aggregation)
IEEE 802.3i (10BASE-T)
IEEE 802.3u (Fast Ethernet)
IEEE 802.3x (Flow Control)
IEEE 802.3z (Fiber Gigabit)

Administration Protocols
RFC 1812 (IPv4)
RFC 783 (TFTP)
RFC 768 (UDP)
RFC 791 (IP)
RFC 793 (TCP)
RFC 2474 (DiffServ)
RFC 2131 (DHCP)
RFC 2138 (RADIUS Authentication)

Management, including MIBs Supported
RFC 1157 (SNMP v1/v2c)
RFC 1213 (MIB II)
RFC 1398 (Ethernet MIB)
RFC 1493 (Bridge MIB)
RFC 1573 (Private IF MIB)
RFC 1757 (RMON MIB)
RFC 2011 (IP-MIB)
RFC 2012 (TCP-MIB)
RFC 2013 (UDP-MIB)
RFC 2037 (Entity MIB)
RFC 2618 (RADIUS Authentication Client MIB)
RFC 2665 (Ethernet-MIB)
RFC 2674P (P-BRIDGE-MIB)
RFC 2674Q (Q-BRIDGE-MIB)
RFC 2737 (Entity MIB)
RFC 2819 (RMON MIB)
RFC 2863 (IF-MIB)
IEEE8021-PAE-MIB (IEEE) (Network Login)

Safety Agency Certifications
UL 60950-1
IEC 60950: 2001; all national deviations
EN 60950: 2001; all national deviations
CSA 22.2 # 60950-00

Emissions
CISPR 22: 1995; Class A
FCC Part 15 subpart B, Class A
EN 55022: 1998; Class A
ICES -003 Class A
AS/NZS 3548 Class A
EN 61000-3-2: 2000
EN 61000-3-3: 1995 +A1

Immunity
EN 55024: 1998

Management
SNMP, Web, and Telnet support
RMON-1
RMON Groups: Statistics, History, Alarms and Events
Management through 3Com management applications
- 3Com Network Supervisor
- 3Com Network Director
- 3Com Network Administrator
- 3Com Enterprise Management Suite

Warranty
Limited Lifetime Hardware Warranty. 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:
http://www.3com.com/products/en_US/global_services/
International:
http://emea.3com.com/globalservices

Ordering Information

PRODUCT DESCRIPTION	3COM SKU
3Com SuperStack 3 Switch 3812 *12-port 10/100/1000 with four SFP ports (SFPs sold separately)*	3C17401
3Com SuperStack 3 Switch 3824 *24-port 10/100/1000 with four SFP ports (SFPs sold separately)*	3C17400
3Com SuperStack 3 Switch 3848 *48-port 10/100/1000 with four SFP ports (SFPs sold separately)*	3CR17402-91
SFPs (LC connector)	
3Com 1000BASE-SX SFP Transceiver *(multimode)*	3CSFP91
3Com 1000BASE-LX SFP Transceiver *(multimode, single-mode)*	3CSFP92
3Com 1000BASE-LH70 SFP Transceiver *(single-mode)*	3CSFP97
Redundant Power Options	
3Com SuperStack 3 Advanced Redundant Power System	3C16071B
3Com SuperStack 3 Advanced Redundant Power System, 325W Power Module Type 3	3C16075

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