



# SmartNode™ 4670

## BRI/FXS/FXO VoIP IAD

IP-enable *all* legacy voice/fax systems with one Enterprise-class VoIP Integrated Access Device. Supporting 8 to 16 concurrent VoIP calls, the SN4670, with built-in G.SHDSL, fiber, or ADSL, enables broadband providers to connect ISDN-PBX, analog fax and phone—even audio-intercom systems—with advanced IP telephony services and the PSTN.

### Flexible ISDN BRI and FXS/FXO Port Combinations

Connect analog phone/fax, answering machines, intercom stations, and ISDN-PBX systems with combinations of 4 to 8 FXS, up to 4 FXO, and/or 2 to 8 BRI interfaces.

### Proven Interoperability

SIP interop with major IP PBX, softswitch, and VoIP service providers. Over 100,000 SmartNode deployments worldwide. ISDN/PSTN compliance in nearly every country.

### G.SHDSL, Fiber, or ADSL Broadband Access

4-wire 11.4-Mbps G.SHDSL.bis, 100-Mbps fiber, or 24-Mbps ADSL WAN interface.

### Transparent Telephony Features

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

### Fax that Works

T.38, SuperG3 Fax, enhanced G.711 Fax, and modem bypass provide reliable fax over VoIP networks using traditional analog or IP-based fax end stations.

### High-Precision Clock

Delivers DECT PBX interoperability and reliable fax performance

### SmartNode™ Awards

- 2012 Internet Telephony Product of the Year: SmartNode™ 4670
- 2011 Internet Telephony Product of the Year: SmartNode™ 5400/2GS
- 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

The SmartNode™ 4670 offers Broadband Providers flexible combinations of ISDN BRI, analog FXS/FXO, and Ethernet/IP interfaces with G.SHDSL, fiber, or ADSL broadband access to deliver a unique, single box CPE solution allowing Enterprises to IP-enable their legacy ISDN-PBX and analog phone/fax/answering machine and audio-intercom systems.

Providing 4 Ethernet, 2 to 8 BRI, 4 to 8 FXS, and up to 4 FXO ports, the SN4670 interconnects any Ethernet switch, ISDN PBX or IP-data network to support 8 to 16 simultaneous VoIP calls using SIP, FXS/FXO or BRI signaling. In addition, the built-in 11.4-Mbps 4-wire G.SHDSL, 100-Mbps fiber, or 24-Mbps ADSL interface provides seamless WAN access.

Like every SmartNode™, the SN4670 supports every industry-standard CODEC to deliver toll-quality voice on every call. Adding session border controller capabilities, the SN4670 includes IP transcoding for up to 8 SIP channels. The Unified Communications Agent™ (UCA) provides any-to-any multipath 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). VoIP-over-VPN with voice encryption provides secure voice and data via IPsec with AES/DES strong encryption and automated

keying via Internet Key Exchange (IKE). In addition, advanced call-router functionality includes least-cost call routing with flexible dialed-number plan support.

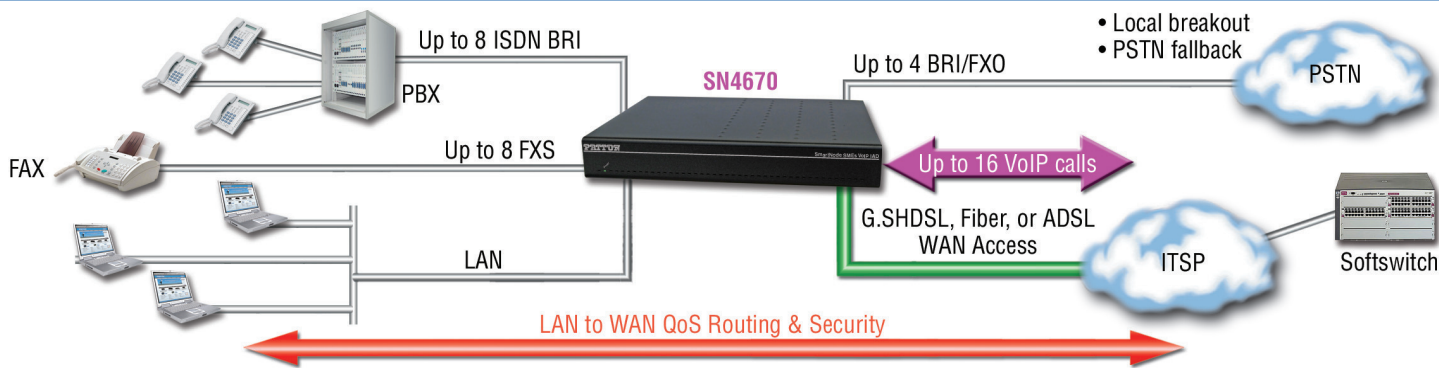
The SmartNode survivability suite combines PSTN fallback, SIP Registrar and IP-link redundancy to ensure business continuity in case the IP network fails. Patton's DownStreamQoS™ delivers the advantage of clear, uninterrupted voice-and-data communication. Furthermore, SmartNode's unique high-precision clock delivers first-line IP telephony service in demanding ISDN and DECT environments with reliable FAX and modem performance. In addition, SmartNode delivers a smooth transition to VoIP with strong number portability support accepting incoming calls from the PSTN throughout the VoIP service provider's number porting process.

The SmartNode 4670 reduces hardware costs, simplifies network architecture, and streamlines service and deployment for service providers. Providing BRI, FXS/FXO, and 10/100 Ethernet with G.SHDSL, fiber, or ADSL broadband access in a single box, the SN4670 delivers secure, prioritized unified communications.

Visit [www.patton.com/smartnode](http://www.patton.com/smartnode) for additional information.



## Application Diagram—Convert Legacy PBX and FAX to VoIP



## Specifications\*

### Capacity

Up to 16 simultaneous VoIP or T.38 fax calls (depending on the model)

### BRI Voice Connectivity

2/4/8 BRI So ports, RJ-45 • NT/TE configurable per port • Built-in line power on each port (total 4W) • DSS1, Q.921, Q.931, NTT-64 • Point-point and point-multipoint • Optional QSIG support\*

### FXS/FXO Voice Connectivity

4/8 FXS ports • 2-wire Loopstart on RJ-11/12 • short haul loop 1.1km @3REN • EuroPOTS (ETSI EG201188) • programmable AC impedance, feeding, ring and on-hook voltage • Caller-ID FSK and ITUV.23/Bell 202 generation • FSK & shuttered dial tone MWI

### Voice Processing

Codec G.711 a-law/mu-law, G.723, G.729ab, G.726, G727, T.38 fax relay

(9.6 k, 14.4 k) • G.711 transparent fax and bypass • Transcoding for up to 12 channels

### Call Routing and Services

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

### LAN/WAN Connectivity

4 x 10/100BaseT Ethernet WAN • Auto-MDI-X • DHCP Client • PPPoE Client (multi-session) • IP Multi-Netting access control lists • DMZ port

### Broadband Access

**G.SHDSL:** 4-wire G.SHDSL ITU-T G.991.2, Annex A,B, F, G • Up to 11.4 Mbps • PPPoE • 8PVCs, each UBR, CBR or VBR-rt selectable • I.610 OAM F4/F5 support • G.994.1

**ADSL:** ADSL2+ ITU-T G.992.5, Annex A, M, B • Up to 24 Mbps • PPPoE • PPPoA • IPoA • 8 PVCs, each UBR, CBR or VBR-rt selectable • I.610 OAM F4/F5 support • G.994.1 (G.hs)

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

### 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 auto provisioning for 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:** 100–240VAC (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

### SmartNode VoIP Gateway: Hi-Capacity, High-Precision Clock, External 100–240 AC power

#### SN4671/2BIS4JS8V2GS/EUI:

SmartNode G.S IAD, 2 BRI, 4 FXS, 8 VoIP calls, 4 LAN/WAN Ethernet Ports, 4-wire G.SHDSL

#### SN4671/4BIS4JS4JO12V2GS/EUI:

SmartNode G.S IAD, 4 BRI, 4 FXS, 4 FXO, 12 VoIP calls, 4 LAN/WAN Ethernet Ports, 4-wire G.SHDSL

#### SN4671/4BIS8JS16V2GS/EUI:

SmartNode G.S IAD, 4 BRI, 8 FXS, 16 VoIP calls, 4 LAN/WAN Ethernet Ports, 4-wire G.SHDSL

#### SN4671/8BIS16V2GS/EUI:

SmartNode G.S IAD, 8 BRI, 16 VoIP calls, 4 LAN/WAN Ethernet Ports, 4-wire G.SHDSL

#### SN4671/4BIS4JS4JO12VA/EUI:

SmartNode ADSL IAD, 4 BRI, 4 FXS, 4 FXO, 12 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

#### SN4671/2BIS2JS2JO8VA/EUI:

SmartNode ADSL IAD, 2 BRI, 2 FXS, 2 FXO, 8 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

#### SN4671/4BIS4JS12VA/EUI:

SmartNode ADSL IAD, 4 BRI, 4 FXS, 12 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

#### SN4671/4JS4JO8VA/EUI:

SmartNode ADSL IAD, 4 FXS, 4 FXO, 8 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

#### SN4671/8JS8VA/EUI:

SmartNode ADSL IAD, 8 FXS, 8 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

#### SN4671/4BIS8VA/EUI:

SmartNode ADSL IAD, 4 BRI, 8 VoIP calls; 4 LAN/WAN Ethernet Ports; ADSL2+ (Annex A,B,M)

### SmartNode VoIP IAD: Fiber SFP, Hi-Capacity, High-Precision Clock, External 100–240 AC power,

#### SN4670/4JS4JO8VF/EUI:

SmartNode IAD, Fiber SFP, 4 FXS, 4 FXO, 8 VoIP calls; 4 LAN/WAN Ethernet Ports

**SN4670/8JS8VF/EUI:** SmartNode IAD, Fiber SFP, 8 FXS, 8 VoIP calls; 4 LAN/WAN Ethernet Ports

#### SN4671/2BIS2JS2JO8VF/EUI:

SmartNode IAD, Fiber SFP, 2 BRI, 2 FXS, 2 FXO, 8 VoIP calls; 4 LAN/WAN Ethernet Ports

#### SN4671/2BIS4JS8VF/EUI:

SmartNode IAD, Fiber SFP, 2 BRI, 4 FXS, 8 VoIP calls; 4 LAN/WAN Ethernet Ports

**SN4671/4BIS4JS12VF/EUI:** SmartNode IAD, Fiber SFP, 4 BRI, 4 FXS, 12 VoIP calls; 4 LAN/WAN Ethernet Ports

#### SN4671/4BIS4JS4JO12VF/EUI:

SmartNode IAD, Fiber SFP, 4 BRI, 4 FXS, 4 FXO, 12 VoIP calls; 4 LAN/WAN Ethernet Ports

**SN4671/4BIS8JS16VF/EUI:** SmartNode IAD, Fiber SFP, 4 BRI, 8 FXS, 16 VoIP calls; 4 LAN/WAN Ethernet Ports

**SN4671/4BIS8VF/EUI:** SmartNode IAD, Fiber SFP, 4 BRI, 8 VoIP calls; 4 LAN/WAN Ethernet Ports

**SN4671/8BIS16VF/EUI:** SmartNode IAD, Fiber SFP, 8 BRI, 16 VoIP calls; 4 LAN/WAN Ethernet Ports

### Accessories

**INS-KIT-RACKEARS-11/19:** Rack mount ears for a 11.5 inch case into a 19-inch rack space

**PATTON**  
Let's Connect!

**Patton Electronics Co.**  
7622 Rickenbacker Drive  
Gaithersburg, Maryland 20879  
USA  
Phone +1 301 975 1000  
Fax +1 301 869 9293  
E-mail [sales@patton.com](mailto:sales@patton.com)  
Web [www.patton.com](http://www.patton.com)

**PE-Inalp Networks Private Ltd**  
Old No. 14 and New No.6,  
Brahadambal Road,  
Nungambakkam High Road  
Chennai: 600 034, India  
Phone +91 44 45490395/6/7  
Fax +91 44 4549.0394  
Email [sales@patton.co.in](mailto:sales@patton.co.in)  
Web [www.patton.co.in](http://www.patton.co.in)

**Patton-Inalp Networks AG**  
Meriedweg 7  
CH-3172 Niederwangen  
Switzerland  
Phone +41 (31) 985 25 25  
Fax +41 (31) 985 25 26  
E-mail [sales@inalp.com](mailto:sales@inalp.com)  
Web [www.inalp.com](http://www.inalp.com)

SN4670-DS6

Patton is a registered trademark and the terms SmartNode, DownStreamQoS, and SessionRouter are trademarks of Patton Electronics Company in the United States and other countries.