

Sipura Phone Adapters

SPA-2100

2 Port FXS Analog Telephone Adapter
2 Ethernet Ports - LAN+WAN



The Sipura Phone Adapter

Inexpensive, easy-to-install and simple-to-use, the Sipura SPA-2100 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-2100 features two POTS (Plain Old Telephone Service) ports for connection to existing analog telephones, fax machines, PBX and key system communication platforms. The SPA-2100 includes an Ethernet interface for connecting to a home or office PC (LAN) as well as an Ethernet connection to the broadband modem or router (WAN). Each SPA-2100 service line can be independently configured via software controlled by the service provider and/or the end user.

With the SPA-2100, 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-2100 converts voice traffic into data packets for transmission over an IP network. Upstream voice traffic can take priority over less time sensitive data traffic to provide quality of service (QoS) treatment to VoIP phone calls.

Stylish and compact in design, the SPA-2100 can be used in consumer and business IP telephony service offerings including full-featured IP Centrex. The SPA-2100 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-2000	2	4	2	0
SPA-1001	1*	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-2000 and SPA-3000 support one G.729 session.
* In the future, the SPA-1001 will add the capability to support a second independently configurable service.

Highlights

Toll Quality Voice and Carrier-Grade Feature Support
The SPA-2100 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 and voice prioritization algorithms. The SPA-2100 is interoperable with common telephony equipment like facsimile, voicemail, PBX/KTS and interactive voice response systems.

The SPA-2100 Supports Key Telephony Features:

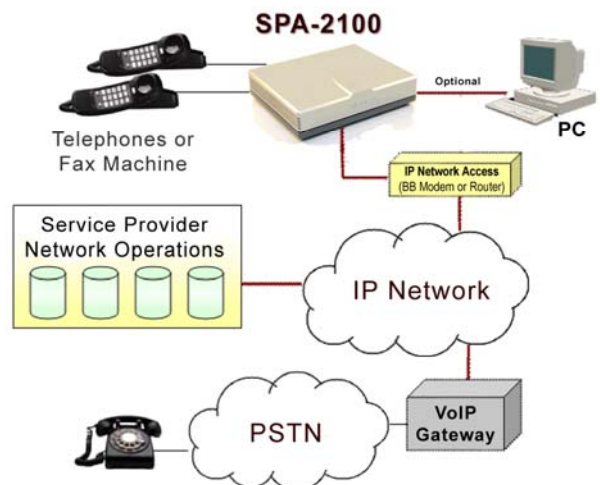
- Terminating Impedance Agnostic - 8 Settings
- Call Waiting, Cancel Call Waiting
- Caller ID with Name / Number (Multinational Variants)
- Caller ID Blocking
- Call Waiting Caller ID with Name / Number
- Call Forwarding: No Answer / Busy / All
- Do Not Disturb
- Call Transfer (Blind and Consultative)
- 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 Numbers
- Off-Hook Warning Tone
- Selective / Anonymous Call Rejection
- Hot Line and Warm Line Calling
- Speed Dialing of 8 Numbers / Addresses
- Music on Hold
- Fax - G.711 Pass-Through or Real Time Fax over IP via T.38 (Pending)

Large-Scale Deployment and Management

The SPA-2100 offers all the key features and capabilities with which service providers can provide customized services to their subscribers. The SPA-2100 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.

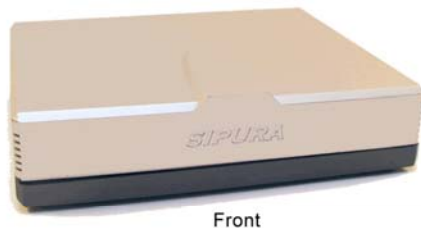
Ironclad Security

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-2100 supports secure, encryption-based methods for communication, provisioning and service.



SPA-2100

This data sheet is preliminary.
Subject to change without notice.



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-2100 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)
DHCP Server – Dynamic Host Configuration Protocol (RFC 2131)
PPPoE Client – Point to Point Protocol over Ethernet (RFC 2516)
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)
VLAN Tagging – 802.1P
SNTP – Simple Network Time Protocol (RFC 2030)
Upload Data Rate Limiting – Static and Automatic
Voice Packet Prioritization Over Other Packet Types
Router or Bridge Mode of Operation (Pending)
MAC Address Cloning
Port Forwarding

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
Direct IP to IP Calling
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
Real Time Fax via T.38 (Pending)
Voice Band Data Modem Support (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 or RC4 Encryption

Provisioning, Administration and Maintenance:

Web Browser Administration and Configuration via Integral Web Server
Automated Key Pad Configuration with Interactive Voice Prompts
Automated Remote 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 - WAN Ethernet 10baseT Interface (IEEE 802.3)
One RJ-45 Port - LAN 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
UL - USA & Canada (Pending)

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 on Each Ethernet Port
Status LED (Provisioning, Alert, etc.)
Phone 1, Phone 2 LED (In-Use, Registered, 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:

102mm x 124mm x 28mm (4.02in x 4.88in x 1.10in)

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 Guide
Administration Guide

Warranty:

One Year Hardware

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