Key Benefits

Scalability
Enhanced Layer 2 10/100/1000 LAN switching solution delivers scalable wirespeed Gigabit performance, with integrated stacking up to eight units high, or 384 Gigabit ports, with high-bandwidth 40Gbps stacking. Stack-wide link aggregation enables high-performance connectivity to the core of the network, with up to eight ports from different units aggregated together to improve resiliency and uptime.

Performance
24 or 48 built-in copper Gigabit ports, including four dual-purpose ports supporting copper links or SFP adapters for easy, flexible connection to fiber-based Gigabit media.

Port-based rate-limiting enables the bandwidth on each port to be restricted, so power users can receive the full bandwidth available while non-key users can be throttled down, preserving network bandwidth and allowing maximum control of network resources. Built-in packet prioritization gives optimal performance to real-time applications such as voice and video.

Future Protection
Gigabit to the desk prepares your network for the future at prices comparable to those of some 10/100 switches. Tri-speed operation at 10-, 100-, and 1000Mbps allows easy migration to Gigabit speeds.

Investment protection is further enhanced with switching silicon designed to support multilayer switching, and a module slot with 10Gbps connections capable of supporting high-speed Ethernet.

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

Security
IEEE 802.1X network login enables intrusion prevention on the network, requiring users to authenticate with a central standards-based RADIUS server for ease of management; unauthorized users are kept off the network.

Management of the switch can be implemented using Secure Shell (SSH) and Secure Sockets Layer (SSL / HTTPS) encryption, preventing unauthorized remote access to the switch over IP networks or from a web browser.

Network Control
Network management can be done 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.

Limited Lifetime Warranty
Limited Lifetime hardware warranty. Next Business Day Advanced Hardware Replacement in most countries.*

* Available in the U.S. and E.U. countries
3Com® SuperStack® 3 Switch 3800 family switches deliver wirespeed Gigabit Ethernet switching, with ten times the performance of 10/100 desktop switching but at similar prices. Tri-speed operation of the switch enables backward compatibility with existing devices, such as printers, while still allowing new PC’s and servers to operate at their maximum potential.

The two SuperStack 3 Switch 3870 models are stackable, up to eight units high, for impressive scalability. The switches come with integrated dual full duplex 10Gbps stacking ports on the back of the unit, providing a total stacked capacity of 40Gbps, and support for single-entity IP management of all units in the stack.

These switches also have notable investment protection capabilities. Along with the built-in 10Gbps stacking ports, each Switch 3870 also has an expansion slot capable of supporting an additional 10Gbps full duplex (20Gbps total) high-speed Ethernet connection. And, the switch silicon supports multilayer (Layers 2 / 3 / 4) switching.

Concerned about network security? SuperStack 3 Switch 3870s support IEEE 802.1X network login security to help ensure all users are authorized before being granted access to any network resource.

3Com backs these products with more than 25 years of networking experience. They come with a Limited Lifetime product hardware warranty and limited lifetime access to software updates, along with Next Business Day Advanced Hardware Replacement.*

Why Gigabit to the Desk?

It is time to consider "Gigabit to the desk" as an alternative to 10/100 switching:

- Give users a 10x improvement in performance. Reduce network latency. Prepare the network for supporting high quality video and voice communication.
- Pricing for Gigabit is closer and closer to that of 10/100 switching, making it wise to make the move now to the higher speed.
- Gigabit speeds are increasingly being supported by new servers and workstations. Prepare the network to deliver optimum speed.
- Migration is easy, with tri-speed operation, with 10-, 100-, and 1000Mbps operation that automatically adjusts to the maximum available speed. No worries about backward compatibility.

* Available in the U.S. and E.U. countries
### Features

#### Performance

- **Switching capacity:** SuperStack 3 Switch 3870 24-port, 108 Gbps; Switch 3870 48-port, 156 Gbps
- **Forwarding rate:** 24-port, 80 Mpps; 48-port, 115 Mpps
- **Store-and-forward switching**

#### Layer 2 Switching

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAC Address</strong></td>
<td>16K MAC addresses, 1024 secure MAC addresses</td>
</tr>
<tr>
<td><strong>VLAN</strong></td>
<td>255 VLANs (IEEE 802.1Q)</td>
</tr>
<tr>
<td><strong>Link Aggregation</strong></td>
<td>IEEE 802.3ad (LACP), Gigabit ports only, 32 trunk groups (up to 8 ports each), trunking across stacked units</td>
</tr>
<tr>
<td><strong>Auto-negotiation</strong></td>
<td>Auto-negotiation of port speed, duplex, and connection (MDI/MDIX)</td>
</tr>
<tr>
<td><strong>Traffic control</strong></td>
<td>IEEE 802.3x full-duplex flow control, Back pressure flow control for half-duplex, Broadcast Storm Control (500-200,000 pps limit)</td>
</tr>
<tr>
<td><strong>Spanning Tree</strong></td>
<td>IEEE 802.1w Rapid Spanning Tree Protocol (RSTP), Backward-compatible with STP, Fast-start mode, Spanning tree enable/disable per port</td>
</tr>
<tr>
<td><strong>Multicast Snooping</strong></td>
<td>Filtering for 64 multicast groups, IGMP v1 and v2, IGMP Querier</td>
</tr>
<tr>
<td><strong>Jumbo Frames</strong></td>
<td>Supports 9K packets</td>
</tr>
</tbody>
</table>

#### Stacking

- **Switched 40Gbps on each switch**
- **Up to 8 units high**
- **Resilient loop back**
- **Hot-swap units**
- **Single IP address for stack management**

#### Convergence

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priority Queues</strong></td>
<td>Eight hardware queues per port, Strict priority, Weighted Round Robin queuing</td>
</tr>
</tbody>
</table>
| **Traffic Prioritization** | Priority based on:  
  - DSCP (DiffServ Code Point)  
  - IEEE 802.1p Class of Service (CoS) priority  
  - TCP/UDP destination port number  
  - Default port priority  
  - Auto classification of 3Com NBX® telephony traffic |
| **Bandwidth Management** | Port-based bandwidth management:  
  - 1 Mbps increments (Gigabit ports) |
## Features, continued

<table>
<thead>
<tr>
<th><strong>Security</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Login</strong></td>
<td>IEEE 802.1X user authentication</td>
</tr>
<tr>
<td></td>
<td>• RADIUS authentication</td>
</tr>
<tr>
<td></td>
<td>• Secure Mode (locks MAC address)</td>
</tr>
<tr>
<td><strong>Packet Filtering</strong></td>
<td>Port-based Access  Control Lists (ACLs)</td>
</tr>
<tr>
<td></td>
<td>• Filtered on destination IP address / mask</td>
</tr>
<tr>
<td><strong>Switch Protocol Security</strong></td>
<td>MD5 cipher-text and clear-text authentication</td>
</tr>
<tr>
<td><strong>Switch Management</strong></td>
<td>RADIUS management of switch passwords</td>
</tr>
<tr>
<td></td>
<td>Trusted IP Management Addresses</td>
</tr>
<tr>
<td></td>
<td>• SSH v1, v2 (56bit DES)</td>
</tr>
<tr>
<td></td>
<td>SSL (HTTPS)</td>
</tr>
<tr>
<td></td>
<td>• 40 Bit</td>
</tr>
<tr>
<td></td>
<td>• 56 Bit DES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Resiliency</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Support for 3Com Advanced Redundant Power Supply</strong></td>
<td>provides backup power to the switch</td>
</tr>
<tr>
<td><strong>Dual software images</strong></td>
<td>Backup and restore of switch settings</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Management</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remote Management</strong></td>
<td>SNMP v1, v2</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>Dual software images</td>
</tr>
<tr>
<td></td>
<td>Backup and restore</td>
</tr>
<tr>
<td></td>
<td>TFTP configuration: upload/download</td>
</tr>
<tr>
<td></td>
<td>TFTP agent: upload</td>
</tr>
<tr>
<td><strong>Configuration</strong></td>
<td>Command line</td>
</tr>
<tr>
<td></td>
<td>Serial (RJ-45 supplied)</td>
</tr>
<tr>
<td></td>
<td>Telnet</td>
</tr>
<tr>
<td></td>
<td>Web-based</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>SNTP</td>
</tr>
<tr>
<td><strong>Mirror port / RAP (Roving Analysis Port)</strong></td>
<td>One-to-one (across stack)</td>
</tr>
<tr>
<td><strong>RMON (Remote Monitoring)</strong></td>
<td>Four groups: statistics, history, alarm, and events</td>
</tr>
<tr>
<td><strong>IP address allocation</strong></td>
<td>DHCP</td>
</tr>
<tr>
<td></td>
<td>Manual</td>
</tr>
<tr>
<td></td>
<td>User-selectable management VLAN</td>
</tr>
<tr>
<td><strong>Switch access levels</strong></td>
<td>5 user accounts</td>
</tr>
<tr>
<td><strong>Remote GUI management</strong></td>
<td>3Com Network Supervisor <em>(copy provided with product)</em></td>
</tr>
<tr>
<td></td>
<td>• Topology discovery</td>
</tr>
<tr>
<td></td>
<td>• Change management reporting</td>
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<tr>
<td></td>
<td>• Capacity planning</td>
</tr>
<tr>
<td></td>
<td>• Event logging</td>
</tr>
<tr>
<td></td>
<td>• Fault identification and troubleshooting</td>
</tr>
<tr>
<td></td>
<td>• Utilization monitoring</td>
</tr>
</tbody>
</table>
Specifications

All information in this section is relevant to both models of the 3Com SuperStack 3 Switch 3870, unless stated otherwise.

Port Capacities
24-Port:
20 10/100/1000 ports
4 dual-personality 10/100/1000 or SFP Gigabit ports

48-Port:
44 10/100/1000 ports
4 dual-personality 10/100/1000 or SFP Gigabit ports

Dimensions
Height: 45 mm (1.7 in or 1U)
Width: 440 mm (17.3 in)
Depth: 415 mm (16.4 in)
Weight: 5.0 kg (11.0 lbs)

Performance
24-port:
Bandwidth: 108 Gbps
Throughput: 80 Mpps

48-port:
Bandwidth: 156 Gbps
Throughput: 115 Mpps

Power Supply
Input voltage: 100-240 V AC 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

Packet Buffer Memory
24-port: 2MB
48-port: 4MB

Environmental Requirements
Operating temperature: 0° to 40°C (32° to 104°F)
Storage temperature: -40° to 70°C (-40° to 158°F)
Humidity: 10% to 90% non-condensing

MTBF
24-port:
31 years (268,000 hours)

48-port:
21 years (184,000 hours)

Industry Standards Supported
Ethernet Protocols
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 802.3z (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 1777 RMON MIB
RFC 2011 IPr-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)

Emissions / Agency Approvals
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

Safety Agency Certifications
UL 60950-1
IEC 60950-1

Management
SNMP, Web, and Telnet support
RMON-1

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

Other Benefits
Limited Lifetime software updates. Next Business Day Advanced Hardware Replacement in U.S. and E.U., after registration of the switch.

Ordering Information

3Com SuperStack 3 Switch 3870, 24-Port
20-port 10/100/1000 switch with four dual-personality 10/100/1000 or SFP ports

3Com SuperStack 3 Switch 3870, 48-Port
44-port 10/100 switch with four dual-personality 10/100/1000 or SFP ports

3Com SuperStack 3 Switch 3870 Stacking Cable
3C17462

3Com SuperStack 3 Switch 3870 Resilient Stacking Cable
3C17463

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