SmartNode™ Enterprise Session Border Controller/IAD

Model 5550 with Broadband Access and BRI/FXS/FXO Ports

The SN5550 is a cost effective eSBC with integrated Broadband access and a variety of telephony port combinations of BRI/FXS/FXO. It is capable of doing up to 200 SIP to SIP calls*** whereof max. 8 can be transcoded**. Built-in QoS functionalities and support of G.722 high definition codec, ensure excellent VoIP call quality.

BRI, FXS, FXO interfaces
Combination of 2 or 4 ISDN BRI S0/T0, 2 or 4 FXS, or 2 or 4 FXO ports.
4 to 16 G.722/G.711 or 4 T.38 calls simultaneously.
Incudes SIP TLS/SRTP.

WAN Access*
Fiber SFP, G.SHDSL-EFM/ATM, Gigabit Ethernet or VDSL/ADSL WAN interface.

Full Telephony Features
Session Router allows flexible call routing and numbering plan adaptations, CLIP/CLIR, hold, transfer, and much more.Full SIP-ISDN AOC support.

Outstanding Interoperability
Interoperable for data, voice and T.38 fax with leading, SIP service providers, softswitch vendors, major IP-PBX systems and various DSLAMs.

Complete Access Routing
Two 10/100/1000 Ethernet ports with auto MDI-X. Ethernet Layer 2 switching and bridging. Access router with NAT, Policy Based Routing, Stateful Firewall, PPPoE, DHCP, DynDNS.

Easy Management & Provisioning
Web-based management, WEB Wizard, SNMPv3, command line interface, secure, zero-touch provisioning separate config. domain support, TR-069.

Full VoIP protocol support
SIPv2, SIPv2 over TLS, T.38, G.722 HD oice, RTP Security with SRTP, fax and modem bypass, DTMF relay

Why SmartNode?
- *Patton quality*
- *Swiss engineered; made in USA*
- *Unrivaled customer support*

The SmartNode SN5550 Enterprise Session Border Controller bridges a wide range of IP-PBX products to their SIP Trunk service providers. With its built-in Security features such as SIP TLS, SRTP, Stateful Firewall and Secure provisioning, it protects the LAN networks from fraud strikes out of the Internet. Additionally it can terminate Broadband links for G.SHDSL, VDSL, ADSL or Fiber SFP.

With a wide spectrum of functionalities supported by the SN5550, it can be used as an IP Router, Access Device, VoIP Gateway & Survivability node in addition to an eSBC with transcoding capabilites.

The combo configuration of 2 BRI/2 FXS/2 FXO or 4 BRI/4 FXS/4 FXO, fits the requirements of small and medium sized enterprises requiring a solution to enable legacy equipment for VoIP networks.

The unique WebWizard enables easy and hassle-free installations, and lets technical people create their own Web interface.

With the separate config domain feature, the SN5550 will be the service demarcationpoint for SIP trunk service providers, so the local administrator only has to modifyconfiguration settings facing the LAN IP-PBX.

Visit www.patton.com for more information.

Typical Application

Whether used as a VoIP Gateway, eSBC or Access Router the SmartNode 5550 provides excellent VoIP, IP QoS and security features for seamless network integration. With BRI and analog ports, the SN5550 converts modem and fax signals to VoIP, and solves problems with integrating PoS, metering systems, elevator phones, etc. to an All-IP environment. For business class IP telephony at the tip of your fingers, the SmartNode SN5550 is more than just talk!

PATTON®
let's Connect!™
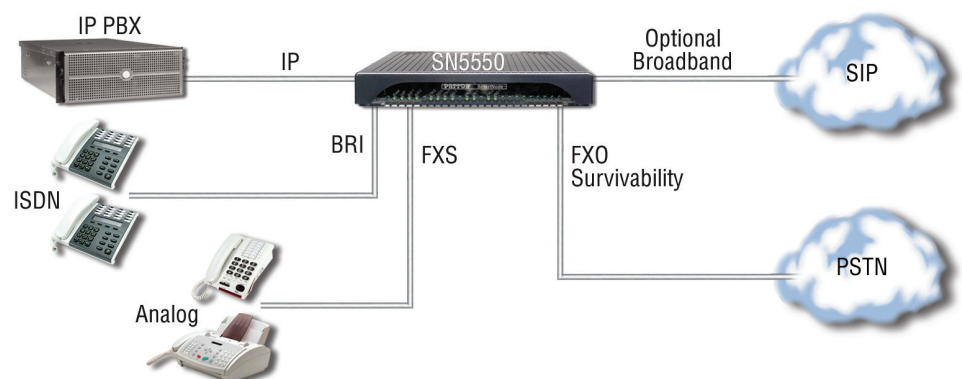
SmartNode™ Model 5550 BRI/FXS/FXO eSBC/IAD

Integrated Access Device (IAD)

Enterprise Session Border Controller (eSBC)

Specifications

Call Capacity
4–16 simultaneous G.722/G.711 or T.38 fax to VoIP calls

Voice Signaling
- SIPv2 & SIPv2 over TLS
- SIP call transfer, redirect
- Overlap or en-bloc dialing
- DTMF in-band, out-of-band
- Configurable tones

Call Routing & Services
- Regular expression number matching
- Regular expression number manipulation
- Least Cost Routing
- Number blocking
- Short-Dialing
- Digit collection
- Distribution-Groups and Hunt-Groups

FXS Connectivity
- 2 or 4 FXS ports, RJ-11/12
- 2-wire Loopstart
- Long Reach FXS—10 km @ 3REN load
- EuroPOTS (ETSI EG201188)
- Programmable AC impedance, feeding, ring and on-hook voltage
- Caller-ID FSK and ITU V.23/Bell 202 generation
- Secondary Surge protection (optional)

FXO Connectivity
- 2 or 4 FXS ports, RJ-11/12
- 2-wire Loopstart—RJ11/12
- Programmable impedance
- Ring detection, tone detection
- Caller ID detection (FXS, DTMF)
- Disconnect supervision

ISDN
- 2 or 4 BRI S0 ports, RJ-45
- NT/TE configurable per port
- Built-in line power on each port (total 4W)
- DSS1, Q.921, Q.931. NTT-64
- HP High Precision Clock Stratum 3 CO
- Point-point and point-multi-point
- Lifeline Bypass Relay
- Optional QSIG support**

Voice Processing
- G.722
- G.711m/A-law
- G.723.1 (6.4 kbps)
- G.729, 729a, 729ab (8 kbps)
- G.726 (16, 24, 32, 40 kbps)
- G.168-2004 echo cancellation (128 ms)
- 4–16 simultaneous low-bandwidth or HD voice or T.38 fax calls, with SRTP
- Up to 200 SIP to SIP calls***
- 2–8 SIP RTP transcoded calls**
- Transparent ISDN data (RFC 4040)
- Silence suppression and comfort noise
- Adaptive and configurable dejitter buffer
- Configurable RTP packet length

Quality of Service
- PacketSmart™ Network Assessment & Monitoring**
- Voice priority, DownStreamQoS™
- Traffic Management, shaping policing
- IEEE 802.1p, IEEE 802.1Q, 4096 VLANs (Tag insertion/deletion), TOS, DiffServ Labeling

Connectivity
- Two 10/100/1000Base-T Ethernet ports
- 1 USB port
- Auto-MDIX
- DHCP Client & Server
- PPPoE Client (multi-session)
- IP Multi-Netting, VLAN, Secondary IP
- IPv4 and IPv6 dual stack
- ICMP
- Dynamic and static NAT and NAPT
- ACL, Stateful Firewall
- DNS, DynDNS
- DHCP Server
- SNTP Client

Broadband Access
ADSL/VDSL: VDSL 2, G.hs, G.Vectoring, up to profile 30a support • ADSL2, ADSL2+, Annex, A/L/M** or B/J** • IPoA, IPoEoA, PPPoA, PPPoEoA (RFC2364, RFC2516)

G.SHDSL-ATM: 4-wire G.SHDSL ITU-T G991.2, Annex A, B, F, G • Up to 11.4 Mbps • PPPoE • PPPoA, IPoA, 8PVCs, each UBR, CBR or VBR-rt selectable • I.610 OAM F4/F5 support • G.994.1 (G.hs)

G.SHDSL-EFM: EFM mode compliant to IEEE 802.3 G.998.2 • PPP over Ethernet (RFC2516) • Support of OAM PDU information and functionality (ITU-T Y.1731) • OAMPDU event notification, variable request, variable response, and loopback control

Fiber: SFP slot for fiber WAN uplink • 100Base-T and GigE support • Up to 8 VLANs • PPPoE

Management
Customizable WebWizard, Web-based GUI, CLI Telnet and HTTP access

TR-069, TFTP, HTTP, HTTPS configuration up- and download TR-069, TFTP, HTTP, HTTPS firmware upgrade, Dual Image, SNMPv3 agent Separate config domain (LAN side config and WAN side config), MIB II and private MIB, Built-in diagnostic tools

Secure Auto-Provisioning with built-in root CA

Power Consumption
< 10W

Packaging
Plastic chassis

Dimensions
Plastic chassis 2BIS/2FXS: 8.2W x 1.3H x 6.5D in. (20.8W x 3.4H x 16.5D cm)

Metal enclosure 4BIS/4FXS & FXO or IAD (with rack mount option):
11W x 1.5H x 6.1D in (28 W x 3.9 H x 15.7 D cm)

Weight
<450g (15.9 oz)/<600g (metal)

Environment
- Operating temperature: 32–104°F (0–40°C)
- Operating humidity: up to 90%, non-condensing

Compliance
- FCC Part 15 Class A (US EMC)
- CE per RTTE 99/5/EC (EMC and LVD)

Safety
- EN60950
- TBR-3 (ISDN BRI/S0)

Specifications subject to change without notice.
* Additional charges apply for licensed features | ** Depending on model |

*** Supports up to 200 SIP-to-SIP sessions under ideal conditions. | Transcoding, debugging, and/or IP routing reduce processing capacity.