



Solutions for Growing Businesses

The Grow-As-You-Go Remote Access System



Product Guide

SuperStack II RAS 1500

- The SuperStack II RAS 1500 Remote Access System gives you flexibility at every level—incremental capacity, configurable module slots for digital or analog users, variable connection speeds, and scalable processing power.



The SuperStack® II Remote Access System (RAS) 1500 gives growing businesses unprecedented flexibility to add and change connectivity options to support dynamic remote access needs.

With the explosive interest in the Internet, an increasingly mobile workforce, and the popularity of telecommuting, remote access demands have become difficult to predict. As a growing business, how can you plan your equipment purchases with confidence? Do you know exactly what your dial-in user population will look like in a year? In two years? Do you know precisely how many users will need access to your corporate LAN, the Internet, or other remote offices? Do you know how many of your users will have modems, how fast their modems will be, or how many will install ISDN lines?

If you don't know the answers to these questions, don't worry. 3Com has developed a new breed of remote access servers for small- and medium-sized companies that give you modularity at every level. As your remote access needs change, the SuperStack® II RAS 1500 can also change to keep pace with your business.

It's all about investment protection—buying one solution that can adapt to the needs of a growing business no matter which modem speeds your users prefer, what resources you plan to add to the network in the future, how many users migrate to ISDN or the new high-speed 56 Kbps (V.90 and x2™ technology) analog technology, or how many dial-in users you add over time.

With the new SuperStack II RAS 1500, you don't have to buy resources you don't need or settle for fixed configurations you can't use.

The Grow-As-You-Go Solution

The SuperStack II RAS 1500 uses an entirely different design from conventional fixed-port stackable or modular chassis-based remote access servers.

The core of the SuperStack II RAS 1500 is a base unit that combines the features of several LAN and WAN devices (WAN port, LAN port, digital and analog modules, and router) into one—access server. The remote access units are completely configurable for either analog or digital port modules. In addition, the analog connections are autoconfigured to support any modem speed, and the digital connections feature Universal Connect™ technology to accept both analog and digital calls on the same port. For dial-out service, the server can act as a modem and ISDN terminal adapter pool for outbound modem and ISDN calls.

Capacity increases can be added incrementally as your business grows. A 4-port increase is achieved by adding an I/O card. For larger increases, simply add low-cost expansion units that don't duplicate the router and connection resources of the

base unit. Dual RISC processors on each expansion unit scale power and capacity at the same time. Put it all together with sophisticated bandwidth management and spoofing features that save on monthly line costs, and you have a solution that grows as you go—the SuperStack II RAS 1500.

One Device Replaces Many

Why buy three or four different boxes when one streamlined, integrated solution will do? The SuperStack II RAS 1500 integrates multiple WAN, LAN, and remote access routing devices into one low-cost device, including:

- A terminal server
- A remote access server
- A multiprotocol router
- Integrated analog and digital modems
- A universal WAN port
- A 10BASE-T LAN port

The SuperStack II RAS 1500 gives you one box, yet many choices. We've added flexibility at every level. Where other remote access servers predetermine fixed-port types and configurations, the SuperStack II RAS 1500 uses modularity and software intelligence to adapt to your needs.

Add Capacity Without Duplicating Resources

Conventional remote access servers add capacity by stacking identical units together. The result is a costly solution that adds ports but duplicates expensive resources, and because you're forced to expand in large increments, you often have to buy more ports than you need.

3Com has developed a new remote access architecture, FlexStack, that is far more cost effective and practical for small businesses facing increased growth. We start with a base unit that integrates the main components of the server. When the time comes to add ports, you buy expansion units that cost far less than buying a second complete concentrator equipped with router, WAN ports, and more. Even better, all the units are managed as a single entity through the network management application.

What's more, the expansion units are connected with 3Com's StackNet cable. Based on the firewire industry standard, StackNet is essentially a full backplane on a cable. The result is a connection that supports up to 200 Mbps full-duplex transmission across the base and expansion units, where multiple units function as one efficient, responsive device with no bottlenecks or performance degradation as you add users.

StackNet offers complete hot swappability. You can add units, or take an expansion unit from the stack for service, without disrupting your existing dial-in users on other units. Hot swappability is a feature normally found on high-end systems, but 3Com's innovative StackNet makes it available on the SuperStack II RAS 1500.

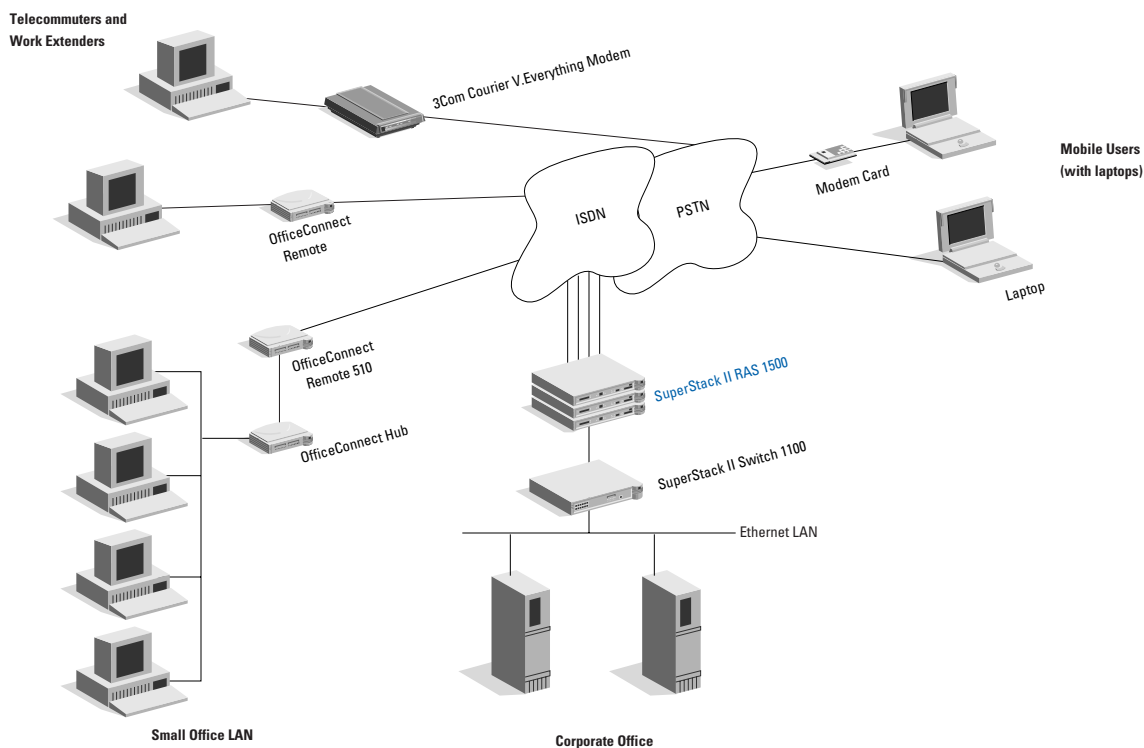
Scale Processing Power with Growth

As you stack units and add capacity, you may be concerned with degrading performance. Typically, when you add capacity without adding processing power, that's what happens. With the 3Com SuperStack II RAS 1500, the base unit and each expansion unit have their own dual Power PC RISC processors, so performance scales perfectly with capacity—every time. One processor is used for modem management while the second processor handles all the routing tasks. Because the two jobs are handled separately by two different processors, users are always assured of fast connect times no matter how many calls are being routed through the remote access server.

Match Port Types to User Population

With transmission speeds and dial-in technologies changing constantly, you can't afford to buy a remote access server that comes with fixed analog or digital ports. That's a recipe for obsolescence.

For the first time, customers have a new concept in remote access servers—modular slots that accept either analog or digital ports. So you can pick and choose ports to match user profiles.



Enjoy Flexible Universal Connectivity

It's impossible to predict which dial-in technologies your dial-in users will have next week, much less next year. For the maximum flexibility in analog connectivity, the SuperStack II RAS 1500 uses V.Everything™ technology. The V.Everything modem port accepts and adjusts for incoming speeds with no intervention or preconfiguration required.

If some of your remote users prefer ISDN, there is equal flexibility on the digital port side with Universal Connect technology. The Universal Connect port accepts both digital and analog calls with V.Everything versatility as well as 3Com's x2 56K and V. 90, so if a digital session ends and an analog call comes in, the Universal Connect port will accept the call. For additional protection and flexibility, the RAS 1500 uses Digital Signal Processor (DSP) modem technology that allows software upgrades.

Take Advantage of One-Number Access

A number of small-business installations have a dedicated phone line connected to a dedicated modem to provide access to applications on a specific server or PC. As these businesses grow and increase the number of remote users, applications, and servers, this design becomes costly. Moving these separate servers to a shared or switched network and using a RAS 1500 for remote access will greatly reduce network complexity and operational costs.

In addition to modularity, the SuperStack II RAS 1500 incorporates advanced software intelligence to maximize your network resources, make life easier for remote users, and reduce the burden of support and maintenance for your staff. For example, you can provide one number to all your analog and ISDN dial-in users and the SuperStack II RAS 1500 can still route the calls to different servers or resources.



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Using one number for multiple resources allows you to bring new resources online without the usual administrative hassles of setting up new telephone numbers and access lines.

Save Money with Built-in Bandwidth Management

The software intelligence of the SuperStack II RAS 1500 can help you save on your monthly telephone bills, because it incorporates both bandwidth-on-demand and network spoofing. If an ISDN line is idle, the server will drop the line to save money and automatically bring the line back up when it sees data coming through.

In addition to being able to drop and re-connect lines as data traffic fluctuates, the RAS 1500 uses MLPPP to allow multiple lines to be trunked or bundled together to aggregate their bandwidth to handle peak requirements. This type of solution is often much more cost effective than providing a dedicated leased line just for peak traffic demands.

That's the intelligent way to serve a growing and changing base of remote access users without spending money or using resources unnecessarily.

Protect Your Network with Strong Security Features

The SuperStack II RAS 1500 is flexible, easy to use, and offers strong security features, which include:

- Local user authentication (PAP, CHAP)
- External RADIUS user authentication
- External Windows-NT or Novell user authentication
- Fixed and roaming callback

Plus, it has extensive packet filtering and firewall features, which can be applied on either a per-port or per-user basis. The firewall operates on both inbound and outbound calls to protect your LAN while connecting to ISPs.

The SuperStack II Remote Access System 1500 is designed to cost effectively meet your remote access requirements today, while providing the flexibility to expand its capability to serve your business demands in the future.

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

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