

Cisco ATA 186 Analog Telephone Adaptor



The Cisco ATA 186 Analog Telephone Adaptor is a handset-to-Ethernet adaptor that turns traditional telephone devices into IP devices. Customers can take advantage of the many new and exciting IP telephony applications by connecting their analog devices to Cisco ATAs.

The Cisco Analog Telephone Adaptor products are standards-based communication devices that deliver true, next-generation voice-over-IP (VoIP) terminations to businesses and residences worldwide.

Protects Legacy Telephone Investment

The Cisco ATA 186 supports two voice ports, each with its own independent telephone number, and a single 10/100BaseT Ethernet port. This adaptor can make use of existing

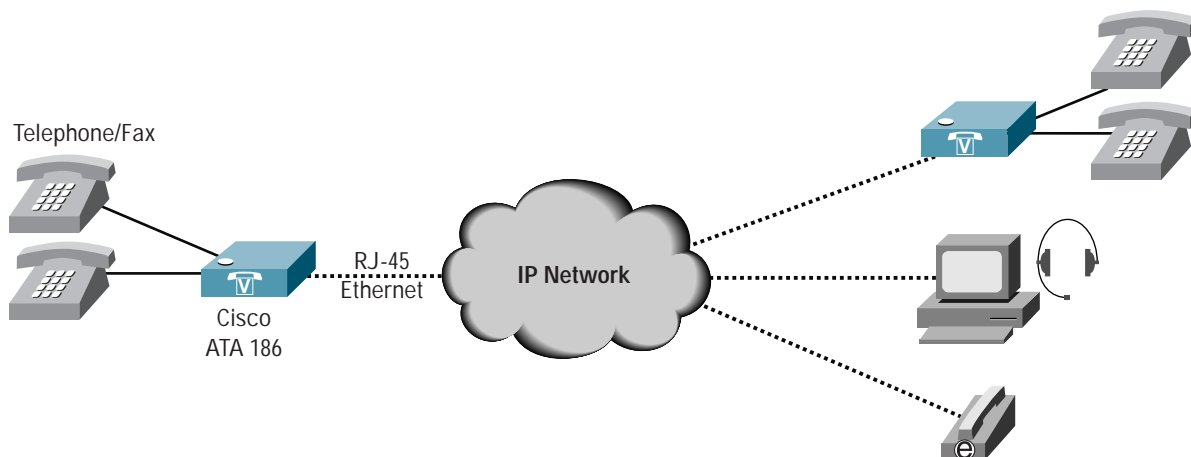
Ethernet LANs, in addition to broadband pipes such as digital subscriber line (DSL), fixed wireless and cable modem deployments.

Cost Effective

The Cisco ATA 186 helps customers turn their analog phone devices into IP devices cost-effectively and is the preferred solution to address the needs of customers who connect to either enterprise networks, small-office environments, or the emerging VoIP managed voice services and local services market.

Enterprise customers are using the Cisco ATA 186 to connect analog phones and FAX machines to their VoIP network. Service providers are taking advantage of emerging telephony applications and the ease of deploying second-line services using the Cisco ATA 186.

Figure 1 Cisco ATA 186—Endpoint for an end-to-end broadband system



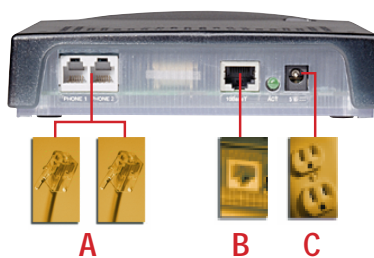


The Cisco ATA 186 allows you to connect analog telephones and faxes to an IP telephony network.

Table 1 Features and Benefits

Features	Benefits
<ul style="list-style-type: none"> • Two voice ports support legacy (analog) touch-tone telephones • RJ-45 connection to 10/100Base-T Ethernet hub or switch 	Connects legacy telephones to IP-based networks
<ul style="list-style-type: none"> • Auto-provisioning with Trivial File Transfer Protocol (TFTP) provisioning servers • Automatic assignment of IP address, network route IP, and subnet mask via Dynamic Host Configuration Protocol (DHCP) • Web configuration through built-in Web server • Touch-tone telephone keypad configuration with voice prompt • Administration password to protect configuration and access • Remote upgrades through network 	Flexible configuration and provisioning options
<ul style="list-style-type: none"> • Advanced pre-processing to optimize full-duplex voice compression • High performance line-echo cancellation eliminates noise and echo • Voice activity detection (VAD) and comfort noise generation (CNG) save bandwidth by delivering voice, not silence • Dynamic network monitoring to reduce jitter artifacts such a packet loss 	Clear, natural-sounding voice quality
<ul style="list-style-type: none"> • H.323 • Session Initiation Protocol (SIP) • Media Gateway Control Protocol (MGCP) • Skinny Client Control Protocol (SCCP)—Cisco CallManager technology 	Supports multiple protocols for interoperability and deployment flexibility
<ul style="list-style-type: none"> • Fits in most environments 	Small form-factor design
<ul style="list-style-type: none"> • Passwords displayed as asterisks instead of readable text. 	Enhanced security
<ul style="list-style-type: none"> • Network status page 	Track packet input, output and errors

System Requirements:



- A Regular analog, touch-tone telephones
- B 10/100Base-T category-3 cable or better (access to an IP network)
- C Power for AC/DC power adaptor



Software Specifications

Voice-over-IP (VoIP) protocols

- H.323 v2
- H.323 v4
- SIP (RFC 2543 bis)
- MGCP 1.0 (RFC 2705)
- MGCP 1.0/network-based call signaling (NCS) 1.0 Profile
- MGCP 0.1
- SCCP

Voice codecs¹

- G.729, G.729A, G.729AB2
- G.723.1
- G.711a-law
- G.711 -law

Provisioning and configuration

- DHCP (RFC 2131)
- Web configuration via built-in Web server
- Touch-tone telephone keypad configuration with voice prompt
- Basic boot provisioning (RFC 1350 TFTP Profiling)
- Dial plan provisioning
- Cisco Discovery Protocol for SCCP

Security

- H.235 for H.323
- RC4 encryption for TFTP configuration profiles

1. In simultaneous dual-port operation, the second port is limited to G.711 when using G.729.

Dual-tone multi-frequency (DTMF)

- DTMF tone detection and generation

Out-of-band DTMF

- H.245 out-of-band DTMF for H.323
- RFC 2833 AVT tones for SIP, MGCP, SCCP

Call progress tones

- Configurable for two sets of frequencies and single set of on/off cadence

Line-echo cancellation

- Echo canceller for each port
- 8 ms echo length
- Nonlinear echo suppression (ERL greater than 28 dB for $f = 300$ to 3400 Hz)
- Convergence time = 250 ms
- ERLE = 10 to 20 dB
- Double-talk detection

Voice features

- Voice activity detection (VAD)
- Comfort noise generation (CNG)
- Dynamic jitter buffer (adaptive)

Fax²

- G.711 fax pass-through
- G.711 fax mode

2. Success of fax transmissions up to 14.4 kbps depends on network conditions and fax modem/fax machine tolerance to those conditions. Network must have reasonably low network jitter, network delay, and packet loss rate.



Physical Specifications

Click [here](http://www.cisco.com/voice/evvbu/pdf/ata186.pdf) [http://www.cisco.com/voice/evvbu/pdf/ata186.pdf] to view the physical product specifications and regulatory compliance information in PDF format.

Ordering Information

Table 2 Cisco ATA 186 Analog Telephone Adaptors

Description	Part Number
Cisco ATA 186 with 600 ohm impedance	ATA186-I1
Cisco ATA 186 with complex impedance (270 ohm in series with 750 ohm and 150 NF in parallel)	ATA186-I2
CallManager Unit license for single analog port	SW-CCM-UL-ANA
CallManager Unit license for dual analog ports	SW-CCM-UL-ANA

Table 3 Cisco ATA 186 Power Supply Cables

Description	Part Number
ATA power supply cable for North America	ATACAB-NA
ATA power supply cable for Continental Europe	ATACAB-EU
ATA power supply cable for United Kingdom	ATACAB-UK
ATA power supply cable for Australia	ATACAB-AU
ATA power supply cable for Argentina	ATACAB-AR
ATA power supply cable for Japan	ATACAB-JP

Click [here](http://www.cisco.com/voice/evvbu/pricing.shtml#ata) [http://www.cisco.com/voice/evvbu/pricing.shtml#ata] for pricing information.

Services and Support

Cisco IP Communications services and support reduce the cost, time, and complexity of implementing a converged network, and they can help you create a resilient IP communications infrastructure that will meet your business needs today-and in the future.

Cisco and its partners have designed and deployed some of today's largest IP communications networks-they understand how to integrate an IP communications solution into your network infrastructure, a solution that will help you more quickly realize business results and gain a competitive advantage.

These results are delivered through a flexible suite of collaborative offerings that help you plan, design, implement, operate, and grow an IP communications solution.

Cisco design tools and best practices ensure the solution best fits your business needs from the start, eliminating costly redesigns and downtime. Cisco proven methods ensure a sound implementation that will deliver the functions and features you expect-on time. Support services include remote network operations, network management tools to administer the converged application and network infrastructure, and technical support services.

Cisco provides the flexibility you need to employ a services strategy that meets your specific requirements.



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