



INTEGRITI INTEGRATION – AIPHONE INTERCOM MANUAL V1.7

INNERANGE.COM

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OVERVIEW

Aiphone Intercom Integration is a 3rd Party Intercom Integration with Integriti. Allowing for key functionality from Aiphone Intercom Systems, users can monitor and control IX/IXG devices directly from the Integriti Software. This integration provides the ability to pull intercom events, have direct control of calls and display the status of all configured Aiphone intercoms. For additional information on supported features, refer to [Intercom Capabilities](#).

PREREQUISITES

- Integriti Edition: Business or Corporate
- Integriti Version: V24 or higher
- Integriti Aiphone Intercom Plugin V1.7
- Integriti Intercom Integration License is required (996932 : Intercom Integration)

TESTED AGAINST

Aiphone Hardware / Software

The Integriti Aiphone Intercom plugin was built and tested against the following versions of software:

- Aiphone IX-MV7 – Firmware v8.00
- Aiphone IXG-DM7 – Firmware v4.00
- Aiphone IX-DV – Firmware v5.60
- Aiphone IX-SS-2G – Firmware v5.60
- Aiphone IX-DA – Firmware v2.13
- Aiphone IXG Support Tool – Firmware v6.0.0.0

Installation and Configuration

Installation

Install the Aiphone Intercom v1.7 Plugin on the Integriti Server running V24 or higher.

Configuring Aiphone environment

Term: a *Peer* – an intercom device which the plugin is configured to connect to.

IX / IXG considerations

The plugin can be used with 'pure' IX systems, 'pure' IXG systems, and with systems containing a mix of IX and IXG devices.

- For a mixed set up, we expect that customers will use an IX Master Station terminal (IX-MV7 or similar) as a peer device.
- Depending on specific needs, customers may configure their system so that IXG Mobile Application appears as an Intercom device in address book. Those APP devices will be always shown as offline on Integriti IntercomDevices UI.
- IXG-2C7 devices do not support CGI, preventing the integration from retrieving their status. If a Peer is an IX device, 2C7 devices will be always shown as Offline; if a peer is an IXG device, 2C7 devices will be always shown as Online/Idle.
- Due to complicated nature of mixing IX and IXG devices in one ecosystem, a customer may experience problems initiating calls from Integriti. The easiest way to avoid this problem is to set every device's StationNumber and UnitNumber to the same value.
 - Note: this may not be always possible if multiple 2C7 devices must share same UnitNo. Discuss with your Aiphone representative.

Device discovery

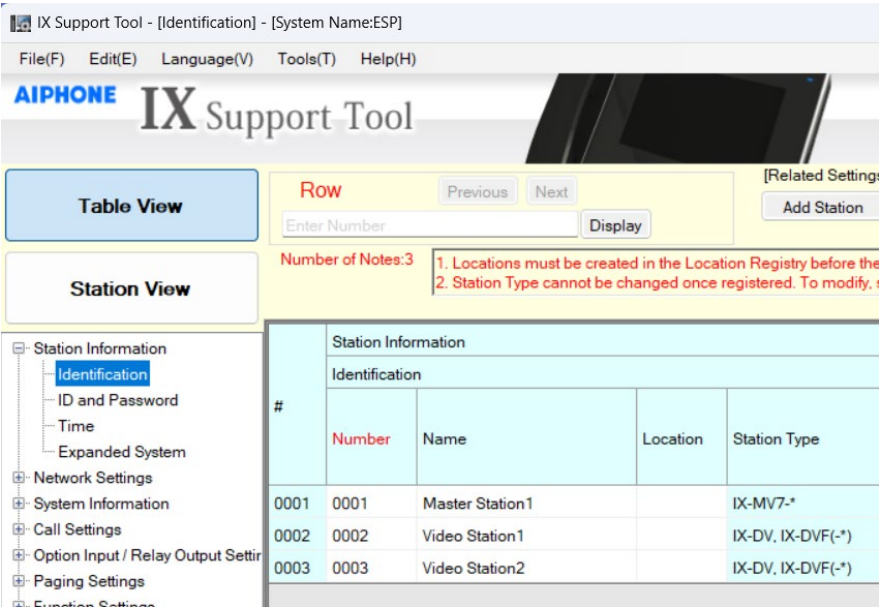
It is important to understand the internal logic of the plugin's device discovery (Refresh) operation, as it sets certain expectations for system configuration.

During Refresh, the plugin sends CGI GetConfig command to the Peer. The received configuration data contains peer's Type, Name, and StationNumber. The Peer is added to the list of discovered devices. Then, the plugin parses the peer's AddressBook entries and adds every listed device to the list.

For every discovered IX device, the logic attempts to figure out its UnitNumber, which is needed for initiating a call to an IX device. The UnitNumber information is available when a peer is an IXG device, but not available when a peer is an IX device (a technical limitation by Aiphone) - in this case the plugin sets a device's UnitNumber same as its StationNumber.

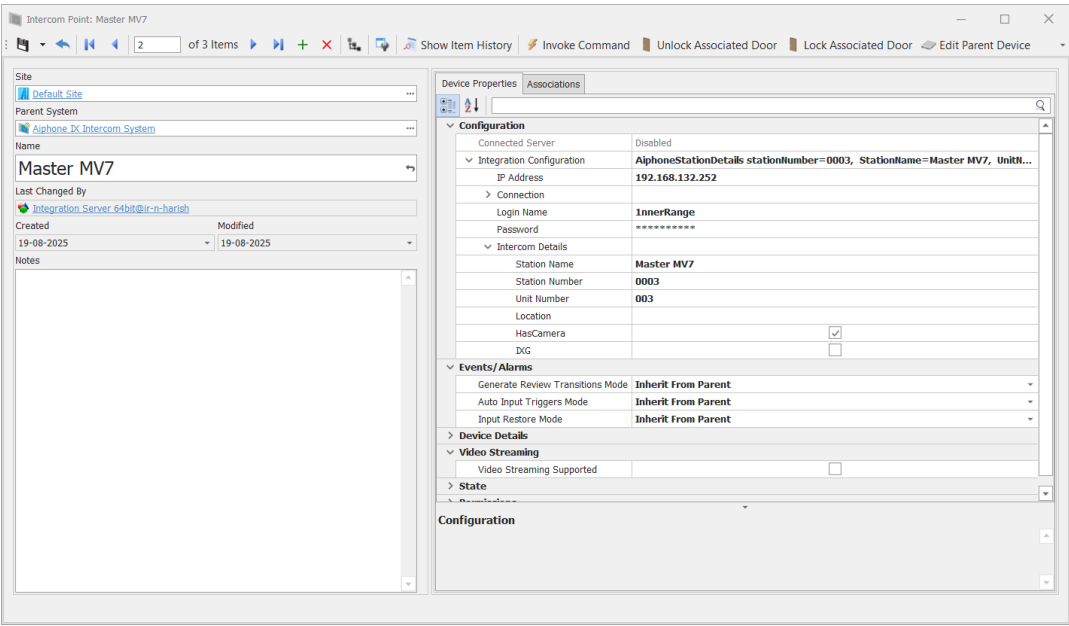
To make the integration work with minimum configuration efforts, we recommend setting IX device's StationNumber and UnitNumber to the same value.

Installation and Configuration

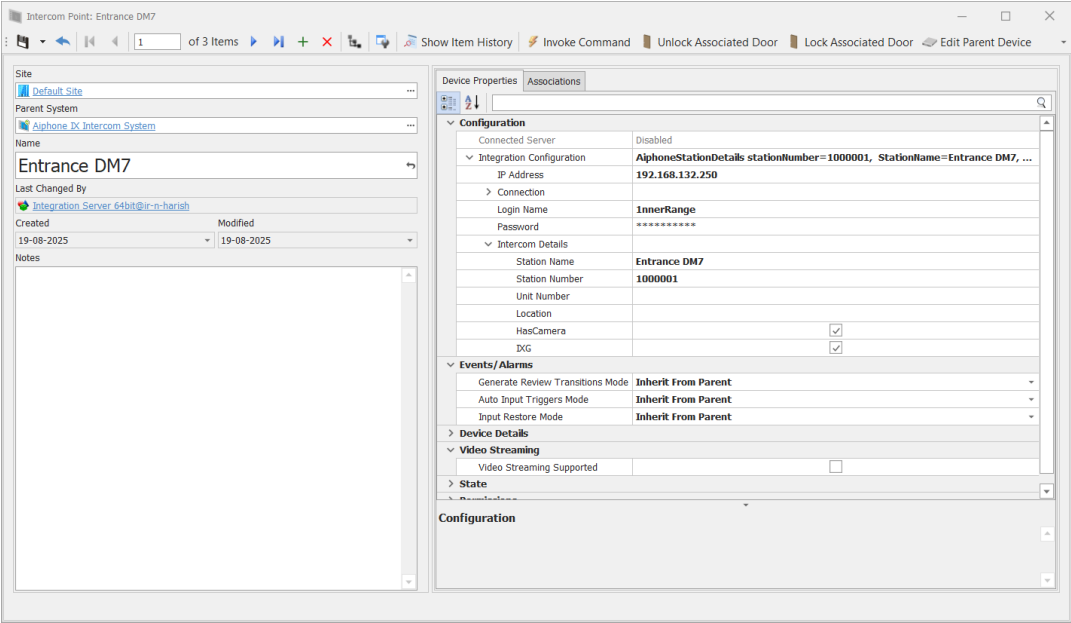


Important: a customer must use Aiphone IX Support Tool to configure IX devices; the IXG Support Tool will not let you have identical StationNumbers and UnitNumbers, it will complain about duplicates. In mixed environments, where there are IX and IXG devices, the IXs must be configured first. Then, the configuration should be exported from IX Support Tool and imported into IXG Support Tool to continue configuring IXG terminals.

After successful discovery, a child device's configuration details can be viewed. The below screenshot presents configuration details of a discovered IX-MV7 and IXG-DM7 devices:



Installation and Configuration



Configuring intercom devices

Download and install the Aiphone IX/IXG Support Tool software. Contact your Aiphone representative for more information on installation and use of this software.

Ensure all intercoms to configure are shown in the Support Tool. If some intercoms are not shown, it may be necessary to load the Support Tool configuration from when the intercoms were initially configured.

In order to use the Integrati Aiphone Integration:

- enable the CGI interface on the Peer device and on each intercom station that will need to have commands invoked on them (Create Call, End Call, Restart Intercom, etc.).

From the top left of the screen select **Table View**.

Select **Function Settings** → **CGI** from the tree on the left.

#	Station Information				Function Settings
	Identification				CGI Integration
	Number	Name	Location	Type	CGI Functionality
001	001	Master Station1	Reception	Master Station	Enable
002	002	Video Station1	Entrance	Video Door Station	Enable
					Disable

- configure the peer station to send events via SIF to the Integrati Integration Server. In addition, configure SIF parameters for every terminal which can trigger events of interest for the integration.
- In the Aiphone IX Support Tool software, select **Function Settings** → **SIF** from the tree on the left.

IXG Support Tool - [SIF] - [System Name:AIPHONE-BLR]

File(F) Connection(S) App Integration(C) Tools(T) View(V) Language(L) Help(H)

Update

Row: Previous Next

[Display settings] No.01 [Move to Related Settings] Event View Selection SIF Functionality

Information

Left Menu:

- Contactless Call
- Guard Button
- Option Input / Relay Output Settings
- Paging Settings
 - Paging Origination
 - All Page
 - Building Page
 - Option Input Page
- Function Settings
 - Door Release
 - Door Release QR Code Settings
 - Automatic Entry
 - Network Camera Integration
 - Paging
 - Bathroom Call
 - Email
 - CGI
 - SIF**
 - Recording

Building Number	Unit Number	Station Name	Function Settings	SIF	SIF Functionality	SIP URI Format	No.01	SIF Settings	Program Type	IPv4	IPv6	Destination P	SSL
01	001	Entrance DM7	Enable	Disable	0100	192.168.132.94		10000	Disable				
01	003	Master MV7	Enable	Disable	0100	192.168.132.94		10000	Disable				

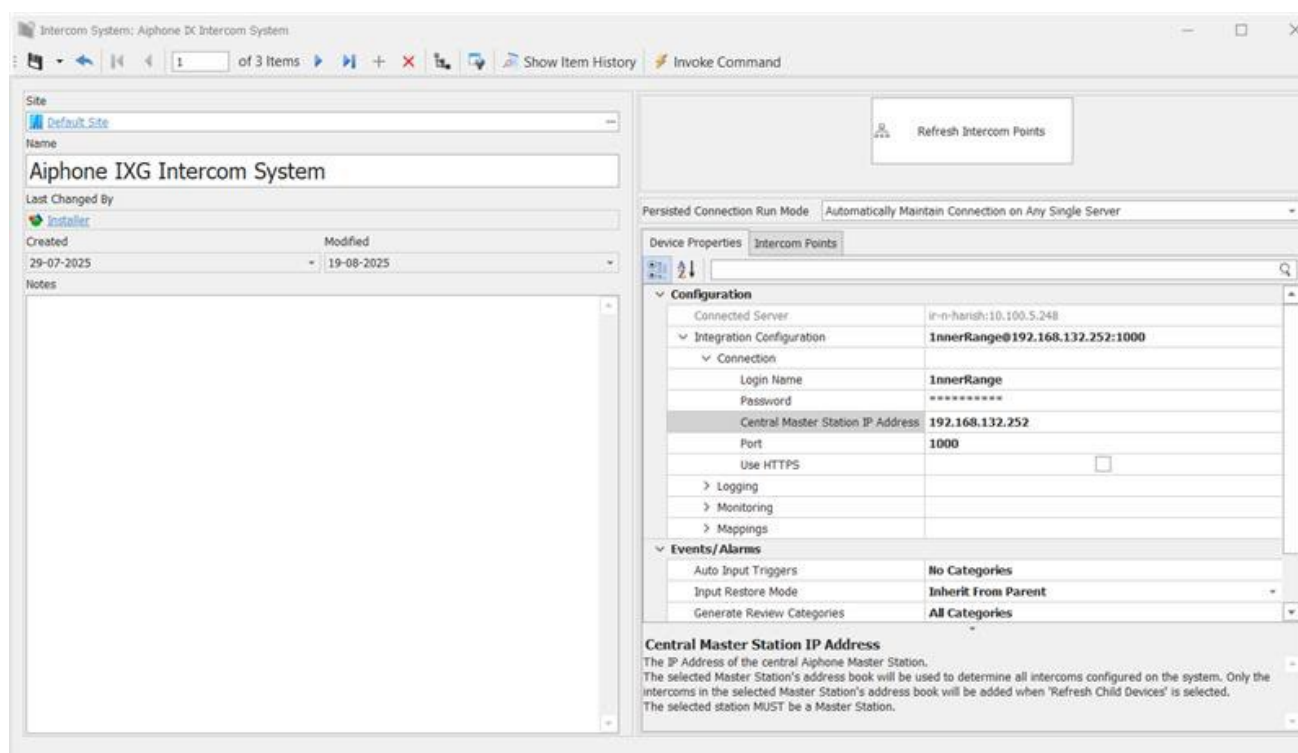
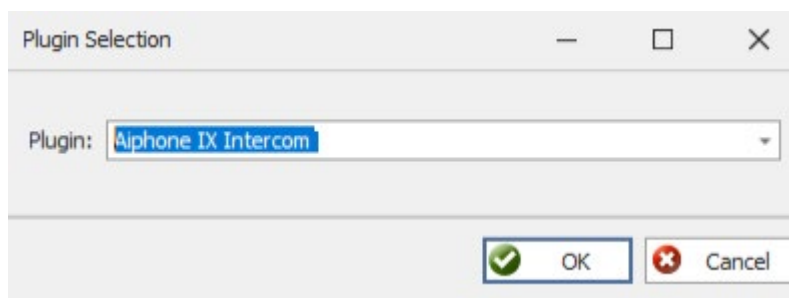
- **SIF Functionality:** Enable
- **No. 01 Program Type:** 0100
- **No. 01 IPv4:** IP address of the Integration Server
- **No. 01 Destination Port:** 10000 (may be changed; see Configuration)
- **No. 01 SSL:** Disable
- **No. 01 Connection:** Socket
- **No. 01 Transmission Trigger:** Select events that should be sent here.

When finished configuring, do not forget to save and upload configuration to the affected devices. Contact your Aiphone support channel if you need help using the Support Tool.

Plugin Configuration

Please refer to the 'Integrati Integrations – Intercom' manual for a detailed description on how to fully configure and use Intercom integrations in Integrati/Infiniti. <C:\Program Files\Inner Range\Integrati Pro\doc\Integrations>.

[Integrations>New Integrated Device>]



Central Master Station IP Address – The IP Address of the Master Station (the Peer) to connect to.

Login Name – The Username of the Aiphone IX User to connect to the Server with. This User should have sufficient permissions configured in Aiphone IX to allow all the features of the plugin to be used

Password – The Password of the Aiphone IX User to connect to the Server with.

Port – The Port to listen for events from the Aiphone intercoms on. This is 10000 by default.

Use HTTPS – Whether to use HTTPS when connecting to the stations.

Certificate Validation Mode – When using HTTPS, how to validate the remote certificate:

- **Default** – Accept only a valid certificate. In place of the IP address, a hostname matching the certificate must be specified.
- **Accept All** – Accept any valid or invalid certificate.
- **Specified Thumbprint** – Accept a valid certificate or a certificate with the specified SHA-1 thumbprint.

Certificate Thumbprint – When the Certificate Validation Mode is 'Specified Thumbprint', the SHA-1 thumbprint of the certificate. Example: 5CD2BFCF0B5DD06ABEB9F66400FAD96A11802E65

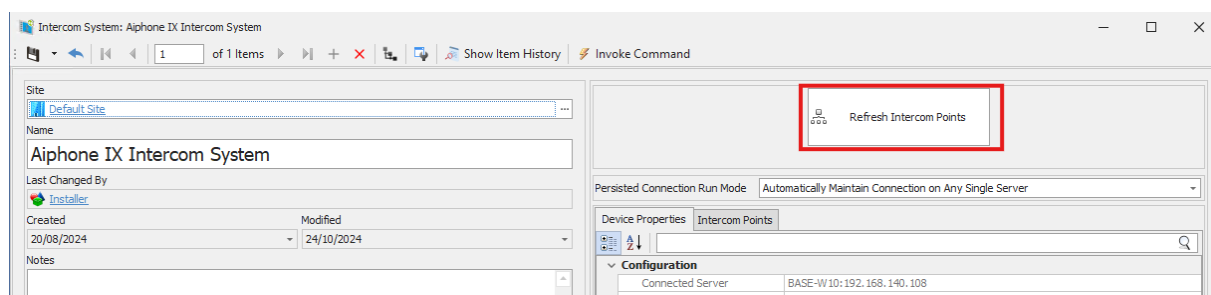
Log Verbosity – Only logs of the specified level or higher will be logged. If Warning is selected, only Warning, Error and Fatal logs will be written to the log

Station Connection Configuration – The following properties for individual intercom devices:

- **IP Address** – The IP Address of the station. Will be filled by Refresh Child Devices.
- **Connection** – See Connection Configuration above.
- **Login Name** – The Username of the Aiphone IX User to connect to the station with.
- **Password** – The Password of the Aiphone IX User to connect to the station with.

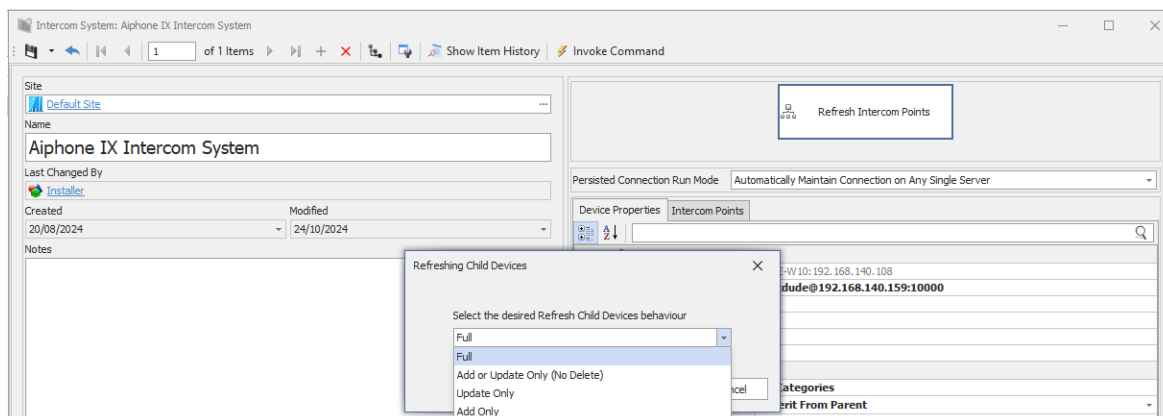
Once Configured **SAVE**.

Then click **Refresh Intercom Points**.



Refreshing Intercoms List

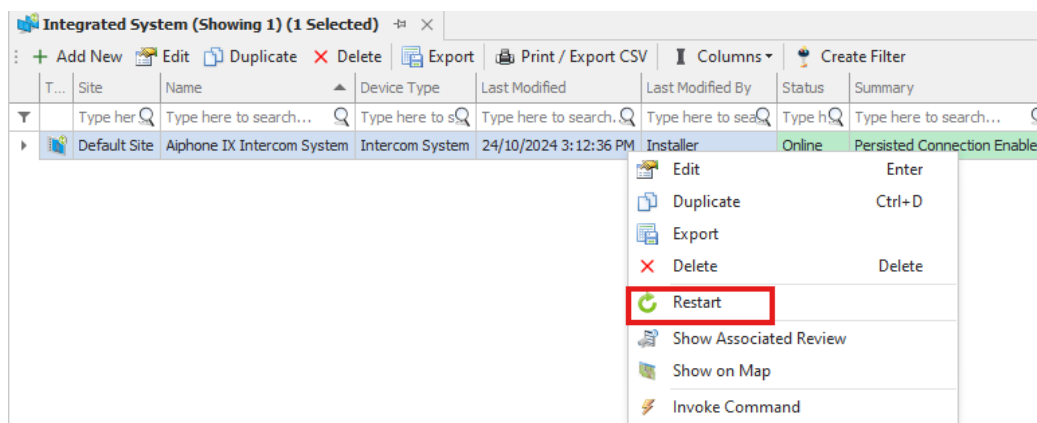
An operator can update the Intercoms list available within Integriti using the “Refresh Intercom Points”



- **Full** – Full Refresh – Warning this will repopulate the Integriti intercom list within Integriti. Any programmed intercoms i.e. Schematics will need repopulating.
- **Add Or Update Only (No Delete)** Additional intercoms added on the system will be populated within Integriti, however, any removed intercoms on the system will still remain within Integriti. This method is used for newly added intercoms on the system wanting to be added to Integriti but not remove any temporary disconnected intercoms on the system. Names will also be updated.
- **Update Only** – Adds and Removes intercoms based on what’s currently connected to the system. Names will also be updated.
- **Add Only** – Only adds new intercoms to Integriti

Connection Restart

An operator can force a restart of the connection which will reinitiate connection between the two systems. This can be used after the initial setup or where there have been changes to the configuration. See Screen shot below:



COMMANDS

Intercom Commands

The following commands can be performed on an Intercom Master Station:

Call Intercom - Creates a call from the selected Intercom Point to the Station Number given in 'Destination Station Number' of the priority given in 'Call Priority'. To call the Intercom's default Master Station (the same behaviour as pressing the call button on the selected Intercom) leave 'Destination Intercom Id' blank.

Call Workstation - Invokes a call from the selected Intercom Point to the Station Number mapped to the given 'Workstation Host Name' (If a mapping is correctly configured). For this command to work the 'Workstation To Station Number Map' property of the Intercom System must be correctly configured.

Answer Call - Answers the currently connected call on the selected intercom.

Enable/Disable Door Release Ability - Allows the ability of the selected Intercom Master Station to remotely unlock doors on connected Intercom Door Stations to be enabled or disabled. If Enabled is set to false, the selected Intercom Master Station will be unable to use the door unlock button to remotely unlock the door of a connected Intercom Door Station. To re-enable this ability, set Enabled to true.

Set Contact Input/Output State - Changes the state of the contact input/output on the selected Intercom Point identified by 'Contact Number' to the state set in 'Contact Status'. For example, setting 'Kind' to 'Output', 'Contact Number' to 1 and 'Contact Status' to 'Make' will set the state of output one on the selected Intercom Station to 'Make'.

Restart Intercom - Restarts the selected intercom.

Change Sound - Sets the sound used for 'Sound Type' to the specified 'Sound Source Number' for the selected Intercom Point. 'Sound Source Number' must be between 1 and 100 and indicates the source number of the sound to use. A sound must be configured at the specified source number for this command to work. For a 'Sound Type' of 'Ring' or 'Contact Ring' the 'Station Number' must be set to identify which calls the ringtone will be changed for.

Advanced Command - Sends a custom Aiphone CGI command to the selected Intercom Point. See the Aiphone CGI interface documentation for more details on sending CGI commands.

The following commands can be performed on an Intercom Point:

Call Intercom - Creates a call from the selected Intercom Point to the Station Number given in 'Destination Station Number' of the priority given in 'Call Priority'. To call the Intercom's default Master Station (the same behaviour as pressing the call button on the selected Intercom) leave 'Destination Intercom Id' blank.

Call Workstation - Invokes a call from the selected Intercom Point to the Station Number mapped to the given 'Workstation Host Name' (If a mapping is correctly configured). For this command to work the 'Workstation To Station Number Map' property of the Intercom System must be correctly configured.

Answer Call - Answers the currently connected call on the selected intercom.

Set Contact Input/Output State - Changes the state of the contact input/output on the selected Intercom Point identified by 'Contact Number' to the state set in 'Contact Status'. For example, setting 'Kind' to 'Output', 'Contact Number' to 1 and 'Contact Status' to 'Make' will set the state of output one on the selected Intercom Station to 'Make'.

Restart Intercom - Restarts the selected intercom.

Change Sound - Sets the sound used for 'Sound Type' to the specified 'Sound Source Number' for the selected Intercom Point. 'Sound Source Number' must be between 1 and 100 and indicates the source number of the sound to use. A sound must be configured at the specified source number for this command to work. For a 'Sound Type' of 'Ring' or 'Contact Ring' the 'Station Number' must be set to identify which calls the ringtone will be changed for.

Advanced Command - Sends a custom Aiphone CGI command to the selected Intercom Point. See the Aiphone CGI interface documentation for more details on sending CGI commands.

TECHNICAL INFORMATION for production

Events monitoring and automation

The plugin listens to and processes all events sent to it by devices. To generate events, a device must be explicitly configured, with SIF enabled and relevant event types selected.

Every received event is logged in Integriti Review and can be used for automation. This is common to all Integriti Intercom integrations.

The Door Unlocking feature

The door unlocking feature with the Entrance Station is outlined in page 9 of the Integriti Intercom Integrations. For Aiphone integration, the review categories should be set to **Intercom Zone Trigger** instead of Intercom Door Unlock Request since the IXG-DM7 does not support sending door release events.

Intercom device online/offline status monitoring

The plugin queries status of every child device every 60 seconds. The frequency is hardcoded.

Initiating a call to an Intercom device by its StationNumber

The CallIntercom command prompts an operator to enter the destination device's address (0030, for example).

The plugin attempts to find a device with matching StationNumber.

If a match is an IXG device, the call's destination is set to the entered ID. If a match is an IX device, the call's destination is set to the device's UnitNumber (which, in practice, should be set to the same as the StationNumber).

If no match, the call's destination is set to the entered ID, with no extra care taken.

TROUBLESHOOTING

Connection Failure

- Check correct IP Address - Refer to [Configuration](#)
 - Test via CMD and Ping test
- Check Username and Password of all intercoms - Refer to [Configuration](#)
- Restart Connection, refer to [Connection Restart](#)

General

For diagnostics and troubleshooting purposes, Integriti logs can be a useful source of information. As well, the plugin generates special *for-internal-consumption* logs which can be viewed and captured with Microsoft DebugViewer (www.sysinternals.com). Inner Range support may request this data when analysing run-time issues.

INTERCOM CAPABILITIES

Core Intercom Capabilities

Feature	Feature Description	Version	Y/N
Receive Events/Alarms from the Intercom System	Log events/alarms occurring on the Intercom system to Integriti's Review	20	✓
Trigger Integriti Actions on Intercom Events/Alarms	Trigger actions to automatically occur in Integriti whenever specific events/alarms are received from the Intercom system.	20	✓
Generate Alerts from Intercom Events/Alarms	Automatically generate and restore Alerts tied to a specific Intercom in Integriti whenever specific events/alarms are received from the Intercom system.	20	✓
Automatically Show Footage from Associated Cameras	Associated CCTV Footage can be directly viewed from Intercoms, or Intercom events/alarms (with an associated Intercom) where the Intercom has an associated Camera.	20	✓
Display Connection Status to Intercom System	Display whether Integriti is currently connected to the Intercom system or not.	20	✓
Show Intercom Status – Online/Offline/Alarm/Call State	The current online, offline, alarm and call status of configured Intercoms will be visible directly through Integriti.	20	✓
Log Calls Occurring in the Intercom System	Calls occurring in the Intercom system will be logged to Integriti's Review.	20	✓
Categorised Review Records	Review generated by the integration will have a different category for different event types, allowing for easy filtering of specific CCTV events	20	✓
Trigger Inputs on Intercom Event	Inputs in Integriti can be automatically triggered and restored when specified types of events are received from the CCTV system.	20	✓
Trigger Actions in the Intercom System	Trigger actions or commands in the Intercom system directly from Integriti.	20	✓
Unlock Associated Door	Unlock associated Integriti Door/s directly from an associated Intercom Point	20	✓

INTERCOM CAPABILITIES

Feature	Feature Description	Version	Y/N
Associate Intercoms With Entities	Intercoms loaded from the CCTV system can be associated with Integriti Entities to allow direct control of one from the other.	20	✓
Create Child Devices From Intercom Configuration	Child Intercom Points will be created based on the Intercom configuration on Refreshing Child Devices.	20	✓
View and Control Intercoms on Schematics	Intercoms can be added to Schematics Maps in Integriti and directly viewed and controlled directly from the Schematic. Each intercom's state is immediately visible on the Schematic where available	20	✓
Sync Time (via NTP)	Sync the time of the Intercom system and Integriti to match via an NTP.	20	✓
Automatically Control Integriti Entities on Intercom Events	Automatically control Integriti Entities on Intercom Events. For example automatically unlocking an associated Door on a Door Unlock event being received from an Intercom	20	✓

Advanced Intercom Capabilities

Feature	Feature Description	Version	Y/N
Automatically Load Intercom Configuration	Refreshing Child Devices will automatically populate all cameras configured in the Intercom System into Integriti when run. If not supported, intercom configuration will need to be manually entered into Integriti.	20	✓
Create Intercom Calls	Create calls between Intercoms in the Intercom system either manually or automatically (from an event) using Integriti.	20	✓
Terminate Intercom Calls	Terminate pending or active calls in the Intercom system either manually or automatically (from an event) using Integriti.	20	✓
Answer Intercom Calls	Answer pending calls in the Intercom system either manually or automatically (from an event) using Integriti	20	✓
Forward Intercom Calls	Forward active calls in the Intercom system from one Intercom to another either manually or automatically (from an event) using Integriti.	20	✓

INTERCOM CAPABILITIES

Feature	Feature Description	Version	Y/N
Place Intercom Calls On Hold	Place active calls in the Intercom system on hold either manually or automatically (from and event) using Integriti.	20	✗
Specify Call Urgency When Creating Calls	When creating calls between Intercoms in the Intercom system, the urgency of the call can be specified from Integriti.	20	✗
Make/Terminate PA Calls	Create Announcements in the Intercom System to specified Intercoms from Integriti.	20	✗
Adjust Intercom Call Volume	Change the call and/or audio volume of Intercoms from Integriti	20	✗
Restart Intercoms Remotely	Restart Intercoms either manually or automatically (from an event) using Integriti.	20	✗
Activate Intercom Relay	Control the On/Off state of a Relay on an Intercom.	20	✗
Control Intercom Audio Streaming Functionality	Start streaming music or audio on selected Intercoms in the Intercom System in Integriti.	20	✗
Initiate Covert Monitoring of Intercoms	Initiate covert monitoring of a specified Intercom in the Intercom system from Integriti. Intercoms can be monitored either via a specified Intercom or directly through the intercom's video viewer (Where supported).	20	✗
Simulate Button Press on Intercom	Simulate the behaviour of pressing a button on a specified Intercom in the Intercom system from Integriti.	20	✓
Soft Button Push To Talk	Simulate a Push-To-Talk button on a selected integration from Integriti - Either as a command or through the call queue interface.	20	✗
Stream Live Footage From Intercom	Stream live video footage directly from an Intercom into Integriti's video viewer.	20	✓
Select Custom Aspect Ratio	Select a Custom Aspect Ratio for video footage streamed from an Intercom.	20	✓
Digital PTZ	Digitally zoom the Intercom Video stream's image.	20	✓

INTERCOM CAPABILITIES

Feature	Feature Description	Version	Y/N
Stream Audio From Intercom	Receive audio from the microphone on a supported Intercom through an Integriti client workstation	20	✓
Send Audio to Intercom	Send audio from an Integriti client workstation out of the speakers on a supported Intercom.	20	✗
64-Bit Server Support	The integration supports being run on the 64-bit integration server	20	✓
Intercom Call Queue Support	The current call queue for Intercoms on the Intercom System can be viewed through Integriti's call queue interface.	20	✗



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