

## Sipura Phone Adapters

### SPA-1000

1 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-1000 features two POTS (Plain Old Telephone Service) ports for connection to existing analog phones, fax machines, PBX and key system communication platforms. The SPA-1000 includes an Ethernet interface for connection to a home or office LAN. The SPA-1000 can be configured via software controlled by the service provider and/or the end user.

With the SPA-1000, 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-1000 converts voice traffic into data packets for transmission over an IP network. The SPA-1000 can be used in consumer and business IP telephony service offerings including full-featured IP Centrex. The SPA-1000 delivers clear sounding voice and reliable fax calling through its implementation of internationally recognized standards for voice and data networking.

SPA Model	Service Lines	Active Calls	3-Way Conferences
SPA-2000	2	4	2
SPA-1000	1	2	1

Notes:  
Each SPA-2000 RJ-11 phone port supports one service line. The SPA-1000 and SPA-2000 support one G.729 session. The SPA-1000 has two (2) physical phone interfaces that act as a single service line splitter.

### Highlights

#### Toll Quality Voice and Carrier-Grade Feature Support

The SPA-1000 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-1000 is interoperable with common telephony equipment like facsimile, voicemail, PBX/KTS and interactive voice response systems.

#### The SPA-1000 Supports Key Telephony Features:

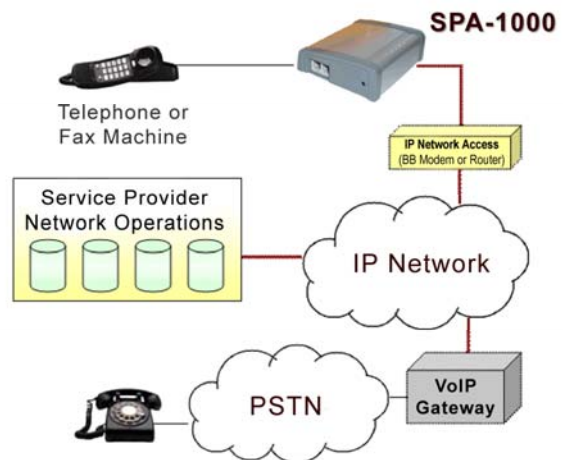
- Terminating Impedance Agnostic - 8 Settings
- Call Waiting, Cancel Call Waiting
- Caller ID with Name / Number (Multinational Variants)
- Caller ID Blocking
- Call Waiting Caller ID with Name / Number
- Call Forwarding: No Answer / Busy / All
- Do Not Disturb
- Call Transfer
- Three-Way Conference 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

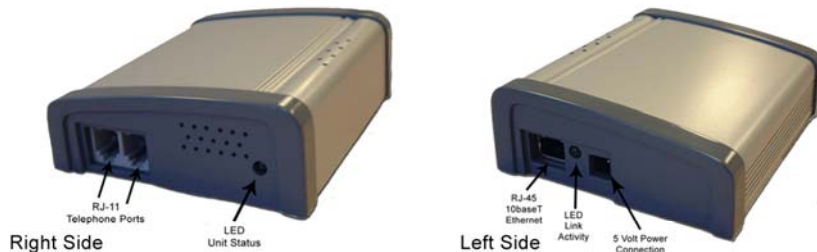
The SPA-1000 offers all the key features and capabilities with which service providers can provide customized services to their subscribers. The SPA-1000 can be remotely provisioned and supports dynamic, in-service software upgrades. A secure profile upload saves providers the time, expense and hassle 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-1000 supports secure, encryption-based methods for communication, provisioning and servicing.



# SPA-1000



## 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-1000 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 Pass-Through  
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 or RC4 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  
Syslog and Debug Server Records  
Per Line and Purpose Configurable Syslog and Debug Options

### Physical Interfaces:

One RJ-45 Port - Ethernet 10baseT Interface (IEEE 802.3)  
One RJ-11 FXS Port - For Analog Circuit Telephone Device (Tip/Ring)  
- Phone1 and Phone2 RJ-11 Ports Act As A Splitter

### Subscriber Line Interface Circuit (SLIC):

Ring Voltage: 40 - 55 V<sub>RMS</sub> 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 with Modular Wall Plug Clip – Country Specific  
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:

110mm x 93mm x 35mm (4.33in x 3.66in x 1.38in)  
Compact Form Factor, Desktop or Wall 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  
Administration Guide

### Warranty:

One Year Hardware

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