



SmartNode™ 4960

Multi-Port T1/E1/PRI VoIP Enterprise Session Border Router

Integrate SIP and legacy phone systems with PSTN and VoIP. Reliable, secure, and feature rich, the high performance SmartNode™ 4960 with transcoding paves the way to Unified Communications.

VoIP Transcoding

Up to 60 channels for WAN bandwidth optimization.

Up to 120 VoIP calls...

with up to four T1/E1/PRI ports and dual Gigabit Ethernet ports.

Unified Communications Agent™

Provides any-to-any multi-path switching with VoIP and data survivability, VoIP-over-VPN security with AES/DES strong encryption, Internet Key Exchange (IKE), and SIP Registrar.

Secure Toll-Quality VOIP

Patton's DownStreamQoS™ and Voice-over-VPN with adaptive traffic management and shaping for maximum voice quality and secure voice communication.

Transparent Telephony Features

Complex number manipulation and mapping for seamless integration with existing infrastructures, CLIP, CLIR, hold, transfer and much more.

WAN Access

Optional 4-wire, 11.4-Mbps G.SHDSL.bis or serial X.21 WAN interface.

Optional High Precision Clock

Delivers DECT PBX interoperability with reliable fax performance.

SmartNode™ Awards

- 2010 Internet Telephony Product of the Year: SmartNode™ 5400
- 2009 Internet Telephony Product of the Year: SmartNode™ 4400 Series
- 2008 Internet Telephony Product of the Year: SmartNode™ 4961
- 2007 Internet Telephony Product of the Year: SmartNode™ S-DTA
- 2006 Internet Telephony Product of the Year: SmartNode™ 4960
- 2005 Internet Telephony Product of the Year: SmartNode™ 4630

As enterprises move toward SIP-based Unified Communications, the SmartNode™ 4960 offers a seamless transition by simultaneously supporting VoIP and circuit-switched access to SIP and traditional telephony.

Preserve your investment in legacy phone equipment while taking the next step toward Unified Communications. Least-cost call routing in Patton's proven SmartNode™ VoIP solutions optimizes monthly expenses while flexible dialed-numbering plans maintain established business processes.

The Unified Communications Agent™ (UCA) provides any-to-any multi-path switching (simultaneous SIP, H.323, ISDN, and POTS calls with routing and conversion between TDM/PSTN and IP/Ethernet networks—plus T.38 and SuperG3 FAX) combined with dial-backup and IP-link redundancy for VoIP-and-data survivability. Provide VoIP-over-VPN security with voice encryption via IPsec with AES/DES strong encryption and automated keying via Internet Key Exchange (IKE), plus SIP Registrar for presence/reachability.

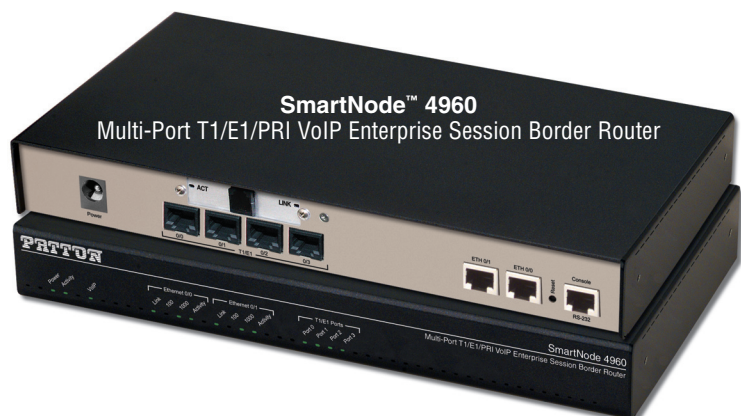
Advanced router functionality includes Patton's DownStreamQoS™ delivering the clear advantage of secure, uninterrupted voice-and-data communication.

Session border controller capabilities include transcoding for up to 64 sessions. Reduce WAN-access bandwidth requirements by converting high-bandwidth G.711 calls on your LAN into lower-bandwidth G.723 calls for WAN transport.

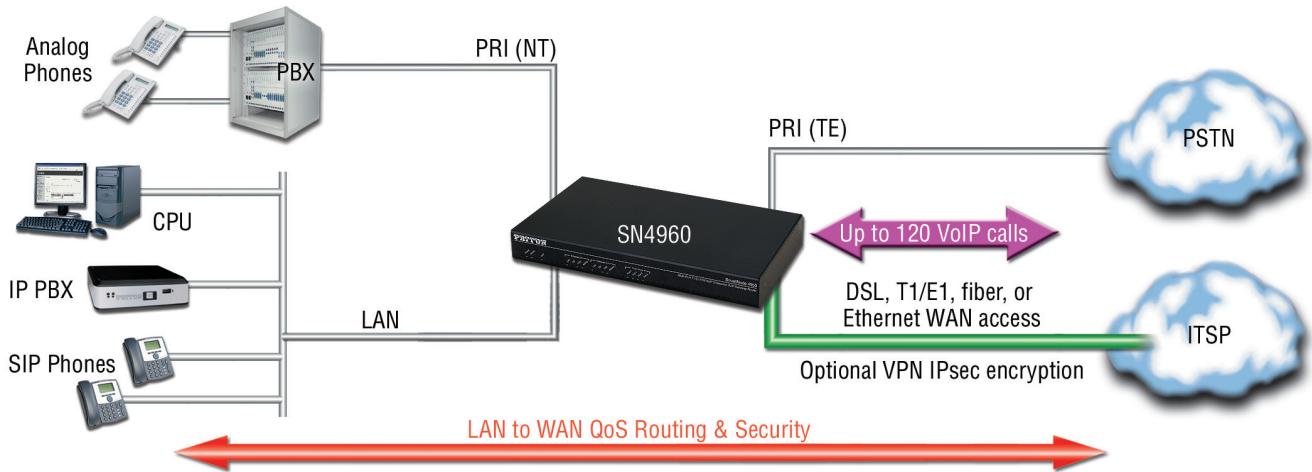
Ensure business continuity. Combining PSTN breakout with IP-link redundancy, SmartNode™ ensures voice-and-data survivability for reliable enterprise-class communications.

Additional options include Patton's unique high-precision clock enabling first-line IP telephony services in demanding ISDN and DECT environments with reliable FAX and modem performance. Optional built-in broadband access via 11.4 Mbps, 4-wire G.SHDSL.bis or serial X.21 reduces hardware costs, simplifies network architecture, and streamlines service and deployment.

Visit www.patton.com for more information.



Application Diagram—Migrate Legacy PBX to IP PBX



Specifications*

Voice Connectivity

Up to four software selectable T1/E1/PRI ports (NE/TE) • Signaling support (ISDN DSS-1, NI-2, Q.SIG, CAS Robbed bit loop and ground start, E&M, immediate, wink, double wink) • ISDN AOC/ECT • ISDN speech, audio & data (Fax Gr 4, UDI 64, RD164) • ISDN supplementary services • SIPv2 & H.323v4 • CAS protocols: RBS (Loop start, ground start, E&M wink, intermediate, double-wink) and R2/MFC-R2 (Q.400–Q.490 and Configurable country profiles)

Broadband Access

4-wire G.SHDSL ITU-T G991.2, Annex A, B, F, G • Up to 11.4 Mbps • PPoE • 8PVCs, each UBR, CBR or VBR-rt

selectable • I.610 OAM F4/F5 support • G.994.1 (G.hs) • Serial X.21

Voice Processing

Codec G.711 a-law/mu-law, G.723, G.729ab, G.726, G.727, T.38 fax relay (9.6 k, 14.4 k) • G.711 transparent fax and bypass • 128 ms echo cancellation • transcoding for up to 64 sessions

Call Routing and Services

Regular expression call routing and manipulation • number blocking • short-dialing • digit collection, distribution and hunt groups

Data Interfaces

Dual 10/100/1000 TX Ethernet Ports • Autosensing • Auto-MDI • Full-duplex

IP Routing

Complete IP access router • DHCP Client & Server • Packet fragmentation • Static firewall, NAT, NAPT RFC 1631 access control lists • DMZ port

IP Quality of Service

Voice priority • DownStreamQoS™ • traffic management, shaping policing • IEEE 802.1p, TOS, DiffServ labeling • IEEE 802.1Q, VLAN tag insertion/deletion 4,096

Management

Web/HTTP, CLI with local console & remote Telnet access • TFTP configuration & firmware loading • SNMP MIB II and product MIB • Secure autoprovisioning for both firmware & unit/subscriber configuration • Built-in diagnostic tools (trace, debug, call generator)

Power & Packaging

Desktop metal chassis

Dimensions: 11.0W x 1.5H x 7.0 D in. (28.0W x 3.9H x 18.0D cm)

Weight: < 30 oz (850g)

Internal Power: 100–240 VAC (50/60 Hz)

Power Consumption < 15W

Operating Environment

Operating temperature: 32 to 104° F (0 to 40°C)

Operating humidity: up to 90%, non condensing

Compliance

EMC: EN55022 and EN5502 • Safety: EN 60950 • CE • FCC Part 15 Class A; Part 68; CS-03

* Specifications subject to change without notice.

Ordering Info

SN4960 SmartNode T1/E1/PRI VoIP Enterprise Session Border Router: Hi-Capacity, 2x GigEthernet, External UI power

SN4960/1E15V/UI: 1 E1/T1, 15 VoIP channels, upgradeable to 30 callX

SN4960/1E24V/UI: 1 E1/T1, 24 VoIP channels, upgradeable to 30 calls

SN4960/1E30V/UI: 1 E1/T1, 30 VoIP channels, non-upgradeable

SN4960/4E15V/UI: 4 E1/T1, 15 VoIP channels, upgradeable to 60 channels

SN4960/4E24V/UI: 4 E1/T1, 24 VoIP channels, upgradeable to 60 channels

SN4960/4E30V/UI: 4 E1/T1, 30 VoIP channels, upgradeable to 60 channels

SN4960/4E48V/UI: 4 E1/T1, 48 VoIP channels, upgradeable to 60 channels

SN4960/4E60V/UI: 4 E1/T1, 60 VoIP channels, non-upgradeable

SN4960/4E96V/UI: 4 E1/T1, 96 VoIP channels, field upgradeable to 120 channels

SN4960/4E120V/UI: 4 E1/T1, 120 VoIP channels

Options & Accessories

SNSW-49V6: 6 channel Voice Upgrade Key for SN4960 VoIP IADs. Software expansion for additional voice channels.

SNSW-VPN2: Software option for IPsec VPN, including DES/3DES and AES encryption, IKE and Voice-Over-VPN

SNSW-QSIG2: Support for ISDN Q.SIG.

*For G.SHDSL option: add 2GS in SKU (ex: SN4960/4E30V2GS/EUI)

*For High-Precision option: use SN4961 in SKU (ex: SN4961/4E30V/EUI)

WAN Options include G.SHDSL, X.21, Frame Relay, PPP, and ML-PPP over E1/T1 Relay Option: Between port 0/0 and port 0/1

Note: For complete ordering list, contact sales@patton.com

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