Release Notes for Cisco ATA 186 Release 2.12.ms

January 29, 2002

OL-1269-04 Rev. A0

These release notes describe newly incorporated features and resolved and open issues for the Cisco Analog Telephone Adaptor (ATA) 186 Release 2.12.ms.

Contents

These release notes provide the following information:

Introduction: Cisco ATA 186 Analog Telephone Adaptor

The Cisco ATA 186:

- Is an analog telephone adaptor that interfaces regular analog telephones to IP-based telephony networks.
- Is installed at the subscriber's premises and supports two voice ports, each with its own independent telephone number.

CISCO SYSTEMS

Corporate Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Downloading and Upgrading the Software

Before you can take advantage of the features of Release 2.12ms, including MGCP and SCCP, you must first download and upgrade the Cisco ATA 186 software. You can download the software at:

http://www.cisco.com/cgi-bin/tablebuild.pl/ata186

For more information about downloading and upgrading, see the SCCP Quickstart Guide, available in the SCCP/MGCP zip file, and the *Cisco ATA 186 Installation and Configuration Guide*.

Features in Release 2.12.ms

Release 2.12.ms of the Cisco ATA 186 software includes support for the Media Gateway Control Protocol (MGCP) and Skinny Client Control Protocol (SCCP).

This document contains information about configuring the Cisco ATA 186 to use both these protocols. As with previous versions of the Cisco ATA 186 software, there are three methods for configuring a Cisco ATA 186 including:

- Manual provisioning by using Interactive Voice Response (IVR)
- Manual Provisioning by using the Cisco ATA 186 Web Server Interface
- Autoprovisioning by using trivial file transfer protocol (TFTP)

Basic information about using these methods is in the *Cisco ATA 186 Installation and Configuration Guide*.

Note SCCP uses a different autoprovisioning method. See the "About SCCP" section on page 17 for details.

About MGCP

This section contains information about the MGCP protocol as implemented for the Cisco ATA 186.

The MGCP gateways interact with a call agent (CA), also called a media gateway controller (MGC) that performs signal and call processing on gateway calls.

MGCP Specifications

The Cisco ATA 186 implementation of MGCP complies with the following specifications:

- MGCP 1.0/Network-based Call Signaling (NCS) 1.0 Profile
- MGCP 0.1, 1.0

✎ **Note**   Security features in NCS 1.0 profile are not supported in this release.

- RFC 1890—RTP Profile for Audio and Video Conferences with Minimal Control (Media and payload type encoding names)
- RFC 2327—Session Description Protocol (SDP)
- RFC 2705—Media Gateway Control Protocol (MGCP 1.0)
- RFC 2833—RTP Payload for DTMF Digits, Telephone Tones, and Telephony Signals (AVT Tones)
- PacketCable Network-Based Call Signaling (NCS) Protocol Specification (PKT-SP-EC-MGCP-I03010620) (NCS 1.0)
- Bellcore GR-506—LSSGR: Signaling for Analog Interfaces (Tones specification)
- Basic MGCP Packages. Draft-foster-mgcp-basic-packages-00.txt.

Cisco ATA 186 Features with MGCP

This release of the Cisco ATA 186 supports the following features with MGCP:

- Two MGCP endpoints per Cisco ATA 186.
- Two connections per MGCP endpoint.
- Multiple audio codecs.
- Allows packages to overlap. Some events and signals are available in multiple packages.
- Auto MGCP version detection.
- Notified entity and domain name server (DNS) for failover.
- Caller ID generation.

Endpoints and Connections

The Cisco ATA 186 has two telephone (FXS) ports. These ports are called port 0 and port 1. Port 0 is labeled Phone 1 and port 1 is labeled Phone 2. Each port is an MGCP endpoint: Port 0 (Phone 1) is MGCP endpoint 0, while port 1 (Phone 2) is MGCP endpoint 1.

Each MGCP endpoint supports one device, either an analog phone set or a Fax machine, and up to 2 connections per device.

The Cisco ATA 186 supports Fax for most Fax machine makes and models for transmission speeds up to and including 9.6 Kbps. Version 2.12 of the Cisco ATA 186 currently does not support Fax at transmission speeds of 14.4 Kbps or faster.

Each connection has a fixed ID, either 0, 1, 2, or 3. Connections 0 and 2 are assigned to MGCP endpoint 0 while connections 1 and 3 are assigned to MGCP endpoint 1.

The IP address part in each MGCP endpoint's identifier can be enclosed by a square bracket [ ] by setting the bit in the ConnectMode parameter that corresponds to square brackets.

This example shows brackets enabled:

```
aaln/1@[128.107.139.111]
```

This example shows brackets not enabled:

```
d002@128.107.123.14
```

The default is brackets not enabled.

Registration: RSIP and NotifiedEntity

On power up, each MGCP endpoint assumes a disconnected state. The Cisco ATA 186 sends a Restart in Progress (RSIP) or Restart Method (RM) command for each MGCP endpoint to the pre-configured CA in one of the following syntaxes (selected by using one of the bits in ConnectMode). The Cisco ATA 186 supports two methods, **disconnect** and **restart**.

> **RSIP** *EPID0*@*ip_address MGCPVersion*
>
> **RM: restart**

and

> **RSIP** *EPID1*@*ip_address MGCPVersion*
>
> **RM: restart**

or

> **RSIP** *@*ip_address MGCPVersion*
>
> **RM: restart**

After a response is received from the CA for the RSIP, the MGCP endpoint is placed in the connected state and resumes normal operation. Subsequent commands are sent according to the NotifiedEntity parameter. Responses are always sent to the source address of the corresponding commands.

If a response to a subsequent command is not received after the maximum number of retransmission attempts, the Cisco ATA 186 assumes that the connection with the CA has been lost and both MGCP endpoints go back into the disconnected state. In this case, the Cisco ATA 186 sends the same message, but the **restart** is replaced by **disconnected**. For example:

> **RSIP** *@*ip_address MGCPVersion*
>
> **RM: disconnected**

The Cisco ATA 186 then sends RSIP messages to the current NotifiedEntity.

MGCP Endpoint Device-Type

To request the device-type from the Cisco ATA 186, the CA must include x-UA in the RequestedInfo (F:) parameter line in an AUEP command. For example:

F: X-UA

The Cisco ATA 186 responds with the following device-type:

```
X-UA: Cisco/ATA186
```

Commands Supported with MGCP

This release of the Cisco ATA 186 supports the following commands for MGCP:

- CRCX (Create Connection)
- MDCX (Modify Connection)
- DLCX (Delete Connection)
- RQNT (Notification Request)
- AUEP (Audit Endpoint)
- AUCX (Audit Connection)
- NTFY (Notify)
- RSIP (Restart in Progress)

Connection Modes Supported with MGCP

The Cisco ATA 186 supports the following MGCP connection modes:

- SendOnly
- RecvOnly
- SendRecv
- Inactive
- Confrnce

LocalConnectionOption

The Cisco ATA 186 supports the LocalConnectionOption:

Codec type: a

TOS: t

Packet size: p

Echo Canceller: e

Silence Suppression: s

Signals and Events Supported with MGCP

Persistent events supported are on-hook transition/off-hook transition (hu/hd) and hookflash (hf). All other notified events must be requested by the CA.

E: Event

ES: Event with auditable event state

BR: Brief signal

OO: On/off signal

TO: Timeout signal

C: Event or signal applicable to a connection

Note By default, hu, hd, and hf are set as persistent events. These events can be removed by setting the applicable bits in ConnectMode.

NCS 1.0 L-Package Supported with MGCP

Table 1   Network-Based Call Signaling (NCS) 1.0 L-Package

Code	Description	Type
0-9,*,#, A, B, C, D	DTMF tones	E, BR
bz	Busy tone	TO
cf	Confirmation tone	BR
ci (ti, nu, na)	Caller ID (on-hook or off-hook)	BR
dl	Dial tone	TO
ft	Fax answer tone (2100 Hz)	E
hd	Off-hook transition	ES
hf	Flash hook	E
hu	On-hook transition	ES
l	DTMF long-duration	E
ld	Long-duration connection	E, C
mwi	Message-waiting indication tone	TO
oc	Operation complete	E
of	Operation failed	E
ot	Off-hook warning	TO
r0-r7	Distinctive ringing	TO
rg	Ringing	TO
ro	Reorder tone	TO
rs	Ring splash	BR
rt	Ringback tone	TO, C

Table 1   Network-Based Call Signaling (NCS) 1.0 L-Package

Code	Description	Type
sl	Intermittent dial tone	TO
t	Timer (DTMF input)	E
wt1, wt2, wt3, wt4	Call-waiting tone	TO
x	DTMF tones wildcard	E

MGCP 0.1-1.0 L-Package Supported with MGCP

Table 2   MGCP 0.1-1.0 L-Package

Code	Description	Type
bz	Busy tone	TO
ci (ti, nu, na)	Caller ID (on-hook or off-hook)	BR
dl	Dial tone	TO
hd	Off-hook transition	ES
hf	Hook flash	E
hu	On-hook transition	ES
mwi	Message-waiting indication tone	BR
nbz	Network busy tone	TO
oc	Operation Complete	E
of	Operation failed	E
ot	Off-hook warning	TO
r0-r7	Distinctive ringing	TO
rg	Ringing	TO
ro	Reorder tone	TO
rs	Ring Splash	BR
sl, sdl	Intermittent dial tone	TO
wt	Call-waiting tone	TO
wt1, wt2, wt3, wt4	Alternative call-waiting tone	TO

MGCP 0.1-1.0 G-Package Supported with MGCP

Table 3   MGCP 0.1-1.0 G-Package

Code	Description	Type
cf	Confirmation tone	BR
cg	Network congestion tone	TO
ft	Fax answer tone (2100 Hz)	E

Table 3   MGCP 0.1-1.0 G-Package

Code	Description	Type
ld	Long-duration connection	E, C
oc	Operation complete	E
of	Operation failed	E
rbk(###)	rt@connection id	TO, C
rt	Ringback tone	TO, C

MGCP 0.1-1.0 D-Package Supported with MGCP

Table 4   MGCP 0.1-1.0 D-Package

Code	Description	Type
0-9, *, #, A, B, C, D	DTMF tones	E, BR
l	DTMF long-duration	E
of	Operation failed	E
t	Timer (DTMF input)	E
x	DTMF tones 0-9 wildcard	E

Configuration Parameters for the Cisco ATA 186 with MGCP

The parameters listed in Table 5 apply to the Cisco ATA 186 when using MGCP. Some of these parameters are new for this release; some change when MGCP is used.

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP

Parameter	IVR Menu	Usage	Default
UseMGCP	38	Set to 1 to select MGCP Mode 1=Use MGCP 0=Use SCCP	0
MGCPVer	206	Indicates the version of MGCP to use: MGCP0.1 MGCP1.0 NCS1.0 **Note** Spaces are not permitted in the MGCPVer parameter.	MGCP1.0
RetxIntvl	203	Sets the first retransmission interval of MGCP commands in milliseconds. Subsequent retransmission periods double the previous retransmission interval.	500 ms

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default
RetxLim	205	Maximum number of times the Cisco ATA 186 retransmits commands. After this number, the Cisco ATA 186 assumes the connection is lost and restarts.	10
MGCPPort	201	The port where the Cisco ATA 186 listens for and sends MGCP messages. Using the same port for sending and receiving messages can facilitate passage through a network address translation (NAT) device.	2427
MediaPort	202	The port where the Cisco ATA 186 transmits and receives RTP messages. This must be an even number. Each connection uses the next available even-numbered port for RTP.	16384
CodecName	N/A	Specifies the names of the encoder/decoder as used in LocalConnectionOption in the following order: G.711 -law, G.711A-law, G.723.1, and G.729. Each codec name is separated by a comma with no white space in between. If a name is empty, the default standard-based name is used. The number of alphanumeric characters in a codec name is limited as follows: PCMU=6, PCMA=6, G723=10, G.729=8. If a codec name is longer than the maximum, the default standard-based name is used.	PCMU,PCMA,G723,G729
LBRCodec	300	The G.711 -law and G.711A-law codecs are always available on each connection in the Cisco ATA 186. Additionally, you can select one of two low-bit rate codecs, G723.1 or G.729a. If LBRCodec is 0, G723.1 is the low-bit-rate codec; if LBRCodec is 3, G.729a is used. G723.1 is available on both lines without restriction. G.729a is available only on the line specified in ConnectMode bit 21 and when LBRCodec is set to 3.	3
PrfCodec	36	Specifies the default preferred codec: 0=G723.1 (only if LBRCodec=0) 1=G.711A-law 2=G.711 -law 3=G.729a (only if LBRCodec=3)	3

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default

AudioMode	312	The 32-bit AudioMode parameter allows fine control of the audio component to suit certain applications. The lower 16 bits control MGCP endpoint 0 while the upper 16 bits controls MGCP endpoint 1.
		
		Bits:
		
		0 (16): Default value of silence suppression:
		
		    1=enable
		
		    0=disable
		
		1 (17): Use G.711 codec only for this MGCP endpoint, regardless of the value of LBRCodec and PrfCodec.
		
		2 (18): Enable detection of Fax CED (answer) tones. If the tone is detected, switch to Fax mode for the rest of the call.
		
		4-5 (20-21): DTMF transmission method:
		
		    0=always in-band
		
		    1=send AVT tone if remote SDP supports it; otherwise send DTMF in-band
		
		    2=always send AVT tone
		
		    3=neither in-band DTMF nor AVT tone
		
		6-15 (22-31): Reserved
			0x00350035

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default
ConnectMode	311	Connection Mode controls a 32-bit bitmap to control the connection mode of the selected call signaling protocol. The bitmap definition for this parameter is: Bits: 0-7: Reserved. 8-12: offset to NSE payload number 96 (0-23). The default is 4. 13: 0 use G.711 -law; 1 use G.711A-law for Fax passthrough. 14: 0 to enable the Cisco proprietary auto codec switch method to support Fax passthrough when a Fax tone is detected; 1 to disable it. In either case, the "FT" event can be reported to the CA. 15: 0/1 enable/disable detecting the Cisco proprietary codec switch method when a Cisco ATA 186 acts as an originating terminal for a Fax call. 16: 1 to use NCS-compliant SDP; 0 to use minimal SDP. 17: 1 to enable dynamic versioning based on CA's version string; 0 to use static MGCP version as provisioned. 18: 1 to disable persistent on-hook and off-hook events. 19: 1 to disable persistent hook flash events. 20: 1 to enable a pair of brackets [ ] to enclose the IP address in the end-point identifier. 21: 0 to allocate the G.729 LBRC resource to line 0; 1 to allocate it to line 1. 22: 1 to use STEP mode for quarantine handling; 0 to use LOOP mode. 23: 1 to enable support for Conference connection mode. 24: 1 to disable support for the `RSIP *@ipaddress` syntax. 28-29: 0 selects the Cisco ATA 186 Style; 1 selects the Bellcore Style; 2 selects the Chalice (VG248) Style of mid-call supplementary services when using SCCP. 30: 0/1 to disable/enable Cisco IP Key Switch (KS) support to handle the differences between CM and KS. 31: 0/1 to disable/enable .xml file support. See the .	0x90000400

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default

CallerIdMethod	316	The 32-bit CallerIdMethod parameter specifies the signal format when generating on-hook and off-hook Caller ID format to use for both FXS lines:
		
		Bit 0: Method - 0=Bellcore (FSK); 1=DTMF.
		
		If Method=0:
		
		   Bits:
		
		   3-8: Maximum number of digits in the telephone number part. Valid values are 1 to 20.
		
		   9-14: Maximum number of characters in the name part. Valid values are 1 to 20.
		
		   15: Use special character O.
		
		   16: Use special character P.
		
		If Method=1:
		
		   Bits:
		
		   3-6: Start digit. Valid values are: 12="A", 13="B", 14="C", and 15="D".
		
		   7-10: End digit. Valid values are: 11="#", 12="A", 13="B", 14="C", and 15="D".
		
		   11: Polarity reversal before and after a Caller-ID signal. 0=no reversal, 1=reversal.
		
		   12-16: Maximum number of digits in a telephone number. Valid values are 1 to 20.
		
		   Examples:
		
		      USA, Caller ID Method=0x19e60
		
		      Sweden, Caller ID Method=0x0ff6
		
		      Denmark, Caller ID Method=0x0fde1
		
		Bits 28-31: Reserved when using MGCP
			0xc0019e60

CallWaitCallerID	N/A	Not Used	NA
DNS1IP DNS2IP	916 917	IP address of the primary and secondary DNS. If DHCP provides DNS, DNS1IP and DNS2IP overwrites the DHCP supplied values if they are neither 0 nor 0.0.0.0. Do not specify a port parameter. The Cisco ATA 186 uses the default DNS port only.	0.0.0.0
NumTxFrames	35	Sets the default RTP packet size in number of frames per packet. For the G.711 and G.729 codecs, a frame is 10 ms. For the G723.1 codec, a frame is 30 ms.	2
UDPTOS	255	Specifies the default IP precedence of UDP packets. You can override this value by using the CA LocalConnectionOption.	0x000000A0

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default
SigTimer	318	This is a 32-bit value divided into several bit fields. Each bit field contains a timeout value that controls the start or stopping of a signaling event: CWT PERIOD (bits 0-7): Period between each burst of a call-waiting tone. Range=0 to 255 in 0.1 seconds. Reserved (bits 8-31). Set to 0.	0x00000064
RingCadence	N/A	This parameter is not used for MGCP. The MGCP ringing pattern follows the description in the MGCP specification.	2,4,25
DialTone BusyTone ReorderTone RingBackTone CallWaitTone ConfirmTone	920 921 922 923 924 925	Each parameter is specified with 9 integers; i1-i9 **Note** Only positive values can be provisioned. For negative values, use the 16-bit 2's complement value. For example, enter -1 as 65535 or 0xffff. i1: Number of frequency components (0, 1, or 2). i2: Transformed frequency of the first frequency component (-32768 to 32767). i3: Transformed frequency of the second frequency component (-32768 to 32767). i4: Transformed amplitude of the first frequency component (-32768 to 32767). i5: Transformed amplitude of the second frequency component (-32768 to 32767). i6: 1 for a continuous tone; 0 for an on-off pattern. i7: Tone on-time (0 to 0xffff sample at 8000 samples/second). i8: Tone off-time (0 to 0xffff sample at 8000 samples/second). i9: Total duration of the tone. (0 to 0xffff).	See Usage.

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default
DialTone BusyTone ReorderTone RingBackTone CallWaitTone ConfirmTone (continued)	920 921 922 923 924 925	For DialTone, BusyTone, ReorderTone, and RingBackTone, the unit is a number of 10 ms (so 100=1 second); for the other tones, the value is the number of samples at 8000 samples/second), where: Transformed Frequency=$32767 \cdot \cos(2p \cdot \text{Frequency}/8000)$ Transformed Amplitude=Amplitude$\cdot\sin(2p \cdot \text{Frequency}/8000)$ Frequency ranges from 0 to 4000 (Hz) Amplitude ranges from 0 to 32767 DialTone=dial tone (dl MGCP signal) BusyTone=busy tone (bz MGCP signal) ReorderTone=reorder tone (also called fast busy or congestion tone) (ro, nbz, cg, or MGCP signals) RingBackTone=ringback tone (rbk, rt MGCP signals) CallWaitTone=call-waiting tone (wt MGCP signals) ConfirmTone=confirmation tone (cf MGCP signal) The following settings are suitable for the US: DialTone=2,31538,30831,3100,3885,1,0,0,0 (equal to -10 dBm) BusyTone=2,30467,28959,1191,1513,0,4000,4000,0 (equal to -21 dBm) ReorderTone="2,30467,28959,1191,1513,0,2000,2000,0 (equal to -21 dBm) RingBackTone=2,30831,30467,1943,2111,0,16000,32000,0 (equal to -16 dBm) CallWaitTone=1,30831,0,5493,0,0,2400,2400,4800 (equal to -10 dBm) ConfirmTone=1,30467,0,5970,0,0,480,480,1920 (equal to -10 dBm)	See Usage.

Table 5   Configuration Parameters for the Cisco ATA 186 with MGCP (continued)

Parameter	IVR Menu	Usage	Default
DialTone	920	The following settings are suitable for Sweden:	See description.
BusyTone	921	DialTone=1,30959,0,4253,0,1,0,0,0 (equal to -5 dBm)	
ReorderTone	922	BusyTone=1,30959,0,2392,0,0,2000,2000,0 (equal to -10 dBm)	
RingBackTone	923	ReorderTone=1,30959,0,2392,0,0,2000, 6000, 0 (equal to -10 dBm)	
CallWaitTone	924	RingBackTone=1,30959,0,2392,0,0,8000,40000,0 (equal to -10 dBm)	
ConfirmTone (continued)	925	CallWaitTone=1,30959,0,2392,0,0,1600,4000,11200 (equal to -10 dBm)	
		ConfirmTone=1,30959,0,2392,0,0,480,480,1920 (equal to -10 dBm)	
		Set the total duration to 0 for the dial, busy, reorder, and ring-back tones so that the duration of these tones follows the MGCP specification or is according to the control of the CA.	
		An intermittent dial tone has the same frequency and level as a regular dial tone; the cadence is fixed internally.	
		wt1, wt2, wt3, and wt4 signals have the same frequency and level as wt; the cadence is fixed according to the MGCP specification.	
TraceFlag	N/A	Reserved for future use	N/A

Parameters in Commands Sent to the Call Agent

Table 6   Parameters in Commands Sent to the CA

Parameter	Usage
ResponseAck	NTFY (notify). Supported for 1.0 and NCS.
RequestIdentifier	NTFY, RQNT
ObservedEvents	NTFY
RestartMethod	RSIP

Parameters in Responses Sent to the CA

Table 7   Parameters in Responses Sent to the CA

Parameter	Usage
ConnectionID	CRCX
LocalConnectionDescriptor	CRCX, MDCX

Table 7   Parameters in Responses Sent to the CA (continued)

Parameter	Usage
DeviceType	AUEP
CallId	AUCX
Connection Mode	AUCX
Request Identifier	AUEP
Requested Events	AUEP
Signal Requests	AUEP
Notified Entity	RSIP
Digit Map	AUEP
Detect Events	AUEP
Event State	AUEP
Capability	AUEP

Parameters in Commands Received from the CA Processed by the Cisco ATA 186

Table 8   Parameters in Commands Received from the CA Processed by the Cisco ATA 186

Parameter	Usage
ResponseAck	CRCX, MDCX, DLCX, RQNT, AUEP, AUCX
CallId	CRCX, MDCX, DLCX
ConnectionID	MDCX, DLCX, AUCX
RequestIdentifier	CRCX, MDCX, DLCX, RQNT
LocalConnectionOption	CRCX, MDCX
ConnectionMode	CRCX, MDCX
RequestedEvents	CRCX, MDCX, DLCX, RQNT
SignalRequests	CRCX, MDCX, DLCX, RQNT
NotifiedEntity	CRCX, MDCX, DLCX, RQNT
DigitMap	CRCX, MDCX, DLCX, RQNT
RequestedInfo	AUEP, AUCX
QuarantineHandling	CRCX, MDCX, DLCX, RQNT
DetectEvents	CRCX, MDCX, DLCX, RQNT
RemoteConnectionDescriptor	CRCX, MDCX

Parameters in Responses Received from the CA Processed by the Cisco ATA 186

Table 9   Parameters in Responses Received from the CA Processed by the Cisco ATA 186

Parameter	Usage
ResponseAck	DLCX, NTFY (1.0, NCS)
NotifiedEntity	RSIP

Call Agent Redundancy

In MGCP, CA (call agent) redundancy is supported in two ways. Two sets of parameters allow you to configure the primary and secondary CA IP addresses or URL. These parameters are:

- CA0orCM0 and CA0UID

  or

- CA1orCM1 and CA1UID

Note   If the CA is identified using the format `CallAgentName@HostName`, enter the CA name in the CA*x*UID parameter. Enter the HostName in the CA*x*orCM*x* parameter (*x* is 0 or 1). If the CA is identified using a URL, enter the URL in the CAxorCMx parameter. An optional port number can also be entered in the format **CA*x*:Port#** or **CM*x*:Port#** (*x* is 0 or 1).

On power up or after a configuration update, the Cisco ATA 186 tries to contact the primary CA at CA0orCM0. If there is no response or the address is not reachable, the Cisco ATA 186 then tries to contact the secondary CA. The Cisco ATA 186 continues to alternate attempts to contact the primary and secondary CAs until a response is received.

If the CAxorCMx parameter is configured with a URL, the Cisco ATA 186 contacts the DNS server to resolve the name. The Cisco ATA 186 accepts up to four IP addresses from the DNS server. During operation if contact is lost between the Cisco ATA 186 and its CA, the Cisco ATA 186 uses an exponential timeout period on each attempt to reach the CA at the IP addresses. The Cisco ATA 186 cycles through the IP addresses until a response is received.

About SCCP

To select the Skinny Client Control Protocol (SCCP) mode, set the UseMGCP parameter to **0**.

SCCP Specifications

The Cisco ATA 186 implementation of SCCP complies with the following specifications:

- Skinny Client Control Protocol—SCCP (Rev3.0 and 3.1)
- IEEE 801.Q VLAN
- Cisco Discovery Protocol (CDP)

- RFC2131—Dynamic Host Configuration Protocol
- RFC1350—The TFTP Protocol (Revision 2)
- ITU G.711 -law, G.711A-law, G.723.1 Annex A, G.729 Annex A
- RFC 2833—RTP Payload for DTMF Digits, Telephone Tones, and Telephony Signals (AVT Tones)
- Bellcore GR-506—LSSGR: Signaling for Analog Interfaces (Tones specification)

CallManager and the Cisco ATA 186

The method of provisioning the Cisco ATA 186 by using TFTP is different when using SCCP than it is when using other protocols.

Release 2.12.ms supports the following versions of Cisco CallManager:

- 3.0
- 3.1

✎
Note The Cisco ATA 186 registers as a Cisco 7960 IP phone in the Cisco CallManager Administration configuration.

Configuring the Cisco ATA 186 for Use with the Cisco CallManager

To configure the Cisco ATA 186 for use with Cisco CallManager, follow these steps:

Step 1 Configure the Cisco ATA 186 in Cisco CallManager Administration. See the "Adding a Phone" section in the *Cisco CallManager Administration Guide*.

✎
Note From the drop-down list, select the Cisco 7960 IP phone.

Step 2 Install the Cisco ATA 186. See "Installing the Cisco ATA 186" in the *Cisco ATA 186 Installation and Configuration Guide*.

Step 3 Make a call. See "Making a Call" in the *Cisco ATA 186 Installation and Configuration Guide*.

For more information about the Cisco CallManager, see the *Cisco CallManager System Guide*.

Connecting with Cisco CallManager

Like other IP devices, the Cisco ATA 186 receives its configuration file and list of Cisco CallManagers from the TFTP server. If the TFTP server does not have a configuration file, the Cisco ATA 186 uses the TFTP server name or IP address and port number as the primary Cisco CallManager name or IP address and port number.

After the Cisco ATA 186 initializes, both ports on the Cisco ATA 186 (SCCP clients) then attempt to connect with the primary Cisco CallManager. If the connection or registration fails, the Cisco ATA 186 Skinny clients then attempt to register with the next Cisco CallManager in the Cisco CallManager list.

If that connection fails, the Cisco ATA 186 Skinny clients then attempt to register with the last Cisco CallManager in the list. If all attempts to connect and register with a Cisco CallManager fail, the client attempts to connect at a later time.

Upon successful registration, the Cisco ATA 186 clients requests the Cisco CallManager software version, current time and date, line status, and call forward status from the Cisco CallManager. If the Cisco ATA 186 loses connection to the active Cisco CallManager, it attempts to connect to a backup Cisco CallManager in the Cisco CallManager list. When the primary Cisco CallManager comes back online, the Cisco ATA 186 attempts to reconnect to it.

For more information about initialization and registration, see the .

XML Support

The Cisco ATA 186 offers optional support of .xml files. Use ConnectMode Bit 31: 0/1 to disable or enable .xml file support. Cisco CallManager 3.1 supports both .cnf and .cnf.xml file formats, while Cisco CallManager 3.0 supports only the .cnf file format. Configure the Cisco ATA 186 appropriately for the Cisco CallManager version used.

The Cisco ATA 186 tries to download the following files in the order listed by using the TFTP method. After it finds one of these files, it exits the file search:

- ATA*macaddress*.cnf.xml
- SEP*macaddress*.cnf.xml
- XMLDefault.cnf.xml
- SEPDEFAULT.cnf

The Cisco ATA 186 extracts a list of CallManagers from the downloaded file. Each CallManager entry contains the CallManager's name, IP address, and port number.

If the Cisco ATA 186 downloads an ATA*macaddress*.cnf.xml file, it also extracts the name of the most recent software version from the download file. It then compares this name to the name of the image it is currently using. If the names are different, Cisco ATA 186 downloads the later software release from the TFTP server.

CNF Support

The Cisco ATA 186 attempts to download the following files in the order listed by using the TFTP method. After it finds one of these files, it exits the file search

- ATA*macaddress*.cnf
- SEP*macaddress*.cnf
- SEPDEFAULT.cnf

The Cisco ATA 186 extracts a list of CallManagers from the downloaded file. Each CallManager entry contains the CallManager's name, IP address, and port number.

If UseTftp is set to 1, after the Cisco ATA 186 successfully downloads a .cnf or .cnf.xml file, it tries to download the configuration file atadefault.cfg from the TFTP server. If UseTftp is set to 0, the Cisco ATA 186 does not download atadefault.cfg.

Skinny Initial Connection and Registration

The Cisco ATA 186 sends out three CDP messages at one-second intervals to the CDP multicast MAC address 0x01000CCCCCCC before sending any DHCP messages. Each CDP message has the CDP trigger type length value (TLV) for VOIP's VLAN ID (TLV tag 0x000F, value 0x20020001). If the Cisco ATA 186 sees a return CDP message with the TLV tag of 0x000E and the desired VLAN-ID within three seconds of its first sent message, the Cisco ATA 186 begins tagging all IP packets with the 802.1Q VLAN tag. After three CDP messages have been sent with no response to the trigger, the Cisco ATA 186 proceeds as if it is not operating in VLAN environment.

Attempts to Connect with the CallManager

After power up initialization, both Cisco ATA 186 Skinny clients initiate a thread to connect with the primary CallManager. If the connection fails, the Cisco ATA 186 retries after an interval computed with an exponential back-off algorithm with the following parameters:

- The initial retry interval: 10 seconds.

- Each retry interval doubles the previous interval up to a maximum of 1 hour.

- If the connection with the primary CallManager fails, the Cisco ATA 186 Skinny client repeats the above connection method.

Successful Connection

After a successful connection, each client sends a registration message to the CallManager. If an acknowledgement (ACK) to the registration is not received within five seconds, the client resends the registration message up to three times until an ACK is received. If no ACK is received, the Cisco ATA 186 attempts to connect with the CallManager.

Auto-reconnect when Disconnected by the CallManager

During the course of normal operation, if the TCP connection with the CallManager is closed by the CallManager or the connection is lost for any other reason, the Skinny client automatically retries to connect and register with the given list of CallManagers.

Successful Registration with the CallManager

After successful registration, the Cisco ATA 186 client:

- Requests from the CallManager the CallManager's software version, current time and date, line status, and call forward status.

- Periodically sends keep-alive messages in accordance with the parameters sent with the ACK to the Registration message.

- Responds to a capabilities query with a list of supported audio compression/decompression standards.

- Expects an unsolicited message from the CallManager if there are any messages in the voicemail box.

Capability Response

Depending on the deployment requirement, the Cisco ATA 186 reports the following audio compression/decompression capabilities:

If LBRCodec=0, then for both Cisco ATA 186 Skinny clients:

> Number of codecs=3
>
>> Codec[0]=G.711 -law, maxFramesPerPacket=60
>>
>> Codec[1]=G.711A-law, maxFramesPerPacket=60
>>
>> Codec[2]=G.723.1@6.4 kbps, maxFramesPerPacket=20

If LBRCodec=3, then:

> For FXS port 0:
>
> Number of codecs=4
>
>> Codec[0]=G.711 -law, maxFramesPerPacket=60
>>
>> Codec[1]=G.711A-law, maxFramesPerPacket=60
>>
>> Codec[2]=G.729, maxFramesPerPacket=48
>>
>> Codec[3]=G.729A, maxFramesPerPacket=48
>
> For FXS port 1:
>
> Number of codecs=2
>
>> Codec[0]=G.711 -law, maxFramesPerPacket=60
>>
>> Codec[1]=G.711A-law, maxFramesPerPacket=60ar

DeviceType

Cisco ATA 186 reports a device type of 7960 for each Skinny client.

Call Features Supported with SCCP

The following call features are supported:

- Pre-call services
  - Redial
  - Access Voicemail
  - Speed Dial
  - Activate Call-Forward-All
  - Cancel Call-Forward-All
- Mid-call services
  - Basic calls
  - Call waiting
  - Call transfer
  - Call conference
  - 3-way calling
  - Call forward
  - Call hold/resume
  - Speed dial
  - Message-waiting-indication (intermittent dial tone)
  - Last number redial

Note The mid-call services depend on the style used to invoke the services, Bellcore (default), ATA, or Chalice (VG248).

Configuration Parameters for the Cisco ATA 186 with SCCP

The parameters listed in Table 10 apply to the Cisco ATA 186 when using SCCP. Some of these parameters are new for this release; some change when SCCP is used.

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP

Parameter	IVR Menu	Usage	Default
UseMGCP	38	Set to 1 to select SCCP Mode. 0=Use SCCP 1=Use MGCP	0
VLANSetting	324	Specifies the VLAN ID and 802.1Q priority to be used for Voice Audio IP Packet and Signaling IP packet. Bits: 0-2: Signaling IP packet priority (000-111) 3-5: Audio IP packet priority (000-111) 6-17: Reserved 18-29: User specified VLAN ID 30-31: Reserved **Note** VLAN IDs acquired by using CDP discovery overwrite statically configured values.	0x0000002B
LBRCodec	300	Selects which low bit-rate codec resource (either G.723.1 or G.729A) the Cisco ATA 186 will use. 0=G.723.1 3=G.729A	3
DNS1IP DNS2IP	916 917	Specifies the IP address of the primary and secondary DNS servers. If these parameters are set to 0 or 0.0.0.0, the Cisco ATA 186 uses values supplied by its DHCP server; otherwise, the configured values overwrite the DHCP-supplied values.	0.0.0.0
UDPTOS	255	Defines IP precedence for UDP packets. A higher value increases the routing priority of the data packets, resulting in less latency. Bits: 0-1: Unused 2: Reliability bit—1=request high reliability 3: Throughput bit —1=request high throughput 4: Delay bit—1=request low delay 5-7: Specifies datagram precedence. Values range from 0 (normal precedence) to 7 (network control).	0x000000A0 Precedence=5

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default

OpFlags	323	Controls operation features.
		
		Bits
		
		0: Not used in SCCP mode
		
		1: Probe gateway router for network connectivity when using a static IP address
		
		    0=Enable
		
		    1=Disable
		
		✎
		
		Note If ICMP and echo port is disabled on the router, set this bit to "1" to avoid unnecessary delay at boot time.
		
		2 – 3: Reserved
		
		4: Specifies whether to use a user-specified VLAN ID.
		
		    1=use user-specified VLAN ID
		
		    0=do not use a user-specified VLAN ID in the VLANSetting parameter.
		
		    1=Disable CDP Discovery
		
		    0=Enable CDP Discovery
			0x00000002

CA$x$orCMx	5,6	x=0 or 1 Specifies the IP address of the TFTP server. If the required CallManager IP address and port number cannot be obtained from the TFTP server, CA0orCM0 specifies the IP address and port number of the primary CallManager that the Cisco ATA 186 should register to as a Skinny Client upon power up. If a port is specified, it must be separated from the host part with a colon (:). For example, 192.168.1.2:2727, or ca.cisco.com. CA0UID is not used in SCCP mode. If the required CallManager IP address and port number were obtained by using the TFTP server, CA1orCM1 is not used in SCCP. Otherwise, CA1orCM1 specifies the IP address and port number of the secondary CallManager that the Cisco ATA 186 should register to. If a port is specified, it must be separated from the host part with a colon (:). For example, 192.168.1.2:2727 or ca.cisco.com. The default CallManager TFTP server is obtained from DHCP option 150. If 0 is specified in CA0orCM0, the Cisco ATA 186 tries to use the default TFTP server.	0

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default

EPIDx
 	
 or
 	
 SIDx
	44
	
	 45
		x=0 or 1
		
		 EPID0 or SID0
		
		 EPID1 or SID1
		
		 The EPIDx or SIDx parameter stores the alphanumeric identifier, to a maximum of 19 characters, of the Cisco ATA 186. In an SCCP environment, EPIDx or SIDx specifies the Skinny ID of each client that the Cisco ATA 186 registers with the CallManager. Because the Cisco ATA 186 has an automated means of creating an SID, the entry in each SIDx field should be either 0 or a dot (.).
		
		 • 0—Disables the port.
		
		 • . — (default) Enables the Cisco ATA 186 to use the default Skinny ID.
		
		 The default SID for port 0 is the MAC address of the Cisco ATA 186. The default SID for port 1 is the last 5 bytes of the Cisco ATA 186's MAC address with byte 01 appended. For example, if the MAC address of the Cisco ATA 186 is 00 01 2D 01 07 3D:
		
		 `SID0=00 01 2D 01 07 3D`
		`SID1=01 2D 01 07 3D 01`
			dot (.)

UseTftp	305	If UseTftp is set to 1, the Cisco ATA 186 uses the statically defined value in TftpURL. If UseTftp is set to 0 and CA0orCM0 is non-zero, CA0orCM0 specifies the IP address of TFTP server. If UseTftp and CA0orCM0 are set to 0, the Cisco ATA 186 acquires its TFTP server IP address from DHCP option 150.	1
TftpURL	905	If TftpURL is set to 0, the Cisco ATA 186 uses the value of CA0orCM0 or DHCP 150 as its TFTP IP address.	0

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default

ConnectMode	311	Controls the connection mode of the selected call signaling protocol. The bitmap definition for this parameter is as follows:
		
		Bits:
		
		0-6: Reserved for future use
		
		7: Fax Passthrough redundancy
		
		    1=enable
		    0=disable
		
		8-12: Offset to NSE payload number 96 (2-23). The default is 4.
		
		13: Fax passthrough codec
		
		    0=use G.711 -law
		    1=use G.711A-law
		
		14: Cisco proprietary codec switch method to support Fax Passthrough when Fax tone is detected. In either case the "ft" event can be reported to the CA if requested.
		
		    0=enable
		    1=disable
		
		15: Detect the Cisco proprietary codec switch method (when the Cisco ATA 186 acts as an originating terminal for a Fax call).
		
		    0=enable
		    1=disable
		
		16-24: Not used in SCCP mode.
		
		28-29: Select Cisco ATA 186 Feature Style for invocation of mid-call supplementary services; 0=select ATA style
		
		    1=select Bellcore Style (default)
		    2=select VG248 (Chalice) style.
		
		30: Cisco IP Key Switch (KS) support (to handle differences between CM and KS)
		
		    1=enable
		    0=disable
		
		31: .xml file support. (See the "XML Support" section on page 19.)
		
		    1=enable
		    0=disable
			0x90000400

AudioMode	312	Allows the user to selectively control the Cisco ATA 186 audio component to suit certain applications. The lower 16 bits control Phone 1, while the upper 16 bits control Phone 2. Bit 2 (18): Enable detection of Fax CED (answer) tone and switch to Fax mode for the rest of the call if the tone is detected.	0x00350035

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default
UIPassword	7387277	Control configuration access to the Cisco ATA 186. When set to a nonzero value, when a user attempts to access the web configuration page or IVR configuration menu, a prompt to enter the correct password appears. The maximum number of characters is 9.	0
DHCP	20	Controls how the Cisco ATA 186's networking parameters are defined: 0=statically 1=acquired from a DHCP server The parameters affected are the Cisco ATA 186's IP address; subnet mask; network gateway; and the IP addresses for the DNS, NTP, and TFTP servers.	1
StaticIP	1	When DHCP is set to 0, this parameter contains the statically defined IP address used by the Cisco ATA 186.	0.0.0.0
StaticRoute	2	When DHCP is set to 0, this parameter contains the statically defined IP address of the network gateway used by the Cisco ATA 186.	0.0.0.0
StaticNetMask	10	When DHCP is set to 0, this parameter contains the statically defined subnet mask used by the Cisco ATA 186.	0.0.0.0

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default
CallerIdMethod	316	Specifies the signal format when generating on-hook and off-hook Caller ID format for both FXS lines. Bits 0: Caller ID Transmission Method: 0=Bellcore (FSK) Method 1=DTMF Method. If Method=0 (Bellcore Method): 3-8: Maximum number of digits in the telephone number portion of the Caller ID message. Valid values are from 1 to 20. 9-14: Maximum number of characters in the name portion of the Caller ID message. Valid values are from 1 to 20. 15: Use special character **O** 16: Use special character **P** If Method=1 (DTMF Method): 3-6: Start digit. Valid values are: 12=A, 13=B, 14=C, 15=D 7-10: End digit. Valid values are: 11=#, 12=A, 13=B, 14=C, 15=D 11: Polarity reversal before and after caller-id signal. 0=no reversal 1=reversal. 12-16: Maximum number of digits in the telephone number. Valid values are from 1 to 20. 28: Set to 1/0 to disable/enable Caller Waiting Caller ID on Phone 1. 2:9 Set to 1/0 to disable/enable Caller Waiting Caller ID on Phone 2. 30: Set to 1/0 to disable/enable Callee ID on Phone 1. 31: Set to 1/0 to disable/enable Callee ID on Phone 2. Select signal format for generating Caller ID for both lines.	0xc0019e60
RingCadence	N/A	Controls the on/off period of call progress tone bursts. See the *Cisco ATA 186 Installation and Configuration Guide*, Appendix F, for more information.	2,4,25

Table 10   Configuration Parameters for the Cisco ATA 186 with SCCP (continued)

Parameter	IVR Menu	Usage	Default
Nprintf	81	Enter the IP address and port number of the PC to which debug messages are to be sent. Syntax: *IP_Address.Port Number* For example, 192.168.2.159.9000 ✎ **Note** If set to 0 or 0.0.0.0.0, the Cisco ATA 186 does not send any debug messages.	0.0.0.0.0
DialTone BusyTone ReorderTone RingBackTone CallWaitTone ConfirmTone	N/A	For each of the six call progress tone parameters listed here, you can specify the frequency component(s), volume, on/off cadence, and total time the tone is played. See the *Cisco ATA 186 Installation and Configuration Guide*, Appendix F, for more information. ✎ **Note** In SCCP mode, the ringback cadence is fixed at 2 seconds on, 4 seconds off, and the call waiting period is fixed at 6 seconds.	See the *Cisco ATA 186 Installation and Configuration Guide*, Appendix F, for defaults.
MediaPort	202	The Base port that the Cisco ATA 186 uses to receive and transmit RTP. The Port number must be an even number. Ports are evenly numbered from the base port. The Cisco ATA 186 uses four media ports to handle conference calls on both lines. For example, if port 16384 is used for one connection, the next connection uses port 16386, while other connections use ports 16388 and 16390.	16384

Pre-call Supplementary Services for SCCP

In SCCP mode, the Cisco ATA 186 offers the services described in this section upon playing a dial tone.

Redial

The Redial feature allows you to call the last number dialed. To activate Redial, enter ***#**.

Access Voice Mail

To access your voice mail box, enter ***0**.

Speed Dial

Speed Dial commands are preset at the CallManager by using the CallManager web page. See the CallManager documentation for more information. To activate speed dialing, enter ***1**, ***2**, ***3**, or ***4**.

Activate Call-forward-all

The Call-forward-all feature allows you to send all calls incoming to one telephone number to another telephone. To activate Call-forward-all, follow these steps:

Step 1   Enter ****1**. You will hear a confirmation tone.

Step 2   Enter the telephone number to which you want to send the calls. You will hear a confirmation tone.

Step 3   Hang up.

Cancel Call-forward-all

To cancel Call-Forward-all, follow these steps:

Step 1   Enter ****2**. You will hear a confirmation tone.

Step 2   Hang up.

Mid-call Supplementary Services

The method of initiating and using supplementary services that can be used during a call when using SCCP differs according to the mode. There are three methods of invoking supplementary services:

- Bellcore style
- Chalice (VG248) style
- ATA style

Mid-call Supplementary Services for Bellcore Style

There are two supplementary services unique to the (default) Bellcore style:

- Call waiting
- Call transfer/conference

For a description of additional supplementary services, see the "Additional Supplementary Services for SCCP" section on page 32.

Call Waiting

When you hear the call waiting tone while engaged in a call, follow these steps:

Step 1   Enter **R** (hook-flash) to put the current call on hold and answer the new call.

Step 2   Enter **R** again to switch between the two calls. If the active remote party hangs up, the other waiting call is resumed automatically. If you hang up, the current call is ended. If the other call is holding, the telephone rings.

Call Transfer/Conference

To transfer a call or begin a conference call, follow these steps:

Step 1   Press R (hook-flash) to place the current call on hold and obtain a second dial tone.

Step 2   At the dial tone, enter the telephone number or speed dial of the third party and wait for the call to be answered.

Step 3   If you hang up when the third party answers or rings, the call is transferred. If you enter **R** before the third party answers, it reverts back to the original call. If you enter **R** after the third party answers, the party is added to the conference. If you enter **R** before you hear ringback, the third call is dropped and you revert to the original call.

.

Mid-Call Supplementary Services for Chalice Style

There are two supplementary services unique to Chalice (VG248) style:

- Call waiting
- 3-way calling/transfer/conference

For a description of additional supplementary services, see the "Additional Supplementary Services for SCCP" section on page 32.

Call Waiting

Call Waiting is the same as for Bellcore style.

3-way Calling/Transfer/Conference

To initiate 3-way Calling, Transfer, or Conference Calls.

Step 1   Enter **R** (hook-flash) to place the current call on hold and obtain a second dial tone.

Step 2   Enter the telephone number or speed dial of the third party and wait for an answer. If you hang up before the third party answers, the new call is dropped. If the original call is still holding, the telephone rings. If you enter another **R** before the third party answers, the new call is dropped and the original call is resumed.

Step 3   After the 3rd party answers, you can enter **R** to obtain a 3rd dial-tone. Then you can enter one of the following:

  a. **R** to switch to the other party (you can then switch back and forth)

  b. **#2** to transfer holding party to the currently active party

  c. **#3** to conference with both parties.

  d. Any other digit or let it time out (in 4 seconds by default) to maintain the current state.

Step 4   If you hang up while talking to one of the remote parties, the currently active call is ended. If the other remote party is still holding, the telephone rings. If the currently active remote party hangs up, the holding party is resumed automatically.

Mid-Call Supplementary Services for ATA Style

There are four supplementary services unique to ATA Style:

- Call Waiting
- Call Hold/Resume
- Call Transfer
- Conference Calling

For a description of additional supplementary services, see the "Additional Supplementary Services for SCCP" section on page 32.

Call Waiting

Call Waiting is the same as for Bellcore style.

Call Hold/Resume

To place the current call on hold, enter **R1** (hook-flash followed by **1**).

To resume the call, enter **R** again.

Call Transfer

To activate Call Transfer, follow these steps:

Step 1   While engaged in a call, enter **R2**.

Step 2   After you hear the dial tone, enter the telephone number.

Step 3   When the other party answers or the remote telephone rings, hang up to transfer the call. You can enter **R** at any time to halt the operation and resume the original call.

Conference Calling

To activate conference calling, follow these steps:

Step 1   While engaged in a call, enter **R3**.

Step 2   When you hear the dial tone, enter the telephone number.

Step 3   When the other party answers or the remote telephone rings, enter **R**. You can hang up at any time to halt adding the new party to the conference.

Step 4   After you hang up, the telephone rings if the original party is still holding.

Additional Supplementary Services for SCCP

Off-hook Ringing

This feature allows the user to receive basic incoming calls even if the telephone is off the hook. In this case, the Cisco ATA 186 plays the standard call waiting tone to alert the user.

Holding Party Reconnect

With this feature enabled, if the user hangs up while a party is being placed on hold, the telephone rings. When the handset is picked up, the user is reconnected to the holding party.

Voice Mail Indication

This feature allows the Cisco ATA 186 to play an intermittent dial tone if there is a message in the user's voice mail box.

Caller ID

When the telephone rings, the Cisco ATA 186 sends Caller ID signal to the telephone between the first and second ring (with name, telephone number, time, and date information, if these are available)

Call-Waiting Caller ID

With this feature enabled, when the Cisco ATA 186 plays a call waiting tone, it sends an off-hook Caller ID signal to the telephone immediately after the first tone burst. Information included is the name, telephone number, time, and date information, if these are available.

Callee ID

With Callee ID, when the Cisco ATA 186 plays a ringback tone, it sends an off-hook Callee ID signal to the telephone immediately after the first tone burst. Information included is the name, telephone number, time, and date information, if these are available. Enable this feature by changing the Caller ID method parameter. (See Table 10.)

Resolved Issues in Cisco ATA 186 Release 2.12.ms

This section lists the issues in previous releases of the Cisco ATA 186 that are resolved in Release 2.12.ms.

- CSCdu83465

  When upgrading from version 1.34 to 2.10, all Cisco ATA 186 users must first upgrade to a 2.0 software version as a transition step. This workaround has been facilitated by adding a transition software image in the CCO 2.10.zip file.

Known Issues in Cisco ATA 186 Release 2.12.ms

This section lists open issues for Cisco ATA 186 Release 2.12.ms.

- CSCdu24665

  Symptom:

  Spurious DTMF during conversation between Cisco ATA 186es

  Condition:

  During a call between Cisco ATA 186s, the equipment emitted spurious out-of-band DTMF tones.

  Workaround:

  There is no workaround.

- CSCdv86073

  Symptom:

  AudioMode bits 1 and 17 are not supported in this release when using MGCP.

  Condition:

  AudioMode bits 1 and 17 are not supported in this release when using MGCP.

  Workaround:

  There is no workaround.

- CSCdv90018

  Symptom:

  Fax transmission errors.

  Condition:

  This condition affects all currently supported VoIP protocols (H.323, SIP, MGCP, and SCCP) when operating the Cisco ATA 186 in fax passthrough or fax mode at a fax transmission rate of 14.4Kbps or higher.

  Workaround:

  Transmit faxes at 9.6kbps. Although most tests indicate that 9.6kbps fax does not exhibit problems, some fax machines may not operate properly with the Cisco ATA 186.

Related Documentation

Use these release notes in conjunction with these documents:

- *Cisco ATA 186 Installation and Configuration Guide*
- *Cisco ATA 186 Quick Start Guide*
- *Cisco ATA 186 Quick Reference Guide*
- Release Notes for the Cisco ATA 186

For information about setting up your CA, see your Call Agent documentation.

If you are using the Cisco CallManager, see the Cisco CallManager documentation, which includes:

- *Cisco CallManager Administration Guide*
- Cisco CallManager System Guide

For information about configuring the gateway for use with either MGCP or SCCP, see the documentation for Cisco IOS 12.2 or later releases.

Obtaining Documentation

The following sections provide sources for obtaining documentation from Cisco Systems.

World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following sites:

- http://www.cisco.com
- http://www-china.cisco.com
- http://www-europe.cisco.com

Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco Product documentation from the Networking Products MarketPlace:

    http://www.cisco.com/cgi-bin/order/order_root.pl

- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:

    http://www.cisco.com/go/subscription

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, in North America, by calling 800 553-NETS(6387).

Documentation Feedback

If you are reading Cisco product documentation on the World Wide Web, you can submit technical comments electronically. Click **Feedback** in the toolbar and select **Documentation**. After you complete the form, click **Submit** to send it to Cisco.

You can e-mail your comments to bug-doc@cisco.com.

To submit your comments by mail, use the response card behind the front cover of your document, or write to the following address:

Attn Document Resource Connection
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools. For Cisco.com registered users, additional troubleshooting tools are available from the TAC website.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information and resources at anytime, from anywhere in the world. This highly integrated Internet application is a powerful, easy-to-use tool for doing business with Cisco.

Cisco.com provides a broad range of features and services to help customers and partners streamline business processes and improve productivity. Through Cisco.com, you can find information about Cisco and our networking solutions, services, and programs. In addition, you can resolve technical issues with online technical support, download and test software packages, and order Cisco learning materials and merchandise. Valuable online skill assessment, training, and certification programs are also available.

Customers and partners can self-register on Cisco.com to obtain additional personalized information and services. Registered users can order products, check on the status of an order, access technical support, and view benefits specific to their relationships with Cisco.

To access Cisco.com, go to the following website:

http://www.cisco.com

Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1 (P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.

- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.