Onboarding AudioCodes Analog Telephone Adapters (ATA) to Microsoft SIP Gateway for Teams
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Stay in the Loop with AudioCodes

Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Document Revision Record

<table>
<thead>
<tr>
<th>LTRT</th>
<th>Description</th>
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<tbody>
<tr>
<td>25102</td>
<td>Initial document release.</td>
</tr>
<tr>
<td>25103</td>
<td>IniFileURL value.</td>
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<td>25104</td>
<td>Remote management</td>
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Documentation Feedback

AudioCodes continually strives to produce high quality documentation. If you have any comments (suggestions or errors) regarding this document, please fill out the Documentation Feedback form on our website at https://online.audiocodes.com/documentation-feedback.
1 Introduction
This document describes how to onboard AudioCodes SIP-compatible analog telephone adapters (ATA) to a Microsoft SIP Gateway in a Teams environment.

1.1 SIP Gateway Overview
An ATA is a device for connecting traditional analog devices to a digital telephone system. The ATA connects the analog devices to Microsoft Teams through a SIP Gateway. AudioCodes offers a variety of ATA models to support SIP Gateway functionality (see Supported ATA Models).

An ATA can connect $N$ number of devices using $N$ number of FXS ports (RJ-11 interfaces). Each port represents a SIP device from Microsoft Teams Admin Center perspective, and there is no notation for ATA. However, the hardware ID of each device is composed of the MAC address of the ATA and a port number. For example, “00-90-8F-49-28-78:001” represents ATA MAC address 00-90-8f-49-28-78 and port number 001.

Teams Admin Center doesn’t have a notion of ATA and each ATA port is abstracted as an independent device. However, ATA onboarding to SIP Gateway is done per ATA instance versus port. In other words, ATA as a “box” MUST be factory reset and the server URL of the ATA MUST be set with appropriate regional HTTP URL, as documented in Configure SIP Gateway. The capacity (i.e., maximum number of ports supported per ATA) is a device attribute and documented per ATA model.

In other words, if ATA has $N$ ports, then the maximum number of ports that can be provisioned to meet SIP Gateway security requirements (i.e., TLS and SRTP) might be less than or equal to $N$ (please check link to OEM documentation for exact number of ports that can be onboarded to SIP Gateway for a given ATA model).

Analog devices are supported only for CAP (Common Area Phone) accounts; hence the Admin MUST use remote sign-in/sign-out from Teams Admin Center for analog devices as they would for any other CAP accounts. Before remote sign-in, the admin must enroll the port of the ATA, by dialing the feature code plus verification code from an analog device connected to that port to validate that it is a trusted device. The Add device menu in the Teams Admin Center remote provisioning includes an option to select, in addition to existing MAC address, analog device and populate Hardware ID in the MAC plus port # format, as described above.

ATA settings are managed using OEM tools or the Web interface of the ATA. However, user’s settings are sent to the device by the SIP Gateway device manager, like every SIP Phone, for each port if analog devices are connected to an ATA.

The ATA port is listed as a regular SIP device in the Teams Admin Center. The admin can activate it using OTP and sign in/out like for any other device. However, if the admin tries to restart this device, the command is ignored because there is no option to restart a single port on an ATA and the admin should use the ATA management tool to perform this command. In addition, all accounts that are signed-in MUST be in the same region because there is no option to “transfer” a port to another region due to regulations (such as EUDB).
1.2 Roadmap for Bulk Provisioning

AudioCodes is aware of the challenges in migrating many analog ports from another system to Teams. Therefore, AudioCodes plans to enable bulk provisioning to avoid the need to OTP each port and afterwards remote sign-in manually. Instead, AudioCodes plans to have a tool that will accept a list of devices (including analog ports) as the input and complete all processes with a single transaction.

1.3 Disclaimers – Known Issues

- Teams Admin Center Restart command (i.e., per port) restarts the entire ATA instead of the specific FXS port.
2 AudioCodes ATAs for SIP Gateway

This section lists the AudioCodes ATA devices for Microsoft SIP Gateway functionality.

2.1 Supported ATA Models

The following table lists the AudioCodes ATA models that support SIP Gateway functionality:

<table>
<thead>
<tr>
<th>Table 1: AudioCodes ATAs for SIP Gateway Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATA Model</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>MP-112</td>
</tr>
<tr>
<td>MP-114</td>
</tr>
<tr>
<td>MP-118</td>
</tr>
<tr>
<td>MP-124</td>
</tr>
<tr>
<td>MP-1288</td>
</tr>
<tr>
<td>MP-502</td>
</tr>
<tr>
<td>MP-504</td>
</tr>
<tr>
<td>MP-508</td>
</tr>
</tbody>
</table>

2.2 Compatible Firmware per ATA Model

The following table lists the compatible AudioCodes ATA models and minimum firmware versions:

<table>
<thead>
<tr>
<th>Table 2: Compatible AudioCodes ATA Models and Firmware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>MP-118 FXS</td>
</tr>
<tr>
<td>MP-118 FXS/FXO</td>
</tr>
<tr>
<td>MP-114 FXS</td>
</tr>
<tr>
<td>MP-114 FXS/FXO</td>
</tr>
<tr>
<td>MP-112 FXS</td>
</tr>
<tr>
<td>MP-124/124E</td>
</tr>
<tr>
<td>MP-1288</td>
</tr>
<tr>
<td>MP-502</td>
</tr>
</tbody>
</table>
2. AudioCodes ATAs for SIP Gateway

<table>
<thead>
<tr>
<th>Model</th>
<th>Minimum Firmware</th>
<th>Microsoft Approved Firmware</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-504</td>
<td>7.26A.356.075</td>
<td>7.26A.356.075</td>
</tr>
<tr>
<td>MP-508</td>
<td>7.26A.356.075</td>
<td>7.26A.356.075</td>
</tr>
</tbody>
</table>

You can download the latest firmware files and documentation of the ATA models from https://tinyurl.com/atafirmware.

2.3 ATA Port Capacity

The SIP Gateway requires the use of secured RTP (SRTP). SRTP causes a minor reduction in channel capacity in some of the AudioCodes ATA models, as shown in the following table:

<table>
<thead>
<tr>
<th>Model</th>
<th>Port Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-1288</td>
<td>No reduction</td>
</tr>
<tr>
<td>MP-124</td>
<td>17 channels (instead of 24)</td>
</tr>
<tr>
<td>MP-118</td>
<td>6 channels (instead of 8)</td>
</tr>
<tr>
<td>MP-114</td>
<td>3 channels (instead of 4)</td>
</tr>
<tr>
<td>MP-112</td>
<td>No reduction</td>
</tr>
<tr>
<td>MP-502</td>
<td>No reduction</td>
</tr>
<tr>
<td>MP-504</td>
<td>No reduction</td>
</tr>
<tr>
<td>MP-508</td>
<td>No reduction</td>
</tr>
</tbody>
</table>
3 ATA Setup for SIP Gateway Functionality

This section describes how to set up your AudioCodes ATA device for SIP Gateway functionality in Microsoft Teams environment.

3.1 Updating ATA with Compatible Firmware

Once you have downloaded the required firmware version file (see Compatible Firmware per ATA Model), you need to install it on the ATA.

To install firmware on ATA:

1. Log in to the ATA’s web interface.
2. Open the Software Upgrade wizard:
   - Select the Maintenance tab, click the Software Update menu, and then click Software Upgrade Wizard.
   - Or
   - On the toolbar, click Device Actions, and then choose Software Upgrade Wizard:

3. Click the Start Software Upgrade button to start the wizard:

4. Click the Browse button, navigate to the firmware file (.cmp), and then click Load File; a progress bar displays the status of the uploading process.
5. Click the Reset button to reset the device with the newly loaded file.
6. After the device resets, the End of Process wizard page appears, displaying the new .cmp file loaded to the device. Verify the firmware version on the Device Information page (Status & Diagnostics > System Status > Device Information):
3.2 Configuring an IP Address

The MediaPack series supports static IP addressing. Therefore, prior to provisioning the Microsoft SIP Gateway, you need to configure a working static IP address, netmask, default gateway, and DNS for the device to establish IP network connectivity.

![Configuration Options](image)

Static IP address is applicable only to the MP-1xx and MP-1288. MP-50x uses DHCP by default for obtaining an IP address.

To configure an IP address:
1. Log in to the web interface of the device.
2. Open the IP Settings page (Configuration > VoIP > Network > IP Interfaces Table).
3. Configure the required IP address and networking parameters:

![IP Settings Configuration](image)

3.3 Configuring SIP Gateway Provisioning Server URL

This section describes how to restore the device to factory defaults and apply the SIP Gateway provisioning server’s URL through AudioCodes ATA’s web interface.

To configure provisioning server URL:
1. Access the device's Admin page, by appending "AdminPage" to the device's IP address in the Web browser's URL (e.g., http://10.13.4.13/AdminPage).
2. In the Navigation pane, click ini Parameters.
3. For each parameter listed in the table below, do the following:
   a. In the 'Parameter Name' field, enter the parameter's name.
   b. In the 'Enter Value' field, enter the parameter's value.
   c. Click Apply New Value.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IniFileURL</td>
<td>&quot;</td>
</tr>
<tr>
<td>AUPDResetURLOnWebConfig</td>
<td>1</td>
</tr>
<tr>
<td>SetDefaultOnIniFileProcess</td>
<td>1</td>
</tr>
</tbody>
</table>

4. In the Navigation pane, click Back to Main.
5. Upload an empty configuration file (.ini) to reset the device to factory defaults:
   a. Using a text-based editor (e.g., Notepad), create an empty [.ini] file with any name on your computer.
   b. Open the Configuration File page (Maintenance > Software Update > Configuration File).
   c. Click Choose File, and then select the empty .ini file.
   d. Click Load INI File.

6. Access the Admin Page again, in the Navigation pane, click ini Parameters, and then apply the following parameter:
   a. In the 'Parameter Name' field, enter IniFileURL.
   b. In the 'Enter Value' field, enter 'http://noam.ipp.sdg.teams.microsoft.com/<mac>.ini'.
   c. Click Apply New Value.

   - The URL above is for the NoAM region. Instead, use the SIP Gateway provisioning server’s URL for your region, as provided in Microsoft SIP Gateway documentation.
   - You must append the URL with /<mac>.ini.

7. Analog Gateway obtains the onboarding configuration and reboots.

3.4 Pairing ATA FXS Port with Teams User (Remote Sign-in)

This section describes how to pair an FXS port on AudioCodes ATA with a Teams user, using a one-time password (OTP). Perform the procedure for each FXS port.

To pair FXS port with Teams user:

1. Access the Microsoft Teams Admin Center at https://admin.teams.microsoft.com, using the tenant admin’s credentials.

2. Navigate to Teams devices > Phones > Actions > Provision devices:

3. Click Add; the following pane is displayed on the right of the window:
3. ATA Setup for SIP Gateway Functionality

4. Add the MAC address of the ATA:
   a. From the 'ID type' drop-down list, select **Hardware ID (analog)**.
   b. In the 'Enter hardware ID' field, type the ATA's MAC address and FXS port (e.g., "00-90-8F-49-28-78:001").
   c. Click **Save**.

5. Select the device (MAC:port) in the table, and then click **Generate verification code**; a verification code (OTP) is generated and displayed in the 'Verification code' column, as shown in the following example:

6. Dial from the analog phone to sign-in:
   a. Connect an analog phone to the **same** FXS port on the ATA.
   b. Off hook the phone, and then dial ***55*<Verification code from Teams Admin Center>; a confirmation tone is played.
   c. On hook the phone.
7. In the Teams admin center, click the **Waiting for sign in** tab, select the Hardware ID, and then click **Sign in a user**:

8. Complete the web sign-in process, by following the on-screen instructions, using the account that you want assigned to the FXS port.

**Sign in a user**

Selected device

![Device MAC address](https://aka.ms/siploginppa)

Most recent signed in user

![Signed out](https://aka.ms/siploginppa)

To remotely sign in to that selected device, follow the steps below:

1. Open this URL:
   
   ![URL](https://aka.ms/siploginppa)

2. Copy and paste this code:
   
   ![Copy code](https://aka.ms/siploginppa)

3. Select the user.
   
   **When you select the user, we'll remotely sign them in to this device.**

4. Return to the Microsoft Teams admin center.
   
   **You're all set.**

**Note:** Remote sign in doesn't support personal user credentials, so you'll need a device user account created in Azure Active Directory. A shared device, like a conference phone, will only be signed in as a shared device when a personal user isn't signed in.

Close
3.5 Signing Out ATA FXS Port from Teams (Remote Sign-in)

This section describes how to sign out (unpair) the ATA's FXS port from Teams.

To sign out FXS port from Teams:

1. Access the Microsoft Teams Admin Center at https://admin.teams.microsoft.com, using the tenant admin’s credentials.
2. Navigate to Teams devices > SIP devices.
3. Select the device:
4. Click the three dots (...) in the upper-right corner, from the drop-down menu, click Actions, and then choose Sign out:

3.6 Enabling Remote Web-based Management from WAN

If you want to enable remote management of the device, after you've provisioned it (as described in the previous sections), access the device through its LAN interface and perform the following procedure.

To enable remote Web-based management (HTTP/S) from WAN:

1. Open the WEB Settings page (Setup menu > Administration tab > Web & CLI folder > WEB Settings).
2. Allow WAN access:
   • For HTTP: From the 'Allow WAN access to HTTP' drop-down list, select Enable.
   • For HTTPS: From the 'Allow WAN access to HTTPS' drop-down list, select Enable.
3. Click Apply and save to flash.