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AIPHONE

IX Series Cisco
Unified
Communications
Manager

AIPHONE IX Series Cisco Unified Communications Manager User Guide

Contents

AIPHONE

AIPHONE IX Series Cisco Unified Communications Manager

Specifications

- **Compatible** with Cisco CallManager versions 10.5 – 14.0
- **Supported IX Series stations:** IX-MV7-*, IX-SOFT, IX-RS-*, IX-DV, IX-DVF-*, IX-SSA-*, IX-SS-2G, IX-DA, IX-BA, IX-EA, IX-DVM

Product Usage Instructions

Call Manager Configuration

- Refer to the provided manual for detailed instructions on configuring Call Manager.

Creating a Security Profile

- Follow the steps outlined in the manual to create a security profile for the device.

Registering a User

- Instructions for registering a user can be found in the manual.

Registering a Station – Adding a New Device

- Step-by-step guide on how to add a new device to the system.

Registering a Station – Device and Protocol Information

- Details on registering a station including device and protocol information.

Registering a Station – Directory Number (DN)

- Instructions on how to assign a directory number to a station.

Support Tool Configuration

- Configure the support tool as per the guidelines provided.

Station Settings / **SIP Server Settings – Setting Station Information**

- Information on setting station details and SIP server settings.

IP Phone Registration / **Calling an IP Phone**

- Steps to register an IP phone and make calls to it.

Configuring Door Release (Optional)

- Guide on configuring and enabling door release from an IP phone.

Video Settings

- Adjust video call settings as required.

Answering an Incoming SIP Call (Optional)

- Set up the call button on an IX substation to answer incoming SIP calls.

Upload Settings to Stations

- Upload setting files to stations and save system programming files.
- Contact Technical Support for further assistance.

Frequently Asked Questions

Communication Compatibility

List of compatible CallManager versions and supported IX Series stations.

Network Information

Detailed network information including addressing, SIP server details, audio codec, ports, and more. Refer to the IX Series Network Summary Document for further details.

Extensions and Call Transfer

Information on call transfers within IX Series stations and from IP phones.

GENERAL OVERVIEW

- This document describes the basic configuration for registering IX stations to Cisco CallManager by Cisco Systems Co., Ltd.
- The screenshots in this manual are from Unified Communications Manager 11.5
- **Certified IX Series stations compatible with CallManager versions 10.5 – 14.0 are as follows:** IX-MV7-*, IX-SOFT, IX-RS-*, IX-DV, IX-DVF-*, IX-SSA-*, IX-SS-2G, IX-DA, IX-BA, IX-EA, IX-DVM
- For configuration of IX Series stations, refer to the IX Series Quick Start Guide or Settings Manuals. Please refer to the relevant manual provided by Cisco Systems for further CallManager information.
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Frequently Asked Questions

- The following are frequently asked questions on registering IX Series stations to CallManager, available features, and network requirements.
- All of the following information is expanded on either further into this document, the IX Series Quick Start Guide provided with every station, or the IX Series Network Summary Document and can be found at **www.aiphone.com/IX**

Communication

- IX Series stations are peer-to-peer and do not require a dedicated or cloud-based server for communication.
- Because of this, IX Series stations do not require Internet access, only a local network connection.
- IX Series stations may register to CallManager as a 3rd party device to allow two-way audio communication between the station and another registered SIP device.
- Video-enabled IP phones (soft or physical) may also stream video from video door/sub stations, as well as two-way video conferencing with IX-MV7-* master station.

Compatibility

- **CallManager:** 10.5, 11.0, 11.5, 12.0, and 12.5
- **IX Series Stations:** IX-MV7-*, IX-SOFT, IX-RS-*, IX-DV, IX-DVF-*, IX-SSA-*, IX-SS-2G, IX-DA, IX-BA

Network Information

- **Addressing:** Hostname, IPv4 (default), IPv6 / Static (default), DHCP
- **SIP Server:** Primary, Secondary, and Tertiary servers available
- **Audio Codec:** G.711 (default) / G.722 Port: 20000 (start) – 21000
- **Video:** H.264/AVC (default) / MJPEG Port: 30000 (start) – 31000
- **SIP:** 5060

- More detailed network information and requirements are located in the IX Series Network Summery Document found at **www.aiphone.com/IX**

Extensions

- IX Series stations can be assigned a 1 to 32-digit Station Number (read: extension) in the Support Tool, which must match the extension assigned to it in CallManager. This setting is explained in greater detail later in this document.
- A station may call a single, 1 to 32-digit extension (which can also be a direct phone number, based on CallManager settings). This extension can be that of a single station or a hunt/call group.
- If the destination of a call is a hunt/call group, CallManager will then distribute the call to the appropriate group of extensions. This setting is explained in greater detail later in this document.

Call Transfer

- Call transfers from one IX Series station to another, or a single SIP extension, are handled by its internal configuration.
- Call transfers of an IX Series station from one IP phone to another are handled by CallManager.
- IX Series stations have three internal call transfer options; Absent, Delayed, and Scheduled. For more information on this feature and its configuration, reference the IX Series Quick Start Guide.

Door Release

- IP phones registered to CallManager can activate an IX Series station's relay output used for door release via its dial pad or a configured soft button (if available).
- Note that IX Series master stations have their method of activating door release, which is automatically enabled.
- To activate the door release relay output, press the Authorization Key (code) while the IP phone is in communication with the station.
- The door release Authorization Key and its length are determined in programming. This setting is explained in greater detail later in this document.

CallManager – Getting Started

- The following steps may be configured before the initial programming of the IX Series stations has been completed.
- However, the registration status of any unconfigured (defaulted) station will show as "unknown".
- The MAC address of each station will be needed during Device Registration and may be found by either locating the MAC address sticker on the back of the intercom or using the Support Tool and running a Station Search (Tools > Station Search).
- Utilizing either of the methods above, notate the Station Type of each station. The station's type will be referenced throughout this process.

Create a Security Profile

- A new security profile will be created for the stations to be registered. If multiple station types are being registered, ensure that the following steps are done for each profile (Basic and Advanced).
- Rather than editing the existing profile, a copy should be made and a new profile should be saved.

System ▾
- Enterprise Parameters
- Enterprise Phone Configuration
- Service Parameters
- Security ▶
  - Certificate
  - Phone Security Profile
  - SIP Trunk Security Profile
  - CUMA Server Security Profile
- Application Server
- Licensing ▶
- Geolocation Configuration
- Geolocation Filter
- E911 Messages

1.1 - Phone Security Profile

Using the **System** drop-down, find **Security** and select **Phone Security Profile**.

1.2 - Third-party SIP Device Basic / Advanced

Locate **Find Phone Security Profile** and use the drop-down menu options to select **Name** and **begins with**. Type "third" in the search field, and click **Find**.

Phone Security Profile *(1 - 6 of 6)*

Find Phone Security Profile where Name ∨ begins with ∨ third [Find] [Clear Filter] [+] [-]

☐	Name ▲	Description
	Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile	Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile
	Third-party SIP Device Advanced - Standard SIP Non-Secure Profile	Third-party SIP Device (Advanced) - Standard SIP Non-Secure Profile
☐	Third-party SIP Device Advanced - Standard SIP Secure Profile	Third-party SIP Device (Advanced) - Standard SIP Secure Profile
	Third-party SIP Device Basic - Standard SIP Non-Secure Profile	Third-party SIP Device (Basic) - Standard SIP Non-Secure Profile
☐	Third-party SIP Device Basic - Standard SIP Secure Profile	AI Third-party SIP Device (Basic) - Standard SIP Non-Secure Profile

[Add New] [Select All] [Clear All] [Delete Selected]

1.3 - Select a Phone Security Profile

IX-MV7-*, IX-SOFT, IX-DV, or IX-DVF-*:
Third-party SIP Device **Advanced** - Standard SIP Non-Secure Profile

IX-RS-*, IX-SSA-*, or IX-SS-2G:
Third-party SIP Device **Basic** - Standard SIP Non-Secure Profile

Phone Security Profile Configuration

[💾 Save] [✖ Delete] [📄 Copy] [🔄 Reset] [✏ Apply Config] [➕ Add New]

┌ **Phone Security Profile Information** ─
Product Type: Third-party SIP Device (Basic)
Device Protocol: SIP
Name* : Aiphone Third-party SIP Device Basic - Standard SIP
Description : Third-party SIP Device (Basic) - Standard SIP Secure
Nonce Validity Time* : 600
Transport Type* : TCP+UDP ∨
☑ Enable Digest Authentication

┌ **Parameters used in Phone** ─
SIP Phone Port* : 5060

[Save] [Delete] [Copy] [Reset] [Apply Config] [Add New]

1.4 - Copy

Click the **Copy** button before making any adjustments.

1.5 - Name

Give the new copy a unique name that can be easily found.

1.6 - Digest Authentication

Check the box next to **Enable Digest Authentication** (when required).

1.7 - Apply Configuration

Click the **Apply Config** button.

Registering a User

- A unique User ID and Password will need to be created for each station, as well as a Last Name and Digest Credentials (when Enable Digest Authentication is checked in the previous step).

User Management ▾

Application User	**2.1 - Select End User**
End User	Use the **User Management** drop-down and select **End User**.
User/Phone Add ▸	

Find and List Users

➕ Add New

2.2 - Add New

Click **Add New**

💾 Save

User Information

User Status	Enabled Local User
User ID*	AiphoneIXDV
Password	••••••
Confirm Password	••••••
Self-Service User ID	
PIN	
Confirm PIN	
Last name*	Front Door Intercom
Middle name	

Associated PC/Site Code	
Digest Credentials	••••••
Confirm Digest Credentials	••••••

3.3 - User Information

User ID
Create a unique User ID for the station.

Password/Confirm Password
Create a password for the station.

Last Name
This may reflect the station's name in Support Tool, or any other unique identifier.

Digest Credentials/Confirm Digest Credentials
Provide the station with Digest Credentials (required when Enable Digest Authentication is checked)

2.4 - Save

Click **Save** at the top of the page.

Registering a Station – Adding a new Device

- Each station will need to be registered as a Third-party SIP Device, selecting Advanced or Basic depending on station type.

3.1 - Select Phone

Use the **Device** drop-down and select **Phone**.

Find and List Phones

➕ Add New

3.2 - Add New

Click **Add New**

Phone

Find Phone where Device Name ⌄ begins with ⌄ [   ] Find | Clear Filter

Select item or enter search text ⌄

Add New

Add a New Phone

➡ Next

3.3 - Select a Phone Type

Status

ⓘ Status: Ready

IX-MV7-*, IX-DV, or IX-DVF-*:
Third-party SIP Device Advanced- Standard SIP Non-Secure Profile

Select the type of phone you would like to create

Phone Type * [Third-party SIP Device (Advanced)   ⌄]

IX-RS-*, IX-SSA-*, or IX-SS-2G:
Third-party SIP Device Basic - Standard SIP Non-Secure Profile

Next

3.4 - Next

Click **Next**.

- **Note:** If a video intercom (IX-MV7-*, IX-DV, or IX-DVF-*) is given a Basic security profile, the video will not stream to compatible IP Phones.

Registering a Station – Device and Protocol Information

- The following are the required settings needed to register a station.
- However, other settings under Device Information and Protocol Information, such as Device Pool, Calling Search Space, Location, etc may need to be adjusted based on the existing configuration of the Call Manager environment.

4.1 - Device Information

MAC Address
The MAC address can be found on a sticker on the back of the intercom, or using Support Tool and running a Station Search (*Tools > Station Search*).

....

Phone Button Template

IX-MV7-*, IX-DV, or IX-DVF-*
Third-party SIP Device Advanced- Standard SIP Non-Secure Profile

IX-RS-*, IX-SSA-*, or IX-SS-2G
Third-party SIP Device Basic - Standard SIP Non-Secure Profile

....

Owner User ID
The **User ID** created in step 3.3 on page 3.

4.2 - Protocol Specific Information

Device Security Profile:
Match this profile with the profile created in step 2.1 on pages 2-3.

IX-MV7-*, IX-DV, or IX-DVF-*
Third-party SIP Device Advanced- Standard SIP Non-Secure Profile

IX-RS-*, IX-SSA-*, or IX-SS-2G
Third-party SIP Device Basic - Standard SIP Non-Secure Profile.

....

SIP Profile:
Select **Standard SIP Profile**.

....

Digest User:
The **User ID** created in step 3.3 on page 3.

4.3 - Save

Click **Save** at the top of the page.

Registering a Station – Directory Number

- The final step is assigning a Directory Number (DN) to the station. The DN should match the Station Number of the station represented in the Support Tool.
- If the station has been configured before registration, it can be found by clicking Station Information > Identification on the left-hand side menu of the Support Tool.
- If the station has yet to be configured, the DN should not exceed 5 digits, as that is the maximum length allowed for a station number in the Support Tool.
- The following are the required settings needed to register an iPhone station.
- However, other settings under Directory Number Information and Directory Number Settings, such as Route Partition, Description, Alerting Name, etc, may need to be adjusted based on the existing requirements of the CallManager environment.

5.1 - Line [1]

Select **Line [1] – Add a new DN**.

Save

Directory Number Information

Directory Number*	4596
Route Partition	Parition_A
Description	
Alerting Name	Front Door Intercom
ASCII Alerting Name	Front Door Intercom
External Call Control Profile	< None >

☑ Active

Directory Number Settings

Voice Mail Profile	< None >
Calling Search Space	< None >
BLF Presence Group*	Standard Presence group
User Hold MOH Audio Source	< None >
Network Hold MOH Audio Source	< None >

☐ Reject Anonymous Calls

Scroll Down   Scroll Down

Multiple Call/Call Waiting Settings on Device SEP000BAA2F0243

Note:The range to select the Max Number of calls is: 1-16
| Maximum Number of Calls* | 1 |
| Busy Trigger* | 1 |

5.2 - Directory Number

Directory Number
The Directory Number must match the Station Number assigned to the station in step 1.2 on page 7.

BLF Presence Group
Select **Standard Presence Group**.

Maximum Number of Calls
Should not be set greater than 2.

Busy Trigger
Must be set to 1.

5.3 - Save

Click **Save** at the top of the page.

Support Tool – Getting Started

- Proceed with the following steps only once the initial programming of the IX Series system and its stations has been completed.
- The IX Series Quick Start Guide is provided with each station and can be found under Literature at **www.Aiphone.com/IX**.

ID	
Password	
Login	Cancel

Default Login Information

ID: admin
Password: admin

Setting Station Information

- Each station's Station Number should be set to the Directory Number assigned to it in CallManager.
- For extensions larger than 5 digits, first, expand Station Information and click Expanded System from the left-hand side menu.
- Here, the system can be placed into Expanded Mode, allowing extensions from 1-32 digits in length, by clicking Enable. To continue assigning a Station Number/Extension to the stations, click Identification.

Adding SIP Server Information

- From the left-hand side menu, expand Network Settings, and click SIP.
- Each station's End User ID / Password and the primary SIP server's network information are entered here. Secondary and Tertiary SIP server information is found by scrolling to the right on this screen.

VoIP Phone Registration

- Each station may have a single SIP call-in destination, whether that destination is an IP Phone or a call/hunt group's extension, however, multiple stations may call the same SIP extension.
- Extensions within the hunt/call group do not have to be added to this list.
- From the toolbar at the top of the screen, click Edit(E) and select VoIP Phone List.

Calling an IP Phone (Door / Sub Station)

- Once an IP Phone or Hunt Group has been added to the Support Tool it may be set as a call destination.
- Note that multiple stations can call the same extension, but each station may only call one extension.
- Expand Call Settings, and click Called Stations (Door/Sub Stations).

- **Note:** Settings will not take effect until the setting files have been uploaded to the stations. Refer to page 12 of this guide for the procedure of uploading the settings.
- IX Series stations have two built-in relay outputs, with Relay Output 1 enabled and set for door release by default.
- 3rd Party IP Phones can activate this output using dial-pad commands with some minor adjustments to the default configuration. Repeat this process for each station.

Door Release from an IP Phone or Mobile Phone

- **IX Station Firmware v 3.0 or newer** : To activate door release from an IP phone, press the Door
- **Release Authorization number** while in communication with the door station.
- If the Door Release Authorization Authentication Key is adjusted from its default value by following steps 5.1 to 5.3 above, this new key must be set for any IX Series Master Station (IX-MV / IX-MV7-*) part of the system.
- Repeat this process for each Master Station.
- While still in Station View, expand Function Settings, and click Door Release.

Station View

Station Number: 0586
Station Name: Security Desk
Location:
Station Type: IX-MV7-*

Select Station to Edit

Type: All
Number: 0586

Previous | Select | Next

Function Settings
- Door Release
- Network Camera Integra
- Paging Settings
- Bathroom Call
- Email
- CGI
- SIF

● Door Release

Door Release Assignment

Station List	Contact Assignment	Authentication Key 1-20 digits
0001 / 4595 / Front Door / / IX-DV, IX-DVF(-*)	Destination Station	9
0002 / 9877 / Parking Garage / / IX-SS-2G	Destination Station	9

Select a Station
At the top right of the screen, use the drop-down menu under Select Station to Edit to choose the first door station to configure, then click Select.

Authentication Key
Find Door Release Authorization and Authentication Key. Replace the default value with the key created in step 4.3.

Click **Update** to save your settings. ➡ Update

Video Settings

- Video is streamed by an IX station to an IP Phone during communication by default. However, depending on the IP Phone, the H.264 profile may need to be adjusted to do so. Note that this setting change will not affect the video quality.
- On the left-hand menu, expand Network Settings, and click Video.

Station Information
- Network Settings
  - IP Address
  - DNS
  - SIP
  - Multicast Address
  - Video
  - Audio
  - Packet Priority
  - NTP

Station Information			Network Settings		
Identification			Video		
			Video Encoder 1		
Number	Name	Station Type	Resolution	Frame Rate [fps]	Select Profile [H.264 / AVC]
0586	Security Desk	IX-MV7-*			
4595	Front Door	IX-DV, IX-DVF(-*)	640x480(VGA)	15	Baseline

Video Profile
Select the H.264 profile. *Baseline is the most commonly used.*

Click **Update** to save your settings. ➡ Update

Configuring a Door Station Call Button to Answer an Incoming Call (Optional)

- Auto-answer is not available for incoming SIP calls to a door or substation.
- To answer an incoming call, the call button will need to be configured to also answer an incoming call and end communication.
- At the top of the screen, click on Table View. Once in Table View, expand Call Settings on the left-hand menu, and click Station Information.

- Station Information
- Network Settings
- System Information
- Call Settings
  - Station Information
  - Called Stations (Master S
  - Called Stations (Door/Su
  - Call Origination
  - Incoming Call

#	Station Information			Call Settings
	Identification			Station Information
	Number	Name	Station Type	Call Button Function
0002	4595	Front Door	IX-DV, IX-DVF(-*)	Call, Answer Call, End Communication
0003	9877	Parking Garage	IX-SS-2G	Call

Button Function
Use the drop-down menu to select **Call, Answer Call, End Communication**.
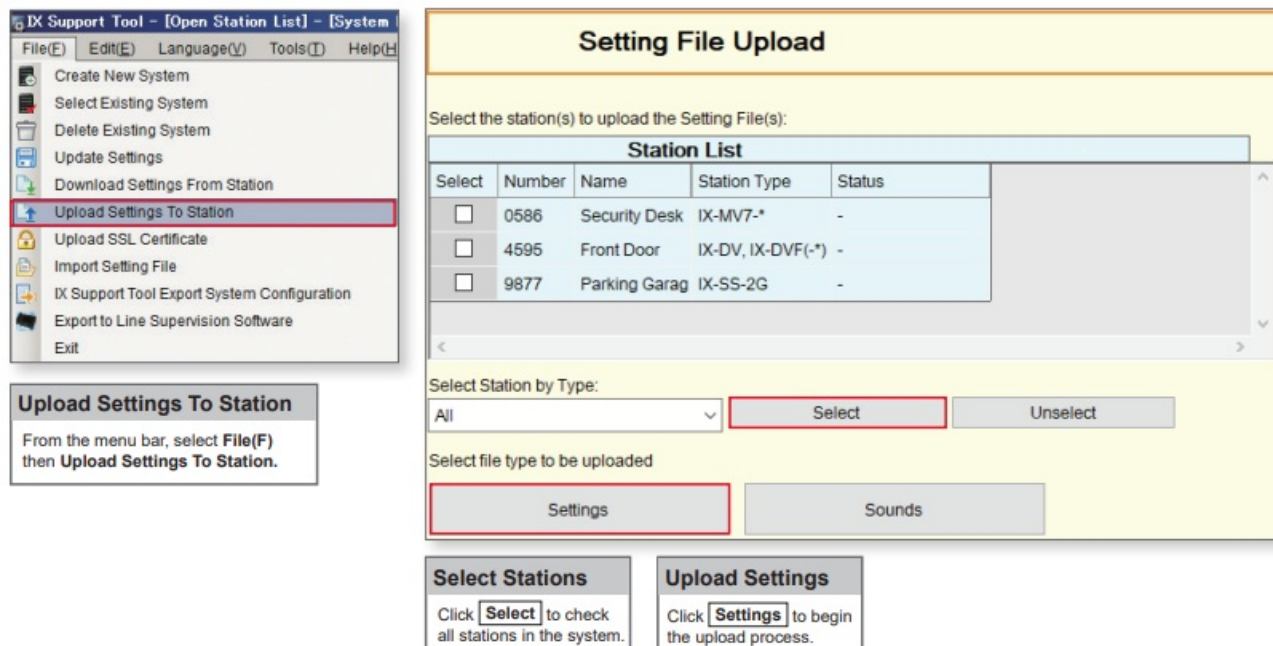
Click **Update** to save your settings. ➡ Update

- Note: Settings will not take effect until the setting files have been uploaded to the stations. Refer to this guide for the procedure of uploading the settings.

Upload Settings to Stations

- The final step after configuring new settings, or making changes to existing settings, is to upload the setting file to all stations.
- If the setting files are not uploaded, any changes made in the Support Tool will not be reflected on the station(s).

Setting File Upload

Select the station(s) to upload the Setting File(s):

Station List

Select	Number	Name	Station Type	Status
☐	0586	Security Desk	IX-MV7-*	-
☐	4595	Front Door	IX-DV, IX-DVF(-*)	-
☐	9877	Parking Garag	IX-SS-2G	-

Select Station by Type:

All | Select | Unselect

Select file type to be uploaded

Settings | Sounds

Upload Settings To Station

From the menu bar, select **File(F)** then **Upload Settings To Station**.
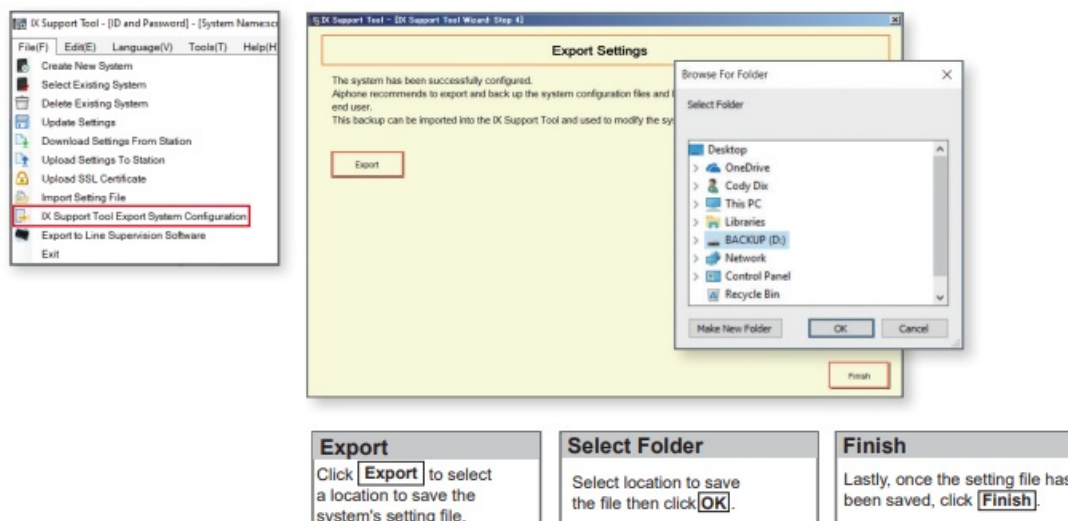
Select Stations

Click **Select** to check all stations in the system.

Upload Settings

Click **Settings** to begin the upload process.

Export Settings

- A copy of the system's setting file should be exported to a secure location or external drive. This step is critical for the ongoing maintenance of this system.
- If settings are to be changed in the future, or new stations are to be added, this file is required to do so.
- To export the file, click on File(F) at the top of the screen and select IX Support Tool Export System Configuration.

Export

Click **Export** to select a location to save the system's setting file.

Select Folder

Select location to save the file then click **OK**.

Finish

Lastly, once the setting file has been saved, click **Finish**.

- **For more details about the features and information above, please contact Technical Support. Aiphone Corporation www.aiphone.com 800-692-0200**

Documents / Resources

AIPHONE IX Series Cisco Unified Communications Manager [pdf] User Guide
IX-MV7-, IX-SOFT, IX-RS-, IX-DV, IX-DVF-, IX-SSA-, IX-SS-2G, IX-DA, IX-BA, IX-EA, IX-DVM, IX Series Cisco Unified Communications Manager, IX Series, Cisco Unified Communications Manager, Unified Communications Manager, Communications Manager, Manager

References

- **User Manual**