



## Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports Cisco Small Business Voice Gateways and ATAs

Feature-Rich VoIP Service Through Your High-Speed Internet Connection

### Highlights

- Enables high-quality feature-rich voice over IP (VoIP) service through your broadband Internet connection
- Dual standard telephone ports for use with analog phones or fax machines, with independent phone numbers
- High-quality, clear-sounding voice, using advanced voice quality of service (QoS) capability
- Compatible with all common telephone features, such as caller ID, call waiting, and voicemail

**Figure 1.** Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports



### Product Overview

The Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports (Figure 1) enables high-quality feature-rich VoIP service through your broadband Internet connection. Just plug it into your home router or gateway and use the two standard telephone ports to connect analog phones or fax machines. Each phone port operates independently, with separate phone service and phone numbers, like having two telephone lines. You'll get clear reception and reliable fax connections, even while using the Internet.

With Internet telephony, along with low domestic and international phone rates, impressive arrays of special telephone features are available. Choose your preferred local dialing number, regardless of where you live. Or add a virtual telephone number to have forwarded to your Internet phone. You can even add a toll-free number. The Cisco PAP2T Internet Phone Adapter is compatible with these and all of the other special telephone features that are available from your Internet telephone service provider, such as caller ID, call waiting, voicemail, call forwarding, distinctive ring, and much more.

## Features

### Telephony

- Two voice ports (RJ-11) for analog phones or fax machines
- Impedance agnostics - eight configurable settings
- Call waiting, cancel call waiting, call waiting caller ID
- Caller ID with name/number (multinational 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 eight numbers/addresses
- Music on hold

## Specifications

Table 1 contains the specifications and package contents for the Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports.

**Table 1.** Specifications for the Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports

Specifications	
<p><b>*Note: Many specifications are programmable within a defined range or list of options. Please see the PAP2T Administration Guide for details. The configuration profile is uploaded to the PAP2T at the time of provisioning.</b></p>	
<b>Data networking</b>	<ul style="list-style-type: none"> <li>• MAC address (IEEE 802.3)</li> <li>• IPv4 (RFC 791) upgradeable to v6 (RFC 1883)               <ul style="list-style-type: none"> <li>◦ Address Resolution Protocol (ARP)</li> </ul> </li> <li>• DNS-A record (RFC 1706), SRV record (RFC 2782)</li> <li>• Dynamic Host Configuration Protocol (DHCP) client (RFC 2131)</li> <li>• Internet Control Message Protocol (ICMP) (RFC 792)</li> <li>• TCP (RFC 793)</li> <li>• User Datagram Protocol (UDP) (RFC 768)</li> <li>• Real Time Protocol (RTP) (RFC 1889) (RFC 1890)</li> <li>• Real Time Control Protocol (RTCP) (RFC 1889)</li> <li>• Differentiated Services (DiffServ) (RFC 2475), type of service (ToS) (RFC 791/1349)</li> <li>• Simple Network Time Protocol (SNTP) (RFC 2030)</li> </ul>
<b>Voice gateway</b>	<ul style="list-style-type: none"> <li>• Session Initiation Protocol (SIP) v2 (RFC 3261, 3262, 3263, 3264)               <ul style="list-style-type: none"> <li>◦ SIP proxy redundancy - dynamic via DNS SRV, A records deregistration with primary SIP proxy server</li> </ul> </li> <li>• SIP support in network address translation (NAT) networks (including Serial Tunnel [STUN])</li> <li>• Highly secure (encrypted) calling via prestandard implementation of Secure RTP</li> <li>• Codec name assignment</li> </ul>
<b>Voice algorithms</b>	<ul style="list-style-type: none"> <li>• G.711 (A-law and <math>\mu</math>-law)</li> <li>• G.726 (16/24/32/40 kbps)</li> <li>• G.729 A</li> <li>• G.723.1 (6.3 kbps, 5.3 kbps)</li> <li>• Dynamic payload</li> <li>• Adjustable audio frames per packet</li> </ul>
<b>Fax capability</b>	<ul style="list-style-type: none"> <li>• Fax tone detection pass-through</li> <li>• Fax pass-through - using G.711</li> <li>• Dual-tone multifrequency (DTMF): in-band and out-of-band (RFC 2833) (SIP info)</li> <li>• Flexible dial plan support with interdigit timers and IP dialing</li> <li>• Call progress tone generation</li> <li>• Jitter buffer - adaptive</li> <li>• Frame loss concealment</li> <li>• Full duplex audio</li> <li>• Echo cancellation (G.165/G.168)</li> <li>• Voice activity detection (VAD) with silence suppression</li> <li>• Attenuation/gain adjustments</li> <li>• Flash hook timer</li> <li>• Message waiting indicator (MWI) tones</li> <li>• Visual messaging waiting indicator (VMWI) via frequency shift keying (FSK)</li> <li>• Polarity control</li> <li>• Hook flash event signaling</li> <li>• Caller ID generation (name and number) - Bellcore, DTMF, European Telecommunications Standards Institute (ETSI)</li> <li>• Music on hold client</li> <li>• Streaming audio server - up to 10 sessions</li> </ul>

<b>Security</b>	<ul style="list-style-type: none"> <li>• Password-protected system reset to factory default</li> <li>• Password-protected administrator and user access authority</li> <li>• Provisioning/configuration/authentication:</li> <li>• HTTPS with factory-installed client certificate</li> <li>• HTTP digest - encrypted authentication via MD5 (RFC 1321)</li> <li>• Up to 256-bit Advanced Encryption Standard (AES) encryption</li> </ul>
<b>Provisioning, administration, and maintenance</b>	<ul style="list-style-type: none"> <li>• Web browser administration and configuration via integral web server</li> <li>• Telephone keypad configuration with interactive voice prompts</li> <li>• Automated provisioning and upgrade via HTTPS, HTTP, Trivial File Transfer Protocol (TFTP)</li> <li>• Asynchronous notification of upgrade availability via NOTIFY</li> <li>• Nonintrusive, in-service upgrades</li> <li>• Report generation and event logging</li> <li>• Stats in BYE message</li> <li>• Syslog and debug server records - per-line configurable web browser</li> </ul>
<b>Physical interfaces</b>	<ul style="list-style-type: none"> <li>• One 10BASE-T RJ-45 Ethernet port (IEEE 802.3)</li> <li>• 2 RJ-11 FXS phone ports - for analog circuit telephone device (tip/ring)</li> </ul>
<b>Subscriber line interface circuit (SLIC)</b>	<ul style="list-style-type: none"> <li>• Ring voltage: 40–55 volts root mean square (Vrms) configurable *</li> <li>• Ring frequency: 10–40 Hz *</li> <li>• Ring waveform: trapezoidal and sinusoidal *</li> <li>• Maximum ringer load: 3 ringer equivalence numbers (RENs)</li> <li>• On-hook/off-hook characteristics: <ul style="list-style-type: none"> <li>◦ On-hook voltage (tip/ring): -50V nominal</li> <li>◦ Off-hook current: 25 mA min</li> <li>◦ Terminating impedance: 8 configurable settings, including North America 600 ohms, European CTR21</li> </ul> </li> </ul>
<b>Regulatory compliance</b>	FCC (Part 15, Class B), cUL, CE, IC-003, A-Tick
<b>Power supply</b>	<ul style="list-style-type: none"> <li>• DC input voltage: +5V DC at 2.0A max.</li> <li>• Power consumption: 5W</li> <li>• Switching type (100–240V) automatic</li> <li>• Power adapter: 100–240V - 50–60 Hz (26–34 VA) AC input, 1.8 m cord</li> </ul>
<b>Indicator lights/LED</b>	Phone1, Phone2, Internet, Power
<b>Documentation</b>	<ul style="list-style-type: none"> <li>• Quick-start installation and configuration guide</li> <li>• User guide</li> <li>• Administration guide - service providers only</li> <li>• Provisioning guide - service providers only</li> </ul>
<b>Environmental</b>	
<b>Dimensions W x H x D</b>	3.98 x 3.98 x 1.10 in. (101 x 101 x 28 mm)
<b>Unit weight</b>	5.40 oz (153 g)
<b>Operating temp.</b>	32° to 113°F (0° to 45°C)
<b>Storage temp.</b>	-77° to 158°F (-25° to 70°C)
<b>Operating humidity</b>	10% to 90% noncondensing
<b>Storage humidity</b>	10% to 90% noncondensing
<b>Package Contents</b>	
<ul style="list-style-type: none"> <li>• Cisco PAP2T Internet Phone Adapter with 2 VoIP Ports</li> <li>• Power adapter</li> <li>• RJ-45 Ethernet cable</li> <li>• Quick installation guide</li> </ul>	
<b>Product Warranty</b>	
1-year limited hardware warranty with return to factory replacement and 90-day limited software warranty	

## Cisco Limited Warranty for Cisco Small Business Series Products

This Cisco Small Business product comes with a 1-year limited hardware warranty with return to factory replacement and a 90-day limited software warranty. In addition, Cisco offers software application updates for bug fixes and telephone technical support at no charge for the first 12 months following the date of purchase. To download software updates, go to:

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### For More Information

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