Versatile Analog Telephone Adapter for Home and Office VoIP

**Toll Quality Voice and Carrier-Grade Feature Support**
The SPA2002 delivers clear, high-quality voice communication in a variety of network conditions. Excellent voice quality in challenging, changeable IP network environments is made possible via our advanced implementation of standard voice coding algorithms. The SPA2002 is interoperable with common telephony equipment like facsimile, voicemail, PBX/KTS and interactive voice response systems.

**Large-Scale Deployment and Management**
The SPA2002 offers all the key features and capabilities with which service providers can provide customized services to their subscribers. The SPA2002 can be remotely provisioned and supports dynamic, in-service software upgrades. A secure profile upload saves providers the time, expense and hassle of managing and pre-configuring or re-configuring customer premises equipment (CPE) for deployment.

**Ironclad Security**
The SPA2002 supports secure, encryption-based methods for communication, provisioning and servicing.

<table>
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<tr>
<th>PRODUCT DATA</th>
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<tbody>
<tr>
<td><strong>Model No.</strong> SPA2002</td>
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</table>
Telephony
- Two voice ports (RJ11) for analog phones or Fax machines
- Impedance Agnostics - 8 Configurable Settings
- Call Waiting, Cancel Call Waiting, Call Waiting Caller ID
- Caller ID with Name/Number (Multi-national Variants)
- Call Forwarding: No answer, Busy, All
- Do Not Disturb
- Call Transfer
- Three-way Conference Calling with Local Mixing
- Message Waiting Indication - Visual and Tone Based
- Call Return
- Call Back on Busy
- Call Blocking with Toll Restriction
- Delayed Disconnect
- Distinctive Ringing - Calling and Called Number
- Off-hook Warning Tone
- Selective/Anonymous Call Rejection
- Hot line and Warm Line Calling
- Speed Dialing of 8 Numbers/Addresses
- Music on Hold

Package Contents
- 1 - SPA2002 Phone Adapter Unit
- 1 - 5v Power Adapter - 1.8m Cord
- 1 - RJ45 Ethernet Cable - 1.8m Cord

Specifications

**Model**
SPA-2002

*Note: Many specifications are programmable within a defined range or list of options. Please see the SPA Administration Guide for details. The configuration profile is uploaded to the SPA2002 at the time of provisioning.*

**Data Networking**
- MAC Address (IEEE 802.3)
- IPv4 - Internet Protocol v4 (RFC 791) upgradeable to v6 (RFC 1883)
- ARP - Address Resolution Protocol
- DNS - A Record (RFC 1706), SRV Record (RFC 2782)
- DHCP Client - Dynamic Host Configuration Protocol (RFC 2131)
- ICMP - Internet Control Message Protocol (RFC 792)
- TCP - Transmission Control Protocol (RFC 793)
- UDP - User Datagram Protocol (RFC 768)
- RTP - Real Time Protocol (RFC 1889) (RFC 1890)
- RTCP - Real Time Control Protocol (RFC 1889)
- DiffServ (RFC 2475), Type of Service - TOS (RFC 791/1349)
- SNTP - Simple Network Time Protocol (RFC 2030)
- SIP Proxy Redundancy - Dynamic via DNS SRV, A Records Re-registration with Primary SIP Proxy Server
- SIP Support in Network Address Translation Networks - NAT (incl. STUN)
- Secure (Encrypted) Calling via Pre-Standard Implementation of Secure RTP
- Codec Name Assignment

**Voice Gateway**
- SIP Proxy Redundancy - Dynamic via DNS SRV, A Records Re-registration with Primary SIP Proxy Server
- SIP Support in Network Address Translation Networks - NAT (incl. STUN)
- Secure (Encrypted) Calling via Pre-Standard Implementation of Secure RTP
- Codec Name Assignment

**Voice Algorithms**
- G.711 (A-law and µ-law)
- G.726 (16/24/32/40 kbps)
- G.729 A
- G.723.1 (6.3 kbps, 5.3 kbps)
- Dynamic Payload
- Adjustable Audio Frames per Packet

**Fax Capability**
- Fax Tone Detection Pass-Through
- Fax Pass-Through - Using G.711
- DTMF: In-band & Out-of-band (RFC 2833) (SIP Info)
- Flexible Dial Plan Support with Interdigit Timers and IP Dialing
- Call Progress Tone Generation
- Jitter Buffer - Adaptive
- Frame Loss Concealment
- Full Duplex Audio
- Echo Cancellation (G.165/G.168)
- VAD - Voice Activity Detection with Silence Suppression
### Specifications

**Model No.** SPA2002

**Security**
- Password Protected System Reset to Factory Default
- Password Protected Admin and User Access Authority

**Provisioning/Configuration/Authentication:**
- HTTPS with Factory Installed Client Certificate
- HTTP Digest - Encrypted Authentication via MD5 (RFC 1321)
- Up to 256-bit AES Encryption

**Physical Interfaces:**
- 1 10baseT RJ-45 Ethernet Port (IEEE 802.3)
- 2 RJ-11 FXS Phone Ports - For Analog Circuit Telephone Device (Tip/Ring)

**Subscriber Line Interface Circuit (SLIC):**
- Ring Voltage: 40-55 VRMS Configurable *
- Ring Frequency: 10 Hz - 40 Hz *
- Ring Waveform: Trapezoidal and Sinusoidal *
- Maximum Ringer Load: 3 REN

**On-hook/off-hook Characteristics:**
- On-hook voltage (tip/ring): -50 V NOMINAL
- Off-hook current: 25 mA min
- Terminating Impedance: 8 Configurable Settings including North America 600 ohms, European CTR21

**Power Supply:**
- DC Input Voltage: +5 VDC at 2.0 A Max.
- Power Consumption: 5 Watts
- Switching Type (100-240v) Automatic
- Power Adapter: 100-240v - 50-60Hz (26-34VA) AC Input, 1.8m cord

**Indicator Lights/LED:**
- LAN Activity/Link LED
- Status LED (In-Use, Provisioning, Idle, Alert)

**Documentation:**
- Quick-Start Installation and Configuration Guide
- User Guide
- Administration Guide - Service Providers Only
- Provisioning Guide - Service Providers Only

**Dimensions**
- 3.11 x 1.12 x 3.79 in (78.99 x 28.45 x 96.27 mm) W x H x D

**Unit Weight**
- 3.17 oz (0.09 kg)

**Operating Temp.**
- 41º~113ºF (5º~45ºC)

**Storage Temp.**
- -13º~185ºF (-25º~85ºC)

**Operating Humidity**
- 10~90% Non-condensing

**Storage Humidity**
- 10~90% Non-Condensing
Inexpensive, easy to install and simple-to-use, the Linksys SPA2002 Analog Telephone Adapter connects a standard telephone or fax machine to IP-based data networks. IP telephony service providers and enterprises can offer residential and business users traditional and enhanced communication services via the customer’s broadband connection to the Internet or Local Area Network (LAN).

The SPA2002 features two RJ11 POTS (Plain Old Telephone Service) ports for connection to existing analog phones, fax machines, PBX and key system communication platforms. The SPA2002 includes an RJ45 Ethernet port for connection to a home or office LAN. Each SPA service line can be independently configured via software controlled by the service provider and/or the end user.

With the SPA2002, individuals and companies are able to protect and extend their past investments in telephones, conference speakerphones and fax machines as well as control their migration to IP with an extremely affordable, incremental investment.

Installed by the end user and remotely provisioned, configured and maintained by the service provider, each SPA2002 converts voice traffic into data packets for transmission over an IP network. The SPA2002 can be used in consumer and business IP telephony service offerings including full-featured IP Centrex. The SPA2002 delivers clear sounding voice and reliable fax calling through its implementation of internationally recognized standards for voice and data networking.

### Linksys Phone Adapter Comparison Chart

<table>
<thead>
<tr>
<th>SPA Model</th>
<th>Service Lines</th>
<th>Active Calls</th>
<th>3-Way Conferences</th>
<th>PSTN (FXO) Connection</th>
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