NETLINK™ ACCESS PRODUCTS

The Patton 2800 Remote Access Server provides 30, 24 or 12 dial access ports, each supporting V.90, K56Flex™ , ISDN and V.34+ connections.

Remote Access Server

Patton 2800 RAS

The Patton 2800 RAS connects 12, 24, or 30 dial-in modem users to the Internet, Extranets, Corporate Intranets or IP LANs using Ethernet, Frame Relay, or PPP. The 2800 RAS can be used in ISPs, competitive service providers, and corporate network environments simply by selecting software options.

For Service Providers and Corporate Network Planners, the 2800 permits linear growth—one T1/E1/PRI line at a time. This enables the ISP to match capital equipment costs to dial-up revenues. As more dial-in ports are required, additional RAS units can be added. All ports support any modem call:V.90, K56Flex™, ISDN, V.34+, and legacy modems. No additional software or upgrades are required.

High Density DSP-Based Architecture

1U-high platform provides 30, 24, or 12 ports for dial-up users

V.90/K56Flex™, ISDN & V.34+ Support

All types of modems are supported on dedicated processors

Frame Relay & PPP/HDLC Support

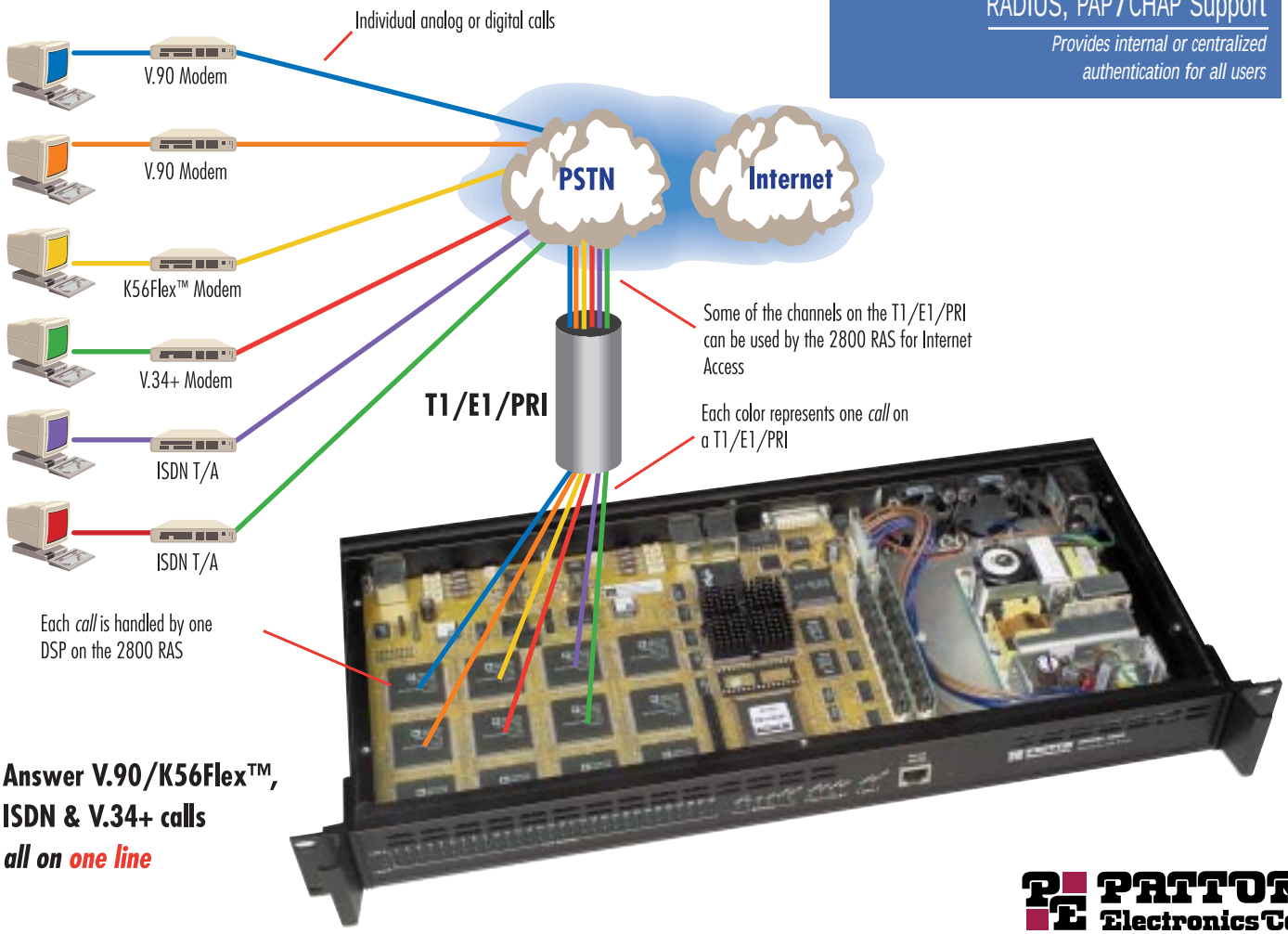
Network uplink can be to an FR switch or router for high speed connectivity

SNMP/HTTP Network Management

Enables operators with HP OpenView™ workstations and/or simple PCs with a browser to configure, control, and manage the 2800

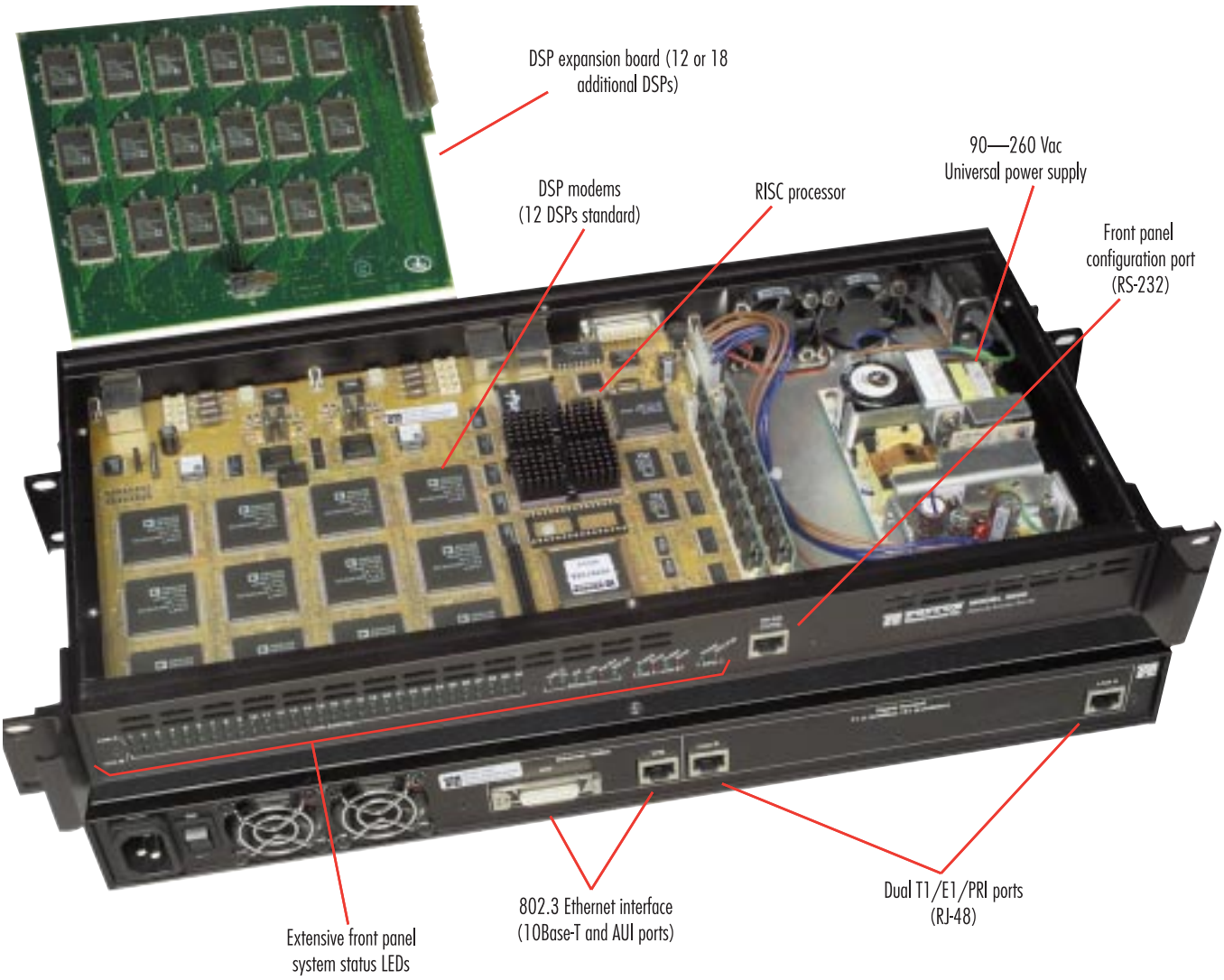
RADIUS, PAP/CHAP Support

Provides internal or centralized authentication for all users



Answer V.90/K56Flex™, ISDN & V.34+ calls *all on one line*

PATTON Electronics Co.



Patton 2800 Remote Access Server

Product Overview

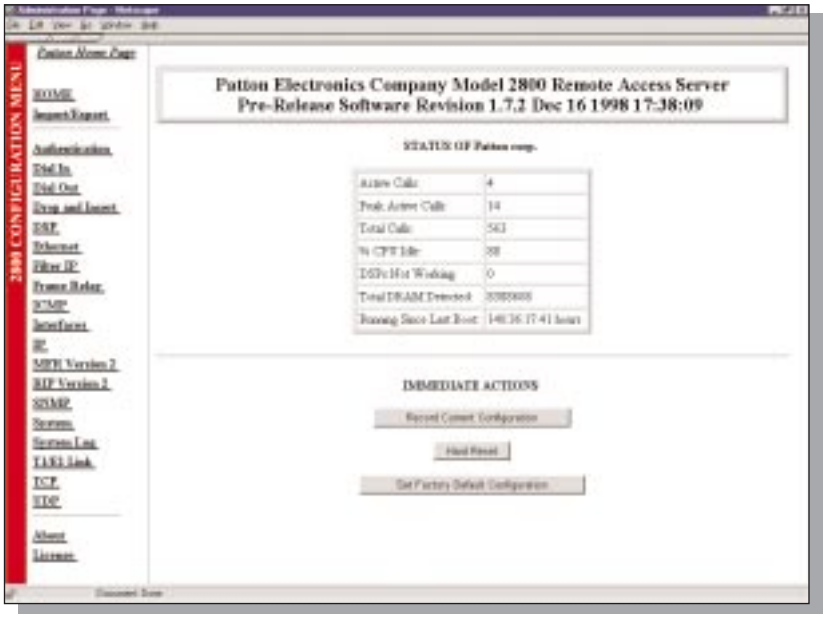
The 2800 RAS answers both analog *and* digital calls entering on the same PSTN-connected port using one phone number. Each call is processed by a single DSP on the board, with the number of connections processed determined by the model number (see the table on page 4). To expand the 2800 to a full T1 or E1, a 12-port or 18-port daughter card can be added to the existing 12 ports on the motherboard. The unit's architecture processes 12, 24, or 30 calls with consistent throughput and linear capacity of all elements.

The 2800 Remote Access Server (2800 RAS) can answer a maximum of 30 dial-in modem calls from V.90, K56Flex™, ISDN, V.34+ and legacy modems–all through its built-in T1/E1/PRI port. When calls are received, different modulations are detected and data is pre-processed by the individual 12, 24 or 30 digital signal processors on-board the 2800 hardware platform. Once data is pre-processed, the IP information is routed by an independent CPU (an Intel i960 RISC processor), which is connected to a FR/PPP WAN port or a 10Mbps Ethernet port. This unique distributed architecture ensures that the 2800 RAS can scale linearly to meet the demanding requirements of any application, including: Call Centers, Web advertising, ISP access and traditional Corporate remote access.

SNMP/HTTP Management

The 2800 RAS can be managed from a variety of local and remote environments simultaneously. The 2800 has a built-in SNMP agent, an embedded HTTP web server, or TELNET management interface–provided by an RS232 console port, Ethernet port, or through any dial-in port. Operators can configure, control, monitor or receive status from any interface.

The built-in HTTP Web server allows each management screen to appear as a Web page to the operator. Now, with a standard Web browser, an operator can configure and monitor the 2800 from any computer, anywhere in the world.

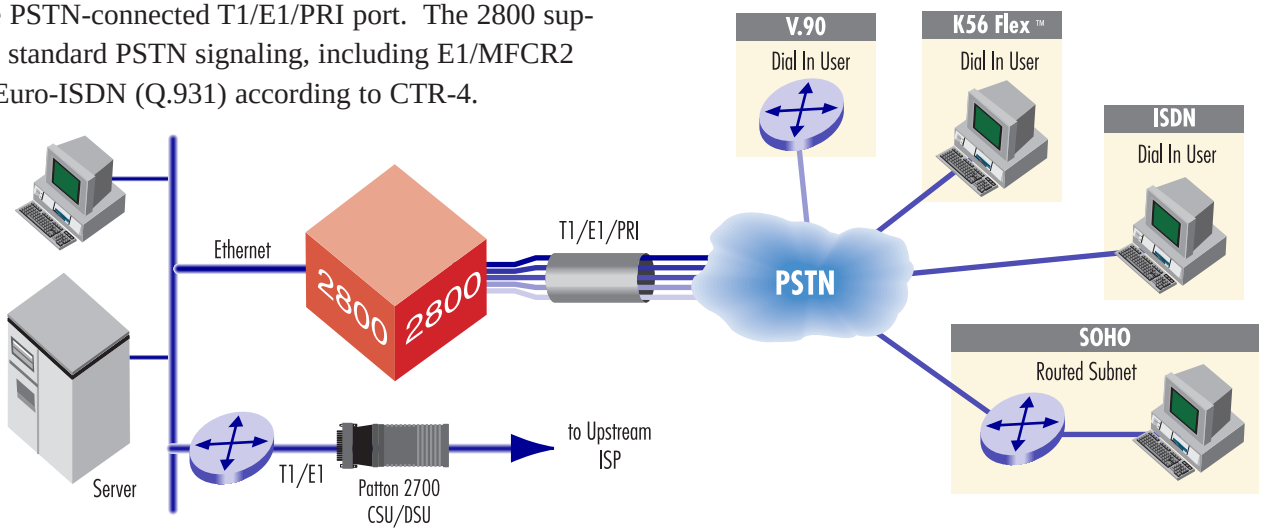


APPLICATIONS

Patton 2800 Remote Access Server

ISP Dial-Up Access

The 2800 RAS enables ISPs to save money by answering any combination of analog and digital calls on the same PSTN-connected T1/E1/PRI port. The 2800 supports standard PSTN signaling, including E1/MFCR2 and Euro-ISDN (Q.931) according to CTR-4.



The signaling on the T1/E1/PRI port allows each call to be individually presented on a 64kbps DS0. All calls are answered individually by the modem software running on each DSP. The DSPs detect the user's modulation and establish a session using V.90, K56Flex™, ISDN, V.34+ or legacy modem signaling. Once a session is established, users are authenticated remotely through RADIUS or locally through the (built-in) user database.

The user's traffic is then routed to either the Ethernet or T1/E1 (WAN) port using PPP or Frame Relay. The 2800 RAS also supports various compression mechanisms, including TCP Header, PPP address and protocol, and V.42/V.42bis error correction and compression. By providing an independent Router through the RISC CPU, the 2800 RAS scales linearly from 1 to 30 connections.

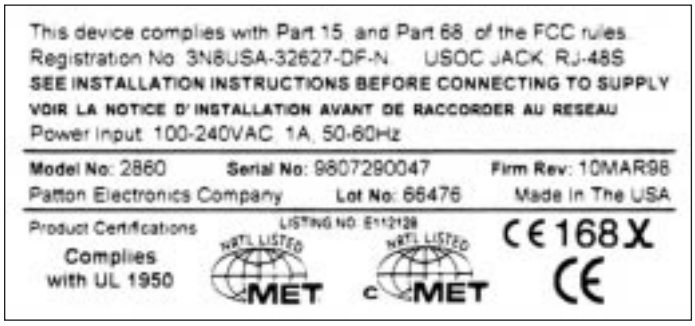
The 2800 also provides two T1/E1/PRI ports. One port is for the PSTN connection. The 2nd port is operator-selectable for PPP uplink to a router, Frame Relay uplink to a switch, or drop-and-insert connection to a PBX. These services are completely user-definable through the Network Management system. A competitive overview is attached.

2800 Competitive Position

(Based on two Patton 2800s with 30 DSPs per box)

	Patton 2800	Ascend Max 4048	Total Control Hiper Bundle 3	Livingston PM-3
Number of V.90 calls	60	48	48	48
Flash-up modems	✔	✔	✔	✔
Digital lines	2	2	2	2
WAN ports	2	1	1	1
Rack height	2U	2U	6U	2U
Warranty	2 years	1 years	1 years	2 years

Patton model number	2800	2810	2860	Bundle 48	Bundle 60
Max number of connections	12	24	30	48	60
Modem modulations	V.90, K56Flex™, V.34 Annex 12, V.34, V.32bis, V.32, V.23, V.22, V.22bis, V.21, Bell 212A, Bell 202, Bell 103, EIA-PN-2330, V.8, V.8bis, Sync/async, receiver/transmitter for V.14, V.42/V.42bis error correction & compression.				
PSTN signalling	E1 Primary Rate, E1 MFCR2 (R2), T1 Primary, T1 Robbed bit with Loop/Ground Start or E&M Wink Start				
Telecom certification	CTR-4 (Euro-ISDN); INS1500 (Japan); TSO14 (Australia), NI-1; Lucent 5ESS, NorTel DMS (USA)				
Homologation received	CEX-168, EN60950, IEC950, UL1950 [NRTL], FCC Part 15A, FCC Part 68B, CS-03, ACA TS038, CTR-4				
Management services	HTTP, SNMP, TELNET Dial-in and Ethernet or RS232 console port, SYSLOG client, Remote software upgrade via FTP, User configurable login prompts and banners				
Authentication	RADIUS, PAP/CHAP, Username/Password, and Static Users Database				
Software upgrades	Achieved through Flash upgrades via FTP (upgrades available from www.patton.com)				
Protocol services	TCP/IP suite with extensive protocol statistics - ICMP/TFTP/FTP/RLOGIN/TELNET • 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 • RIP and RIPv2 dynamic route distribution - user configurable static routes • TCP clear connection				



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