Release Notes for the Cisco ATA 186 and Cisco ATA 188 Release 3.0

Dec. 15, 2003

These release notes describe newly incorporated features, changed features or changed behavior, resolved issues, and open issues for the Cisco ATA 186 and the Cisco ATA 188 for Release 3.0 (SIP, H.323, SCCP, and MGCP protocols).

The Cisco ATA now offers four separate images—one for each protocol.

Note The term *Cisco ATA* refers to both the Cisco ATA 186 and the Cisco ATA 188.

Contents

These release notes provide the following information:

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

Introduction to the Cisco ATA Analog Telephone Adaptor

The Cisco ATA is an analog telephone adaptor that allows traditional analog telephones to operate on IP-based telephony networks. The Cisco ATA supports two voice ports, each with its own independent telephone number.

Two Cisco ATA products are available to Cisco customers—the Cisco ATA 186 and the Cisco ATA 188. Both products run the same software and have two voice ports. The Cisco ATA 186 has one RJ45 port that provides access to an Ethernet network. The Cisco ATA 188 has an Ethernet switch and two RJ45 ports—one for accessing an Ethernet network and one for connecting a downstream Ethernet device such as a PC.

Downloading and Upgrading the Software

Before you can use the Cisco ATA Release 3.0, you must first download and upgrade the Cisco ATA software. You can download the software, after logging in, at:

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

Note If you are using the Cisco ATA executable-file-upgrade method, check with the administrator of the TFTP server to make sure that the TFTP upgrade method is disabled. Otherwise, the Cisco ATA might downgrade to an old image via TFTP.

For more information about downloading and upgrading software, see the Cisco ATA administrator's guides for the signaling protocol you are using. The administrator's guides can be found at the following location:

http://www.cisco.com/univercd/cc/td/doc/product/voice/ata/ataadmn/index.htm

New Features for Release 3.0

This section contains information on new features for Cisco ATA Release 3.0:

General Features

Table 1 contains information on new features for Cisco ATA Release 3.0 that apply to all four supported protocols—SIP, H.323, SCCP and MGCP. For detailed information about the items in this table, refer to the Cisco ATA administrator's guide for your protocol.

Table 1 New General Features for 3.0 Release

Feature	Description	For More Information
Extended tone format of call-progress tones.	The Cisco ATA supports this format as well as basic format. Basic format is used in most countries; use the extended format only if the country in which the Cisco ATA is used requires this format.	See the "Parameters and Defaults" section of your administrator's guide.
FXS input level and output level control.	The Cisco ATA now includes parameters—FXSInputLevel and FXSOutputLevel—that you can configure to control the level of the Cisco ATA FXS ports.	See the "Parameters and Defaults" section of your administrator's guide.
Syslog support.	The Cisco ATA uses functionality of the syslog protocol (see RFC3164) for system diagnostics.	See the "Troubleshooting" section of your administrator's guide.
Version parameter for the Cisco ATA configuration file.	The CFGID parameter allows the local administrator to track the version of the configuration file.	See the "Parameters and Defaults" section of your administrator's guide.
Enhancements to the cfgfmt.exe tool.	This is the tool that you use to create the binary Cisco ATA configuration file. For security purposes, the tool now allows you to use a stronger encryption key when creating the configuration file.	See the section about the cfgfmt tool in the main configuration section of your administrator's guide.
Stronger encryption key parameter.	The EncryptKeyEx parameter had been added for stronger encryption.	See the "Parameters and Defaults" section of your administrator's guide.
Timestamp option for the PRSERV tool.	PRSERV is an MS-DOS Windows-based debugging program tool that is included in every software upgrade package.	See the "Troubleshooting" section of your administrator's guide.
DHCP status using HTTP.	The Cisco ATA provides an HTTP page that allows you to check the status of DHCP-related information.	See the "Troubleshooting" section of your administrator's guide.
ETSI FSK Caller ID support.	The CallerIDMethod parameter allows you to configure the ETSI method of caller ID to display the caller number.	See the "Parameters and Defaults" section of your administrator's guide.
New bitaid.exe tool	You can use this tool to help you configure values of Cisco ATA bitmap parameters. The tool prompts you for the necessary information.	This tool is included in the zip file that you download when you obtain the Cico ATA software.

New Features for SIP

Table 2 contains new SIP features for Cisco ATA Release 3.0. For more information, refer to the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for SIP (version 3.0)*.

Table 2 New SIP Features for 3.0 Release

Feature	Description	For More Information
Display-name support for caller ID.	The Cisco ATA supports configuration of display-name parameters for both Cisco ATA ports. The caller name and caller ID will be displayed on the called-party phone if that phone supports caller ID.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Three-party conference warning tone.	Bit 28 of the ConnectMode parameter allows you to disable/enable this tone.	See the "Parameters and Defaults" section of your administrator's guide.
G.726 codec support.	The LBRCodec and TxCodec parameters allow you to configure the G.726 codec.	See the "Parameters and Defaults" section of your administrator's guide.
Special Information Tone (SIT).	The Cisco ATA plays the special information tone (configured with the SITone parameter) when it receives a *404 (Not Found)* response.	See the "Parameters and Defaults" section of your administrator's guide.
Voice prompt confirmation for call waiting and call forwarding.	You can configure the Cisco ATA to automatically call a voice announcement server whenever the status of call-waiting or call-forwarding services changes.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Call-forward setting removal through HTTP.	The service provider can remotely reset a call-forwarding setting for which a subscriber configured an incorrect phone number.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Status of phone service using HTTP.	Information about various phone features is provided.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Dial plan enhancements.	Many dial plan rules have been added for this release.	See the "Parameters and Defaults" section of your administrator's guide.
XML page of Cisco ATA configuration.	The Cisco ATA provides an XML page for you to access the current configuration information of a Cisco ATA. This page is for retrieving the configuration only; you cannot change configuration values on this page.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Configurable reboot of the Cisco ATA.	Once a configured timeout value is reached, the Cisco ATA automatically reboots after its Ethernet connection is broken.	See the "Basic and Additional SIP Services" section of your administrator's guide.

Table 2 New SIP Features for 3.0 Release (continued)

Feature	Description	For More Information
Configurable number for retrying SIP requests.	The MsgRetryLimits parameter lets you configure the number of times that the Cisco ATA retransmits various SIP requests to the current proxy as well as the number of times that the Cisco ATA sends responses to specific requests from the SIP user agent.	See the "Parameters and Defaults" section of your administrator's guide.
SIP session timer support.	The SessionTimer parameter allows you to configure various options of the SIP session timer.	See the "Parameters and Defaults" section of your administrator's guide.
Anonymous user-name support for a SIP INVITE Request.	The ConnectMode parameter allows you to configure this feature.	See the "Parameters and Defaults" section (Bit 27 of the ConnectMode parameter) of your administrator's guide.
Privacy token for SIP Diversion header.	The ConnectMode parameter allows you to configure this feature.	See the "Parameters and Defaults" section (Bit 27 of the ConnectMode parameter) of your administrator's guide.
Simple Traversal of UDP through NAT (STUN) support.	The Cisco ATA supports this feature as described in *RFC3489*.	See the "Basic and Additional SIP Services" section of your administrator's guide.
More characters supported for dial plan.	If your dial plan exceeds 199 characters, then use must use the DialPlanEx parameter to configure the plan. The DialPlanEx character supports dial plans up to 499 characters in length.	See the "Parameters and Defaults" section of your administrator's guide.
Random delay for when the Cisco ATA requests its configuration file from the TFTP Server after a reboot.	The delay is determined by the following formula: `CfgInterval + random (min(1800, CfgInterval))` where: • random(x) function yields value between 0 to x-1. • min(x,y) function yields the minimum of x and y. • CfgInterval is the value of the CfgInterval configuration parameter (in seconds).	No configuration is required.
Disabling call return for incoming calls with Caller Line Identification Restriction (CLIR).	This is a privacy option to provide users with stricter control over the appearance of their caller line identification at the SIP message level.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Redundant Proxy Support for BYE/CANCEL Request.	The Cisco ATA retries a BYE or CANCEL request using an alternate SIP proxy if the GkOrProxy parameter value is configured with a domain name. The BYE request requires special consideration because the destination can be either the SIP endpoint client or proxy server.	See the "Basic and Additional SIP Services" section of your administrator's guide.

Table 2 New SIP Features for 3.0 Release (continued)

Feature	Description	For More Information
Called Party Anonymity.	This option allows you to use an *Anonymous* user name in the To header of all SIP Invite requests. Cisco ATA configuration (bit 30 of the ConnectMode parameter) controls this option, which applies to all calls regardless of whether the calling party has enabled or disabled CLIR.	See the "Basic and Additional SIP Services" section of your administrator's guide.
Bellcore Visual Message Waiting Indicator (VMWI) support	The Cisco ATA supports the Bellcore/Telecordia FSK method to turn on/off VMWI on a phone upon receiving MWI messages from a server. The Bellcore/Telecordia FSK VMWI is enabled automatically if the CallerIdMethod parameter is configured to use the Bellcore method, and if the PaidFeatures and CallFeatures parameters are configured to enable the message waiting indication.	See the "Parameters and Defaults" section of your administrator's guide.
Call-waiting hang-up alert.	This feature provides an audible alert (ringtone) whenever the user inadvertently hangs up from a call-waiting call while an active call is still on hold.	See the "Basic and Additional SIP Services" section of your administrator's guide.

New Features for H.323

Table 3 contains new H.323 features for Cisco ATA Release 3.0. For more information, refer to the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for H.323 (version 3.0).*

Table 3 New H.323 Features for 3.0 Release

Feature	Description	For More Information
Configurable reboot of the Cisco ATA.	Once a configured timeout value is reached, the Cisco ATA automatically reboots after its Ethernet connection is broken.	See the "Basic and Additional H.323 Services" section of your administrator's guide.
Random delay for when the Cisco ATA requests its configuration file from the TFTP Server after a reboot.	The delay is determined by the following formula: `CfgInterval + random (min(1800, CfgInterval))` where: • random(x) function yields value between 0 to x-1. • min(x,y) function yields the minimum of x and y. • CfgInterval is the value of the CfgInterval configuration parameter (in seconds).	No configuration is required.
More characters supported for dial plan.	If your dial plan exceeds 199 characters, then use must use the DialPlanEx parameter to configure the plan. The DialPlanEx character supports dial plans up to 499 characters in length.	See the "Parameters and Defaults" section of your administrator's guide.

New Features for SCCP

Table 4 contains new SCCP features for Cisco ATA Release 3.0. For more information, refer to the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for SCCP (version 3.0).*

Table 4 New SCCP Features for 3.0 Release

Feature	Description	For More Information
Secondary dial tone.	A example of a secondary dial tone is the dial tone that the Cisco ATA plays when you dial a number to obtain an outside line.) The configurable parameter for the second dial tone is called DialTone2.	See the "Parameters and Defaults" section of your administrator's guide.
Bellcore Visual Message Waiting Indicator (VMWI) support	The Cisco ATA supports the Bellcore/Telecordia FSK method to turn on/off VMWI on a phone upon receiving MWI messages from a server. The Bellcore/Telecordia FSK VMWI is enabled automatically if the CallerIdMethod parameter is configured to use the Bellcore method.	See the "Parameters and Defaults" section of your administrator's guide.

New Features for MGCP

Table 5 contains new MGCP features in Cisco ATA Release 3.0. For more information, refer to the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for MGCP (version 3.0).*

Table 5 New MGCP Features for 3.0 Release

Feature	Description	For More Information
Random delay for when the Cisco ATA requests its configuration file from the TFTP Server after a reboot.	The delay is determined by the following formula: `CfgInterval + random (min(1800, CfgInterval))` where: • random(x) function yields value between 0 to x-1. • min(x,y) function yields the minimum of x and y. • CfgInterval is the value of the CfgInterval configuration parameter (in seconds).	No configuration is required.
Bellcore Visual Message Waiting Indicator (VMWI) support	The Cisco ATA supports the Bellcore/Telecordia FSK method to turn on/off VMWI on a phone upon receiving MWI messages from a server. The Bellcore/Telecordia FSK VMWI is enabled automatically if the CallerIdMethod parameter is configured to use the Bellcore method.	See the "Parameters and Defaults" section of your administrator's guide.

New Behavior for 3.0

Table 6 lists behavior changes for Cisco ATA Release 3.0, and includes the protocol(s) for which the behavior applies.

Table 6 New Cisco ATA Behavior in Release 3.0

Topic	Behavior Description	Protocols
Flush DNS Cache if Contacting all IP Addresses Fails	**Behavior Prior to Release 3.0** Prior to release 3.0, the DNS cache was never flushed, which meant that the Cisco ATA was unable to detect updated domain name records. In Release 3.0, the Cisco ATA can detect updated domain name records. **Behavior in Release 3.0** When a request URL is a domain name, the Cisco ATA first checks its local cache for any records of the domain name. If no records are found, the Cisco ATA performs a DNS query to resolve the domain name. The Cisco ATA caches the returned IP addresses to use in subsequent requests of the same domain name. The Cisco ATA sends a request to the current proxy IP address several times before trying the next proxy IP address. If all IP addresses fail, including all the IP addresses in the secondary proxy farm, the Cisco ATA flushes its DNS cache and performs a new DNS query on the domain name.	SIP
TFTP configuration-fetch enhancement	**Behavior Prior to Release 3.0** Prior to firmware version 3.0, the Cisco ATA would reboot when idle at each configuration interval (*CfgInterval* configuration parameter value), and would fetch its configuration file from the TFTP server at that time. **Behavior in Release 3.0** In version 3.0 firmware, the Cisco ATA fetches its configuration file at the configuration interval first without first needing to reboot. As soon as Cisco ATA is idle, the fetched configuration file is applied to the Cisco ATA internally stored configuration in flash memory. If any configuration parameter changes require a reboot to take effect, the Cisco ATA automatically reboots. If there are no configuration changes requiring a reboot, the Cisco ATA continues normal operation. This enhancement prevents unnecessary reboots, and trace logs can be enabled via TFTP without rebooting the Cisco ATA.	SIP, H.323, MGCP

Resolved Issues for Release 3.0

This section lists the issues in previous releases of the Cisco ATA that are resolved for Release 3.0:

Resolved Non-Protocol-Specific Issues

Table 7 lists the issues in previous releases of the Cisco ATA that are resolved for Cisco ATA Release 3.0 for all four supported protocols (SIP, H.323, SCCP and MGCP).

Table 7 Resolved Issues for All Protocols

DDTS Number	Summary
CSCec40552	The Cisco ATA does not recognize 802.1q-encapsulated CDP packets.
CSCec40569	The Cisco ATA does not support the configuration of native VLAN to be the same as voice VLAN.
CSCec40600	The Cisco ATA does not detect and recover from its IP address being duplicated by another device.
CSCec66330	A dual-line Cisco ATA cannot answer an incoming call-waiting call.
CSCec71373	Phone line polarity may stay negative if the DTMF Caller ID method is used.
CSCec80212	The Cisco ATA G.729 encoder creates unclear voice for some words.
CSCuk46104	Voice quality (MOS) is poor for G.729a calls.

Resolved SIP Issues

Table 8 lists the issues in previous releases of the Cisco ATA that are resolved for Cisco ATA Release 3.0 for SIP only.

Table 8 Resolved Issues for SIP Protocol

DDTS Number	Summary
CSCea29483	The Cisco ATA was allowing a user to perform a ***69** (call return) on a blocked (anonymous) number.
CSCea81162	The Call-ID header is repeated without enough randomness.
CSCea87946	Users cannot dial their own number on the Cisco ATA to check voicemail.
CSCeb29862	In some scenarios, callers receive a ringback tone when they should receive a busy tone.
CSCeb69460	The Cisco ATA186 is not compliant with RFC 3261 when constructing ACK messages.
CSCeb72440	The call-forward-no-answer feature should take precedence over a ring timeout.
CSCec11473	Session ID and version fields cannot be longer than 10 digits.
CSCec31059	The default U.S. call-waiting call-command sequence for handling the held call is incorrect. **Note** For the correct default call command sequence, see the "Call Commands" section of the *Cisco ATA 186 and Cisco ATA 188 Analog Telephone Adaptor Administrator's Guide for SIP (version 3.0)*.

Table 8 Resolved Issues for SIP Protocol (continued)

DDTS Number	Summary
CSCec32294	Increase the length of the USER value in the SIP *FROM* and *TO* headers.
CSCec39833	Prefix digits are not added to call return numbers.
CSCec45808	Disabling call return for incoming calls with CLIR fails.
CSCec49959	The call-waiting feature does not always work properly after the Cisco ATA receives a *Re-INVITE for HOLD* message from the SIP user agent.
CSCec58379	The NAT address needs to be stored in the host field of the Call-ID.
CSCec61406	The SIP Session Timer gets canceled when the Cisco ATA receives a *408 request timeout*.
CSCec64751	For the Cisco ATA to interoperate with PGW release 9.5, increase the maximum SDP session ID size to at least 48 bytes.
CSCec77460	The Cisco ATA sends RTP to the wrong IP address after receiving a SIP re-invite message from the SIP user agent.
CSCec86654	Fax passthrough redundancy does not work if the upspeed payload type=0/8.
CSCed00495	The Cisco ATA does not switch to the backup proxy that is specified in the AltGk parameter.

Resolved SCCP Issues

Table 9 lists the issues in previous releases of the Cisco ATA that are resolved for Cisco ATA Release 3.0 for SCCP only.

Table 9 Resolved Issues for SCCP Protocol

DDTS Number	Summary
CSCec29807	The Cisco ATA 188 does not support a consult-transfer in an ITS environment.
CSCec34000	The Cisco ATA is reset while acting as the caller following a Cisco CallManager-performed reset of devices.
CSCec40416	The Cisco ATA cannot recognize a CDP packet that is more than 500 bytes long.
CSCec40507	The wrong ringback tone is played in various network locales.
CSCec40531	The Cisco ATA does not implement IP survivability in SCCP mode.
CSCec64857	The Cisco ATA 186 does not respond to a *StationConnectionStatisticsReg* SCCP message.
CSCec87482	After being reset, the Cisco ATA does not re-register with SRST.

Resolved MGCP Issues

Table 10 lists the issues in previous releases of the Cisco ATA that are resolved in Cisco ATA Release 3.0 for MGCP only.

Table 10 Resolved Issues for MGCP Protocol

DDTS Number	Summary
CSCeb16212	DTMF-based Caller ID is not displayed on the phone or on the CID device.
CSCec56021	The ConnectMode (M:) header is optional in an MDCX command in MGCP 1.0 and NCS 1.0.
CSCec61462	Caller ID not displayed when the date/time or number are not specified in the Caller ID information.

Open Issue for Release 3.0

The following open issue applies to the SCCP Protocol:

- CSCec76453

  Description: The Cisco ATA does not turn off its function button LED. The occurs when the Cisco ATA is configured as a shared line with another endpoint, and when Cisco CallManager has granted the line resource to the other endpoint. When the Cisco ATA returns to an on-hook state after being off hook, and the other endpoint still controls the line, the Cisco ATA LED remains on.

  Workaround: There is no workaround for this issue.

Related Documentation

Use these release notes in conjunction with the documents located at this index:

http://www.cisco.com/univercd/cc/td/doc/product/voice/ata/index.htm

Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

World Wide Web

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

http://www.cisco.com

Translated documentation is available at the following URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

Ordering Documentation

You can order Cisco documentation in these ways:

- Registered Cisco.com users (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 Systems Corporate Headquarters (California, U.S.A.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can submit comments electronically on Cisco.com. In the Cisco Documentation home page, click the **Fax** or **Email** option in the “Leave Feedback” section at the bottom of the page.

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

You can submit your comments by mail by using the response card behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Document Resource Connection
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 online documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

Cisco.com

Cisco.com is the foundation of a suite of interactive, networked services that provides immediate, open access to Cisco information, networking solutions, services, programs, and resources at any time, from anywhere in the world.

Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you with these tasks:

- Streamline business processes and improve productivity
- Resolve technical issues with online support
- Download and test software packages
- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

If you want to obtain customized information and service, you can self-register on Cisco.com. To access Cisco.com, go to this URL:

http://www.cisco.com

Technical Assistance Center

The Cisco Technical Assistance Center (TAC) is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two levels of support are available: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Cisco TAC inquiries are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

The Cisco TAC resource that you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

Cisco TAC Web Site

You can use the Cisco TAC Web Site to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to this URL:

http://www.cisco.com/tac

All customers, partners, and resellers who have a valid Cisco service contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to this URL to register:

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

If you are a Cisco.com registered user, and you cannot resolve your technical issues by using the Cisco TAC Web Site, you can open a case online by using the TAC Case Open tool at this URL:

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

If you have Internet access, we recommend that you open P3 and P4 cases through the Cisco TAC Web Site.

Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

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

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

This document is to be used in conjunction with the documents listed in the "Related Documentation" section on page 12.