



## DATA SHEET

# 3Com® Switch 40x0 Family

## Key Benefits

### XRN Technology

3Com XRN™ (eXpandable Resilient Networking) technology allows implementation of high availability configurations using two interconnected Switch 4050s, Switch 4060s, or Switch 4070s, scaling the backbone to 48 wirespeed Gigabit Layer 3 switching ports.

### Performance

3Com's custom ASIC architecture delivers 56 Gbps multilayer switching capacity, providing wirespeed performance across all ports, with a forwarding rate of more than 40 Mpps, minimizing network congestion.

### Reliable and Serviceable Hardware

A durable, 2RU metal chassis offers high availability hardware features such as redundant, load sharing and hot-swappable power supplies, in addition to hot-swappable fan trays and GBIC and SFP transceivers.

### High Availability Features

High availability software and management features, including Link Aggregation (802.3ad), Resilient Links, Spanning Tree and Rapid Spanning Tree (802.1w), seven groups of RMON, email alerts, backup and restore, and dual flash images, facilitate highly available network designs for the core backbone.

### Advanced Network Control

Advanced Layer 2 and Layer 3 functionality such as multicast filtering, virtual LANs, and multilayer traffic classification and prioritization improve traffic control across the network.

### Layer 3 Switching

Layer 3 switching capabilities such as support for IP unicast routing using static routes, OSPF, RIP/RIPv2, CIDR, and UDP Helper, enhance performance, provide network control and security, and enable logical network segmentation.

### Advanced Security Capabilities

Security features such as RADIUS client support and Routed Access Control Lists ensure authorized user access to network resources. Application Filtering enables the switch to identify and discard unauthorized applications from consuming network bandwidth.

### Powerful Management

An intuitive interface eases network-wide setup of switch traffic prioritization. The switches also provide RAP for analysis of network traffic, and a VLAN setup wizard for ease of configuration. 3Com® Network Supervisor (trial copy included) discovers, maps, monitors, and issues alerts for easy network administration. The 3Com Network Supervisor Advanced Package (separately sold) provides advanced configuration capabilities such as bulk software upgrades.

### Flexibility

A combination of integrated 1000BASE-SX, 10/100/1000, GBIC and SFP ports supports a variety of cabling plants and network designs. An expansion slot accommodates an optional four-port Gigabit module for even greater flexibility.

\* With purchase of optional Advanced Feature License, 3C1770V40

## High Availability Without Compromise

High availability is one of the key requirements for connectivity in the core backbone of enterprise networks.

The switches in the 3Com Switch 40x0 Family (Switch 4050, Switch 4060, and Switch 4070) deliver this capability through a combination of hardware and software features that provide redundancy, reliability, serviceability, and high network-level availability without compromising performance or functionality.

These switches support two redundant, load sharing and hot-swappable power supplies in addition to hot-swappable fan trays and GBIC and SFP transceivers.

Network-level availability features such as Link Aggregation and Rapid Spanning Tree enable resilient data paths across the network for even greater fault tolerance.

## Advanced Multilayer Switching Functionality

Mature, feature-rich, and standards-base, 3Com Gigabit Multilayer Switching software, supported by the switches in the 3Com Switch 40x0 family, provides feature-rich Layer 2 functionality, Layer 3 switching for IP networks, and enhanced QoS services.

Advanced Layer 2 features such as VLAN tagging, Multicast Filtering, Link Aggregation, Spanning Tree, Rapid Spanning Tree (802.1w), and support for seven groups of RMON provide a rich feature set for demanding Gigabit backbones.

The 3Com Switch 4050, Switch 4060, and Switch 4070 support four priority queues per port, Weighted Round Robin queue scheduling, traffic classification and prioritization based on Layer 2 (physical port, 802.1p, Ethertype), Layer 3 (DSCP, IP host address and IP subnet) and Layer 4 (TCP/UDP) information. Priority remarking for DSCP and application filtering is also available for enhanced traffic control across the backbone.

These switches also support Layer 3 switching for IP networks, enabling a wide array of services such as OSPF unicast IP routing\* supporting static routes, RIP and RIPv2, IP Multinetting, Classless Interdomain Routing (CIDR) and UDP Helper. Routed Access Control Lists based on IP address information can also be used to provide enhanced control and security across a Layer 3 switching implementation.

For more efficient use of Internet bandwidth, the 3Com Switch 4050, Switch 4060, and Switch 4070 enable automatic redirection of web traffic to 3Com SuperStack 3 Webcache appliances, enhancing web performance.

These switches provide enhanced device management functionality through support for BootP/DHCP clients, seven groups of RMON, and RMON event notification via an integrated SMTP client.

### XRN Technology

Companies no longer have to spend a fortune or double their IT staff to ensure that their essential business systems are continuously available to users who need them. eXpandable Resilient Networking (XRN) technology from 3Com is a new LAN core technology allowing network managers to build affordable network cores with exceptional performance and flexibility.

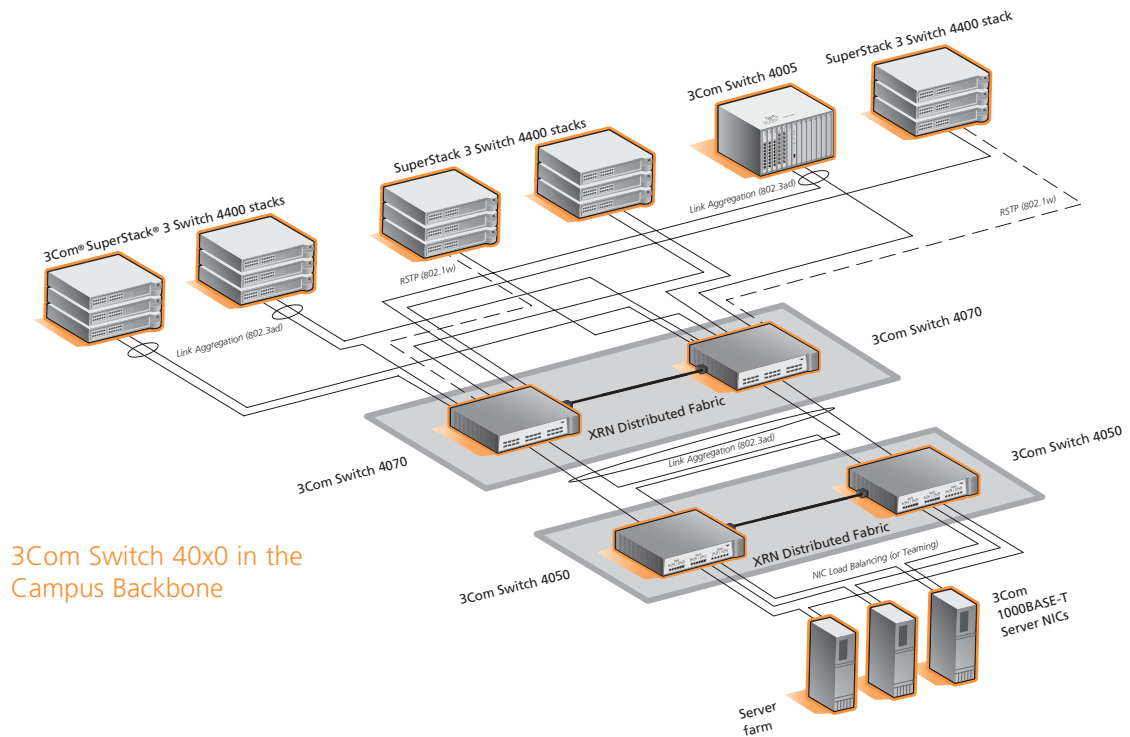
With XRN technology, multiple interconnected Gigabit switches behave as a single distributed switching fabric that grows with the network.

XRN technology, enabled at a single site via the XRN Interconnect Kit, or across sites with the 3Com GBIC Fabric Interconnect, is supported on the 3Com Switch 4050, Switch 4060, Switch 4070, and the SuperStack 3 Switch 4900 family.

*"3Com offers a revolutionary approach to build enterprise LAN cores with innovative technology that breaks new ground in the networking industry."*

Zeus Kerravala, vice president of Enterprise Infrastructure, Yankee Group

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3Com Switch 40x0 in the Campus Backbone

## High-Performance Switching and Flexibility for the Backbone

The switches in the 3Com Switch 40x0 Family (Switch 4050, Switch 4060, and Switch 4070), based on a 3Com-developed ASIC architecture, deliver 56 Gbps multilayer switching capacity for bandwidth-intensive core backbones and demanding enterprise applications. Each switch delivers non-blocking Layer 2 and Layer 3 switching across all ports, forwarding at speeds in excess of 40 Mpps.

Many Gigabit backbones require multimode and single mode fiber for connectivity to distributed wiring closets or buildings, and copper cabling for high bandwidth connections to servers and hosts in the data center.

The 3Com Switch 40x0 family delivers integrated media flexibility by providing different combinations of 1000BASE-SX and 10/100/1000 ports, GBIC ports, and SFP ports.

In addition, using link aggregation, these switches can be connected to an external server farm aggregation device such as the 3Com SuperStack 3 Switch 4924. An optional expansion slot accommodates a 4-port Gigabit module for even greater flexibility.

## Specifications

All information in this section is relevant to the 3Com Switch 4050, Switch 4060, and Switch 4070 unless stated otherwise.

### Connectors

**3Com Switch 4050:**  
12 autosensing 10/100/1000 ports, 6 fixed 1000BASE-SX ports (MT-RJ), 6 GBIC ports accommodating 1000BASE-SX, 1000BASE-LX GBICs or 1000BASE-LH70 GBICs

**3Com Switch 4060:**  
6 autosensing 10/100/1000 ports, 12 fixed 1000BASE-SX ports (MT-RJ), 6 GBIC ports accommodating 1000BASE-SX, 1000BASE-LX GBICs or 1000BASE-LH70 GBICs

**3Com Switch 4070:**  
24 SFP ports, accommodating 1000BASE-SX and 1000BASE-LX SFPs (LC type connectors)

**All switches:**  
1 module slot accommodating SuperStack 3 Switch 4900 family expansion modules or XRN™ Interconnect

### Dimensions

Height: 8.3 cm (3.5 in)  
Width: 44 cm (17.3 in)  
Depth: 36.3 cm (14.3 in)  
Weight: 8.95 kg (19.7 lb)

### Performance

41.7 million packets per second

### Reliability

MTBF @ 25°C: 365,000 hours

### Environmental Requirements

Operating temperature: 0° to 40°C (32° to 104°F)  
Storage Temperature: -10° to +70°C (14° to +158°F)  
Operating Humidity: 10% to 95% relative humidity non-condensing  
Standards: EN60068

### Safety Agency Certifications

UL60950, EN60950, CSA22.2 No. 60950, IEC 60950, IEC 825-1, EN 60825-1

### 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, EN61000-3-2, EN61000-3-3, CIS-PRR 22 Class A

Immunity: EN55024

Heat Dissipation:  
210 W (717 BTU/hr) maximum

### Power Supply

AC Line Frequency 50/60 Hz  
Input Voltage Options 90-240 VAC  
Current Rating 3.5A maximum

### Switching Features/Functionality

802.1D  
802.1Q VLAN Support  
ISO 8802-3  
IEEE 802.3x (Flow Control)  
IGMP Snooping  
Link Aggregation (802.3ad)

### SNMP Standards

SNMP Protocol (RFC 1157)  
MIB-II (RFC 1213)  
Bridge MIB (RFC 1493)  
RMON MIB II (RFC2021)

Remote Monitoring MIB (RFC 1757)  
Interface MIB (RFC 2233)  
MAU MIB (RFC 2239)  
IP Forwarding Table MIB (RFC 1354)  
Ethernet MIB (RFC 1643)  
RIP v2 MIB (RFC 1724)  
IP Forwarding Table (RFC2096)

### Administration

UDP (RFC 768)  
IP (RFC 791)  
ICMP (RFC 792)  
TCP (RFC 793)  
ARP (RFC 826)  
TFTP (RFC 783)  
TELNET (RFC 854)  
BOOTP/DHCP (RFC 1542)  
HTTP (RFC 2068)

### Routing Protocols

RFC 1058 RIP  
RFC 1519 CIDR  
RFC 1723 RIP v2  
RFC 2131 Boot/PDHCP Relay  
RFC 2328 OSPF Version 2\*  
RFC 1850 OSPF Version 2 MIB\*

### Hardware Warranty

Limited Warranty for one year. Includes fan and power supply. See [www.3com.com/warranty](http://www.3com.com/warranty) for details.

### Management

3Com Network Supervisor (trial copy provided on accompanying CD)  
Web interface  
Command line interface management  
SNMP compatibility

\* With purchase of optional Advanced Feature License

## Ordering Information

3Com Switch 4050	3C17708
3Com Switch 4060	3C17709
3Com Switch 4070	3C17707

### Optional Modules and Accessories

3Com 200W AC Power Supply	3C17718
3Com Spare Fan Tray	3C17717
3Com SuperStack 3 Switch 4900 1000BASE-SX Module	3C17710
3Com SuperStack 3 Switch 4900 4-port 1000BASE-T Module	3C17711
3Com SuperStack 3 Switch 4900 4-port 1000BASE-LX module	3C17712
3Com SuperStack 3 Switch 4900 4-Port GBIC Module	3C17714

### Optional Modules and Accessories, continued

3Com 1000BASE-SX GBIC <sup>(1)</sup>	3CGBIC91
3Com 1000BASE-LX GBIC <sup>(1)</sup>	3CGBIC92
3Com 1000BASE-LH70 GBIC <sup>(1)</sup> (up to 70km)	3CGBIC97
3Com 1000BASE-SX SFP <sup>(2)</sup>	3CSFP91
3Com 1000BASE-LX SFP <sup>(2)</sup>	3CSFP92
3Com 1000BASE-LH SFP <sup>(2)</sup>	3CSFP97
3Com XRN Interconnect Kit	3C17715
3Com 5m XRN Interconnect Cable	3C17722
3Com GMS v4.0 Advanced Feature License	3C1770V40

### Optional Network Management Packages

3Com Network Supervisor Advanced Package	3C15201
3Com Integration Kit for HP OpenView	3C15300

<sup>(1)</sup> GBICs are compatible with Switch 4050 and 4060, and SuperStack 3 Switch 4900 4-port GBIC module

<sup>(2)</sup> SFPs are compatible with Switch 4070, only

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To learn more about 3Com solutions, visit [www.3com.com](http://www.3com.com). 3Com Corporation is publicly traded on NASDAQ under the symbol COMS.

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