

# INTERNET ACCESS

...simplicity not complexity...  
...simplicity not comple

## T1

...IP...PPP...IP...PPP...RADIUS...  
...IP...PPP...RADIUS...

## E1

...E1...T1...T1...PRI...  
...T1...E1...PRI...

## PRI

...internet access...network access...  
...internet access...network a

# NETWORK ACCESS

...K56FLEX™/V.90...concentration...  
...K56FLEX™/V.90...concentration

## Internal or RADIUS AUTHENTICATION

The 2800 RAS provides two convenient authentication options: an internal user database and connection to a RADIUS server. Here's how it works: Once a user connects to the 2800, it will obtain the username and password of the calling party\*. The 2800 will then process the user's access request by either comparing the user to its own internal database (see the screen at right) or querying a RADIUS server (see the illustration below)

Patton Electronics Home Page

**AUTHENTICATION** Model 2800

**Validation**

Validation: staticThenRadius(4)

Host Address: 208.197.109.76

Secondary Host Address: 207.68.156.52

Host Port: 1645

Timeout: 5

Retries: 5

Secret: frankencelery

NAS Identifier:

Accounting Address: 131.84.1.60

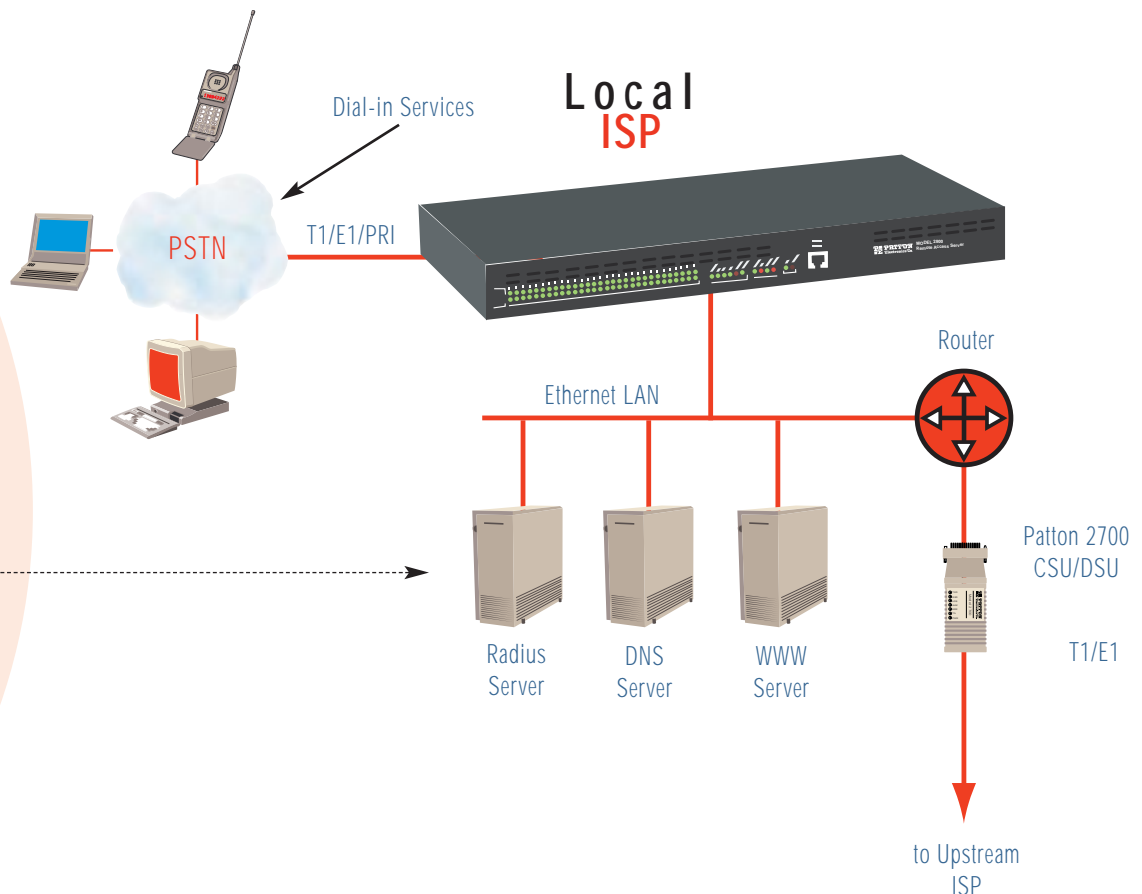
Secondary Accounting Address: 198.41.8.7

Accounting Port: 1646

Accounting Enable: enableAccounting(1)

**2800 CONFIGURATION MENU**

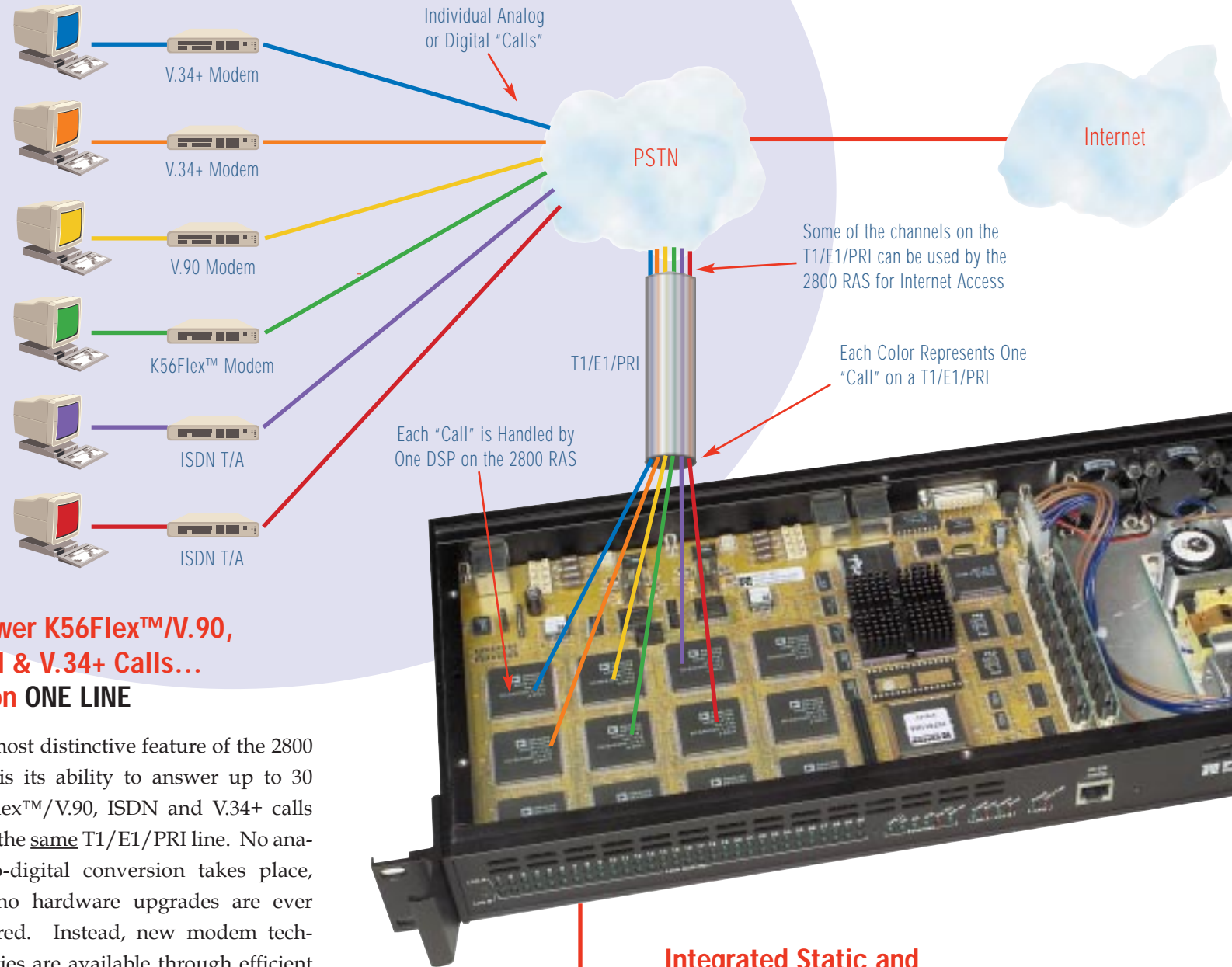
- [HOME](#)
- [ALL VALUES](#)
- [Authentication](#)
- [Dial In](#)
- [Dial Out](#)
- [Drop and Insert](#)
- [DSP](#)
- [Ethernet](#)
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\*Note: The 2800 obtains username and password information through a login prompt or through PPP authentication using PAP (Password Authentication Protocol) or CHAP (Challenge Handshake Authentication Protocol).

# The Patton 2800 RAS

The Patton 2800 Remote Access Server provides dial-in access for both analog and digital modem users. The 2800 RAS incorporates Channel Bank, Modem (V.34+, K56Flex™/V.90 and ISDN), Terminal Server and Router functions in a single, compact, manageable package.

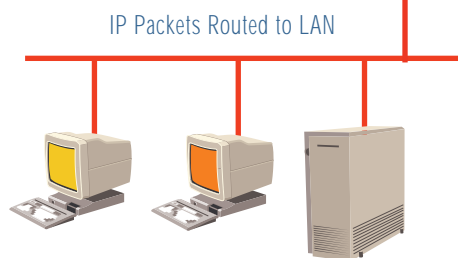


**Answer K56Flex™/V.90, ISDN & V.34+ Calls... all on ONE LINE**

The most distinctive feature of the 2800 RAS is its ability to answer up to 30 K56Flex™/V.90, ISDN and V.34+ calls from the same T1/E1/PRI line. No analog-to-digital conversion takes place, and no hardware upgrades are ever required. Instead, new modem technologies are available through efficient software upgrade, allowing you to continue providing optimum service-today and tomorrow!

## Integrated Static and Dynamic ROUTING

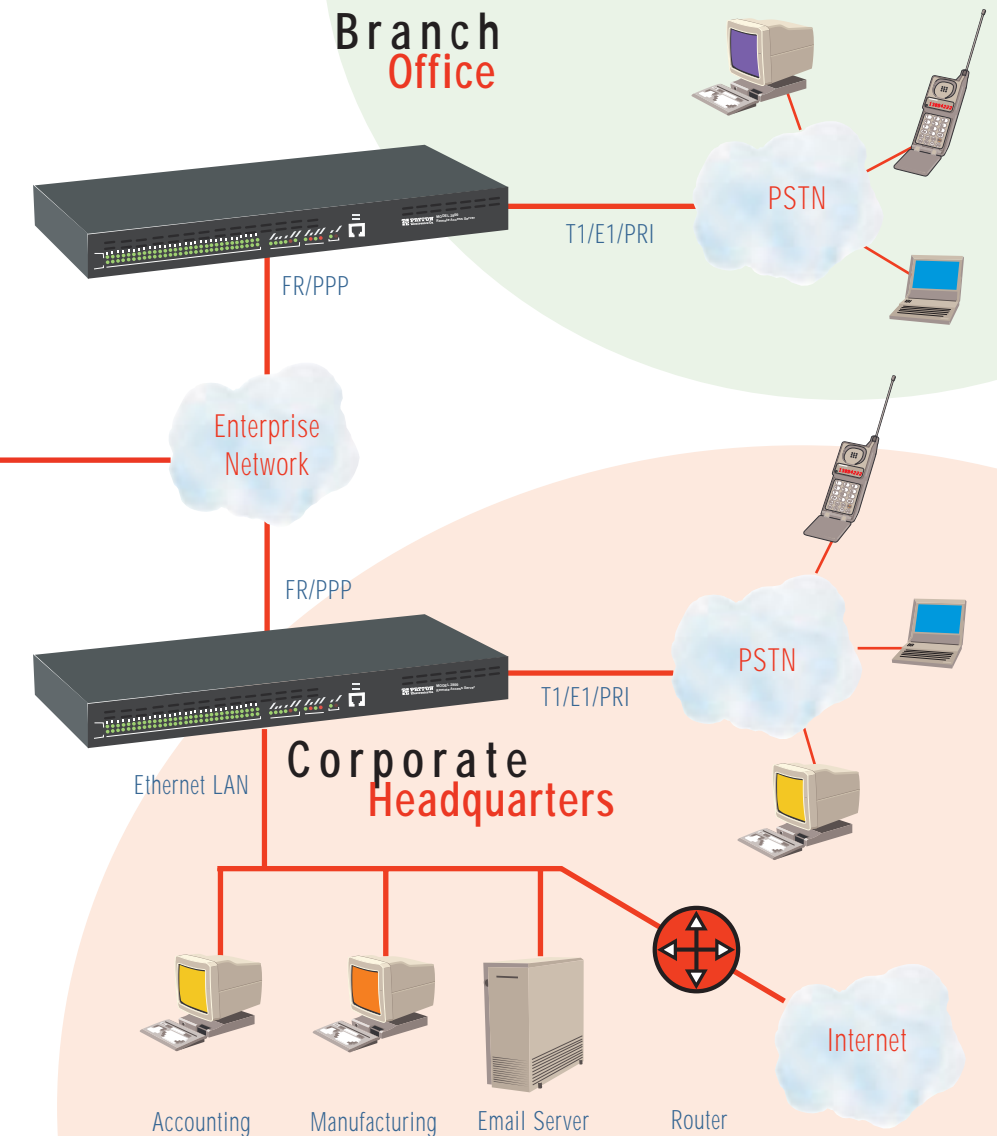
The 2800 RAS automatically routes IP packets to the "next hop" through the local Ethernet port or through the 2800's second T1/E1 port. Routes can be statically or dynamically configured using RIP (Routing Information Protocol) or RIP version 2.



# Connects to Routers, Switches and PABXs

**PoP UPLINK with Frame Relay or PPP**

Service providers with existing router or Frame Relay backbones can provide dial-up service at a remote PoP (Point-of-Presence). Simply connect the 2800 to a router using PPP--or to a switch using Frame Relay--and begin offering service! This capability allows the ISP to generate increased revenue by providing local service to customers, giving them substantial savings over the alternative of long-distance telecommuting.



**Need a VOICE & DATA Solution? Use the 2800's Drop & Insert Feature!**

A typical remote office has three requirements: dial-in remote access, Internet access and two-way voice communication. With our drop & insert feature, all three requirements can be met by one 2800 RAS. And what's more, the 2800 can meet all three requirements through a single T1/E1 line--resulting in potentially significant savings in telco service charges!

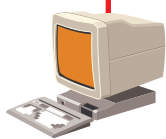
# Configuration & Management

## NETWORK MANAGEMENT the "WWW" Way

For familiar and easy-to-use configuration, the 2800 RAS has a built-in HTTP server. This server allows any standard WWW browser to configure and monitor the 2800 RAS. Obtaining information is as simple as clicking on a link. Changes are as effortless as submitting a request ("Wow, this is great!). All 2800 subsystems (e.g. Authentication, IP, T1/E1 link) are presented in an intuitive manner, permitting quick access to important information. For existing network management topologies, the 2800 can also be configured, controlled and managed using SNMP. A sample 2800 HTTP management screen is shown below.



Local RS-232  
Configuration Port



## FRONT PANEL Tells You What's Happening

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**PATTON**  
Electronics Co.

Patton Electronics Company Model 2800  
Programmable Access Router Software  
Revision 1.4  
Administration

**2800 CONFIGURATION MENU**

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**STATUS OF Model 2800**

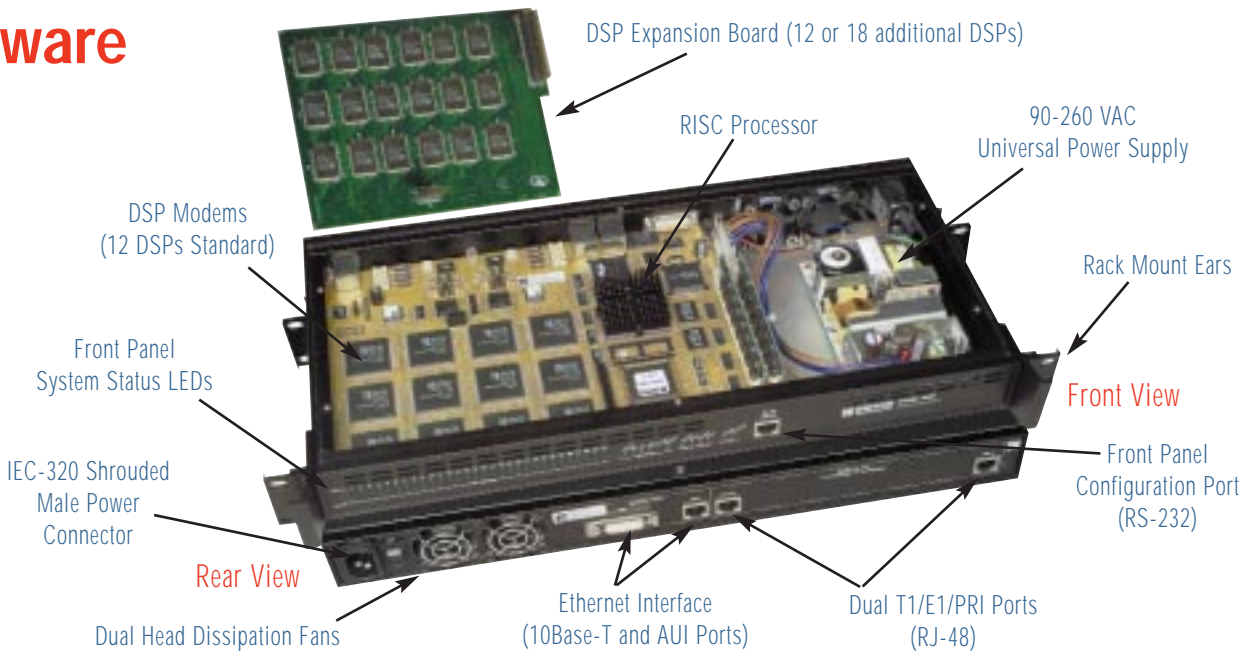
Active Calls:	2
Peak Active Calls:	8
Total Calls:	225
% CPU Idle:	91
DSPs Not Working:	0
Total DRAM Detected:	8388608
Running Since Last Boot:	44:43:31.31 hours

**IMMEDIATE ACTIONS**

- Record Current Configuration
- Hard Reset
- Set Factory Default Configuration

Remote network management is great. But what if you're up close and personal with the 2800 RAS? No problem. Numerous front panel LED indicators present 2800 status information at a glance: call status (e.g. ringing, on-line, available), T1/E1/PRI status and Ethernet status are all monitored in plain view. In addition, an out-of-band RS-232 control port allows convenient configuration from a laptop, PC or local terminal.

# 2800 Hardware



# 2800 Software

## Modem Services

Analog and Digital Modem Services  
Supports up to 30 concurrent dial-up connections, either analog (V.34+) or digital (K56Flex™/V.90/ISDN)  
Modem modulations: K56Flex™, V.34 Annex 12, V.34, V.8, V.32bis, V.32, V.22, V.22bis, V.23, V.21, Bell 212A, Bell 103, Bell 202, EIA PN-2330  
Software sync/async receiver/transmitter for V.14  
V.42/V.42bis error correction and compression

## Protocol Services

TCP/IP Suite with extensive protocol statistics  
ICMP/TFTP/FTP  
Ethernet ARP, Proxy ARP and RARP protocols  
Point-to-Point protocol (PPP)  
SLIP protocol  
Van Jacobson TCP header compression PPP address and protocol compression  
RADIUS authentication and accounting, with support for primary and secondary servers  
Internal Call History/Progress and Statistics  
RIP and RIPv2 dynamic route distribution  
User configurable static routes  
TCP clear connection

## Management Services

Out-of-Band RS-232 configuration port for management and control  
Remote software upgrade via FTP to internal FLASH memory  
SNMP version 1 configuration management  
Support of MIB-II (RFC-1213), DS1 MIB (RFC-1406), RIPv2 MIB (RFC-1389), Ethernet MIB (RFC-1643) and Patton's enterprise MIB  
System logging to configuration port, non-volatile FLASH, volatile RAM, SYSLOG Daemon and SNMP trap  
RADIUS accounting  
Dial-in dynamic IP address pool management  
User configurable login prompts and banners  
Built-in HTTP server for complete configuration and control using a standard Web browser

## Security

Internal database of over 100 static users  
RADIUS client supporting dual authorization and accounting servers  
Framed connections: PPP, PAP & CHAP  
Unframed connections: User name login and password  
Dual SNMP/HTTP passwords for monitor and superuser access levels

**US Headquarters** • Patton Electronics Company • 7622 Rickenbacker Drive • Gaithersburg, MD 20879

Tel: (+301) 975-1000 • Fax: (+301) 869-9293 • Email: [sales@patton.com](mailto:sales@patton.com) • Web: <http://www.patton.com>

**Western Europe Office** • Tel: (+44) 1256-381840 • Fax: (+44) 1256-381885

**Asia/Pacific Office** • Tel: (+852) 2332-0646 • Fax: (+852) 2574-7803

**Middle East/North Africa Office** • Tel: (+961 3) 397197 • Fax: (+961 3) 397218

**Latin America/Caribbean Office** • Tel: (+301) 975-1000 • Fax: (+301) 869-9293