8039 SIP Video Intercom
FW Version 2.0.1

Installation & Configuration

Order Codes

8039 SIP Video Intercom
Table of Contents

IMPORTANT SAFETY INFORMATION ................................................................. 3
OVERVIEW ........................................................................................................... 6

INTRODUCTION ................................................................................................. 6
WHAT’S NEW (COMARED TO THE PREVIOUS Firmware V1.5) ............................ 6

SETUP AND INSTALLATION ............................................................................... 7
GETTING STARTED - QUICK INSTALL & TEST .................................................. 7
INSTALLATION .................................................................................................... 8
PROGRAMMING AND CONFIGURATION .......................................................... 8
WIRING CONNECTIONS .................................................................................... 9

WEB INTERFACE STATUS AND LOGIN ........................................................... 11
WEB Interface Login .......................................................................................... 11
STATUS .............................................................................................................. 12
STATUS TAB - VIDEO ....................................................................................... 12

WEB INTERFACE BASIC SETTINGS .................................................................. 13
Basic Settings Tab - SIP ...................................................................................... 13
Basic Settings Tab - Features ........................................................................... 14
Basic Settings Tab - Video ................................................................................ 16
Basic Settings Tab - Keypad ............................................................................. 19
Basic Settings Tab - Door Control ................................................................. 21
Basic Settings Tab - Multicast ......................................................................... 23

WEB INTERFACE ADVANCED SETTINGS ......................................................... 26
Advanced Settings Tab - Network ................................................................. 26
Advanced Settings Tab - Admin ..................................................................... 28
Advanced Settings Tab - Time ......................................................................... 30
Advanced Settings Tab - Provisioning ............................................................ 31
Advanced Settings Tab - Tones ........................................................................ 33
Advanced Settings Tab - Advanced Audio ..................................................... 34
Advanced Settings Tab - Advanced SIP ......................................................... 35
Advanced Settings Tab - Advanced Multicast ................................................ 37

WEB INTERFACE SYSTEM ............................................................................. 39
System Tab - Maintenance .............................................................................. 39
Upgrade 8039 SIP Video Intercom Firmware ................................................ 40
System - System Log ........................................................................................ 40

SPECIFICATIONS ............................................................................................. 41
8061 IP RELAY CONTROLLER ......................................................................... 42
TYPICAL 8039/8061 SETUP .............................................................................. 43

CONFIGURING THE 8061 ................................................................................. 44

FCC COMPLIANCE STATEMENT ..................................................................... 45
Important Safety Information

This product is powered by a certified limited power source (LPS), Power over Ethernet (PoE); through CAT5 or CAT6 connection wiring to an IEEE 802.3af compliant network PoE switch. The product is intended for installation indoors or on outdoor perimeter of a building. If used in an outdoor environment, additional protective measures must be taken according to the installation manual. All wiring connections to the product must be in the same building. If the product is installed beyond the building perimeter or used in an inter-building application, the wiring connections must be protected against over voltage / transient. Algo recommends that this product be installed by a qualified electrician.

If you are unable to understand the English language safety information then please contact Algo by email for assistance before attempting an installation support@algosolutions.com.

Consignes de Sécurité Importantes

Ce produit est alimenté par une source d'alimentation limitée certifiée (alimentation par Ethernet); des câbles de catégorie 5 et 6 joignent un commutateur réseau à alimentation par Ethernet homologué IEEE 802.3af. Le produit est conçu pour être installé à l'intérieur ou dans une zone adjacente à un édifice; selon le manuel d'installation, des mesures de sécurité additionnelles s'avèrent alors nécessaires. Tout le câblage rattaché au produit doit se trouver dans le même édifice. Si le produit est installé au-delà du périmètre de l'édifice ou utilisé pour plusieurs édifices, le câblage doit être protégé des surtensions transitoires. Algo recommande qu'un électricien qualifié se charge de l'installation de ce produit.

Si vous ne pouvez comprendre les consignes de sécurité en anglais, veuillez communiquer avec Algo par courriel avant d'entreprendre l'installation au support@algosolutions.com.

Información de Seguridad Importante

Este producto funciona con una fuente de alimentación limitada (Limited Power Source, LPS) certificada, Alimentación a través de Ethernet (Power over Ethernet, PoE); mediante un cable de conexión CAT5 o CAT6 a un conmutador de red con PoE en cumplimiento con IEEE 802.3af. El producto se debe instalar en lugares cerrados o en el perímetro de un edificio al aire libre. Si se utiliza en un ambiente al aire libre, se deben tomar medidas de protección adicionales de acuerdo con el
manual de instalación. Todas las conexiones cableadas al producto deben estar en el mismo edificio. Si el producto se instala fuera del perímetro del edificio o se utiliza en una aplicación en varios edificios, las conexiones cableadas se deben proteger contra sobretensión o corriente transitoria. Algo recomienda que la instalación de este producto la realice un electricista calificado.

Si usted no puede comprender la información de seguridad en inglés, comuníquese con Algo por correo electrónico para obtener asistencia antes de intentar instalarlo: support@algosolutions.com.

⚠️ Wichtige Sicherheitsinformationen


Sollten Sie die englischen Sicherheitsinformationen nicht verstehen, kontaktieren Sie bitte Algo per Email bevor Sie mit der Installation beginnen, um Unterstützung zu erhalten. Algo kann unter der folgenden E-Mail-Adresse erreicht werden: support@algosolutions.com.

⚠️ 安全须知

本产品由认证的受限电源（LPS），以太网供电（PoE），通过 CAT5 或 CAT6 线路联接至 IEEE 802.3af 兼容的 PoE 网络交换机供电。本产品适用于室内或建筑物周边安装。如用于室外环境，必须按照安装手册采用附加的保护措施。所有联接本产品的线路必须源自同一建筑物。本产品如需用于超出建筑物周边范围或跨建筑物的安装，线路联接部分必须有过压和瞬态保护。Algo 建议本产品由专业电工安装。

如果您对理解英文版安全须知有问题，安装前请通过电子邮件和 Algo 联系，support@algosolutions.com。
EMERGENCY COMMUNICATION

If used in an emergency communication application, the 8039 SIP Video Intercom should be routinely tested. SNMP supervision is recommended for assurance of proper operation. Contact Algo for other methods of operational assurance including the use of the integrated microphone for automated “sound to air” acoustic testing.

WET OR OUTDOOR ENVIRONMENTS

The 8039 SIP Video Intercom is intended for indoor or outdoor locations and may be subjected to spray or weather, provided the rear wiring cavity is properly sealed to prevent water ingress.

Gaskets included with the 8039 SIP Video Intercom may be effective against water ingress on some, but not all surfaces in which case additional protective measures must be taken such as a perimeter sealant.

CAT5 or CAT6 connection wiring to an IEEE 802.3af compliant network PoE switch must not leave the building perimeter without adequate lightning protection.

When the Intercom is connected to wiring that exits the building, there is potential risk of lightning induced electrical surges or high voltages from fault conditions. To reduce risk, outdoor wiring should be protected by Earth grounded conduit whenever possible. Relay input and output connections must not leave the building perimeter without adequate lightning protection.
Overview

Introduction

The 8039 SIP Video Intercom is ideal for secure business entrances, emergency intercom, and gated entrances. The Algo 8039 provides hands-free intercom capability with video, entrance security with door unlock control, rugged weatherproof design, and superior audio performance.

Fully compatible with SIP industry standards, the 8039 SIP Video Intercom will work with most hosted or enterprise SIP-base servers supporting third-party SIP endpoints.

The 8039 SIP Video Intercom is configured using central provisioning features or by accessing a web interface using browsers such as Google Chrome, Firefox, or Internet Explorer.

What is Included

- 8039 SIP Video Intercom
- Mounting Plate

What is not Included

- Optional 8061 IP Relay Controller
Setup and Installation

Getting Started - Quick Install & Test

⚠️ This guide provides important safety information which should be read thoroughly before permanently installing the product.

1. Connect the 8039 SIP Video Intercom to an IEEE 802.3af compliant PoE network switch. The backlight keypad will turn on. After about 30 seconds, a beep will signal the completion of the boot process.

2. After the boot is complete, press the call button on the 8039 to hear the IP address. (Once the SIP Server field is populated in the 8039 web interface, the call button will contact the preconfigured extension when pressed.) The IP address may also be discovered by downloading the Algo locator tool to find Algo devices on your network: [www.algosolutions.com/locator](http://www.algosolutions.com/locator)

3. Access the 8039 SIP Video Intercom web page by entering the IP address into a browser (Chrome, IE, Firefox etc) and login using the default password `algo`.

4. Enter the IP address for the SIP server into the SIP Domain field under the BASIC SETTINGS > SIP tab.

5. Enter the SIP Extension, Authentication ID, and Password. Also enter the target Dialing Extension that the Intercom will call.

   Note: The Authentication ID may also be called Username for some SIP servers, and in some cases may be the same as the SIP extension.

6. Press the Call Button on the 8039 Intercom, then answer the phone to communicate over the Intercom. Press the digit 6 on the phone keypad to activate the door control relay for three seconds (if applicable).
Installation

The 8039 SIP Video Intercom is weather protected for outdoor installation. However, if network cabling extends beyond the perimeter of the building, then adequate lightning protection is required to protect the cabling and network switch from lightning surges. No lightning protection is required by UL or CSA if the 8039 is located on the outside wall of a building and the wiring is inside the perimeter of the building.

The 8039 is wall and door frame (mullion) mountable via the supplied mounting plate:

Secure the mounting plate to the wall/mullion door frame via two #8 screws. Attach the 8039 into the mounting plate and secure the device in place with the attached security screw at the bottom of the mounting plate using the provided Allen wrench.

Programming and Configuration

The 8039 SIP Video Intercom is configurable using the web interface or provisioning features.

After boot up, the speaker will beep and the intercom will have obtained an IP address. If there is no DHCP server the 8039 SIP Video Intercom will default to the static IP address 192.168.1.111.

Before the 8039 is configured, the call button on the front can be pressed to play the IP address over the speaker. (Once the SIP Server field is populated on the 8039 web interface, the call button will contact the preconfigured extension when pressed.) The IP address may be discovered by downloading the Algo locator tool to find Algo devices on your network: www.algosolutions.com/locator
Enter the IP address (e.g 192.168.1.111) into a browser such as Google Chrome, Firefox, or Internet Explorer (other than IE9). The web interface should be visible and the default password will be `algo` in lower case letters.

**Wiring Connections**

**Network Connection**
The speaker provides a RJ45 jack for network connection. A cable run from the switch can be terminated to a modular jack with connection by patch cord, or terminated with a RJ45 plug.

PoE (Power over Ethernet) must be 48V 350 mA IEEE 802.3af compliant whether provided by the network switch or injector.

There are two lights on the Ethernet jack:

- **Green light**: On when Ethernet is working, flickers off to indicate activity on the port.
- **Amber light**: Off when successful 100Mbps link is established. Typically on only briefly at power up.

Under normal conditions, the Amber light will turn on immediately after the Ethernet cable is first connected. This indicates that PoE power has been successfully applied. Once the device connects to the network, it will switch to the Green light instead, which will typically flicker indicating traffic on the network.

**Door Control Relay**
Provides both normally open and normally closed relay contacts. *Note: The 8061 IP Relay Controller can be used as an alternative more secure option for door opening control, by using a separate relay from the public-facing intercom.*

**Serial Control**
**Reserved for future use**

**Door Sensor (Dry Contact Input)**
An external call button can be connected as a normally open switch. When the relay is triggered, this will dial the pre-configured "Extension to Dial".
Backlit Keypad and Call Button
The backlit keypad and call button will be steady during power up and will flash during a reset.

If enabled, when making a call, the call button light will flash rapidly, while the call is ringing at the far-end phone. Once the call is answered, the flashing will slow down.

Reset
The 8039 SIP Video Intercom can only be reset during a power up. To return all the settings to the factory default for the 8039, wait until all the backlit keys start flashing. Then press and hold the call button until the call button backlight begins a double flash pattern. Release the call button and allow the unit to complete its boot process. **Do not press the call button until all the keys start flashing.**

A reset will set all configuration options to factory default including the password.
Web Interface Status and Login

Web Interface Login

The web interface requires a password which is ‘algo’ by default. This password can be changed in the Admin tab after logging in the first time.

![Web Interface Login](image)

Web Interface is accessed by entering 8039’s IP Address into the web browse.

Important: It is highly recommended to change the default password if the device is directly connected to a public network.
Status

The device’s Status page will be available before and after log on. The section can be used to check 8039’s SIP Registration status of the SIP extensions, Call Status, Proxy Status, Extension to Dial, Door Controller status, and general MAC, IP, Netmask, and Date/Time information.

The Status page can be hidden when logged out for security purposes under the Advanced Settings > Admin tab.

Status Tab – Video

The video can be seen in the “Status > Video” tab when the user is not logged in. A separate video password can also be enabled, to allow users to access the video, but not the rest of the device settings. This password can be set in “Basic Settings > Video” tab, “Session Password” field. Video settings like brightness, contrast, view (Dewarped or Fisheye) are also available in the “Basic Settings > Video” tab.
Web Interface Basic Settings

Basic Settings Tab – SIP

SIP Server information and Credentials should be obtained from your telephone system administrator or hosted account provider. After saving the settings, see the Status tab to confirm the registration was successful.

Important: Any time changes are made to settings in the web interface the ‘Save’ button must be clicked to save the changes.

SIP Domain (Proxy Server)
The IP address (e.g. 192.168.1.111) or domain name (e.g. myserver.com) of the SIP Server

SIP Extension
Used to register the 8039 on the SIP Server.

Authentication ID
May also be called Username for some SIP servers and in some cases may be the same as the SIP extension.

Authentication Password
SIP password provided by the system administrator for the SIP account.

Extension to Dial
Enter the phone number that will be dialed when the call button is pressed. This can also be a Hunt Group number. Ensure that voice mail is not reached.
Note: The “Basic Settings > Keypad” tab offers additional keypad modes like playing a voice prompt when the call button is pressed and using the keypad to dial extensions or listed departments.

Basic Settings Tab – Features

Speaker Volume
Select speaker audio level of the 8039 from 1 (lowest) to 10 (highest).

Automatic Gain Control (AGC)
Normalizes the audio level. This ensures audio level heard at the speaker is always at a consistent level, independent of the phone that is used to answer the call.

Answer Inbound Call
Allow the 8039 to auto-answer an inbound call. By default, this functionality is activated.
**Answer Tone**
Select a tone to be played over the speaker when the intercom answers an inbound call. Use only Default, or custom uploaded file. The other pre-installed tone files all contain silence at the end in order to generate ring “cadence” of 6 seconds. This silence will block the voice path for several seconds at the start of a call.

**Outbound Ring Limit**
This feature can be used to set a limit on how long the intercom will ring before timing out. If the call is not answered within this time period, the 8039 will go back to an idle state.

**Ringback Tone**
Select an audible ringback tone to be played on the 8039 speaker until the call is answered.

**Allow Call Button to End Active Call**
If enabled, allows the visitor to end an active call by pressing the call button.

**G.722 Support**
Enable or disable the G.722 codec.

**Maximum Call Duration**
Select the maximum call length. The call will be terminated once the maximum time is reached. In the event that a call inadvertently reaches voicemail or gets accidentally left on hold, this setting ensures that the 8039 returns on-hook.

**Door Sensor Connector**
External call button can be used as an input to the door sensor connector. External call button will function like the call button on the device.
Basic Settings Tab – Video

**Exposure Region**
Select an exposure calculation region for optimal image rendering. “Spot” method calculates exposure based on the center area of the image. “Full Frame” method uses the entire image to determine the exposure. “Centre Weighted” uses mainly the center area and a fraction of the remaining frame to compute the exposure.

**Camera View**
Camera view can be set to either a “Dewarped” full page view or a circular “Fisheye”.

**White Balance**
Select the white balance settings. “Auto” will auto-detect the light levels and auto-balance the video accordingly. Other balance choices include: Daylight 6500K and 5500K, Fluorescent, and Incandescent.
Brightness
Increase or decrease image brightness either above or below the default value.

Contrast
Increase or decrease image contrast either above or below the default value.

Sharpness
Increase or decrease image sharpness either above or below the default value.

Saturation
Increase or decrease image saturation either above or below the default value.

Powerline Frequency
Choose the local powerline frequency. For example, 60 Hz in North America and 50 Hz in Europe. This allows the device to reduce video flicker when used with indoor lighting.

Allow PTZ Video via DTMF Control
Use DTMF command to control the web video and H.264 video stream.

Packet Type
Refer to phone specifications to determine best supported packet type (“Single NAL Unit” or “Fragmentation Unit Type A (FU-A)”). Use ‘Auto’ mode except with legacy video phones with limited Video SDP negotiation capability.

CIF Stream Bitrate
Select the amount of network traffic the device can use.

HD Channel Resolution
Select the video resolution as supported by the video phone that will answer the calls, 720p (1280x720) or VGA (640x480).

HD Channel Bitrate
Select the amount of network traffic the device can use.
Request Media Bandwidth
Adds bandwidth modifiers and attributes in the SDP offer/answer.

SIP Video Capacity
This controls the video parameters included in the SIP 'Offer' that is sent when the 8039 initiates a call. Select the video capacity as supported by the video phone that will answer the calls.

SIP Video Stream
This controls the actual video stream sent by the 8039. Use ‘Auto’ mode unless a manual override is required for compatibility with legacy video phones.

Maximum Browser Sessions
Allows for a limit to be set on the number of separate browser sessions that can be open simultaneously to show the video. The setting can be “Disabled” to turn off the web video capability.

Session Passcode
This allows a separate password to be configured that allows access to only the “Status > Video” tab.
Basic Settings Tab – Keypad

Dial Mode – Single Number
This mode allows the 8039’s “Call” button to dial a pre-configured number, the “Extension to Dial”. There is also an option to allow all the number keys on the keypad to dial this same extension.

Dial Mode – List
This mode allows each of the 10 “number” keys to dial a different preconfigured phone number. For example, 1 for Reception, 2 for Sales, 3 for Shipping, etc.

The Call button can be configured to play a voice prompt detailing the available options to the visitor. The voice prompt can be uploaded via a custom audio file in the “Advanced Settings > File Manager” tab.

Dial Mode – Keypad Dial
This mode allows the keypad to be used to dial extensions directly. If an incorrect number is dialed by mistake, the “#” key can be pressed to cancel, and the extension can be dialed again.

Set the “Length of Extension to Dial”, correctly to match the extension length of your phone system.

The Call button can be set to “Dial Extension” (e.g. reception) or to “Play Voice Prompt” giving the visitor instructions and/or summary of main extensions to dial via the keypad.
Warning: Set appropriate permissions on the phone system to ensure that a malicious visitor cannot use the intercom to dial an external number. Also ensure that a visitor will not reach voicemail to prevent the call from getting “stuck.”

**Keypad Backlight**
Enable or disable the Keypad's blue backlight.

**Call Button Backlight**
Enable or disable the Call Button's blue backlight.

**Backlight Brightness**
Configures the brightness of the Keypad and Call Button backlight if they are enabled.

**Basic Settings Tab – Door Control**

The 8039 contains a relay that can be used for Door Control, or it can be used with the optional 8061 IP Relay Controller (sold separately) for additional door security, as the 8061 can be located inside the building and separate from the public-facing intercom. This section allows you to configure the 8061 settings (if used), or the local door relay. For more information about the 8061, see “8061 IP Relay Controller” on page 48.

**Number of Network Door Controllers**
Set up to 4 network door controllers (8061s) to unlock/lock the doors.
**Door Unlock Tone**
Allow a tone to be played when the door is unlocked to create awareness.

**DTMF Detection Type**
Different DTMF detection options are given. Use the default of ‘Auto’ unless advised by Algo technical support.

**Local Door Relay**
Enable or disable the door control relay on the 8039.

<table>
<thead>
<tr>
<th>#1 Network Door Controller Address</th>
<th>Address</th>
<th>Requires Algo 8061, firmware v2.7.3 or above.</th>
<th>Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside Codes</td>
<td>Door Unlock via Telephone DMTT.</td>
<td>Momentary Open Code</td>
<td>1-4 digit code that can be used to unlock the door for a brief period of time. Leave this field blank to disable this feature.</td>
</tr>
<tr>
<td>Duration</td>
<td>3 seconds</td>
<td>Latch Open Code</td>
<td>1-4 digit code that can be used to unlock the door indefinitely. Leave this field blank to disable this feature.</td>
</tr>
<tr>
<td>Latch Closed Code</td>
<td>1-4 digit code that will lock the door again when it is latched open. Leave this field blank to disable this feature.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Codes</td>
<td>Door Unlock from Doorphone Keypad.</td>
<td>Access Code</td>
<td>1-8 digit codes allowed. Up to 25 codes can be entered by separating each code with a space, comma, or semicolon. Leave this field blank to disable this feature.</td>
</tr>
</tbody>
</table>

**Network Door Controller Address**
IP address of the optional 8061 IP Relay Controller. For 8061 configuration, see page 48.

**Network Door Controller Password**
Used to authenticate the link between the 8039 and the 8061. Ensure that the two devices have matching passwords. Default password is *algo*.

*Note: The Relay Module Password is used solely to secure the link between the 8039 and the 8061. It is not the same as the Momentary Open Code.*

**Momentary Open Code**
1-4 digit DTMF code that can be used to unlock the door for a brief period of time. Leave this field blank to disable this feature.

(Default: 6)
Duration
The time period for which to unlock the door when the Momentary Open Code is entered. From ¼ to 30 seconds.

Latch Open Code
1-4 digit DTMF code that can be used to unlock the door indefinitely. Leave this field blank to disable this feature.

Latch Closed Code
1-4 digit DTMF code that will lock the door again when it is latched open. Leave this field blank to disable this feature.

Outside codes
This is a “secret” code that allows authorized visitors or employees to let themselves in without needing to call someone inside the building.

Access Code
1-8 digit codes allowed. Up to 25 codes can be entered by separating each code with a space, comma, or semicolon. Leave this field blank to disable this feature.

Basic Settings Tab – Multicast

Multicast IP Addresses
Each 8039 SIP Video Intercom has its own IP address, and shares a common multicast IP and port number (multicast zone) for multicast packets. The 8039 is able to act as a multicast Slave, allowing it to multicast messages from a Master device over the intercom speaker.

Note: The 8039 is not meant for voice paging in large areas. Instead we recommend using the 8186 SIP Horn Speaker for outdoor or wide-area applications, and the 8180 SIP Audio Alerter or 8188 SIP Ceiling Speaker for any other indoor paging requirements.

The network switches and router see the packet and deliver it to all the members of the group. The multicast IP and port number must be the same on all the master and slave units of one group. The user may define multiple zones by picking different multicast IP addresses and/or port numbers.

7. Multicast IP addresses range: 224.0.0.0/4 (from 224.0.0.0 to 239.255.255.255)
8. Port numbers range: 1 to 65535
9. By default, the 8039 Video Intercom is set to use the multicast IP address 224.0.2.60 and the port numbers 50000-50008

Make sure that the multicast IP address and port number do not conflict with other services and devices on the same network.
Multicast Page Zones

The 8039 Video Intercom supports nine “basic” multicast zones. These zones are defined by the multicast IP addresses.

Somewhat arbitrarily, these zones are defined below but may be used in other ways. The important consideration is that there is a priority hierarchy – streaming activity on a zone higher on the list, will be treated as a higher priority than a zone lower on the list – with music being the lowest priority.

- Priority
- All Call
- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6
- Music

“Expanded” zones can also be enabled, in the Basic Settings > Multicast tab, allowing up to 50 zones in total. These have the same behaviors as the basic zones, but are hidden by default to simplify the interface.
**Multicast Mode (Slave Selected)**
If Slave mode is enabled the 8039 intercom speaker will activate when receiving a multicast message.

**Multicast Type - Regular**
Select “Regular” if receiving multicast from other Algo SIP endpoint(s) and/or multicast-enabled phone(s) that use RTP audio packets.

**Number of Zones**
Select “basic” zones if configuring nine or fewer multicast zones or “expanded” to configure up to 50 zones. The expanded zones have the same behaviour as the basic slave zones, but are hidden by default to simplify the interface.

**Slave Zones**
Select one or more multicast zones for the 8039 SIP Video Intercom to monitor. Note that multicast zone priority is based on the zone definition list order (top to bottom).

**Multicast Type – Polycom Group Paging/Push-to-Talk**
The 8039 SIP Video Intercom may receive multicast paging compatible with Polycom “on premise group paging” protocol.

To configure the 8039 as a slave to play Polycom page announcements, select “Group Page” or “Push-to-Talk”. Then enter the Polycom Zone (IP Address and Port) that matches the configuration of the Polycom phones and Channels. The “Default Channel” is the target group in a Polycom paging environment.
The Polycom phone used as page audio source for the 8039(s), must be configured to use either the G.711 or G.722 audio codec. **The Polycom phone(s) must also be configured with the “Compatibility” setting (“ptt.compatibilityMode”) disabled in order for this codec setting to be applied.**

If using a Polycom phone as the Multicast master, a tone may be set for any of the 25 Polycom Groups configured on the Algo device. If an Algo device is used as a Multicast master, a tone does not have to be set as the Algo master will provide its own tone. Polycom Group Tones can be set in Advanced Settings > Advanced Multicast tab.
Web Interface Advanced Settings

Advanced Settings Tab - Network

**Protocol**

DHCP is an IP standard designed to make administration of IP addresses simpler. When selected, DHCP will automatically configure IP addresses for each 8039 on the network. Alternatively the 8039 can be set to a static IP address.

**VLAN Mode**

Enables or Disables VLAN Tagging. VLAN Tagging is the networking standard that supports Virtual LANs (VLANs) on an Ethernet network. The standard defines a system of VLAN tagging for Ethernet frames and the accompanying procedures to be used by bridges and switches in handling such frames. The standard also provides provisions for a quality of service prioritization scheme commonly known as IEEE 802.1p and defines the Generic Attribute Registration Protocol.
VLAN ID
Specifies the VLAN to which the Ethernet frame belongs. A 12-bit field specifying the VLAN to which the Ethernet frame belongs. The hexadecimal values of 0x000 and 0xFFF are reserved. All other values may be used as VLAN identifiers, allowing up to 4094 VLANs. The reserved value 0x000 indicates that the frame does not belong to any VLAN; in this case, the 802.1Q tag specifies only a priority and is referred to as a priority tag. On bridges, VLAN 1 (the default VLAN ID) is often reserved for a management VLAN; this is vendor specific.

VLAN Priority
Sets the frame priority level. Otherwise known as Priority Code Point (PCP), VLAN Priority is a 3-bit field which refers to the IEEE 802.1p priority. It indicates the frame priority level. Values are from 0 (lowest) to 7 (highest).

802.1x Authentication
Credentials to access LAN or WLAN that have 802.1X network access control (NAC) enabled. This information will be available from the IT Administrator.

Differentiated Services (6-bit DSCP value)
Provides quality of service if the DSCP protocol is supported on your network. Can be specified independently for SIP control packets versus RTP audio packets.

DNS Caching Mode
In "SIP" mode, only the results of DNS queries for SIP requests will be cached. In "All" mode, the results of all DNS queries will be cached.
Advanced Settings Tab – Admin

Password
Password to log into the 8039 SIP Video Intercom web interface. You should change the default password algo in order to secure the device on the network. If you have forgotten your password, you will need to perform a reset using the Reset Button in order to restore the password (as well as all other settings) back to the original factory default conditions.

For additional password security see “Force Strong Password” below.

Confirmation
Re-enter network admin password.

Device Name (Hostname)
Name to identify the device in the Algo Network Device Locator Tool.

Introduction Section on Status Page
Allows the introduction text to be hidden from the login screen.
Show Status Section on Status Page when Logged Out
Use this option if you wish to block access to the status page when logged out. The settings and configurations, on the status page, will be hidden entirely unless you’re logged in – this feature is useful when you want only trusted users to view possible sensitive device information.

Web Interface Session Timeout
Set the maximum period of inactivity after which the web interface will log out automatically.

Log Level
Use on the advice of Algo technical support only.

Log Method
Allows the 8039 SIP Video Intercom to write to external Syslog server if the option for external (or both) is selected.

Log Server
If “Network” or “Both” is selected this is the address of the Syslog server on the network.

Web Interface Protocol
The HTTPS is always enabled on the device. Use HTTPS only to disable HTTP, then requests will be automatically redirected to HTTPS. Also note that since the device can have any address on the local network, no security certificate exists, and thus most browsers will provide a warning when using HTTPS.

Force Strong Password
When enabled, ensures that a secure password is provided for the device’s web interface for additional protection. The password requirements are:

- Must contain at least 10 characters
- Must contain at least 1 uppercase character
- Must contain at least 1 digit (0 – 9)
- Must contain at least 1 special character

Allow Secure SIP Password
Allows SIP passwords to be stored in the configuration file in an encrypted format, to prevent viewing and recovery. Once enabled, the SIP “Realm” field should be entered and all the configured Authentication Password(s) must be re-entered in the Basic Settings > SIP tab, and any other locations where SIP extension have been configured, to save the encrypted password(s).

If the Realm is changed at a later time, all the passwords will also need to be re-entered again to save the passwords with the new encryption.
To obtain your SIP Realm information, contact your SIP Server administrator (or check the SIP log file for a registration attempt). The Realms may be the same or different for all the extensions used.

**SNMP Support**
Additional SNMP support is anticipated for future, but the 8039 SIP Video Intercom will respond to a simple status query for automated supervision. Contact Algo technical support for more information.

**System Integrity Checking**
This feature verifies installed system packages to ensure they have not been tampered with by running ‘Perform Check’. Enabling this feature may cause reboots and upgrades to take 30 seconds longer. Verification results can be found on the Status page.

**Advanced Settings Tab – Time**

Network time is used for logging events into memory for troubleshooting.

![Time Settings](image)

**Timezone**
Select time zone.

**NTP Time Servers 1/2/3/4**
The interface will attempt to use Timer Server 1 and work down the list if one or more of the time servers become unresponsive.

**NTP Time Server Source**
When “Use DHCP Option 42” is chosen, if an NTP Server address is provided via the DHCP Option 42, that NTP Server will be used instead of the 4 mentioned...
above. Alternatively, “Ignore DHCP Option 42” can be chosen to only use servers mentioned above.

**Device Date/Time**

This field shows the current time and date as set on the device. If testing the device on a lab network that may not have access to an external NTP server, the “Sync with browser” button can be used to temporarily set the time on the device.

> **Note:** This time value will be lost at power down, or overwritten if NTP is currently active. Time and date are used only for logging purposes and are not typically required.

### Advanced Settings Tab – Provisioning

Provisioning allows installers to pre-configure 8039 SIP Video Intercom units prior to installation on a network. It is typically used for large deployments to save time and ensure consistent setups.

> **Note:** It is recommended that Provisioning Mode be set to Disabled if this feature is not in use. This will prevent unauthorized re-configuration of the device if DHCP is used.
The device can be provisioned via the Auto mode (where all three DHCP options (Option 66/160/150) will be automatically checked for an active provisioning server), just one of the three specified DHCP options, or a Static Server. In addition, there are four different ways to download provisioning files from a “Provisioning Server”: TFTP (Trivial File Transfer Protocol), FTP, HTTP, or HTTPS.

For example, 8039 configuration files can be automatically downloaded from a TFTP server using DHCP Option 66. This option code (when set) supplies a TFTP boot server address to the DHCP client to boot from.

**Important: DHCP must be enabled if using DHCP Option 66/160/150, in order for Provisioning to work.**

One of two files can be uploaded on the Provisioning Server (for access via TFTP, FTP, HTTP, or HTTPS):

- Generic (for all Algo 8039 Intercoms)  
  algop8039.conf
- Specific (for a specific MAC address)  
  algom[MAC].conf

Both protocol and path is supported for Option 66, allowing for http://myserver.com/config-path to be used.

**MD5 Checksum**

In addition to the .conf file, an .md5 checksum file must also be uploaded to the Provisioning server. This checksum file is used to verify that the .conf file is transferred correctly without error.

A tool such as can be found at the website address below may be used to generate this file: [http://www.fourmilab.ch/md5](http://www.fourmilab.ch/md5)

The application doesn’t need an installation. To use the tool, simply unzip and run the application (md5) from a command prompt. The proper .md5 file will be generated in the same directory.

If using the above tool, be sure to use the “-l” parameter to generate lower case letters.

**Generating a generic configuration file**

1. Connect 8039 to the network
2. Access the 8039 Web Interface Control Panel
3. Configure the 8039 with desired options
4. Click on the System tab and then Maintenance.
5. Click "Download" to download the current configuration file
6. Save the file settings.txt
7. Rename file settings.txt to algop8039.conf
8. File algop8039.conf can now be uploaded onto the Provisioning server

If using a generic configuration file, extensions and credentials have to be entered manually once the 8039 SIP Video Intercom has automatically downloaded the configuration file.

Generating a specific configuration file
1. Follow steps 1 to 6 as listed in the section “Generating a generic configuration file”.
2. Rename file settings.txt to algom[MAC address].conf (e.g. algom0022EE020009.conf)
3. File algom[MAC address].conf can now be uploaded on the Provisioning server.

The specific configuration file will only be downloaded by the 8039 SIP Video Intercom with the MAC address specified in the configuration file name. Since all the necessary settings can be included in this file, the 8039 will be ready to work immediately after the configuration file is downloaded. The MAC address of each 8039 SIP Video Intercom can be found on the back label of the unit.

For more Algo SIP endpoint provisioning information, see:

www.algosolutions.com/provision
Dynamic Range Compression (DRC)
If enabled, compresses the dynamic range of page audio to increase loudness.

Dynamic Range Compression Gain
‘Dynamic Range Compression’ must be enabled to display this setting. Higher compression gain increases distortion.

Jitter Buffer Range
The jitter buffer removes the jitter in arriving network packets by temporarily storing them. This process corrects the inconsistent delays on the network. It is recommended to use the lowest value.

Always Send RTP Media
If enabled, audio packets will be sent at all times, even during one-way paging mode. This option is needed in cases when the server expects to see audio packets at all times.

Speaker Filter
Applies a high-pass filter to the speaker output. Used to reduce audio artifacts like humming or buzzing by filtering out unwanted frequencies.
Speaker Noise Filter
Enables heavy filtering below 145Hz to reduce mains induced noise (fans).

Microphone Filter
Applies a high-pass filter to the microphone input. Used to reduce audio artifacts like humming or buzzing by filtering out unwanted frequencies.

Microphone Noise Filter
Enables heavy filtering below 145Hz to reduce mains induced noise (fans).
Advanced Settings Tab – Advanced SIP

SIP Transportation
Which transport layer protocol to use for SIP messages. Setting ‘SIP Transportation’ to ‘TLS’, ensures the encryption of SIP traffic.

SIPS Scheme
Only visible when ‘SIP Transportation’ set to ‘TLS’. Enabling SIPS Scheme requires the SIP connection from endpoint to endpoint to be secure.
SIP Outbound Support (RFC 5626)
Enable this option to support best networking practices according to RFC 5626. This option should generally be enabled if the Algo device is being registered with a hosted server or if TLS is being used for SIP Transportation.

Outbound Proxy
IP address for outbound proxy. A proxy (server) stands between a private network and the internet.

Register Period (seconds)
Maximum requested period of time where the 8128 SIP Strobe Light will re-register with the SIP server. Default setting is 3600 seconds (1 hour). Only change if instructed otherwise.

Media NAT
IP address for STUN server if present or IP address/credentials for a TURN server.

Server Redundancy Feature
Two secondary SIP servers may be configured. The 8039 SIP Video Intercom will attempt to register with the primary server but switch to a secondary server when necessary. The configuration allows re-registration to the primary server upon availability or to stay with a server until unresponsive.

If Server Redundancy is selected the web page will expand as shown below.

Backup Server #1
If primary server is unreachable the 8039 SIP Video Intercom will attempt to register with the backup servers. If enabled, the 8039 SIP Video Intercom will always attempt to register with the highest priority server.

Backup Server #2
If backup server #1 is unreachable the 8039 SIP Video Intercom will attempt to register with the 2nd backup server. If enabled, the 8039 SIP Video Intercom will always attempt to register with the highest priority server.

Polling Intervals (seconds)
Time period between sending monitoring packets to each server. Non-active servers are always polled, and active server may optionally be polled (see below).

Poll Active Server
Explicitly poll current server to monitor availability. May also be handled automatically by other regular events, so can be disabled to reduce network traffic.
**Automatic Fallback**  
Reconnect with higher priority server once available, even if backup connection is still fine.

**Polling Method**  
SIP message used to poll servers to monitor availability.

**Keep-alive Method**  
If Double CRLF is selected the 8039 SIP Video Intercom will send a packet every 30 seconds (unless changed) to maintain connection with the SIP Server if behind NAT.

**Keep-alive Interval**  
Interval in seconds that the CRLF message should be sent.

**Use Outgoing TLS port in SIP headers**  
Use ephemeral port number from outgoing SIP TLS connection instead of listening port number in SIP Contact and Via headers. This is useful to connect the device to some local SIP servers, like Asterisk or FreeSWITCH.

**Do Not Reuse Authorization Headers**  
When enabled, all SIP authorization information from the last successful request will not be reused in the next request.
Advanced Settings Tab – Advanced Multicast

RTP Control Protocol (RTCP)

RTCP Port Selection

Select the port on which RTCP packets will be sent or received. If using the 'Next Higher Port' option, ensure that the default multicast zone definitions are modified such that zones are only assigned to even-numbered ports, leaving the next higher odd-numbered ports free for RTCP packets.

Audio Sync

When paging to the 8039 SIP Video Intercom as well as other third party devices, the low latency of the 8039 may cause the audio to lead other devices. By adding
audio delay up to one second, the 8039 may be synchronized with other endpoints or telephones that have greater latency.

**Zone Definition**
The “Expanded” Slave zones can be enabled/disabled in Basic Settings > Multicast. Default IP addresses and ports may be revised for any given zone in the table.

---

**Important:** Ensure that the Address and Port settings are the same for all master and slave devices.

---

**Page Tone and Page Volume**
When an Algo device is the multicast Master, a page tone will play on the Slave device, so it is recommended to set the Slave tone to “None”. If a page is received from a non-Algo device that doesn’t send a tone, a tone can be inserted on the Slave device allowing for a page tone to be played prior to page audio starting.

By default, the same page volume can be set for all Slave zones in the Basic Settings > Features tab. Unique page volumes may be revised on a per-zone basis in the table above. For instance, emergency pages can be louder on certain Slave endpoints.

**Polycom Slave Tones**
A tone may be set for any of the 25 Polycom Groups. If using an Algo device as a Multicast master, it is recommended to set the slave tones to “None” to avoid conflicts, as the Algo devices already multicast a tone by default.

These settings are available only if the 8039 is set as a Multicast Slave and “Polycom Group Page” or “Polycom Push-to-Talk” are selected in the Basic Settings > Multicast tab.
Advanced Settings Tab – Snapshot

Snapshot Mode
Disable or enable the snapshot to be triggered when the call is made.

⚠️ Important: Enabling snapshot mode will disable low-power sleep mode.

Image Archiving Frame Rate
Choose a frame rate from 1/5 FPS to 5 FPS.

No. of Images Captured Before Event
Number of images to be captured before the call is made.
No. of Images Captured After Event
Number of images to be captured after the call is made.

Min. Time Between Events
Ignore upcoming events for the chosen period after a triggering event.

Audible Click
Play a tone when image is captured.

Time Between Captures
Automatically capture an event on this interval.

Email
Set an email server for the images to be uploaded.

FTP
Set an FTP server for the images to be uploaded.

Max. Time to Archive
Stop uploading images when timed out after a triggering event.
Web Interface System
System Tab - Maintenance

Download Configuration File
Save the device settings to a text file for backup or to setup a provisioning configuration file.

Restore Configuration File
Restore settings from a backup file.

Restore Configuration to Defaults
Resets all 8039 SIP Video Intercom device settings to factory default values.

Download Backup File
Saves the device settings (configuration) and all the files in File Manager: certificates, licenses, and tones to a backup zip file.

Restore from Backup Zip File
Restores the device settings (configuration) and all the files in File Manager: certificates, licenses, and tones from a backup zip file.

Restore All Settings and Files to Defaults
Resets the device settings (configuration) and all the files in File Manager: certificates, licenses, and tones to factory default values.

Reboot the Device
Reboots the device.
Method
Specify whether the firmware files will be downloaded from the local computer or a remote URL.

Signed Firmware File
Point to the SFW file provided by Algo

How to upgrade 8039 SIP Video Intercom Firmware
1. From the top menu, click on System, then Maintenance.
2. In the Upgrade section, click on Choose File and select the 8039 SIP Video Intercom firmware file to upload. Note that a SFW file must be loaded.
3. Click Upgrade
4. After the upgrade is complete, confirm that the firmware version has changed (refer to top right of Control Panel).
System Tab - File Manager

Uploading custom Ring Tones (WAV Files)
Custom WAV files may be uploaded into memory (1 GB) to play on the 8039 speaker.

An existing file may also be modified by downloading the original via the links in the web interface, making the desired changes, and then uploading the new version with a different name. Audio files must be in the following format:

- WAV format
- 8kHz or 16kHz sampling rate
- 16-bit PCM, or u-law
- Mono
- Smaller than 200MB

A zip files containing one or more audio files may also be uploaded. File names must be limited to 32 characters, with no spaces.
Uploading Certificate Files

To use TLS SIP Signaling and provisioning, the certificate is required for a SIP server to validate the Algo device.

The TLS certificate can be uploaded to the certs folder. Rename the certificate to 'sipclient' using '.pem' filetype extension before uploading.

For the HTTPS provisioning, a certificate can also be manually uploaded into the certs folder through file manager.

System Tab – System Log

System log files are automatically created and assist with troubleshooting in the event the 8039 SIP Video Intercom does not behave as expected.
Specifications

Power Input: 48 V PoE IEEE 802.3af Class 0.
  • Max 10 W when speaker active.
  • 6 W when video in-use.
  • 4 W idle when video not being viewed and backlight disabled.

Protocol: SIP (initiate or answer call).

Multicast: Receive.


Video Codecs: H.264 Main or high profile.

Video Resolution: 720p, VGA, CIF up to 30fps.

Image Sensor: 187 Degree FOV horizontal and vertical. Fisheye image de-warped.

Server Redundancy: Primary, secondary, tertiary.

Processor: Linux OS; ARM Cortex-A8 Core with HD video processor and floating point DSP.

Enclosure: Metal.

Keypad Functions: Press any key to call; access control; dial number directly; directory annunciation.

Microphone: Single Wideband.

Memory: 1 GByte audio storage.

Door Control: Optional Algo 8061 IP Relay Controller or internal relay NO or NC rated 30V 1A.

Configuration: Web interface (HTTP or HTTPS) or auto provisioning server.

Provisioning: TFTP, FTP, HTTP, HTTPS
Supervision: SNMP

NAT: STUN, CRLF Keep Alive.

Environmental: -40 to +122 deg F (-40 to +50 deg C); Rated for outdoor environments. Type 3R (IPX3)

Dimension: 1.95" W x 10.4" T x 1.64" D (4.95 cm x 26.3 cm x 4.17 cm).

Mounting: Includes concealed mounting bracket and secure screw with matching security tool.

Weight: 2.65 lb (1.2 Kg).


8061 IP Relay Controller

The 8039 can provide secure door control functionality when used with the optional Algo 8061 IP Relay Controller.

The 8061 serves as a bridge between the 8039 and peripheral hardware such as door strike.

As a door opening controller, the 8061 can be located in a secure environment to prevent tampering of the public-facing intercom, as compared to using the local Door control relay on the 8039 which would require the door strike wires to be run outside the building.

The door control feature is activated by a command from the answering telephone keypad, or entry of the door release code by a visitor via the 8039 itself.
Typical 8039/8061 Setup

1. Connect the 8061 to the network via an Ethernet cable at the back of the device. Ensure that a PoE port is used for power and that the 8061 is connected to the same subnet and VLAN as the target intercom.

2. Run two wires from the door strike to the Normally Open/Common (NO/C) input pair or Common/Normally Closer (C/NC) input pair on the 8061. For more wiring information please visit: www.algosolutions.com/doorstrike.
Configuring the 8061

1. Find the IP address of the Algo 8061 using the Algo locator tool available from the Algo website www.algosolutions.com/locator. This tool displays all of the Algo devices available on the network, and their corresponding IP addresses. Note this address down as you will need it when you configure the 8039 for use with this device.

2. Point your browser to the above IP address. The 8061 Control Panel will be displayed.

3. Log in. The default password is algo.

4. Go to the Basic Settings > Door Control tab.

5. Set the “Door Control Link” to “Enabled”.

6. In the “Door Control Password” field set a password that will be used for configuring the intercom for door control. Note this password down as you will be reusing it when configuring the 8039 with this device.

See section “Basic Settings Tab – Door Control” page 20 for configuring the 8201 with the parameters from above.
FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.