Product Name: Patton SmartNode SN4834/JSD/EUI 4 FXS VoIP IAD, Integrated X.21 WAN, H.323 and SIP, External UI Power

Manufacturer: Patton Inalp

Model Number: SN4834/JSD/EUI

Patton SmartNode SN4834/JSD/EUI 4 FXS VoIP IAD, Integrated X.21 WAN, H.323 and SIP, External UI Power

The Patton SmartNode SN4834/JSD/EUI 4 FXS VoIP IAD, Integrated X.21 WAN, H.323 and SIP, External UI Power Serial Series Analog VoIP IADs let you add packet voice while providing access routing with native V.35/X.21 synchronous serial connection. Add up to 8 phone lines and combine Internet and VPN access on a single PPP or Frame-Relay based access line for the new standard in toll-bypass, remote/branch office connectivity, and enhanced carrier services.

Patton SmartNode SN4834/JSD/EUI Key Features

• Integrated Sync Serial Uplink—Built-in X.21, V.35 router with PPP, Frame Relay RFC-1490, 8 PVCs and FRF.12 fragmentation

• Complete VoIP Gateway—SIPv3, H.323v4, T.38 & Fax bypass, G.723, G.729, G.726, G.711, echo cancellation, silence compression, comfort noise.

• FXS, FXO, or Combinations—Up to 8 FXS ports connect to your standard telephone or PBX. 2 or 4 FXO ports allow local PSTN connections. Programmable call routing and switching.

• Access & Network Routing—Connected to any broadband or access provider. IPv4, RIPv2, ICMP, NAT/PAT, Firewall, DHCP, DynDNS, IPSec VPN.

• QoS Guaranteed Voice & Data—Quality of Service ensures voice traffic gets priority without shutting down your Ethernet LAN.

• Management & Provisioning—Web based management, SNMP, Command Line Interface. Auto-Provisioning for automated configuration distribution and SW upgrades caller/called ID, and time of day.

The SN4830 Serial Series offers models with combinations of 2 to 8 analog FXS phone ports and 2 or 4 FXO ports. The Dual 10/100baseT LAN ports can be used for LAN, IPSec VPN and DMZ connections. The integrated X.21/V.35 WAN port provides direct access to IP over PPP and Frame-Relay. Like every SmartNode the 4830 series supports the industry standard VoIP signaling protocols including SIP, H.323, T.38 Fax-Relay, plus Fax and Modem-Bypass and is interoperable with leading Softswitches and VoIP services.

Quality of Service (QoS) features include advanced voice prioritization and traffic management. DownStreamQoS™ ensures voice without interruptions even over best-effort internet connections. Packet labeling according to 802.1p, TOS and DiffServ enable integration into managed QoS networks.

The SN4830 is the solution for service providers and network integrators looking for the seamless integration of analog phones and PBXs into converged VoIP-Data networks. It ensures easy setup and continuous trouble-free operation and cost effective deployment. The support of the leading VoIP signaling protocols ensures interoperability with third-party equipment and protects your investments for the future.

Patton SmartNode SN4834/JSD/EUI - Technical Specifications

Voice Connectivity

• 2, 4, 6, or 8 FXS ports 2-wire Loopstart, RJ-11/12 Short haul loop 1.1 KM @3REN EuroPOTS (ETSI EG201 188) Programmable AC impedence, feeding, and ring voltage; On-Hook Voltage 29VDC Caller-ID Type-1/2 FSK and ITU V.23/Bell 202 generation

• 2 or 4 FXO ports 2-wire loop-start presented as an RJ-11/12 2.5kV line isolation Surge Protection: Voice Ports: Tip & Ring protected by 270 V side actor Off-hook and ring

detection, Automatic line gain, Programmable ring count End of Call detection, Line drop, busy tone, battery reversal detection Hook-Flash Sending, H.245 Hook-Flash relay, DTMF send, detect, and relay Caller ID FSK CLI reception and relay (Bellcore/ANSI and ETSI/ITU), Call routing based on Caller ID Second dial-tone for two-stage DTMF dialing, Call routing based on DTMF numbers

Data Connectivity

• Dual 10/100 Full Duplex, Autosensing, Ethernet RJ-45
• V.35 or X.21 (depending on model) on a female connector (cable sold separately)
• Frame-Relay (8 PVCs) # RFC1490, FRF.12 fragmentation
• LMI, Q.933D, ANSI 617D, Gang of Four
• PPP, PAP, CHAP, LCP, IPCP

Voice Processing (signalling dependent)

• Voice codes G.711 A-Law/µ-Law (64kbps) G.726 (ADPCM 40, 32, 24, 16 kpbs) G.723.1 (5.3 or 6.3 kbps) G.729ab (8kbps)
• Up to 8 parallel voice connections
• G.168 echo cancellation
• Carrier tone detection and generation
• Silence suppression and comfort noise
• Configurable dejitter buffer
• Configurable tones (dial, ringing, busy)
• RTP/RTCP (RFC 1889)

Fax and Modem Support

• G.711 Fax- and Modem-Bypass
• T.38 Fax relay (9.6 k, 14.4 k)

PHYSICAL CHARACTERISTICS

• POWER
• POE 802.3af/802.3at
• 48VDC input

Voice Signalling

• H.323v4 RAS, H.225, H.245 H.235 secure RAS Fast-connect, early H.245 Gatekeeper autodiscovery, Alias registration Overlap dialing Empty capability set (call transfer, hold) H.323v1 call transfer, hold
• SIPv2 Supported RFCs: 2806, 2833, 2976, 3261, 3263, 3264, 3323, 3325, 3515 draft-ietf-sip-cc-transfer-02, draft-ietf-sip-cc-transfer-05 draft-ietf-sip-refer-02, draft-ietf-sip-replaces-01 draft-ietf-sip-session-timer-04, draft-ietf-sip-session-timer-08 Caller ID, CLIR (receive from PSTN) Support for proxy and redirect servers RFC2833: DTMF Relay, SIP INFO DTMF Relay, Fax-Bypass (G.711), T.38 Fax-Relay Session Timer, Record-Routing, Authentication Compression CODECs, Fax/Modem bypass

Call Routing

• Virtual Interfaces
• Routing Criteria: Called party number (Destination) Calling party number (Source) Time of day, day of week, date

- Longest prefix match, wildcard match, regular expression match
- Number Manipulation Functions: Replace numbers Add/remove digits Regular Expressions
- Fallback Routing: Soft Fallback to alternative interface or Call Router table

IP Services

- IPv4 router
- Static Routes, ICMP redirect (RFC 792), RIPv1, v2 (RFC 1058 and 2453)
- Static and dynamic NAT and NAPT
- DHCP server and Client
- Access Control Lists
- IPSEC AH & ESP Modes, preshared Keys
- AES/DES/3DES Encryption

Quality of Services

- Traffic classification by ACL
- TOS and DiffServ labeling Configurable TOS/Precedence bits or DiffServ codepoints
- IEEE 802.1p/Q
- Traffic scheduling: Priority, Weighted fair queuing (WFQ), Hierarchical traffic classes
- Policing of traffic classes
- DownStreamQoS™ Dynamic restriction of inbound (downstream) TCP traffic to free bandwidth for voice packets.
- Improves voice quality in the receiving direction

Management

- Web GUI
- Industry standard CLI with local console (CRJ-45, RS-232) and remote Telnet access
- TFTP configuration & firmware loading
- SNMP v1 agent (MIB II and private MIB)
- Built-in diagnostic tools (trace, debug)

Operating Environment

- Operating temperature: 0 - 40°C
- Operating humidity: Up to 90% (non condensing)

System

- CPU Motorola MPC875 @ 66 MHz
- Memory 32MB SDRAM/8MB Flash
- Power: External universal 100 - 240 VAC (50/60 Hz)
- Power dissipation: 4 - 12W model dependent

Compliance

- EMC compliance: EN55022 and EN55024
- Safety compliance: EN 60950
- CE per RTTE 99/5/EC (EMC and LVD)
- FCC Part 15 Class A
- TBR-21 (FXS)

Price: £451.97