

IXG SERIES

IP Multi-Tenant Video Intercom

Quick Start Programming Guide for Commercial Applications

IXG Support Tool version 5.0.1.0

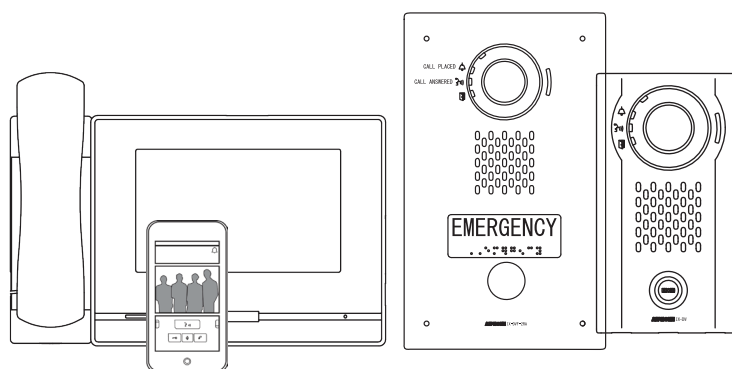


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ATTENTION:

This is an abbreviated programming manual addressing basic program settings for an IXG Series system using the IXG Support Tool. A complete set of instructions (*IXG Operation Manual / IXG Support Tool Setting Manual*) can be found at www.aiphone.com/IXG, along with additional literature and media.

GENERAL OVERVIEW

Commercial Systems

The IXG Series covers a wide variety of applications. This guide is focused on configuring commercial systems, such as single tenant offices. Settings specific to multi-tenant residential buildings and IXG-DM7-HID(A) entrance stations are not covered in this guide, and can be viewed here:

<https://www.aiphone.com/IXG-Series-QuickStartGuide>

IXG Support Tool

The IXG Support Tool is designed to batch configure all stations simultaneously. It does so by finding each station on the network by its MAC address. The IXG Series is designed to function on a managed network. However, the broadcast method used to find stations during the programming process requires that stations be in the same broadcast domain. **When possible, it is recommended to place the stations and the programming PC on the same unmanaged network for initial programming.** Once the stations are associated (see **page 9**), the stations can be returned to their final locations for the rest of the programming process.

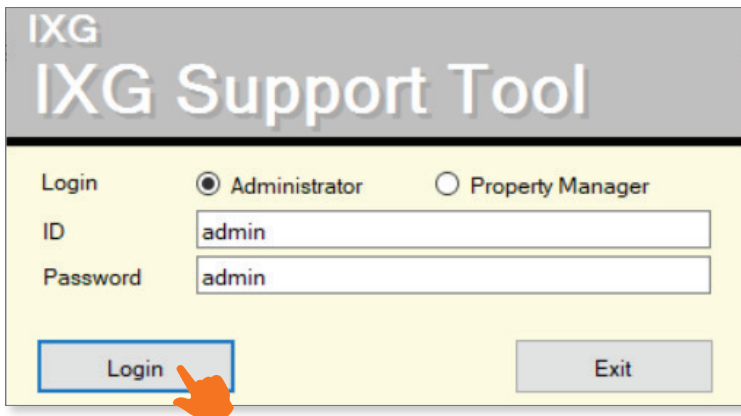
Once the system configuration has been created, the NIC used by IXG Support Tool can be manually selected in the top menu under **File, IXG Support Tool Settings** by using the Select Nic drop down, choosing the proper NIC, and clicking **OK**.

The IXG Support Tool and newest firmware updates can be downloaded at

<https://www.aiphone.com/IXG-SupportTool>

Launching Support Tool

There are two login options for Support Tool: **Administrator** and **Property Manager**. This guide is focused on Administrator mode, so choose Administrator. The default ID and Password is **admin/admin**. Click **Login**. A prompt will appear to change the password. Enter a password on both lines and click **OK**.



i The admin ID and Password can be changed later by navigating to **File, Account Management**.

CREATING A NEW SYSTEM

Getting Started

If this is the first time launching Support Tool, the [Create a New System](#) screen will automatically appear. Otherwise, navigate to **File** and select [Create New System](#).

Commercial systems are smaller scale than multi-tenant applications or larger sites, like school campuses. Therefore, Single Building should be selected.

Create New System

Create a new system. ◆ Required Settings

Site Name ◆

System Type ◆
 Single Building Multiple Buildings *Cannot be changed once created.

Number of Buildings ◆
 Building *1~99

System ID ◆

1-20 alphanumeric characters

System Password ◆

1-20 alphanumeric characters

i All ID and passwords should be recorded and saved in a secure location. Recovery of ID and passwords may be difficult, or impossible, in some situations.

Enter the required configuration information above and fill in the **Site**, **Installer**, and **Property Management Company Information**. This information is required and must be accurate to activate the IXG mobile app. Click **Finish** to continue.

Site Information

COUNTRY / REGION *

Street address *

Apt., suite, bldg

City *

State *

Zip Code / Postal Code *

Installer Information

Company Name *

Representative Name

Email *

Phone Number *

Property Management Information

Company Name *

Representative Name *

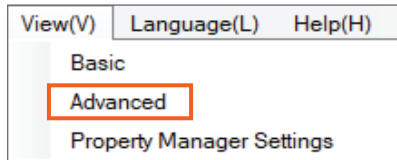
Email *

Phone Number *

i This information can be updated at any time by navigating to [Site Settings](#), [Site Information](#).

Advanced View

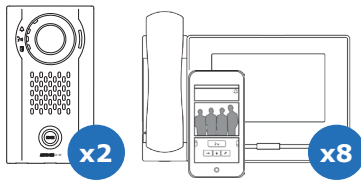
To access all of the settings used by commercial systems, use the top menu and select **View**, Advanced.



Site Settings

Units / Stations - Unit Types

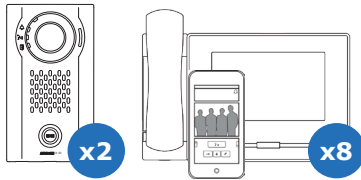
A typical IXG Commercial system will use one of three different types of units: **Commercial**, **Guard**, and **Outside Area**. Each has their own purpose, available features, communication paths, and station types. There is no limit to the number of units in a system, but each unit type can only support a set number of stations.



Commercial Unit

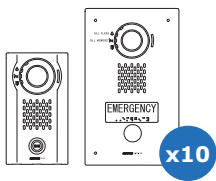
Commercial Units consist of up to eight IX-MV7-* master stations, IX-SOFT PC master stations, a VoIP extension, IX-RS-* handset sub stations, or a combination of these, along with eight IXG mobile apps and a telephone number.

Stations within a commercial unit can communicate with inside and outside area units, guard and entry units, as well as other commercial units. The two private door stations will only call to stations within their unit.



Guard Unit

Guard units consist of up to eight IXG-MK guard stations, IX-RS-* handset sub stations, a VoIP extension, or a combination of these, along with up to eight IXG mobile apps and a telephone number. The two private door stations will only call to stations within their unit.

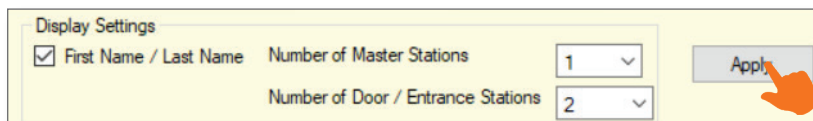


Outside Area Unit

Outside area units consist of up to ten door or emergency stations that can call any IX or IXG Series master, guard, or tenant station. Each door is configured separately.

Units/Stations - Adding Units

Units and their stations will be added to the system here. First, look to the top of the screen for the Display Settings section. By default, each unit is set to have one master/tenant station and one entrance/door station. Use the drop-downs to select the number of stations the units will have, then click **Apply**.



This setting is applied to all units. Select quantities that reflect your largest unit.

Site Settings (continued)

Units/Stations - Adding Units (continued)

From left to right, select the Building Number the unit will belong to (in this case, 01), set a Unit Number, and click **Select** to choose a unit Type.

Building Number	Unit Number	Unit Type	
01	100		Select
01	101		Select

Select Unit

Entrance

Residential

Guard

Commercial

Inside Area

Outside Area

Delete

Residential, Guard, and Commercial units can include mobile apps and a phone number.

Cancel

i When adding multiple of the same Unit Type, select a completed Unit Number field and press the Enter key on the keyboard. This will auto-populate the next field.

Once all units have been added, enter a Unit Name for each. For each station to be added to a unit, click **Select** next to the appropriate station in that unit and choose a station type from the list. Use the drop-down menu to select how many mobile apps are permitted for each unit, if needed.

Site Settings

Units / Stations

Unit Name

Front Door

Main Office

Master / Tenant S

Select

Select

Select Station

IX-MV7*

IX-SOFT

IX-RS*

VoIP Phone

Delete

Cancel

Number of available Mobile Apps

8

Click **Save** once every unit has been created and all stations have been added.

Once all of the previous changes have been updated, find the Default Call Settings section at the top of the screen. Click on **Group** to automatically configure a default paging group for all master stations. Click on **Called Stations (Door/Sub Stations)** to set up default calling assignments for door stations.

Default Call Settings

Group

Called Stations (Door/Sub Stations)

i Clicking **Called Stations (Door/Sub Stations)** will automatically set up calling assignments for any door stations in the system. To set these up manually, or customize settings beyond the defaults, refer to the Call Partitioning section found on **page 14**.

Site Settings (continued)

Sample Commercial System Layouts

The IXG Series can use different unit types to support a variety of applications. Here are some common use cases and solutions to achieve those goals.

Single Office (1 Door Station, 1 Master Station, 8 Mobile Apps)

For this size of office, everything can be placed in a single commercial unit.

Site Settings Required settings.										
Units / Stations										
Building Number	Unit Number	Unit Type		Last Name	Phone Registratio	Master / Tenant S		Door / Entrance S		Number of available Mobile Apps
01	100	Commercial	Select		Disable	IX-MV7-*	Select	IX-DV,IX-DVF(-*)	Select	8

Single Office (3 Door Stations, 1 Master Station, 8 Mobile Apps)

To accommodate more than two doors calling to a single office, place the master station and mobile apps in a commercial unit, and the three door stations in an outside area.

Units / Stations									
Building Number	Unit Number	Unit Type		Unit Name	First Name	Last Name	Phone Registratio	Master / Tenant S	
01	100	Commercial	Select	Commercial100			Disable	IX-MV7-*	Select
01	101	Outside Area	Select	Outside Area 101					Select

Units / Stations									
Door / Entrance S		Door / Entrance S		Door / Entrance S		Number of available Mobile Apps			
	Select		Select		Select	8			
IX-DV,IX-DVF(-*)	Select	IX-DV,IX-DVF(-*)	Select	IX-DV,IX-DVF(-*)	Select				



To finish configuring the stations in the Outside Area and Commercial Unit for calling, see **Station Partitioning** on page 13.

Multiple Offices (1 Door Station, 1 Master Station, 1 Guard Station)

A door station in an outside area can call masters in multiple units at the same time. The main restriction is that only the mobile apps from one unit can be called. These call settings can be fully configured by following the **Station Partitioning** section on page 13.

Units / Stations									
Building Number	Unit Number	Unit Type		Unit Name					
01	100	Outside Area	Select	Front Door					
01	101	Commercial	Select	Main Office					
01	102	Guard	Select	Security Desk					

Master / Tenant S		Door / Entrance Station 1		Number of available Mobile Apps
	Select	IX-DV,IX-DVF(-*)	Select	
IX-MV7-*	Select		Select	8
IXG-MK	Select		Select	8

Station Information

Identification

From the side menu, navigate to **Station Information**, Identification. This menu can be used to customize the Station Number and Name for each station in the system. The Station Name and Number are typically only seen by stations within the same Unit for internal communication, but it is recommended to give custom names to any door stations so that users can distinguish them more easily. Once everything is configured, click **Save**.

ID / Password (Optional)

From the side menu, navigate to **Station Information**, ID / Password. This menu can be used to edit the the Admin ID and Password for each station, though this is not normally recommended. This menu can also be used to give stations an ONVIF and RTSP ID and password, which is needed for door stations that will be tied to an NVR.

Gateway Settings

If the system contains mobile apps, a gateway adaptor (IXGW-[T]GW) will need to be added and configured.

Gateway Registration

To add the gateway adaptor to the system, navigate to **Gateway Settings**, Gateway Registration. For each gateway adaptor, select Enable, then optionally edit its Station Name, and review the other settings. Up to 99 gateway adaptors can be used per system. Once everything is configured, click **Save**.

Gateway Settings		Gateway Registration			
Gateway Number	Station Type	Enable	Station Name	Cancel Priority Rule	Maximum Simultaneous Calls
1	IXGW-(T)GW	<input checked="" type="checkbox"/>	Gateway Adaptor1	Enable	8
2	IXGW-(T)GW	<input type="checkbox"/>		Enable	8

Gateway Selection

Navigate to **Gateway Settings**, Gateway Selection. For each unit, choose a primary gateway that will be used to call IXG mobile apps. An optional secondary gateway can also be designated that will be utilized if the primary gateway goes offline. Click **Save**.

Building Nu	Unit Numbe	Unit Name	Gateway Settings			
			Gateway Selection			
			Primary		Secondary	
Gateway Number	Station Name	Gateway Number	Station Name			
01	100	Front Door	1	Gateway Adaptor		
01	101	Main Office	1	Gateway Adaptor		



Gateway Selection cannot be completed until the gateway and stations receive their network information. See **page 8**.

Network Settings

IP Address

From the side menu, navigate to **Network Settings**, IP Address. Each station can be manually assigned an IP address, or click near the top of the screen to enter an IP address range to automatically assign all stations.

i Typically, stations deployed across a managed network cannot be found by Support Tool unless the network is configured to allow this broadcast search. In this case, it may be easier to move the stations to a switch local to the programming PC than it would be to configure the network to allow a network-wide broadcast.

More network settings can be seen by scrolling right. **For systems with the IXGW-(T)GW gateway adaptor, a default gateway and a primary DNS server must be added for the adaptor, and optionally for all other stations. A secondary DNS server can also be optionally added.** Consult the network administrator for more information if needed. Once everything is configured, click **Save**.

Station Name	Network Settings																														
	IP Address																														
	Hostname	IP Version	Static / DHCP	IPv4 Address																											
				IP Address				Subnet Mask				Default Gateway				Primary DNS Server				Secondary DNS Serv											
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4									
Video Door Station1		IPv4	Static	192	168	1	50	255	255	255	0																				
Master Station1		IPv4	Static	192	168	1	51	255	255	255	0																				
Gateway Adaptor1		IPv4	Static	192	168	1	52	255	255	255	0	192	168	1	1	8	8	8	8	8	8	8	8	8	8	8	4				

NTP

Navigate to **Network Settings**, NTP. It is recommended to enable and configure NTP settings for each station when possible. **For systems with the IXGW-GW gateway adaptor, it will have NTP enabled and an Aiphone NTP server address set by default.** Adjusting this default server address is possible, and recommended for sites with their own server. Click **Save**.

Association Settings

Station Settings List and Station List

From the top menu, select **Connection** and click Association Settings. Here, stations created in the previous steps will be associated to stations found on the network. Select a station from the Station Settings List and one from the Station List below. Confirm that the IP address and subnet mask listed in the Station Settings List are correct, then click **Apply**. This will assign the Station Name and IP Address to the station and reboot the station. A station reboot usually takes several minutes.

Select	Building Nu	Unit Number	Station Name	Station Type	Hostname	IP Address	Subnet Mask	Associated
<input checked="" type="radio"/>	01	100	Video Door Station1	IX-DV,IX-DVF(-*)		192.168.1.50	255.255.255.0	-
<input type="radio"/>	01	101	Master Station1	IX-MV7-*		192.168.1.51	255.255.255.0	-
<input type="radio"/>			Gateway Adaptor1	IXGW-(T)GW		192.168.1.52	255.255.255.0	-

Select	Building Nu	Unit Number	Station Name	Station Type	IP Address	Subnet Mask	MAC Address	Associated
<input type="radio"/>				IX-MV7-*	192.168.1.160	255.255.255.0	00:0B:AA:2F:9D:F3	-
<input type="radio"/>			Video Door Station2	IX-DV,IX-DVF(-*)	192.168.1.12	255.255.255.0	00:0B:AA:28:26:0C	-
<input type="radio"/>			Gateway Adaptor1	IXGW-(T)GW	192.0.0.21	255.255.254.0	00:0B:AA:4C:01:2F	-

i Typically, stations deployed across a managed network cannot be found by Support Tool unless the network is configured to allow this broadcast search. In this case, it may be easier to move the stations to a switch local to the programming PC than it would be to configure the network to allow a network-wide broadcast.

If a Station Search fails immediately, go to **File** from the top menu and select IXG Support Tool Settings. Find the Select NIC drop-down and select the correct NIC that Support Tool should use, then click **OK**. Return to Association Settings to try again. If the station search continues to fail immediately, a local antivirus or firewall may be preventing this action. Disabling one or both of these may be a simple solution in quickly finishing the initial system configuration.

Associated Station List

Scroll down to confirm the stations were successfully associated. The IP and MAC addresses of the stations will be listed. If the wrong station information was associated to a station, select that station on this list and click **Remove Association**. Once removed, scroll up and associate the correct station.

Select	Building Nu	Unit Number	Station Name	Station Type	IP Address	Subnet Mask	MAC Address	Status
<input type="checkbox"/>	01	100	Video Door Station1	IX-DV,IX-DVF(-*)	192.168.1.50	255.255.255.0	00:0B:AA:28:26:0C	Success
<input type="checkbox"/>	01	101	Master Station1	IX-MV7-*	192.168.1.51	255.255.255.0	00:0B:AA:2F:9D:F3	Success
<input type="checkbox"/>			Gateway Adaptor1	IXGW-(T)GW	192.168.1.52	255.255.255.0	00:0B:AA:4C:01:2F	Success

Upload Settings

Once associated, each station will need to have its setting file uploaded to it. This setting file contains all other system information and is required for the station to function. To upload the settings to each station, select **Connection** on the top menu and select Upload Settings. Select each station by placing a check mark next to it, or click **Select** to select all stations at once. Click **Settings** to upload station settings. If Sounds, Images, or Schedules were also configured, click their respective buttons.

Select	Building Nu	Unit Number	Station Name	Station Type	Status
<input checked="" type="checkbox"/>	01	100	Video Door Station1	IX-DV.IX-DVF(*)	-
<input checked="" type="checkbox"/>	01	101	Master Station1	IX-MV7*	-
<input checked="" type="checkbox"/>			Gateway Adaptor1	IXGW-(T)GW	-



If any stations fail, they may still be booting up from the Association Settings step. It is also important to ensure that the programming PC is in the same subnet range as the stations. For example, if the stations are set to 192.168.1.xx, the PC should also be set to this.

Exporting System Configuration

Once the Upload is complete, select **File** from the top menu and click Export System Configuration. Export this system's configuration to save as a backup if the settings are lost, or if they need to be moved to a new PC and Support Tool. If the configuration file is going to be emailed, it will need to be compressed first.

Mobile App Integration

If IXG mobile apps are to be part of the system, the first step in many situations is to create an administrative account for the site.

However, **if this is one of multiple sites the installing company is responsible for**, skip the "Create a New Administrator Account" step. Use existing IXG cloud server account credentials in the step "Upload Settings to IXG Cloud Server" to add this site to the installation company IXG Cloud Server account.

Create a New Administrator Account

Select App Integration from the top menu and click Create a New Administrator ID. Enter an ID, Password, and Email Address. Click **Create** to continue.

Administrator ID
(Unique ID)

Password
(Unique Password)

The password must be at least 8 characters and include uppercase letters, lowercase letters, and numbers.

Confirm Password

Email Address
installername@companyemail.com

Create Cancel

A verification code will be sent to the registered email. To enter this verification code, select **App Integration** from the top menu and click Activate. Enter the previously created Administrator ID and Verification Code and click **Activate**.

Mobile App Integration (continued)

Upload Settings to IXG Cloud Server

The system settings must be uploaded to the IXG Cloud Server. To do this, select **App Integration** from the top menu and select Upload Settings to IXG Cloud Server. From there, follow the prompts.

The first screenshot shows the 'IXG Cloud Server Login' screen. It has a title bar 'IXG Cloud Server Login'. Below it are two input fields: 'IXG Cloud Server ID (Unique ID)' and 'Password (Unique Password)'. There is a link '*Forgot password?'. At the bottom are 'Login' and 'Cancel' buttons. A modal window titled 'Upload Settings to IXG Cloud Server' is overlaid on top. It has a title bar 'Upload Settings to IXG Cloud Server'. Below it is a 'Select Country.' dropdown menu with 'United States' selected. At the bottom are 'Upload' and 'Cancel' buttons. An orange arrow points to the 'Upload' button.

The second screenshot shows the 'License Agreement' screen. It has a title bar 'License Agreement'. Below it are two sections of text. The first section is '1. Instructions for Residents' and the second is '2. ID verification for issuing a QR code'. At the bottom are 'Agree' and 'Disagree' buttons. An orange arrow points to the 'Agree' button.

Downloading the IXG Mobile App

Before registering the IXG Mobile App to a Unit, it will need to be downloaded to the mobile device. Search for "Aiphone IXG" in the Apple App Store™ for iOS® devices, or Google Play™ store for Android® devices. Once installed, and the privacy policy is agreed to, it will ask to scan a QR code for registration.

Exporting the App Registration QR Code as a PDF

To register mobile devices to the IXG system, a QR Code is generated for each specific unit. Select **App Integration** from the top menu and click Export QR Code for App Registration. Place a check mark next to the desired units and click **Export QR Code for App Registration**. This will generate one or more PDFs that can be scanned by mobile devices with IXG Mobile App installed. Each PDF can only be used once.

Export QR Code for App Registration					
Select	Building Nu	Unit Numbe	Unit Name	Registered Master Statio	Available App(s)
<input type="checkbox"/>	01	001	North Entrai	0	0
<input checked="" type="checkbox"/>	01	101	Cobalt Inc	0	1
<input checked="" type="checkbox"/>	01	201	201	1	1

Syncing the IXGW-(T)GW with the IXG Cloud Server

Once the upload to the cloud server is complete, the status LED on the IXGW-(T)GW Gateway will change to a solid green once it is synced with the IXG cloud server. If the status LED continues flashing orange for more than five minutes, it may require a manual reboot. Simply disconnect its PoE connection and reconnect it after five seconds.



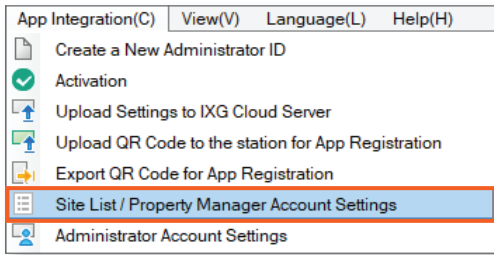
If the sync fails, or the status LED never turns green, confirm both the programming PC and the IXGW-(T)GW have an internet connection. This may require adjusting the network firewall to allow the IXGW-(T)GW access. Also, confirm that the Default Gateway and DNS settings configured under Network Settings are set correctly.

Property Manager Account Creation

For post-installation system management for residential applications, a Property Manager Account must be created. This account will allow a Property Manager access to the Property Manager View in Support Tool.

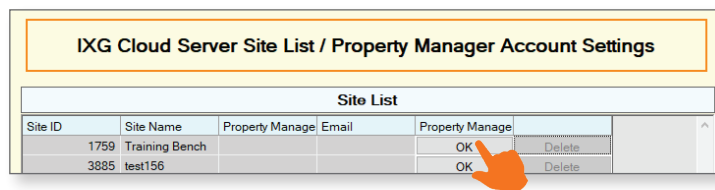
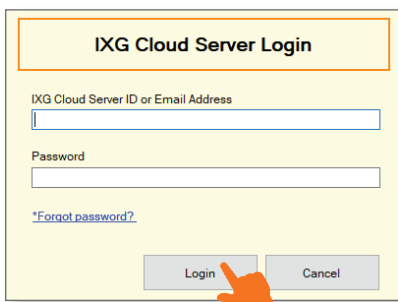
Creating the Property Manager Account

From the top menu, click **App Integration** and choose Site List/ Property Manager Account Settings

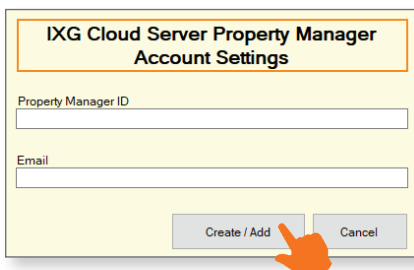


Log into the IXG Cloud Server Account

Enter the cloud server credentials created on **page 10** and click **Login**. Once logged in, it will show all sites linked to that IXG Cloud server account. Find the site to create the property manager account for and click **OK**.



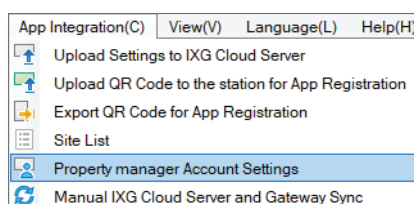
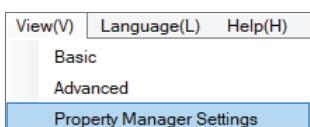
On the next screen, create a new Property Manager ID and enter an email address to be attached to this account. **This email cannot be the same as the email associated to the IXG Cloud server account.** When finished, click **Create/Add**. This will send a temporary password to the designated email. The initial password can be changed from the Property Manager View.



Property Management Settings

In order to access the property management account, select **view** from the top menu and click Property Manager Settings. This will return to the support tool login screen. Select Property Manager, then enter the Support Tool login credentials and click **Login**.

At the top menu, choose **App Integration** and click Property Manager Account Settings. Use the Property Manager ID and the password that was sent to the email provided and click **Login**. When prompted to change your Password, enter new credentials and click **Change**.



i For more information about how to use the property management account, refer to the [Property Manager Guide](#)

Station Partitioning

Stations placed in different units are not automatically configured to call one another. These settings control which stations can see and communicate with each other.

System Information - Station List

To configure which stations are in an answering station's address book, expand **System Information** from the side menu and select Station List.

A row of all of stations will be listed, as well as a column for each. Find the cross section where the desired stations meet and place a check mark in the drop down menu to place those stations in each others address book. To take them out of the address book, make that cell blank. The door release button can be enabled when adding the specified station or mobile app to a station's address book. By default, when adding a station with the check mark it will show the door release button.

Building Nu	Unit Number	Station Name	01 / 100 / 1000		
			Video Door Station1 / IX-DV,IX-DVF(-*)		
			Select	Network Camera	Door Release But
01	101	Master Station1	✓		
01	101	Intercom App1	✓		Display 1 Only
01	101	Intercom App2	✓		Display 1 Only

Call Settings - Called Stations (Door/Sub Stations)

To choose what stations a door station can call, select **View**, Advanced from the top menu. Navigate to **Call Settings**, Called Stations (Door/Sub Stations) from the side menu.

The page will display a row of all stations along the top, as well as a list of stations to the left. To configure the stations a door will call, scroll right to find the cell where the calling door station and the master station intersect. Use the drop-down menu to add a **U** to add that station to the door's call list. Remove the **U** to prevent the door from calling that master.

Building Nu	Unit Number	Station Name	Total	Call Settings	
				Called Stations (Door/Sub Stations)	
				Group 01	
				Select Unit	Building Number / Unit Number / Station Number / Station Name / Station Type
					01 / 100 / 1000 / Video Door Station1 / IX-DV,IX-DVF(-*)
01	100	Video Door Station1	0	Select	01 / 101 / 1010 / Master Station1 / IX-MV7-*
					<input type="text" value="U"/>

The door stations can only be set to ring one unit of mobile apps per group. To select the desired unit's mobile apps, scroll to the right and click **Select**. Place a check mark next to the desired mobile app unit and click **OK**.

Mobile Apps and Phone			
Building Nu	Unit Number	Unit Name	Select Unit
			Select
			Select
			Select

Select a Destination Unit.

Select	Building Number	Unit Number	Unit Name
<input checked="" type="checkbox"/>	01	101	Main Office

Upload Settings to Stations

The final step is to upload these setting changes to the IXG stations. To upload the settings to each station, select **Connection** on the top menu and click Upload Settings. Find more information on **page 10**.

IXW-MA(A) Programming

IXG and IX Series Stations use SIF signaling to trigger outputs on IXW-MA(A) multi-purpose adaptors. This can be used to mirror outputs on the stations for door release or external signaling.

Adding IXW-MA(A) to a System

Navigate to **Site Settings**, **I/O Adaptor Registration**. There will be a list of up to 99 adaptors. Place a check in the **Enable** column for each adaptor to be added. Click **Save**.

I/O Adaptor Number	Site Settings	
	I/O Adaptor Registration	
	Enable	Station Name
1	<input checked="" type="checkbox"/>	I/O Adaptor1
2	<input type="checkbox"/>	

Navigate to **Network Settings**, **IP Address**. Enter an IP address, subnet mask, and (optionally) a default gateway for the newly added adaptors. Click **Save**.

Gateway Adaptor1	IPv4	Static	192	168	1	52	255	255	255	0
I/O Adaptor1	IPv4	Static	192	168	1	53	255	255	255	0

Configuring Stations for SIF Signaling

Navigate to **Function Settings**, **SIF**. For each station that will signal the IXW-MA(A), set **SIF Functionality** to **Enable**. Under the **SIF Settings** column, set the **Program Type** to 0100, enter the IP address of the IXW-MA(A) under **IPV4**, set the **Destination Port** to 65014, set **SSL** to Enabled, and **Connection** to Socket.

Building Nu	Unit Numbe	Station Name	Function Settings							
			SIF							
			SIF Functionality	SIP URI Format	No.01			Destination P	SSL	Connectio
Program Type	IPv4	IPv6								
01	100	Video Door Station1	Enable	Disable	0100	192.168.1.53		65014	Enable	Socket

Transmission Trigger				
Begin Out	Begin Cor	Door Rele	End Com	Change Co
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>



The IXW-MA(A) itself does not need any programming in this section.

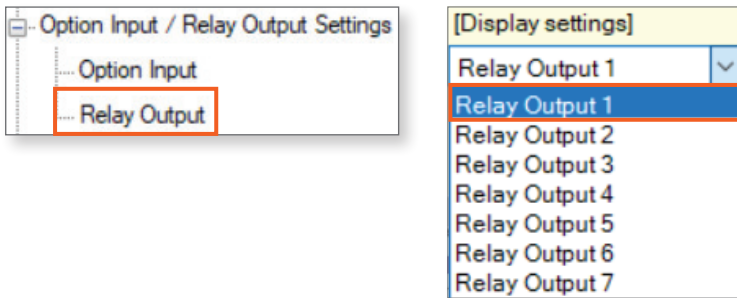
Scroll right to the **Transmission Trigger** section. For each station signaling the IXW-MA(A), check off **Change Contact**. Once these settings are configured, click **Save**.

Unit Number	Station Name	Function Settings						
		SIF						
		No.01						
Transmission Trigger								
Begin Out	Begin Cor	Door Rele	End Com	Change Co	Unit error	Begin Bro		
1002	Guard Station1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1003	Master Station1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1003	Video Door Station1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

IXW-MA(A) Programming (continued)

Configuring Stations for SIF Signaling

Navigate to **Option Input / Relay Output Settings**, Relay Output. Relay Output 1 will be displayed by default. The **Display settings** menu can be used to switch to other relay outputs.



For each programmed output, set the **Function** on the IXW-MA(A) to Contact Change SIF Event.

Station Name	Option Input / Relay Output Settings	
	Relay Output	
	Relay Output 1	
	Name	Function
Video Door Station1		Door Release
Master Station1		Door Release
Guard Station1		Door Release
I/O Adaptor1		Contact Change SIF Even

Scroll right to the **Contact Change SIF Event** column. Click **Select Station** to display a list of stations. Select the signaling station and click **OK**. Click **Save**.

Relay Output 1	
Contact Change SIF Event	
Station Nu	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station
	Select Station

Select Station

Select Station

Station List					
Select	Building Nu	Unit Number	Station Nu	Station Name	Station Type
<input checked="" type="radio"/>	01	100	1000	Video Door Station1	IX-DV.IX-DVF(-)
<input type="radio"/>	01	101	1010	Master Station1	IX-MV7-*
<input type="radio"/>	01	102	1020	Guard Station1	IXG-MK
<input type="radio"/>			0001399	I/O Adaptor1	IXW-MA

i Only one station can be assigned to each IXW-MA(A) output.

Repeat these steps for each output to be programmed, and then upload settings to all stations to complete the process (see **page 10** for more information).

Additional Settings

The following are simple feature or function settings that can be quickly adjusted, enabled, or disabled. Each of these settings are found under the Advanced View in Support Tool. Click **View** on the top menu and select [Advanced](#) to switch views.

Always click the **Save** button in the top left corner to save the setting changes in Support Tool, and [Upload Settings](#) to each station once all changes have been made (**page 10**). **The stations will not reflect the setting changes until this is done.**

Adjusting Audio Volumes

Some stations can adjust their inbound and outbound audio volumes. Adjust these by navigating to **Station Settings**, [Volume](#).

Adjusting Ring Tones

IX-MV7 master stations can set custom ringtones for incoming calls from different door and entrance stations. Navigate to **Call Settings**, [Incoming Calls](#). Scroll right to find where the master station's row intersects the column for the desired station and set a new call pattern. These can be individually set for calls made by a call button or an option input, and for different call priority levels.

Door Station Release Timer

The time the door release relay output is triggered can be adjusted for the entrance station and door stations on the system. Adjust these times by navigating to **Option Input / Relay Output Settings**, [Relay Output](#).

By default, the output timers are set to 400msec. Use the drop-down under [Output Time Range](#) to select a time range of either **200-2000msec** or **3-600sec**. Then, manually enter the amount of time the relay should trigger.

Door Station Call Timeout and Ringback Tone

Adjust the amount of time an entrance or door station calls in for, as well as select the ringback tone (which includes audio guidance), by navigating to **Call Settings**, [Call Origination](#).

The call timeout duration is set to 60 sec by default, for both Entrance and private door stations. Adjust this by manually entering a time under [Call Timeout \(10-600sec\)](#).

Use the drop-down under [Ringback Tone](#) to select a pre-loaded or custom ringback tone, or audio guidance.

Door Station Communication Start Tone

The Door Station can play a "Communication Start Tone" to let the visitor know the call is connected and it is time to speak. Enable this by navigating to **Station Settings**, [Communication](#).

Disable Door Station Monitoring

To prevent any station in any Unit from monitoring an entrance station, Navigate to **Station Settings**, [Monitoring](#).

Door Station Recording

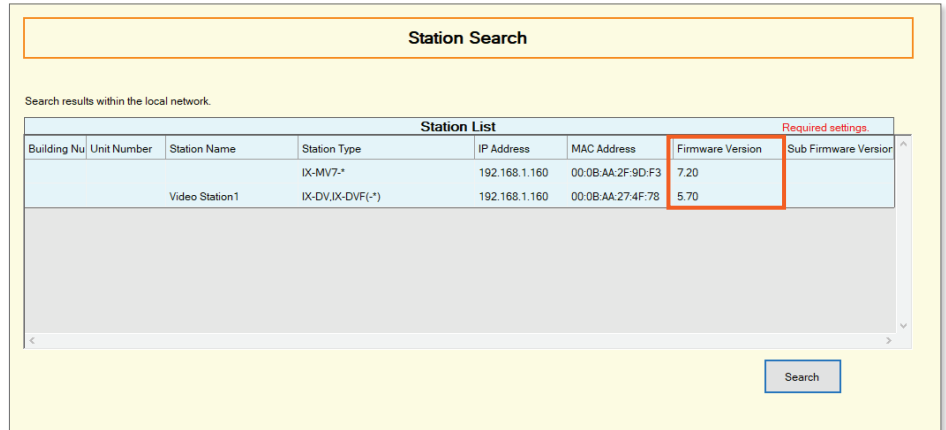
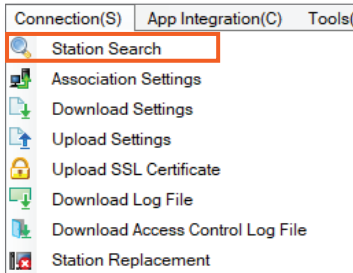
Door stations with a microSD slot and a third party microSD card can record audio and video when a call is placed. Recording begins once communication is established with a station. Enable these functions by navigating to **Function Settings**, [Recording](#).

Updating Station Firmware

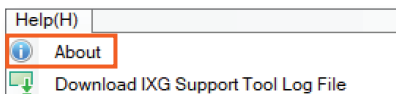
IXG Support Tool can be used to update the firmware on both IXG Series and compatible IX Series stations. Firmware updates are recommended, since they contain valuable security and feature improvements. There are a few steps to take to make sure that firmware updates are necessary, and some stations may require additional resources.

Checking Firmware and Support Tool Versions

To see if IXG Support Tool and the stations' firmware are up to date, first navigate to **Connection(S), Station Search**. The station search will begin automatically. The search will last for sixty seconds, but the stations will normally appear after a few seconds. Click **Cancel** to end the search early. The firmware version for the stations will be listed to the right. IXG Series Stations should be at version 3.0 or higher. For most IX Series stations, they should be at version 7.2 or higher. IXW-MA(A) stations should be at version 9.25 or higher.



To see what version of IXG Support Tool is installed on the PC, navigate to **Help, About**. The software version will be listed on the popup screen. The IXG Support Tool should be at version 5.0.1.0 or higher.



If needed, the most current versions of IX and IXG Series Station Firmware and IXG Support Tool can be downloaded at the links below.

IXG Support Tool: <https://www.aiphone.com/IXG-SupportTool>

IX and IXG Firmware Updates: <https://www.aiphone.com/kbtopic/firmware-ix-ixg>

To update IXG Support Tool, download the current version from the link, extract the compressed file, and run the setup file to install the new version of IXG Support Tool. This will not delete your existing system information.

If any of the IX Series stations have a firmware version lower than 5.00, the firmware is too old to be updated through IXG Support Tool. They will need to be updated through the dedicated IX Firmware Upgrade Tool. Instructions and a software download link are below. **This is not a concern for IXG Series stations** since their firmware numbering scheme is different. These can always be updated through IXG Support Tool.

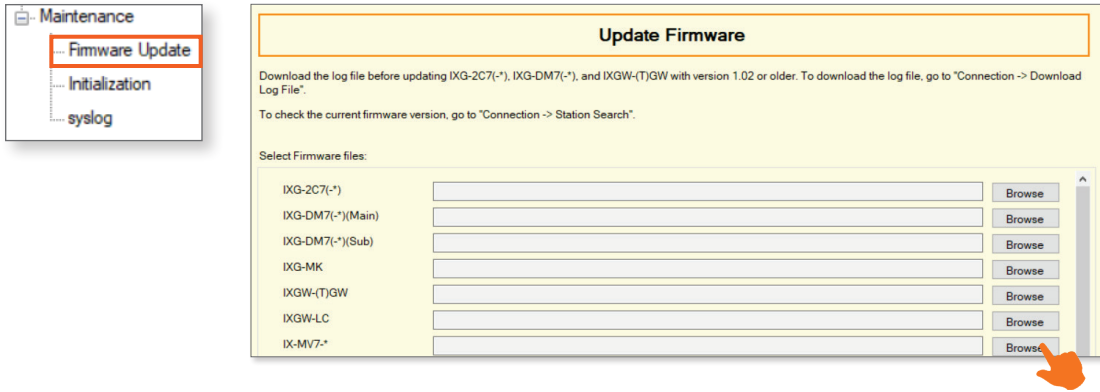
IX Firmware Upgrade Tool: <https://www.aiphone.com/IXFirmwareUpgradeTool>

IX Firmware Upgrade Tool Guide: <https://www.aiphone.com/wp-content/uploads/Firmware-Update-Tool-Guide.pdf>

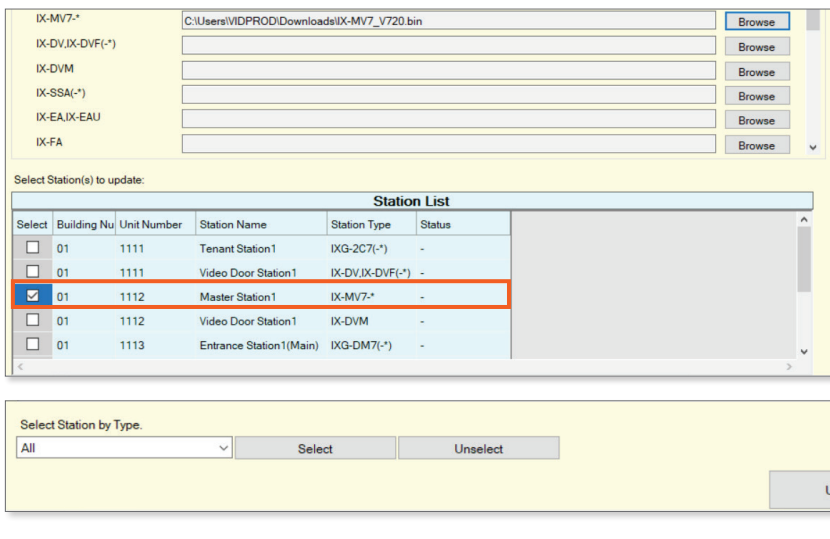
Updating Firmware Through IXG Support Tool

This method will work for both IXG and IX Series stations. Use the links on the **page 17** to download the required firmware updates. These will be downloaded in a compressed folder. Use the programming PC's built-in methods to extract the firmware update, which is stored as a .bin file.

Navigate to **Maintenance, Firmware Update**. The page will display a menu showing different station types. Use the **Browse** buttons to navigate to where the appropriate firmware .bin file is located. Multiple station types can have a firmware update selected at a time.



Select all of the stations to be updated and click **Save**. This process will take several minutes, and the stations will reboot during this time. Stations with a screen will display a status bar during the update. All stations will show a solid status light once the process is complete.



i Do not interrupt a firmware update once it has started, including unplugging the station. Doing so can damage the station.

i In order to update the Sub Firmware on an IXG-DM7-*, the Wiegand connection on the card reader needs to be connected to an access control system for power.

NETWORK SECURITY SUMMARY

These pages cover the different ports, protocols, and connections required for the IXG Series to function. This information can help troubleshoot issues and ensure a proper network environment is in place.

Stations and Devices

IX and IXG Series stations require a PoE connection for communication and power.

Entrance Station:	IXG-DM7-HID(A)
Answering Stations:	IXG-2C7, IX-MV7-*, IX-RS-*, IXG-MK
Door Stations:	IX-EA, IX-DV, IX-DVF-*, IX-DVM, IX-SSA-*, IX-SS-2G
Adaptors:	IXGW-(T)GW, IXGW-LC, IXW-MA(A)
Mobile App:	"Aiphone IXG"

Support Tool Software Information

Download and install the IXG Support Tool programming software. The latest version of Support Tool and IXG Series station firmware can be found at the links below.

IXG Support Tool: <https://www.aiphone.com/IXG-SupportTool>

Firmware Upgrades: <https://www.aiphone.com/kbtopic/firmware>

Support Tool and Line Supervision Software Minimum System Requirements

OS: Windows 7 (Professional, Enterprise, Ultimate), Windows 8 (Pro, Enterprise), Windows 8.1 (Pro, Enterprise), Windows 10 (Home, Pro, Enterprise), Windows 11 (Home, Pro, Enterprise)

CPU: 32 bit (x86) or 64 bit (x64) of 1 GHz

RAM: 4GB or more

Screen Resolution: 1280 x 768

Support Tool and Line Supervision Software Default ID and Passwords

Administrator ID: admin (*max. 32 alphanumeric characters*)

Administrator Password: admin (*must be changed after first use, max. 32 alphanumeric characters*)

Property Management ID: admin (*max. 32 alphanumeric characters*)

Property Management Password: admin (*must be changed after first use, max. 32 alphanumeric characters*)

Security and Communication

The IXG Series supports the use of **HTTPS** and **TLS (v1.2)**, providing the ability to upload signed certificates to encrypt and secure authentication. Support Tool allows centralized certificate management, with the ability to upload **CA certificates** to stations.

SSH (SFTP over SSH) is used when uploading a setting file to stations using the IXG Support Tool, but not during typical operation. This is a critical function, therefore SSH cannot be disabled.

HTTPS is used when uploading from IXG Support Tool to the IXG Cloud server. This may require whitelisting the following URL: ***.ap-northeast-1.amazonaws.com** (this * is a wildcard representing multiple subdomains).

IEEE 802.1X authentication is supported.

Hash Algorithms: MD5, SHA1, SHA256

Security and Communication (continued)

Communication

SIP Connection Port: 5060

Audio codec: G.711 (μ -law, A-law)

Video codec: H.264/AVC, Motion JPEG

Video Encoder 1 (Intercom Communication)

RTP Video: Start 30000 - End 31000

RTP Audio: Start 20000 - End 21000

Video Encoder 2 (Secondary HD Streaming)

RTP Video: Start 32000 (1-65534) - End 33000 (1-65535)

RTP Audio: Start 22000 - End 33000

Minimum / Maximum Frame Rate (FPS): 1 / 30

Minimum / Maximum Bitrate: 32 / 2048

Minimum / Maximum Resolution (Encoder 2): 320x240 / 1280x960

IXGW-GW Cloud Communication: TLS 1.2 is used to setup encrypted connections with allowed cipher suites ECDHE-ECDSA-AES128-GCM-SHA256 and ECDHE-RSA-AES128-GCM-SHA256. Certificates are set to automatically renew with AWS Certificate Manager.

By default, **IXG stations use Unicast when placing outbound calls to other stations**, but may utilize Multicast in network environments that would benefit from the method. When Paging to more than 50 stations Multicast is required, and a Multicast address must be set in Support Tool. If Multicast is used, either for calling or when required for large paging groups, any address in the 224.0.0.0 to 239.255.255.255 range may be used.

Addressing

The IXG Series offers Batch IP addressing or can be manually set for each device using IXG Support Tool. Each IXG station is set to the same default static IP address (*192.168.1.160*) that can be manually changed or set to DHCP during the programming process.

IPv4: 192.168.1.160 (*1.0.0.0-223.255.255.254*)

Subnet Mask: 255.255.255.0 (*128.0.0.0-255.255.255.254*)

Default Gateway: - (*1.0.0.0-223.255.255.254*)

IPv6: - (*2000::0-3FFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF* or *FD0::0-FDFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF*)

IPv6 Default Gateway: - (*::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF*)

DNS Primary Server IPv4: - (*1.0.0.1-233.255.255.254*)

IPv6: - (*::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF*)

Secondary Server IPv4: - (*1.0.0.1-233.255.255.254*)

IPv6: - (*::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF*)

NTP IPv4: ntp.jo.aiphone-app.net (*1.0.0.0-223.255.255.255* or *Hostname*)

IPv6: - (*::FF:0-FEFF:FFFF:FFFF:FFFF:FFFF:FFFF:FFFF* or *Hostname*)

LTE Connection

The IXGW-TGW Mobile App Gateway can be used to connect the IXG system to a 4G LTE mobile network, using the included SIM card. This connection can be used as a primary network connection for the system, or as a backup to the ethernet connection. The SIM card also allows for calls to a single phone number on each call from an entrance station or door station.

Supported Networks: AT&T® (requires activation of included AT&T SIM card). Third party SIM cards are not supported.

Ports and Protocols

The information below contains the most common and critical ports and protocols for the IXG Series. Some are used only during the initial programming process, others during general use and optional features.

Port	Type	Service or Protocol	Notes
5060	UDP	SIP	Session Initiation Protocol
8740	UDP	Keep-alive during door release	
8620	SSL	Door release command	Encrypted Door Release
65011	TCP	Option Relay Output control	
65030	UDP	Lift Control Adaptor control	
123**	UDP	NTP	IXGW-(T)GW Gateway must have an assigned NTP server address to function
53**	UDP	DNS	IXGW-(T)GW Gateway must have an assigned DNS server address to function
25	TCP	SMTP	Email notifications
443	TCP	HTTPS (TLS 1.2)	Secure Web Access for certification server control
22*	TCP	SFTP over an SSH session	Setting File Upload for Support Tool
8883**	TCP	Secure MQTT	Call control server connection to Cloud Server
8700*	UDP	Broadcast	Station Search and Association functions with Support Tool
55550	UDP	Paging Delivery	
59900	TCP	Message Page Delivery	
65000	UDP	Multicast Paging Delivery	
55552 - 56552	UDP	RTP Range used when paging	
10000-20000**	UDP	SRTP/SRTCP, DTLS, ICE(STUN)	IXGW-(T)GW and IXG Mobile App cloud server communication
20000 - 21000 30000 - 31000	UDP	RTP Audio and Video ranges for Encoder 1	Intercom to Intercom communication
22000 - 23000 32000 - 33000	UDP	RTP Audio and Video ranges for Encoder 2	Intercom to 3rd Party Streaming

* IXG Support Tool function / ** IXG App functionality

Additional IXG App Information

A reachable DNS and NTP server must be assigned to the IXGW-(T)GW Mobile App Gateway. A public DNS server, such as 8.8.8.8, may be used. Note that the IXG Support Tool has a preset NTP server for the IXGW(T)-GW gateway adaptor. However, this NTP server is based in Japan, so using a local NTP server is suggested.

Outbound communication is required for the IXG mobile app to function.

***.ixg.iphone-app.net: 443**

iot.us-east-1.amazonaws.com: 8883

***.compute-1.amazonaws.com: 10000-20000**

***: wildcard representing multiple subdomains**

If using an external DNS server: 53

If using an external NTP server: 123

IXGW-(T)GW Network Flow Chart

This Flow Chart shows the expected communication for an IXGW-(T)GW when calling from a door or entrance station to an off site mobile app. The Amazon Web Services servers used to make this connection can vary based on physical location, time of day, and server load.

