

Sipura Phone Adapters

SPA-2002

2 Port FXS Analog Telephone Adapter



The Sipura Phone Adapter

Inexpensive, easy-to-install and simple-to-use, the Sipura Phone Adapter (SPA) connects standard telephones and fax machines to IP-based data networks. IP telephony service providers and enterprise users can offer traditional and enhanced communication services via the customers' broadband connection to the Internet or Local Area Network (LAN).

The SPA-2002 features two POTS (Plain Old Telephone Service) ports for connection to existing analog phones, fax machines, PBX and key system communication platforms. The SPA includes an Ethernet interface 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 SPA-2002, 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 SPA-2002 converts voice traffic into data packets for transmission over an IP network. The SPA-2002 can be used in consumer and business IP telephony service offerings including full-featured IP Centrex. The SPA-2002 delivers clear sounding voice and reliable fax calling through its implementation of internationally recognized standards for voice and data networking.

Sipura Phone Adapter Comparison Chart

SPA Model	Service Lines	Active Calls	3-Way Conferences	PSTN (FXO) Connection
SPA-2100	2	4	2	0
SPA-2002	2	4	2	0
SPA-1001	2	2	1	0
SPA-3000	2	3	1	1

Notes:
The SPA-2100 supports up to 2 sessions using G.729. The SPA-1001, SPA-2002 and SPA-3000 support one G.729 session.
The SPA-1001 will add the capability to support a second independently configurable service shared by its single FXS port.

Highlights

Toll Quality Voice and Carrier-Grade Feature Support

The SPA-2002 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 SPA-2002 is interoperable with common telephony equipment like facsimile, voicemail, PBX/KTS and interactive voice response systems.

The SPA-2002 Supports Key Telephony Features:

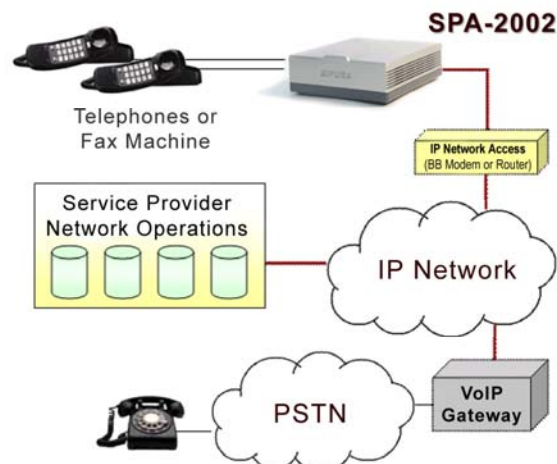
- Terminating Impedance Agnostic - 8 Settings
- Call Waiting, Cancel Call Waiting
- Caller ID with Name / Number (Multinational Variants)
- Caller ID Blocking
- Call Waiting Caller ID with Name / Number
- Call Forwarding: No Answer / Busy / All
- Do Not Disturb
- Call Transfer
- Three-Way Conference 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
- Off-Hook Warning Tone
- Selective / Anonymous Call Rejection
- Hot Line and Warm Line Calling
- Speed Dialing of 8 Numbers / Addresses
- Music on Hold

Large-Scale Deployment and Management

The SPA-2002 offers all the key features and capabilities with which service providers can provide customized services to their subscribers. The SPA-2002 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 premise equipment (CPE) for deployment.

Security

Sipura Technology recognize that security for both end users and network operators is a fundamental requirement for a viable, carrier-grade telephony service. The SPA-2002 supports secure, encryption-based methods for communication, provisioning and servicing.



SPA-2002



Front



Rear

Technical Specifications

Note: Many specifications are programmable within a defined range or list of options.

Please see the SPA Administration Guide for details.

The target configuration profile is uploaded to the SPA-2002 at the time of provisioning.

Data Networking:

MAC Address (IEEE 802.3)
IPv4 – Internet Protocol Version 4 (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 Version 2 (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 mu-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 Tone Detection
Fax Pass-Through – Using G.711
Real Time Fax – Using T.38 (Pending)
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 w/ Silence Suppression
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
Sipura *SecureProvision*
HTTP Digest – Encrypted Authentication via MD5 (RFC 1321)
Up to 256-bit AES Encryption

Provisioning, Administration and Maintenance:

Web Browser Administration and 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 and Event Logging
Stats in BYE Message
Syslog and Debug Server Records – Per Line Configurable

Physical Interfaces:

One RJ-45 Port - Ethernet 10baseT Interface (IEEE 802.3)
Two RJ-11 FXS Ports - For Analog Circuit Telephone Device (Tip/Ring)

Subscriber Line Interface Circuit (SLIC):

Ring Voltage: 40 - 55 V_{RMS} Configurable
Ring Frequency: 10 Hz - 40Hz
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: Eight Configurable Settings Including:
North America 600 ohms, European CTR21

Regulatory Compliance:

FCC Part 15 Class B
CE Mark

Power Supply:

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

Indicator Lights:

LAN Activity/Link LED
Status LED (In-Use, Provisioning, Idle, Alert)

Operating Temperature:

41 to 113° F (5 to 45° C)

Storage Temperature:

-13 to 185° F (-25 to 85° C)

Relative Humidity:

10 to 90% non-condensing, operating and non-operating

Unit Dimensions:

94mm x 78mm x 30mm (3.70in x 3.07in x 1.18in)
Compact Form Factor, Desktop Mountable

Box Dimensions / Weight:

183mm x 152mm x 64mm (7.20in x 5.98in x 2.52in) / 490g (1.08 lbs)

Box Contents:

1 - Sipura Phone Adapter Unit - Color: Platinum
1 - 5v Power Adapter - 1.8m (3 ft) Cord - Color: Black
1 - RJ-45 Ethernet Cable - 1.8m (3 ft) Cord - Color: Black

Shipping Carton (20 Pieces) Dimensions / Weight:

39.5cm x 34cm x 33cm (15.55 in x 13.39 in x 12.99 in) / 10.6kg (23.37 lbs)

Physical Customization:

Customer Logo / Branding Available
Case Color Matching Available

Documentation:

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

Warranty:

One Year Hardware

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