LINKSYS®
A Division of Cisco Systems, Inc.

CISCO SYSTEMS

Versatile Analog Telephone Adapter for Home and Office VoIP
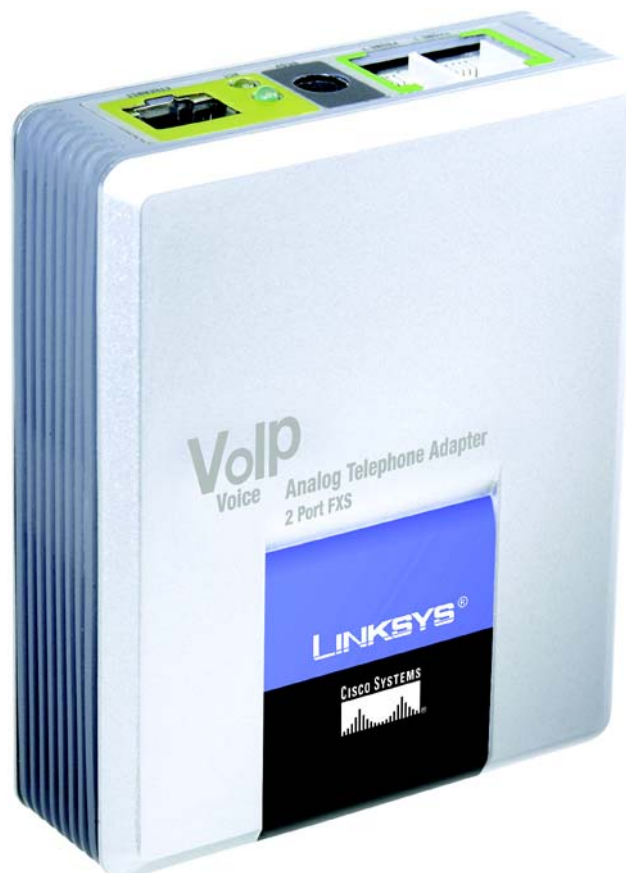
Toll Quality Voice and Carrier-Grade Feature Support
The SPA2002 delivers clear, high-quality voice communication in a variety of network conditions. Excellent voice quality in challenging, changeable IP network environments is made possible via our advanced implementation of standard voice coding algorithms. 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.

Model No. **SPA2002**

PRODUCT DATA

Model No.   **SPA2002**

Features

Package Contents

Specifications

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)
- Caller ID Blocking
- 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

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

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 (RFC792)
	TCP - Transmission Control Protocol (RFC793)
	UDP - User Datagram Protocol (RFC768)
	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)
Voice Gateway	SIPv2: Session Initiation Protocol v2 (RFC 3261, 3262, 3263, 3264)
	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-Though - 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

	Attenuation / Gain Adjustments
	Flash Hook Timer
	MWI - Message Waiting Indicator Tones
	VMWI - via FSK
	Polarity Control
	Hook Flash Event Signaling
	Caller ID Generation (Name & Number) - Bellcore, DTMF, ETSI
	Music on Hold Client
	Streaming Audio Server - up to 10 sessions
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
Provisioning, Administration & Maintenance:	Web Browser Administration & Configuration via Integral Web Server
	Telephone Key Pad Configuration with Interactive Voice Prompts
	Automated Provisioning & Upgrade via HTTPS, HTTP, TFTP
	Asynchronous Notification of Upgrade Availability via NOTIFY
	Non-intrusive, In-Service Upgrades
	Report Generation & Event Logging
	Stats in BYE Message
	Syslog & Debug Server Records - Per Line Configurable
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
Regulatory Compliance:	FCC (Part 15, Class B) , CE, ICES-003
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

Environmental

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

SPA Model	Service Lines	Active Calls	3-Way Conferences	PSTN (FXO) Connection
SPA1001	2	2	1	0
SPA2002	2	4	2	0
SPA2100	2	4	2	0
SPA3000	2	3	1	1