



# SuperStack II Hub 10

## Stackable Ethernet Hubs

*Economical, reliable, and easy-to-configure hubs providing flexible connectivity in departmental and remote office networks*

SuperStack II Hub 10s support TP, fiber, and Telco and can be stacked together to increase port density. SuperStack II Hub 10s can be combined with other SuperStack II products to provide a totally integrated solution.



SuperStack™ II Hub 10s are stackable hubs that provide complete media flexibility and manageability. With a low initial investment, the SuperStack II Hub 10s allow you to increase port density; add comprehensive, yet easy-to-use SNMP management; and provide features like high-performance RMON, resilient links, and powerful security.

3Com's SuperStack II system gives you a simple, cost-effective connectivity solution for local, wide area, and SNA networks. With SuperStack II, you can combine diverse technologies and network services in one stacked system, strengthen it with a power system and resilience, and manage it all with Transcend® management software.

### Key Benefits:

- **Media choices.** Create a single- or mixed-media Ethernet stack with 12-port and 24-port RJ-45 twisted-pair hubs, 6-port ST fiber hubs, and 24-port Telco twisted-pair hubs.
- **Slide-in SNMP management with RMON.** A choice of user-installable management modules provides management for all the hubs in the stack.
- **RMON management.** Remote Monitoring (RMON) automates management to reduce network traffic and errors.
- **Transcend® management.** A choice of either Workgroup or Enterprise Management is available.

- **Built-in security.** Easy-to-enable security features such as Need to Know and Disconnect Unauthorized Device protect data and LAN resources.
- **Backbone choices.** Backbone links include a standard AUI port, plus optional Transceiver Interface Modules.
- **A choice of additional power.** An optional Redundant or Uninterruptible Power System ensures continual operation.
- **Fault tolerance.** Robust features such as resilient links maximize uptime.
- **+5 Lifetime Limited warranty.**





## Hub Choices

SuperStack II Hub 10 Ethernet hubs are offered in four versions:

- **12-Port TP hub (3C16670A)**  
12 shielded RJ-45 twisted-pair connectors
- **24-Port TP hub (3C16671A)**  
24 shielded RJ-45 twisted-pair connectors
- **6-Port Fiber ST hub (3C16665A)**  
6 ST fiber connectors
- **24-Port Telco hub (3C16672A)**  
Two 50-pin Telco connectors

The hubs are also equipped with a standard AUI port and a slot for a slide-in Transceiver Interface Module. In all the hubs except 12-Port TP, both the AUI port and the transceiver port can be active at the same time.

## Backbone Choices

A complete set of easy-to-install Transceiver Interface Modules is available for backbone and other connections:

- BNC coaxial (3C1206-6)
- ST fiber (3C1206-5)
- Male AUI coaxial (3C1206-4)
- Female AUI coaxial (3C1206-0)
- Twisted pair (3C12063)
- 10BASE-FB (3C12067)

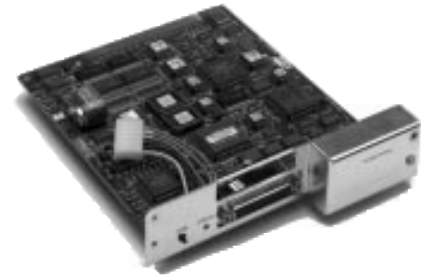
## Bridge MicroModule

The LinkBuilder® Bridge MicroModule (3C16060) is an unmanaged local bridge that you can slide into the Transceiver Interface Module slot. Since it is unmanaged, this device is ideal for low-cost, simple bridging where sophisticated management capabilities are not needed.

The Bridge MicroModule has one port internal to the stack and one standard AUI port for external connections. It is self-learning (256 stations), requires no configuration, and provides full-rate forwarding, filtering, and packet buffering for optimum performance.

## Slide-in Management Modules

The SuperStack II Hub 10 Management Module (3C16630A) is a Simple Network Management Protocol (SNMP) unit that can be added at any time to one hub in the stack. One management module manages a stack of eight hubs of any



The SuperStack II Hub 10 Management Module can be added at any time to one hub in the stack.

media. The modular design means you don't have to purchase a separate hub to add management capabilities.

As an integral part of the Transcend system, SmartAgent® intelligent agents in the module automatically gather and collate critical information while keeping management traffic to a minimum on the backbone.

With the SuperStack II Hub 10 Management Module, you can:

- Gather traffic and error statistics and control ports
- Implement action-on-events to create self-managing networks
- Disconnect unauthorized devices from the network and allow only authorized ports to receive data
- Poll critical devices at remote sites without adding appreciably to network management traffic
- RMON support for all nine groups

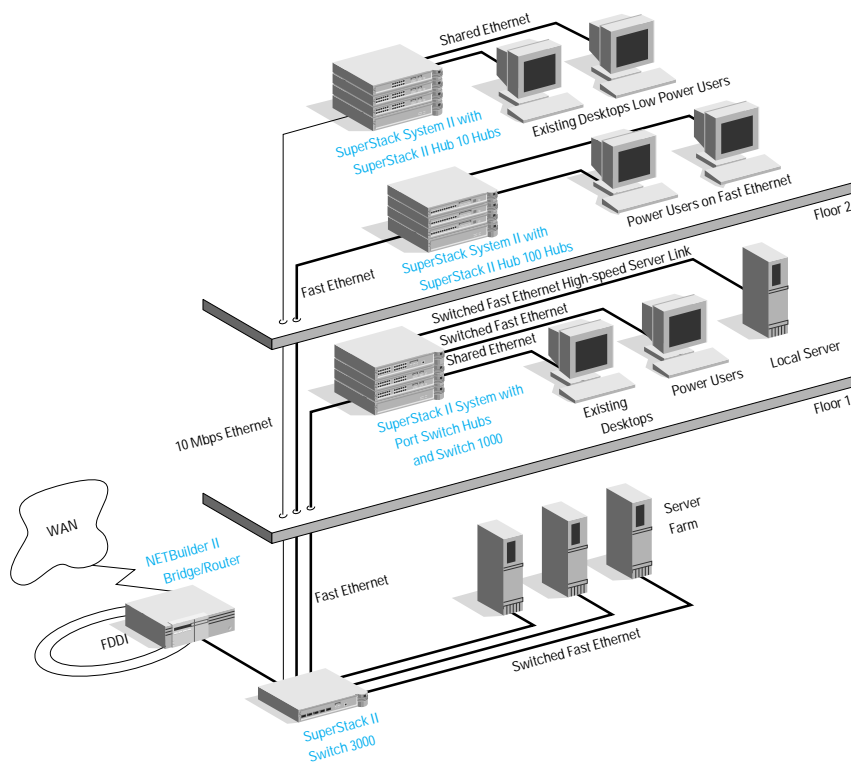
## SuperStack II Hub 10 Hubs at a Glance

	SuperStack II Hub 10 12-Port TP Hub	SuperStack II Hub 10 24-Port TP Hub	SuperStack II Hub 10 24-Port Telco Hub	SuperStack II Hub 10 6-Port ST Fiber Hub
Twisted-pair RJ-45 ports	12	24		
Twisted-pair Telco ports			24	
Fiber (ST) ports				6 pairs
AUI ports	1*	1	1	1
Transceiver Interface Module/Bridge MicroModule slots per hub	1*	1	1	1
Total ports per hub	13	26	26	8
Maximum number of ports**	104	208	208	64

\*The integrated AUI port and a Transceiver Interface Module cannot be used simultaneously in the 12-Port TP hub.

\*\*In a single media stack of up to 8 hubs

## Corporate Network with Switched Ethernet and Fast Ethernet Workgroups



### Ethernet and Fast Ethernet in One Network.

Using 3Com products, you can easily combine switched Ethernet workgroups and 100BASE-T Fast Ethernet workgroups in one network. 3Com's Fast Ethernet products provide high performance, cost-effective connections for backbone infrastructures for workgroups.

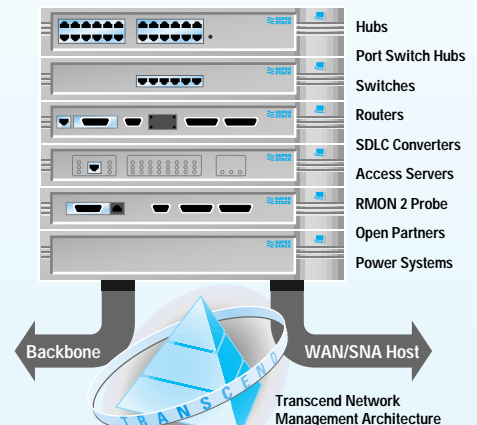
In this example, a 3Com SuperStack II Switch 3000 FX accommodates 10 Mbps Ethernet and 100 Mbps Fast Ethernet downlinks from a SuperStack II Hub 10 stack and a SuperStack II Hub 100 stack or a SuperStack II Switch 1000 Ethernet/Fast Ethernet Switch. The SuperStack II Switch 3000 Fast Ethernet backbone switch also extends Fast

Ethernet links to a central server farm, and provides connections to the wide area and FDDI campus networks. A NETBuilder II® bridge/router provides connections to the wide area and FDDI campus networks.

3Com's LAN Security Architecture gives you security features, standard with the hubs, that help safeguard your network against security breaches. For example, the Need to Know feature protects sensitive data on the network by monitoring destination addresses, while Multiple User Level with Passwords ensures that only authorized users have access to critical management functions.



## SuperStack II



3Com's SuperStack II system gives you a flexible, cost-effective connectivity solution for local, wide area, and SNA networks. You can combine diverse technologies and network services in one stacked system, strengthen it with uninterruptible and redundant power systems, and manage it all with Transcend management software.

As an important part of 3Com's Transcend Networking framework, SuperStack II will meet your evolving network needs—future-proofing your network investment.

A single SuperStack II system provides connections for a range of network environments and protocols: Ethernet, 100BASE-T Fast Ethernet, Token Ring, FDDI, ISDN, X.25, Frame Relay, and ATM. Depending on your needs, you can build SuperStack II systems for virtually any network environment. Capabilities include:

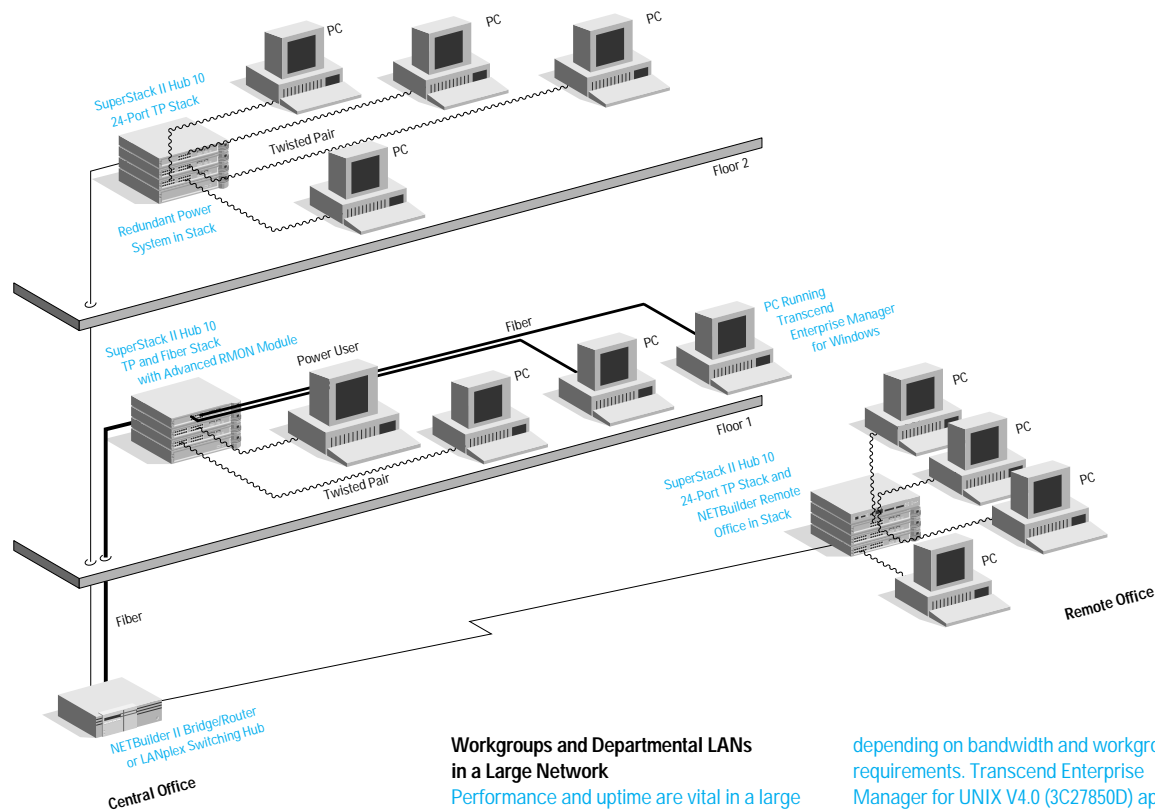
- Shared and Port Switched hubs for flexible workgroup connectivity with SNMP management
- Industry-leading physical layer support for Token Ring networks
- Full RMON support for Ethernet, Fast Ethernet, and Token Ring networks, as well as a dedicated RMON 2 Probe
- Full range of switches to boost performance in high-speed client/server LANs
- Full, multiprotocol network access for teleworkers or users at other off-site locations
- Routing between central site and branch offices using innovative Boundary Routing® architecture or conventional routing software for multiple WAN choices, including ISDN
- SNA-to-LAN conversion linking local and remote offices to an SNA host system
- Choice of power systems to ensure uninterrupted network operation

For smaller offices of less than 20 users, our OfficeConnect™ products can be used to complement SuperStack II.

## SuperStack II Port Switch Hub

The SuperStack II Port Switch Hub brings new levels of performance, flexibility and robustness to workgroup hubs. Port switching capability allows any individual user to be software-assigned to any of four internal segments within the hub. This allows the flexible allocation of bandwidth among users and makes it easy to deal with

moves, adds and changes. In addition, the Port Switch Hub is VLAN-ready, and will support Configuration using Transcend VLAN applications in the same way as for 3Com's Switching products. High levels of redundancy, including optional hot-swap capability and redundant management, make the SuperStack II Port Switch Hub the ideal choice for the Enterprise Workgroup.



### Workgroups and Departmental LANs in a Large Network

Performance and uptime are vital in a large network. Operating as part of SuperStack II system, SuperStack II Hub 10 allows you to improve performance by segmenting local LAN traffic while ensuring uptime with resilient links. In addition, the Advanced RMON Management Module provides users with more demanding requirements, extra power and storage capacity. The SuperStack II Port Switch Hubs allow flexible configuration of users into segments

depending on bandwidth and workgroup requirements. Transcend Enterprise Manager for UNIX V4.0 (3C27850D) application provides powerful UNIX-based (SunNet Manager, HP OpenView, IBM NetView for AIX) management capabilities for larger LANs in a building if traffic should start to exceed thresholds.

## Specifications

### SuperStack II Hub 10 Stackable Ethernet Hubs

#### Dimensions

##### **12-Port TP, 24-Port TP, Fiber, and Telco Hubs**

Width: 17.5 in/44 cm  
Depth: 9 in/23 cm  
Height: 1.6 in/4.4 cm

##### **Redundant Power System**

Width: 17.3 in/44 cm  
Depth: 12 in/30.5 cm  
Height: 2.6 in/6.6 cm

##### **Uninterruptible Power System**

Width: 17.3 in/44 cm  
Depth: 14.5 in/36.8 cm  
Height: 2.6 in/6.6 cm

#### Weight

**12-Port Hub**  
5.75 lb/2.6 kg

**24-Port Hub**  
6 lb/2.7 kg

**Fiber Hub**  
5.33 lb/2.4 kg

**Telco Hub**  
6 lb/2.7 kg

**Redundant Power System**  
14 lb/6.3 kg

**Uninterruptible Power System**  
28 lbs/12.6 kg

**Management Module**  
11 oz/311 g

**Advanced RMON Management Module**  
11 oz/311 g

**Bridge MicroModule**  
2 oz/180 g

#### Connectors and Cables

All have 1 integrated AUI port and 1 optional Transceiver Interface Module slot

##### **TP Hub**

12 RJ-45 ports (in this hub only, the AUI port and a module cannot be used simultaneously)

##### **24-Port TP Hub**

24 RJ-45 ports

##### **Fiber Hub**

6 ST ports

##### **Telco Hub**

2 50-way D-Type connectors (24 UTP ports)

##### **Management Module**

1 25W D-Type RS-232 port

#### Power Requirements

##### **Hubs and Modules**

Power supply: 85 to 264 VAC, 50 to 60 Hz

Power consumption:

12-Port TP Hub: 28W  
24-Port TP and Telco Hub: 36W  
Fiber Hub: 35W  
Management Module: 6W  
Advanced RMON Management Module: 6W  
Bridge MicroModule: 2.3W

Power inlet: IEC320

Fuse protection: 2A

Heat dissipation/hour:

12-Port TP Hub: 100 BTU  
24-Port TP Hub: 123 BTU  
Fiber Hub: 120 BTU  
Telco Hub: 123 BTU  
Management Module: 27 BTU

##### **Redundant Power System**

Input voltage: 85 to 138 and 170 to 276 Vrms

Input frequency: 47 to 63 Hz

Inrush current (max.): 35A

Input rms current (max.): 5.9A each main with 240W load

Efficiency 70% min. at each main with 240W load

Leakage current: 3.5mA per main

DC output per module:

60W  
+5 (+5%±3%) V at 8.5A  
+12.2 (±3%) V at 2.5A  
-12 (±4%) V at 1A

Max. combined aggregate DC output: 240W

Over-voltage protection: 5 V output with auto restart at max. OVP at 6.5 V

##### **Uninterruptible Power System**

Input voltage (3 variants):

<b>US</b>	Input range: 120V -30%, +20% Output regulation: -10%, +6%
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<b>Intl</b>	Input range: 230V -30%, +20% Output regulation: -10%, +6%
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<b>Japan</b>	Input range: 100V -20%, +20% Output regulation: -10%, +6%
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Input frequency: 120V models are 60Hz. 100V and 230V models are 50/60Hz.

Efficiency 96%

#### Environmental Ranges

##### **Hubs (Operating)**

Temperature: 32° to 122° F (0° to 50° C)

Humidity:  
up to 90% noncondensing

##### **Hubs (Storage)**

Temperature: -22° to 140° F (-30° to 60° C)

Humidity:  
10% to 95% noncondensing

##### **Redundant Power (Operating)**

Temperature: 32° to 122° F (0° to 50° C)

Humidity:  
10% to 90% noncondensing

##### **Redundant Power (Storage)**

Temperature: 32° to 122° F (0° to 50° C)

Humidity: 10% to 90% noncondensing

##### **Uninterruptible Power System (Operating)**

Temperature: 32° to 104° F (0° to 40° C)

Humidity:  
5% to 95% noncondensing

#### LEDs

Each SuperStack II Hub 10 hub includes LEDs for power status (per unit), packet reception (per unit), collision (per unit), partition (per port), link status (per port), management, and unit ID.

#### Standards Compliance

##### **Functional Standards**

IEEE 802.3, ISO 8802/3

##### **Electromagnetic Compatibility**

Each individual hub and Management Module complies with VFG243, FCC Part 15 Class A, EN55022, CSA 108.8, EN50082-1 (IEC801 2-5) and SuperStack II Hub 10 complies with Level B EN51022

The RPS complies with VFG 243, FCC Part 15 Class A, EN55022 Class B, IEC 801 Parts 2-6

The UPS complies with VCCI-II for 100V models; FCC-B for 120V models; EN50091-2 and CE compliance for 230V models.

Emissions: Harmonics: per EN61000-3-2

RFI: per EN55022-B, FCC-B, VCCI-II

##### **Shock and Vibration (Redundant Power)**

In accordance with IEC68

##### **Safety**

EN60950, UL1950, CSA22.2, #950IEEE, ECMA 97

Uninterruptible Power System:

100V/120V models: UL1778 Listed, UL 1449 rated MOV, CSA 22.2 No. 107.1.

230V models: TUV (GS mark) per EN50091-1.

##### **Environmental**

Each individual hub and Management Module complies with IEC68; each TP and Fiber/Telco hub also complies with BS2011

##### **Communications Protocols**

RFC 826 ARP

RFC 791 IP

RFC 792 ICMP

RFC 768 UDP

RFC 793 TCP

##### **Communications Applications**

RFC 854 Telnet

RFC 855 Telnet options

RFC 856 Telnet binary option

RFC 857 Telnet echo option

RFC 858 Telnet suppress-go-ahead option

RFC 859 Telnet status option

##### **Management Protocols**

RFC 1157 SNMP

RFC 1212 Concise

RFC 1213 MIB II

RFC 1215 Traps

RFC 1516 Repeater

RFC 1286 Bridge

RFC 1757 RMON





## Specifications *(continued)*

### SuperStack II Hub 10 Stackable Ethernet Hubs

#### 3Com Corporation

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World Wide Web:  
<http://www.3com.com>

#### 3Com ANZA

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ANZA West: 61 3 9866 8022

#### 3Com Asia Limited

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Shanghai, China: 86 21 6374 0220  
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Indonesia: 62 21 523 9181

Korea: 82 2 319 4711

Malaysia: 60 3 732 7910

Singapore: 65 538 9368

Taiwan: 886 2 377 5850

Thailand: 662 231 8151 4

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Venezuela: 58 2 953 8122

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Spain: 34 1 3831700

#### 3Com Middle East

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Norway: 47 22 18 40 03  
Sweden: 46 8 632 56 00

#### 3Com South Africa

27 11 807 4397

#### 3Com UK Ltd.

Edinburgh: 44 1312 208228  
Manchester: 44 1618 737717  
Marlow: 44 1628 897000

#### Hub Standards

IETF 802.3 Repeater MIB

IETF 802.3 Repeater MAU MIB

IEEE 802.3 Layer management  
for 10-Mbps repeater,  
section 19

IEEE 802.3 Layer management for  
10-Mbps Medium  
Attachment Units  
(MAUs), section 20

#### Others

RFC 783 TFTP (Trivial File  
Transfer Protocol)

VT100 Terminal interface  
protocol

#### Mounting

Includes hardware for mounting in a  
standard 19-inch rack/desk and wall  
mounting.

#### Ordering Information

##### Hubs

SuperStack II Hub 10  
12-Port TP Hub 3C16670A

SuperStack II Hub 10  
24-Port TP Hub 3C16671A

SuperStack II Hub 10  
Fiber Hub 3C16665A

SuperStack II Hub 10  
Telco Hub 3C16672A

SuperStack II Hub 10  
12-Port Managed Hub 3C16673B

SuperStack II Hub 10  
48-Port TP System/12  
(Includes 4 SuperStack II Hub 10  
12 port hubs, 3 expansion cables,  
and 1 SuperStack II Hub 10  
Management Module) 3C16674B

SuperStack II Hub 10  
48-Port TP System/24  
(Includes 2 SuperStack II Hub 10  
24 port hubs, 1 expansion cable,  
and 1 SuperStack II Hub 10  
Management Module) 3C16675B

#### Management and Bridge Modules

SuperStack II Hub 10  
Management Module 3C16630A

SuperStack II Hub 10  
Advanced RMON Module 3C16632  
LinkBuilder Bridge MicroModule  
3C16060

#### Backbone Connections

AUI Transceiver Interface  
Module (1 female AUI connector)  
3C1206-0

Fan-Out Transceiver  
Interface Module (1 male AUI  
connector) 3C1206-4

Fiber Optic Transceiver Interface  
Module (1 pair of ST connectors)  
3C1206-5

Coaxial Transceiver Interface  
Module (1 BNC connector)  
3C1206-6

Twisted Pair Transceiver  
Interface Module (1 RJ-45  
connector) 3C12063

Twisted Pair Transceiver  
10BASE-FB Interface Module  
(1 RJ-45 connector) 3C12067

#### Management Software

Transcend WorkGroup Manager for  
Windows 95 and NT 3C15000F

Transcend Enterprise Manager for  
Windows 95 and NT (includes  
Transcend WorkGroup Manager  
for Windows) 3C15010E

Transcend Enterprise Manager for  
UNIX (support for SunNet Manager,  
HP OpenView, and IBM NetView  
for AIX) 3C27850D

#### Accessories

Redundant Power System  
3C565047A

SuperStack II Uninterruptible  
Power System (US version)  
3C16010

SuperStack II Uninterruptible  
Power System  
(International version) 3C16011

SuperStack II Uninterruptible  
Power System (Japanese version)  
3C16012

Expansion Cable 3C625

To learn more about 3Com products, visit our World Wide Web site at <http://www.3com.com>.

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