Cisco SPA 502G 1-Line IP Phone with Display, PoE and PC Port

Highlights

- For business or home office use

- Dependable, Affordable and Feature Rich

- Full-featured 1-line business-class IP phone supporting Power over Ethernet (PoE)

- Monochrome backlit display for ease of use, aesthetics, and on-screen applications

- Connects directly to an Internet telephone service provider or to an IP private branch exchange (PBX)

- Dual switched Ethernet ports for connecting a computer behind the phone, reducing cabling costs

- Wideband audio for unsurpassed voice clarity and enhanced speaker quality

- Easy installation and highly secure remote provisioning, as well as menu-based and web-based configuration

- Supports up to two Cisco® SPA 500S Expansion Module, adding up to 64 additional buttons*

- Supports both Session Initiation Protocol (SIP) and Smart Phone Control Protocol (SPCP) with the Cisco Unified Communications 500 Series for Small Business

Comprehensive Interoperability and SIP-Based Feature Set

Part of the Cisco Small Business Pro Series, the SIP based Cisco SPA 502G 1-Line IP Phone (Figure 1) has been tested to ensure comprehensive interoperability with equipment from voice over IP (VoIP) infrastructure leaders, enabling service providers to quickly roll out competitive, feature-rich services to their customers.

With hundreds of features and configurable service parameters, the Cisco SPA 502G addresses the requirements of traditional business users while building on the advantages of IP telephony. Features such as easy station moves and shared line appearances (across local and geographically dispersed locations) are just some of the many advantages of the SPA 502G.

The Cisco SPA 502G 1-Line IP phone also supports productivity-enhancing features such as VoiceView Express and Cisco XML applications when used with Cisco Unified Communications 500 Series in SPCP mode.

Carrier-Grade Security, Provisioning, and Management

The Cisco SPA 502G uses standard encryption protocols to perform highly secure remote provisioning and unobtrusive in-service software upgrades. Remote provisioning tools include detailed performance measurement and troubleshooting features, enabling network providers to deliver high-quality support to their subscribers. Remote provisioning also saves service providers the time and expense of managing, preloading, and reconfiguring customer premises equipment.

Figure 1.   Cisco SPA 502G 1-Line IP Phone

Telephony Features

- One voice line
- One SIP registration
- Line status: active line indication, with name and number
- Menu-driven user interface
- Shared line appearance**
- Speakerphone
- Call hold
- Music on hold**
- Call waiting
- Caller ID name and number
- Outbound caller ID blocking
- Call transfer: attended and blind
- Three-way call conferencing with local mixing
- Multiparty conferencing via external conference bridge
- Automatic redial of last calling and last called numbers
- On-hook dialing
- Call pickup: selective and group**
- Call park and unpark**
- Call swap
- Call back on busy
- Call blocking: anonymous and selective
- Call forwarding: unconditional, no answer, on busy
- Hot line and warm line automatic calling
- Call logs (60 entries each): made, answered, and missed calls
- Redial from call logs
- Personal directory with auto-dial (100 entries)

- Do not disturb
- Digits dialed with number auto-completion
- Anonymous caller blocking
- Uniform Resource Identifier (URI) (IP) dialing support (vanity numbers)
- On-hook default audio configuration (speakerphone and headset)
- Multiple ring tones
- Called number with directory name matching
- Ability to call number using name: directory matching or via caller ID
- Subsequent incoming calls show calling name and number
- Date and time with support for intelligent daylight savings
- Call start time stored in call logs
- Call timer
- Name and identity (text) displayed at startup
- Distinctive ringing based on calling and called number
- 10 user-downloadable ring tones
- Speed dialing, eight entries
- Configurable dial/numbering plan support
- Intercom**
- Group paging
- Network Address Translation (NAT) Traversal, including Simple Traversal of UDP Through NATs (STUN) support
- DNS SRV and multiple A records for proxy lookup and proxy redundancy
- Syslog, debug, report generation, and event logging
- Highly secure call encrypted voice communications support
- Built-in web server for administration and configuration with multiple security levels
- Automated remote provisioning, multiple methods; up to 256-bit encryption (HTTP, HTTPS, Trivial File Transfer Protocol [TFTP])
- Option to require administrator password to reset unit to factory defaults

Hardware Features

- Pixel-based display: 128 x 64 monochrome LCD graphical display with backlight
- Dedicated illuminated buttons for:
  - Audio mute on/off
  - Headset on/off
  - Speakerphone on/off
- 4-way rocking directional knob for menu navigation
- Voicemail message waiting indicator (VMWI) light
- Voicemail message retrieval button
- Dedicated hold button
- Settings button for access to feature, setup, and configuration menus

- Volume control rocking up/down knob controls handset, headset, speaker, ringer

- Standard 12-button dialing pad

- High-quality handset and cradle

- Built-in high-quality microphone and speaker

- Headset jack: 2.5 mm

- LED test function

- Two Ethernet ports with integrated Ethernet switch: 10/100BASE-T RJ-45

- 802.3af-compliant PoE

- Optional 5 VDC universal (100-240V) switching; power supply is ordered separately (Cisco PA100)

Regulatory Compliance

- FCC (Part 15, Class B), CE Mark, A-Tick, C-Tick, Telepermit, UL, CB

Security Features

- Password-protected system, preset to factory default

- Password-protected access to administrator and user-level features

- HTTPS with factory-installed client certificate

- HTTP digest: encrypted authentication via MD5 (RFC 1321)

- Up to 256-bit Advanced Encryption Standard (AES) encryption

- SIP over Transport Layer Security (TLS)

- Secure Real-Time Transport Protocol (SRTP)

Documentation

- Quick-Start Installation and Configuration Guide

- User Guide

- Administration Guide

- Provisioning Guide (for service providers only)

Package Contents

- Cisco SPA 502G 1-Line IP phone, handset, and stand

- Handset cord

- RJ-45 Ethernet cable

- Quick-Start Installation

Specifications

Table 1 gives specifications for the Cisco SPA 502G 1-Line IP Phone.

Table 1. Specifications for the Cisco SPA 502G 1-Line IP Phone

Note: Many features 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 502G at the time of provisioning.	
Data networking	• MAC address (IEEE 802.3) • IPv4 (RFC 791) • Address Resolution Protocol (ARP) • DNS: A record (RFC 1706), SRV record (RFC 2782) • Dynamic Host Configuration Protocol (DHCP) client (RFC 2131) • Internet Control Message Protocol (ICMP) (RFC 792) • TCP (RFC 793) • User Datagram Protocol (UDP) (RFC 768) • Real-Time Transport Protocol (RTP) (RFC 1889, 1890) • Real-Time Control Protocol (RTCP) (RFC 1889) • Differentiated Services (DiffServ) (RFC 2475) • Type of service (ToS) (RFC 791, 1349) • VLAN tagging 802.1p/Q: Layer 2 quality of service (QoS) • Simple Network Time Protocol (SNTP) (RFC 2030)

Voice gateway	• SIP version 2 (RFC 3261, 3262, 3263, 3264)
	• SPCP with the Cisco Unified Communications 500 Series
	• SIP proxy redundancy: dynamic via DNS SRV, A records
	• Reregistration with primary SIP proxy server
	• SIP support in NAT networks (including STUN)
	• SIPFrag (RFC 3420)
	• Secure (encrypted) calling via SRTP
	• Codec name assignment
	• Voice algorithms:
	  ◦ G.711 (A-law and μ-law)
	  ◦ G.726 (16/24/32/40 kbps)
	  ◦ G.729 A
	  ◦ G.722
	• Dynamic payload support
	• Adjustable audio frames per packet
	• Dual-tone multifrequency (DTMF), in-band and out-of-band (RFC 2833) (SIP INFO)
	• Flexible dial plan support with interdigit timers
	• IP address/URI dialing support
	• Call progress tone generation
	• Jitter buffer: adaptive
	• Frame loss concealment
	• Comfort Noise Generation (CNG)
	• Voice activity detection (VAD) with silence suppression
	• Attenuation/gain adjustments
	• VMWI - Voicemail Waiting Indicator, via NOTIFY, SUBSCRIBE
	• Caller ID support (name and number)
	• Third-party call control (RFC 3725)

Provisioning, administration, and maintenance	• Integrated web server provides web-based administration and configuration • Telephone keypad configuration via display menu/navigation • Automated provisioning and upgrade via HTTPS, HTTP, TFTP • Asynchronous notification of upgrade availability via NOTIFY • Nonintrusive in-service upgrades • Report generation and event logging • Statistics transmitted in BYE message • Syslog and debug server records: configurable per line

Power supply	• Power supply is optional and is purchased separately
	◦ Models: Cisco PA100-NA, PA100-EU, PA100-UK, PA100-AU
	• Switching type (100-240V) automatic
	• DC output voltage: +5 VDC at 2.0A maximum
	• Power adapter: 100-240V 50-60 Hz (26-34 VA) AC input
Physical interfaces	• Two 10/100BASE-T RJ-45 Ethernet ports (IEEE 802.3)
	• Handset: RJ-9 connector
	• Built-in speakerphone and microphone
	• Headset 2.5mm jack
Indicator lights/LEDs	• Speakerphone on/off button with LED
	• Headset on/off button with LED
	• Mute button with LED
	• Message waiting LED
Body dimensions (W x H x D)	8.42 x 8.35. x 1.73 in. (214 x 212 x 44 mm)
Unit weight	2.00 lb (0.9 kg)
Operating temperature	32º ~ 104ºF (0º ~ 40ºC)
Storage temperature	-4º ~ 158ºF (-20º ~ 70ºC)
Operating humidity	5% to 95% noncondensing
Storage humidity	5% to 95% noncondensing

Table 2 compares the SPA 502G with other Cisco SPA 500 Series IP Phones.

Table 2.   Cisco SPA 500 Series IP Phone Comparison

Model	Voice Lines	Ethernet Ports	High-Resolution Graphical Display	PoE Support
SPA 501G	8	2	No	Yes
SPA 502G	1	2	Yes	Yes
SPA 504G	4	2	Yes	Yes
SPA 508G	8	2	Yes	Yes
SPA 509G	12	2	Yes	Yes
SPA 525G	5	2	Color	Yes

Tables 3 and 4 give part numbers for the Cisco SPA 502G and optional support and accessories.

Table 3.   Ordering Information

Part Number	Description
SPA 502G	Cisco SPA 502G 1-Line IP Phone
CON-SBS-SVC1	3-year Cisco Small Business Pro Support Service

Table 4.   Optional Accessories

Part Number	Description
MB100	Wall-mount brackets for SPA 500, CP500, and SPA 900 Series
PA100-NA	Power supply for SPA 500, CP500, and SPA 900 Series-5V/2A (North America style plug)
PA100-UK	Power supply for SPA 500, CP500, and SPA 900 Series-5V/2A (UK style plug)
PA100-EU	Power supply for SPA 500, CP500, and SPA 900 Series-5V/2A (EU style plug)
PA100-AU	Power supply for SPA 500, CP500, and SPA 900-5V/2A (AU style plug). Power supply for SPA 500 and SPA 900 Series-5V/2A (NA)
WBP54G	802.11b/g wireless bridge

Warranty

Cisco SPA 500 Series IP Phones are covered by a Cisco standard 1-year hardware warranty. For more information, go to: http://www.cisco.com/go/warranty.

To download software updates, go to: http://www.cisco.com/go/smallbiz.

Service and Support

The Cisco Small Business Pro Service provides peace of mind coverage at an affordable price, and helps you get the most value from Cisco Small Business Pro solution. Delivered by Cisco, this device-level, subscription-based service includes software updates, extended access to the Cisco Small Business Support Center, and next-business-day hardware replacement as necessary.

For More Information

To learn more about the Cisco SPA 500 Series IP Phones please visit: http://www.cisco.com/go/500phones.

For more information on Cisco Small Business products and solutions, visit: http://www.cisco.com/smallbusiness.

*Feature supported only in SIP mode.
**Feature requires support by call server.