3Com® SuperStack® II
Remote Access System 1500
The ideal solution for small- to medium-sized organizations

3Com®

The SuperStack II Remote Access System 1500 provides comprehensive remote access services for small- to medium-sized organizations and Internet service providers.

Key Benefits

Extensive range of supported functions in one platform. Provides lower equipment costs with integrated features such as dial-in/dial-out access and LAN-to-LAN routing via dialed or Frame Relay and leased line PPP connections. Support by Transcend Network Supervisor (TNS) integrates the RAS 1500 into 3Com's overall network management applications and allows your remote access products to be managed with the same application as your LAN products.

Easy to install. Features HTML browser-based Wizard-guided graphical user interface (GUI) and documentation.

Advanced ease-of-use features. NAT/PAT enable cost-effective shared ISP access. Full DHCP server, relay, and proxy functions provide simplified LAN access for local and remote users.

Secure access. Includes local authentication and works with RADIUS, Windows NT, or NetWare NOS servers for remote authentication.

Modular units. Allows easy addition of I/O cards and hot swapping of expansion or PRI access units.

Universal Connect™ technology. Provides industry-leading versatility by enabling the same digital port and line to handle both analog (serving up to V.90 56K speeds) and ISDN traffic.

Scalable. Combines ISDN (BRI and PRI) and analog connections ranging from 4 to 24 ports to grow with your needs.
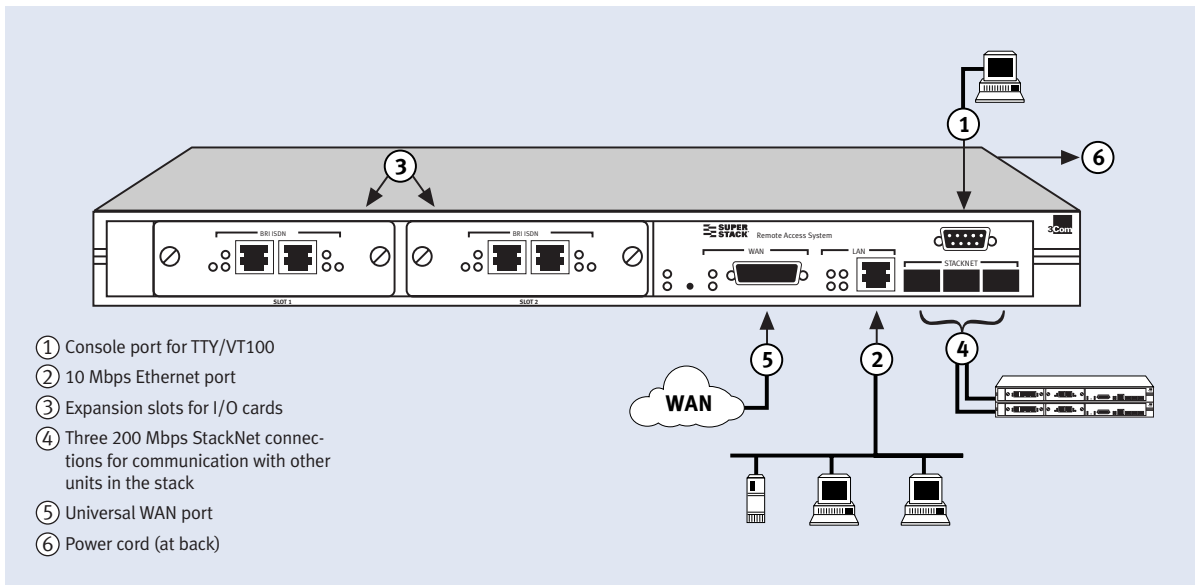
The 3Com® SuperStack® II Remote Access System (RAS) 1500 consists of three stackable components that provides multiprotocol remote access server and full function WAN router technology for small and medium sized businesses. With options to use high-performance V.34 modems and 64K-256K ISDN BRI cards, and ISDN PRI access unit with V.90 56K connectivity, providing customers with a complete remote access solution. The intelligent access technology automatically supports dial-in access for SOHOs (small offices/home offices) and mobile users, LAN-to-LAN connection for branch to headquarters data access, and shared dial-out services for LAN to ISP/Internet access. Consisting of a base router stack unit, expansion stack unit, multiple user-installable I/O cards, and ISDN PRI TI

and E1 access units, the SuperStack II Remote Access System 1500 offers unprecedented configuration flexibility. Each expansion unit has two option slots for easy installation of any combination of analog or ISDN BRI modules. StackNet FireWire™ connects the expansion and ISDN PRI access units to the base unit allowing them to serve as one network entity, which is managed as one device by a single network management application.

The SuperStack II Remote Access System 1500 leverages the award-winning expertise of both 3Com and the former U.S. Robotics to provide demanding users with enterprise-level function and performance at entry-level costs.

Remote Access

① Console port for TTY/VT100
② 10 Mbps Ethernet port
③ Expansion slots for I/O cards
④ Three 200 Mbps StackNet connections for communication with other units in the stack
⑤ Universal WAN port
⑥ Power cord (at back)

The flexible, stackable RAS 1500 base unit with integrated intelligent access.

SuperStack II Remote Access System 1500

Protect your hardware investment with 3Com's grow-as-you-need and mix-and-match solution. Unlike traditional, fixed-port stackable servers, the RAS 1500 is a stackable base unit that accepts expansion units that provide slots for additional plug-in I/O cards or ISDN PRI T1 or E1 connectivity. Choose from a 4-port V.34 analog modem, two 2-port Universal Connect™ digital ISDN-BRI I/O cards, or the ISDN PRI access unit (T1 or E1) with integrated digital modems. The Universal Connect digital modems allow users to access information at analog speeds up to 56 Kbps V.90 and at digital speeds up to 64 Kbps per line. An ISDN BRI port can handle a maximum of two analog calls (one per B channel), two 64 Kbps digital ISDN calls, or one Multilink PPP (MLPPP) bundled digital call at 128 Kbps. An ISDN PRI port can handle 23 B Channels with T1 and 30 B Channels with E1 ISDN PRI and 1 D Channel. MLPPP and bandwidth-on-demand automatically combine multiple ports across the stack to offer up to 256 Kbps of throughput to handle peak traffic demands. MLPPP will also work with analog connections. The base unit incorporates a universal serial WAN port for Frame Relay or leased-line PPP connectivity speeds up to 2 Mbps (E1) and a 10BASE-T LAN port for network backbone connectivity.

When you need to expand capacity as your requirements grow, you can easily add the RAS 1500 expansion unit with full integration into the base unit via the included StackNet cable (IEEE 1394 FireWire). The expansion unit also accepts a combination of analog and ISDN-BRI I/O cards. Two expansion units can be connected via StackNet cable to a base unit; one T1 or E1 ISDN PRI access unit equipped with 23 (U.S.) and 30 (Europe and Asia) integrated Universal Connect modems can be connected to the base unit. (Note: Only the digital ISDN I/O cards and ISDN PRI access units support all call types.)

Each RAS 1500 base and expansion unit contains multiple Power PC RISC processors—as new units are added, processing power is added to support these additional users. A fully integrated HTML browser-based GUI configuration utility with a built-in Wizard, as well as an intuitive console interface are incorporated for user-friendly local and remote manageability.

Network Address Translation/Port Address Translation (NAT/PAT)

With NAT/PAT, multiple LAN-based users, each with their own IP address, can access the Internet or corporate LAN through a single public address (PAT) or many users can share a small public subnet (NAT). NAT/PAT translates these multiple private IP addresses to a single public address or public subnet that is recognized by the Internet service provider. This feature can reduce operating charges and simplify Internet access for companies.

Dynamic Host Configuration Protocol (DHCP)

The RAS 1500 can serve as the central DHCP server for both remote and LAN-based users. In addition, it can "proxy" or "relay" IP address requests to another central server. This feature simplifies network administration and enhances the mobility of both remote and local users.

Caller ID (CLID), Call Back (CB)

In addition to "fixed" and "roaming" call back, the RAS 1500 adds more security and the option to reduce phone charges for remote sites. Incoming ISDN calls (BRI and PRI) can be "screened" by the caller ID information presented via the D channel. If the caller is recognized, the call is dropped and automatically redialed, thus insuring that the appropriate site is called back and the initial call from the remote site is not charged by the phone company (use this feature in router-to-router connections with products such as the OfficeConnect® ISDN LAN modem, the OfficeConnect® Remote 5x1 router, and the OfficeConnect® NETBuilder® 10 IP/IPX router).

SuperStack® II Remote Access System 1500 Feature Matrix

Feature	RAS 1500 Base Unit	RAS 1500 Expansion Unit	4-Port Analog I/O V.34 Card*	2-Port ISDN BRI I/O Card "U" and "S/T" versions	PRI T1 & E1 Access Unit
Processor	2 Power PC RISC	2 Power PC RISC	2 HiPer™ technology DSP	2 HiPer technology DSP	16 HiPer technology DSP (E1) 4 Power PC RISC
Memory	8 MB Flash expandable to 16 MB, 28 MB DRAM expandable to 72 MB	8 MB Flash expandable to 16 MB, 28 MB DRAM expandable to 72 MB	N/A	N/A	8 MB Flash expandable to 16 MB, 32 MB DRAM expandable to 136 MB
LAN interface	10BASE-T Ethernet 100 m maximum distance	Via FireWire to base unit	N/A	N/A	Via FireWire to base unit
Console port	RS-232 DTE configuration; cable and DB-25 to DB-9 converter included	Via FireWire to base unit	N/A	N/A	Via FireWire to base unit
Ports	Slots for 2 I/O cards	Slots for 2 I/O cards	4 RJ-11, V.34 integrated modems	2 RJ-45, ISDN BRI S/T or U integrated Universal Connect™ (analog and digital capable)	1 RJ-45 PRI T1 or E1 with 23/30 integrated Universal Connect modems
Interconnect	3 FireWire (IEEE 1394); 200 Mbps connectors	1 FireWire (IEEE 1394); 200 Mbps connector, one cable included	N/A	N/A	1 FireWire (IEEE 1394) 200 Mbps connectors, one cable included
WAN interface	FlexWan, 60-pin, 56 Kbps to 2 Mbps	Via FireWire to base unit	N/A	N/A	Via FireWire to base unit
WAN protocol/ DTE interface support	Frame Relay, leased line PPP, V.35, X.21	Via base unit	N/A	N/A	Via FireWire to base unit
Dimensions	35.6 cm D x 43.2 cm W x 4.4 cm H (14 in D x 17 in W x 1.75 in H)	35.6 cm D x 43.2 cm W x 4.4 cm H (14 in D x 17 in W x 1.75 in H)	26.7 cm D x 8.9 cm W x 3.2 cm H (10.5 in D x 3.5 in W x 1.25 in H)	26.7 cm D x 8.9 cm W x 3.2 cm H (10.5 in D x 3.5 in W x 1.25 in H)	35.6 cm D x 43.2 cm W x 4.4 cm H (14 in D x 17 in W x 1.75 in H)
Weight	4.8 kg (10.5 lb)	4.4 kg. (9.8 lb)	.7 kg (1.6 lb)	.7 kg (1.6 lb)	4.5 kg (9.9 lb)
Accessories	Rack mount kit with cable control, software and documentation on CD, console cable	Rack mount kit with cable control and FireWire cable	4 standard 10 ft phone cables RJ-11	2 twisted pair 10 ft cables RJ-45	Rack mount kit with cable control guides, FireWire cable, software and documentation on CD
Shipping container	47 cm D x 53.3 cm W x 17.3 cm H (18.5 in D x 21 in W x 6.8 in H)	47 cm D x 53.3 cm W x 17.3 cm H (18.5 in D x 21 in W x 6.8 in H)	35.6 cm D x 27.9 cm W x 10.9 cm H (14 in D x 11 in W x 4.3 in H)	35.6 cm D x 27.9 cm W x 10.9 cm H (14 in D x 11 in W x 4.3 in H)	47 cm D x 53.3 cm W x 17.3 cm H (18.5 in D x 21 in W x 6.8 in H)
Shipping container weight	6.9 kg (15.2 lb)	6.4 kg (14.2 lb)	2 kg (4.5 lb)	2 kg (4.5 lb)	6.9 kg (15.2 lb)
Operating temperature	0° to 40°C (32° to 107.6°F)	0° to 40°C (32° to 107.6°F)	0° to 40°C (32° to 107.6°F)	0° to 40°C (32° to 107.6°F)	0° to 40°C (32° to 107.6°F)
Power supply	70 W, rated at 1.5 A at 100 VAC; 1 A at 240 VAC, 90 VAC to 264 VAC; frequency 47 - 63	50 W, rated at 1.5 A at 100 VAC; 1 A at 240 VAC, 90 VAC to 264 VAC; frequency 47 - 63	N/A	N/A	70 W, rated at 1.5 A at 100 VAC; 1 A at 240 VAC, 90 VAC to 264 VAC; frequency 47 - 63
Dial-up services	IP, IPX, V.110, V.120, V.90 56K	IP, IPX, V.110, V.120, V.90 56K	N/A	N/A	IP, IPX, V.110, V.120, V.90 56K
Terminal dial-in services	SLIP/CSLP, Telnet/Rlogin client/ClearTCP client, pass-through login to default hosts, dial back, DNS	SLIP/CSLP, Telnet/Rlogin client/ClearTCP client, pass-through login to default hosts, dial back, DNS	N/A	N/A	SLIP/CSLP, Telnet/Rlogin client/ClearTCP client, pass-through login to default hosts, dial back, DNS
Dial-out (modem pool) services	Telnet, ClearTCP, DialOut/IP (tactical software) send/receive scripts	Telnet, ClearTCP, DialOut/IP Windows 95-98 and NT, send/receive scripts	N/A	N/A	Telnet, ClearTCP, DialOut/IP (tactical software) send/receive scripts
Modulation	V.25, V.22, V.32, V.32terbo, V.34, V.90 56K	ISDN BRI, PRI V.25, V.22, V.32, V.32terbo, V.34, V.90 56K	V.25, V.22, V.32, V.32terbo, V.34	ISDN BRI, V.25, V.22, V.32, V.32terbo, V.34, V.90 56K	V.25, V.22, V.32, V.32terbo, V.34, V.90 56K
LAN-to-LAN routing and bridging	IP, IPX, bridging (802.1d), bandwidth-on-demand, spoofing, MLPPP, extensive filtering	Via base unit	N/A	N/A	Via base unit
Frame Relay	IETF RFC 1490, LMI support, CCITT Q.922/ANSI T1.618, FRF.1 1A, FRF.3 1A	Via base unit	N/A	N/A	Via base unit
Leased line	PPP	Via base unit	Via base unit	Via base unit	Via base unit
Security	User name, password, callback (fixed, and CLID call back), CHAP/PAP, RADIUS, DHCP, DNS, 3rd party external and LAN-based external network filtering, NOS	Via base unit	N/A	N/A	Via base unit
Compression	PPP, Microsoft, NOS, Ascend, VI	Via base unit	N/A	N/A	Via base unit
Management	Via in-band network connection and remote access; HTML browser-based configuration Wizard; console port and Telnet TNS; SNMPv1 MIB II	Via FireWire to base unit	Via base unit	Via base unit	Via base unit

*North America and other selected countries. Contact 3Com for details.

Specifications

Standards Compliance Regulatory and Safety Requirements

FCC Part 15, Class A

EMC Directive (CE), Class A

UL 1950 II ed.

CSA 950

IEC 950

FCC Part 68

Industry Canada CS-03

CTR 3, CTR 4

ETS 300 047, ETS 300 046

CTR2/NET2

ITU-T Standards

1.430: ISDN BRI Layer 1

Q.921: ISDN BRI Layer 2

Q.931: ISDN BRI Layer 3

Categorize as a Class 1 LED Device

Certifications and Approvals

The RAS 1500 with ISDN BRI cards has been certified for shipment in 55-plus countries worldwide. The 4 port analog card and ISDN PRI T1 access unit have been certified for shipment in North America and a few other countries. The ISDN BRI "S/T" card and ISDN PRI E1 access unit are Euro-ISDN compliant and have been certified for shipment in Europe and a few other countries. Check with your local 3Com office or our Web site for the latest list of countries where the RAS 1500 can be sold.
http://www.3Com.com/support/ras1500/index.html

WAN Approvals

ITU-T V.35, V.36, V.24, X.21

Warranty

Includes:

• Five-year limited warranty

• 90-day free phone support

• Free software updates

YEAR 2000 COMPLIANT

Visit: http://www.3Com.com/products/Y2000.html

Ordering Information

SuperStack II Remote Access System (RAS) 1500 Base Unit
3C421600-xx*

SuperStack II Remote Access System 1500 Expansion Unit
3C421670-xx*

SuperStack II Remote Access System 1500 V.34 Analog Card
3C426130

SuperStack II Remote Access System 1500 ISDN-BRI "U" Card
3C421800

SuperStack II Remote Access System 1500 ISDN-BRI "S/T" Card
3C421810

SuperStack II Remote Access System PRI T1 Access Unit with 23 internal modems
3C433270-xx

SuperStack II Remote Access System 1500 PRI E1 Access Unit with 30 internal modems
3C433279-xx

16 MB SIMM Upgrade Kit required for upgrading Version 1.0 Base Units
3C436221-MEM

X.21 Universal WAN Access Cable
3C423130

V.35 Universal WAN Access Cable
3C423140

*For worldwide ordering, add the appropriate country code suffix to the model number for the base unit and PRI access expansion unit to ensure the appropriate power cord is included. For US: Canada, Korea, Taiwan, U.S.; UK: Hong Kong, Ireland, Malaysia, Singapore, United Kingdom; ME: Austria, Belgium, France, Germany, Greece, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden; DK: Denmark; IT: Italy; CH: Liechtenstein, Switzerland; JP: Japan; AU: Australia, New Zealand

All components and accessories must be ordered separately.

The RAS 1500 is also supported by the same 3Com network management application that manages LAN products. Transcend Network Supervisor (TNS) provides powerful yet easy-to-use network management tuned to the needs of small to medium enterprises. Automated operations and intelligent defaults assist inexperienced network managers while advanced features are available for more experienced staff. An intuitive user interface focuses on the tasks and information all managers need in order to take control of their network. A discovery wizard finds IP devices and links on the network up to a maximum of 500 devices. After discovery the network structure is automatically mapped to provide a graphical display of devices and connections. Network icons are created and can be 'clicked' to open the new RAS 1500 browser based configurator.

TNS is supplied in a free evaluation version and is available for download from the web (http://www.3com.com/tns)