

## Overview

The SmartNode 4900 Series IpChannel Bank is the perfect business solution for applications requiring 12 to 32 concurrent analog voice/fax calls. The IpChannel Bank transforms any PBX system, analog call-center application, or ISP MDU service into a state-of-the-art packet-voice system without requiring costly equipment replacement or upgrades.

There are several models in the SN4900 Series - ranging from 12 to 32 FXS or FXO ports (look for the "JO" letters in the model code for FXO ports, and the "JS" letters for FXS ports). Also available are different WAN interface options: V.35, X.21, T1, E1, ADSL, G.SHDSL.

The SN4900 Series supports key industry-standard VoIP signaling protocols such as SIP, H.323, and T.38 Fax Relay—plus fax-bypass and modem-bypass. This ensures interoperability with the leading soft switches and VoIP services.

Built-in Quality of Service (QoS) features include voice prioritization and traffic management via configurable service-policy profiles. Patton's advanced DownStreamQoS ensures clear, uninterrupted voice—even over best-effort networks such as the Internet. Packet classification using 802.1p, TOS, and DiffServ makes integration with existing managed QoS networks easy.

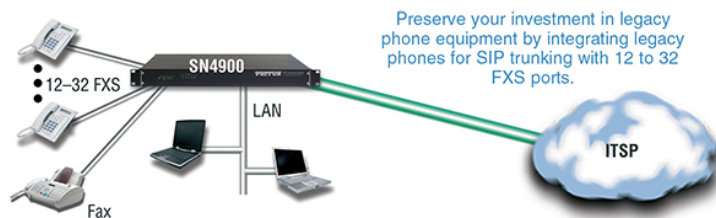
Create custom security profiles for a comprehensive security environment. IPSec in the SN4900 Series delivers data integrity, authentication, anti-replay and data confidentiality. Firewall capabilities include Access Control Lists (ACLs), IP-address and port filtering, protection against Denial of Service (DoS) attacks, and use of second Ethernet port as DMZ.

Offering easy setup, reliable operation, and third-party interoperability on a proven platform, the SN4900 Series IpChannel Bank sits at the core of cost-effective business solutions. The investment protection you need for the future is here today.

## Applications

### **Protect your investment—integrate analog equipment**

Legacy is not bad! While VoIP offers distinct advantages in almost every aspect of communications, in many cases it is appropriate to integrate legacy equipment into a VoIP system rather than replacing it. **The SN4900 Series is the enabler that protects your investment in analog equipment.** It enables enterprises to extend multiple analog lines from a PBX to a remote location with existing cabling or phones, taking advantage of a single IP link to transport up to 32 voice calls. The remote location can be a building around the block as well as a partner in another continent.



For call centers, the SN4900 is the ideal, reliable solution to integrate legacy work desks and cabling into next-generation, VoIP based call center software.

## Features

- **12, 16, 24 or 32 FXS or FXO ports**—Simultaneous voice or fax calls on all ports. Advanced local call switching.
- **Full SIP and T.38 support**—Supports the complete range of industry standard VoIP: SIP, H.323, T.38 fax, fax and modem bypass, DTMF relay. Codecs G.729, G.723 etc.
- **Secure Toll-Quality VoIP**—DownStreamQoS and Voice-over-VPN with adaptive traffic management and shaping for maximum voice quality and secure voice communication.
- **Complete Access Routing**—Two 10/100 Ethernet ports with auto MDI-X. Access router with NAT, Firewall, PPPoE, DHCP, DynDNS, multiple VLANs & VPN with IPSec\*
- **Optional Integrated WAN uplink**—Choose from V.35, X.21, T1/E1, ADSL or G.SHDSL data interfaces in addition to the two Ethernet ports.

# Specifications

<b>Capacity</b>	12, 16, 24, 32 simultaneous VoIP calls
<b>Voice Signaling</b>	<ul style="list-style-type: none"><li>• SIPV2 H.323v4 (simultaneously with B2BUA capability)</li><li>• SIP call transfer, redirect</li><li>• DTMF in-band &amp; out-of-band</li><li>• All tones programmable (dial, ringing, busy)</li></ul>
<b>Voice Processing</b>	<ul style="list-style-type: none"><li>• CODEC G.711 a-law/mu-law, G.723, G.729ab</li><li>• G.726, G.727, T.38 fax relay (9.6 k, 14.4 k)</li><li>• G.711 transparent fax and bypass</li></ul>
<b>Call Switching and Services</b>	<ul style="list-style-type: none"><li>• Regular expression based call routing and number manipulation</li><li>• Number blocking</li><li>• Short-dialing</li><li>• Digit collection, distribution and hunt groups</li><li>• Transparent line extension</li></ul>
<b>FXS Connectivity</b>	<ul style="list-style-type: none"><li>• 2-wire Loopstart on 50pin (12 to 24 channels) or 64-pin (32 channels) Telco connector</li><li>• Short haul loop 1.1km @3REN</li><li>• EuroPOTS (ETSI EG201188)</li><li>• Programmable AC impedance, feeding, ring and on-hook voltage</li><li>• Caller-ID FSK and ITU V.23/Bell 202 generation</li></ul>
<b>FXO Connectivity</b>	<ul style="list-style-type: none"><li>• 2-wire Loopstart on 50pin (12 to 24 channels) or 64-pin (32 channels) Telco connector</li><li>• Programmable impedance, ring detection, tone detection, disconnect supervision</li><li>• Caller ID detection</li></ul>
<b>Data Services</b>	<ul style="list-style-type: none"><li>• Two 10/100 Ethernet ports</li><li>• Complete IP access router</li><li>• DHCP Client &amp; server</li><li>• Packet fragmentation</li><li>• Static firewall, NAT, NATP RFC 1631 access control lists</li><li>• DMZ port</li></ul>
<b>Quality of Service</b>	<ul style="list-style-type: none"><li>• Voice priority</li><li>• DownStreamQoS™</li><li>• Traffic management, shaping and policing</li><li>• IEEE 802.1p, TOS, DiffServ labeling</li><li>• IEEE 802.1Q, VLAN tag insertion/deletion 4,096</li></ul>
<b>Optional WAN interfaces</b>	<ul style="list-style-type: none"><li>• X.21/V.35 Frame Relay (8 PVCs); RFC1490, FRF.12 fragmentation; LMI, Q.933D, ANSI 617D, Gang of Four; PPP, PAP, CHAP, LCP, IPCP)</li><li>• T1/E1 (ITU-T G.703, ANSI T1.403; &amp; AMI, B8ZS, HDB3)</li><li>• ADSL2+ (Annex A, B, I, J, I, M, U-R2)</li><li>• G.SHDSL (G.991.2, Annex A, B, F, G, Up to 5.7Mbps, 8 PVCs, QoS)</li></ul>
<b>Management</b>	<ul style="list-style-type: none"><li>• Web/HTTP, CLI with local console and remote Telnet access</li><li>• TFTP configuration &amp; firmware loading</li><li>• SNMP MIB II and product MIB</li><li>• Secure auto-provisioning for both firmware and unit/subscriber configuration</li><li>• Built-in diagnostic tools (trace, debug, call generator)</li></ul>
<b>System</b>	<ul style="list-style-type: none"><li>• CPU Motorola MPC875 @ 133 MHz</li><li>• Memory 32MB SDRAM/8MB Flash</li></ul>
<b>Power</b>	<ul style="list-style-type: none"><li>• 100–240 VAC (50/60 Hz)</li><li>• Power dissipation: &gt; 22W (60W max, model SN4932/JS/RUI)</li></ul>
<b>Operating Environment</b>	<ul style="list-style-type: none"><li>• Operating temperature: 32 - 122°F (0 - 50°C)</li><li>• Operating humidity: Up to 90% (non condensing)</li></ul>
<b>Compliance</b>	<ul style="list-style-type: none"><li>• EMC compliance: EN55022 and EN55024</li><li>• Safety compliance: EN 50950</li><li>• CE compliance</li><li>• FCC Part 15 Class A</li><li>• RoHS</li></ul>