



# Multi-Port T1/E1 VoIP Integrated Access Device

## SmartNode™ 4960

The award-winning SmartNode 4960 integrates with legacy telephony gear to deliver VoIP and data services with QoS and encrypted-voice VPNs. The SmartNode 4960 comes with four T1/E1/PRI ports, two GigE ports, and supports up to 120 simultaneous VoIP calls, making it the ideal choice for low-cost, secure, prioritized communications.

### Up to 120 VoIP Calls

Up to 120 simultaneous voice or T.38 fax calls with one to four T1/E1/PRI ports and dual Gigabit Ethernet ports. Use any CODEC or fax on any port, any time.

### Universal SIP and T.38 support

Softswitch certified signaling support between all T1 RBS CAS, ISDN PRI, Q.SIG, SIP, and H.323.

### Secure Toll-Quality VoIP

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

### Transparent Telephony Features

Handles complex number manipulation and mapping scenarios for most seamless integration with existing infrastructure, CLIP, CLIR, hold, transfer and much more.

### Management & Provisioning

Web-based management, SNMP, command line interface. Automated provisioning for easy large-scale deployments.

### Failover Relay

Optional feature that ensures you can still make PSTN calls if there is a power failure.

Providing a high-density seamless link between the circuit-switched telephone network and voice-over-IP, the SN4960 is ideal for PBX business trunking or corporate VoIP access. Offering up to four software configurable T1/E1/PRI interfaces the SN4960 connects to any switch, PBX and data network with up to 120 simultaneous calls using SIP, T1, E1 or PRI signaling. The dual gigabit Ethernet ports connect to the network for the highest throughput with its integrated QoS router. With its built-in CSU/DSU, any T1/E1 port can be selected as a WAN port for truly integrated voice and data access.

Like every SmartNode, the SN4960 delivers toll-quality voice with all industry standard CODECs including low-bandwidth G.723/G.729. Business class services are supported with T.38 fax, fax bypass and modem bypass features.

Many business class features are provided in the SmartNode 4960 product line, including Failover Relay for increased call reliability. Multi-link PPP and Frame Relay are provided as configurable software options for customers who need to bond E1/T1 lines. An X.21 WAN port is also available for serial WAN services.

The SmartNode 4960 is ready for SIP TLS and SRTP through software upgrades. Exclusive DownStreamQoS™ and Voice-over-VPN features give the clear advantage of uninterrupted and secure voice communication for any call today.

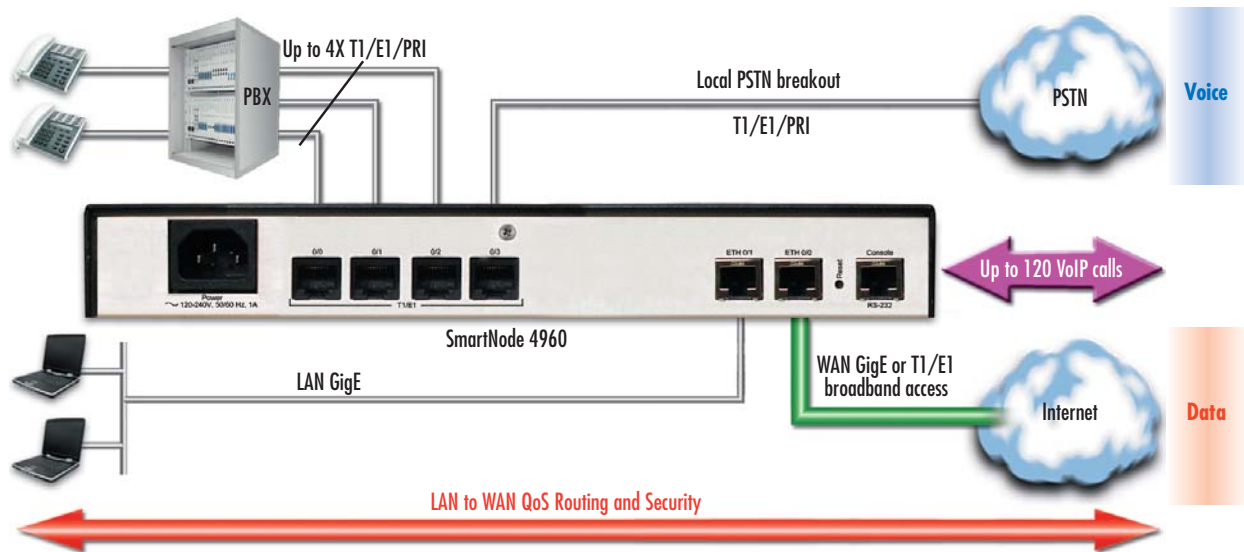
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## Remote Office/Branch Office Voice Extension and Access diagram



## Specifications\*

### Voice Connectivity

Up to four software selectable T1/E1/PRI ports • Signaling support (ISDN DSS-1, NI-2, Q.SIG, 5ESS, CAS Robbed bit loop and ground start, E&M, immediate, wink, double wink) • SIPv2, H.323v4 • ISDN AOC/ECT • ISDN speech, audio & data (Fax Gr 4, UDI 64, • RDI64) • ISDN supplementary services

### 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

### Call routing and services

Regular expression matching 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

### 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 firmware & unit/subscriber configuration • Built-in diagnostic tools (trace, debug, call generator)

### Environment

Temp: 32–104°F (0–40°C); Humidity: Up to 90% (non condensing)

### Power

100–240 VAC (50/60 Hz)  
Power consumption: 15W

### Compliance

EMC: EN55022 and EN55024 • Safety: EN 60950 • CE • FCC Part 15 Class A; Part 68; CS-03 • RoHS

## Ordering Information

### SN4960 SmartNode T1/E1/PRI

**VoIP IAD: Hi-Capacity, 2x GigEthernet, Internal UI power**

**SN4960/1E15V/UI:** 1 E1/T1, 15 VoIP Channels, upgradeable to 30 calls.

**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, non-upgradeable.

### 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.

\* Specifications subject to change without notice.

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