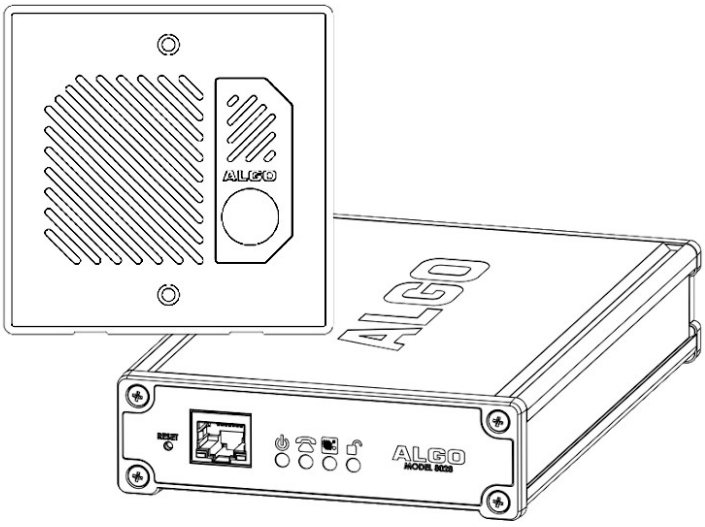
8028 SIP Doorphone (G2)
FW Version 3.2

User Guide



Order Codes

8028	SIP Doorphone (G2)

Optional Accessories:

64-00038	Brass Faceplate
X24VG	Power Supply

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Table of Contents

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Important Safety Information

The 8028 SIP Doorphone (G2) is designed, tested and verified to comply with CSA/ANSI/UL 62368-1 Safety Standards for INFORMATION TECHNOLOGY EQUIPMENT.

⚠ 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 802.3at PoE+ or 802.3af compliant network PoE switch. The product is intended for installation indoors. 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 802.3at PoE+ or 802.3af. Le produit est conçu pour être installé à l'intérieur. 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); medianteun cable de conexión CAT5 o CAT6 a un conmutador de red con PoE en cumplimiento con IEEE802.3at PoE+ or 802.3af. El producto se debe instalar en lugares cerrados. 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.

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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

Dieses Produkt wird durch eine zertifizierte Stromquelle mit begrenzter Leistung (LPS – Limited Power Source) betrieben. Die Stromversorgung erfolgt über Ethernet (PoE – Power over Ethernet). Dies geschieht durch eine Cat-5-Verbindung oder eine Cat-6-Verbindung zu einer IEEE 802.3at PoE+ or 802.3af-konformen Ethernet-Netzwerkweiche. Das Produkt wurde konzipiert für die Installation innerhalb eines Gebäudes. Alle Kabelverbindungen zum Produkt müssen im selben Gebäude bestehen. Wenn das Produkt jenseits des Gebäudes oder für mehrere Gebäude genutzt wird, müssen die Kabelverbindungen vor Überspannung und Spannungssprüngen geschützt werden. Algo empfiehlt das Produkt von einem qualifizierten Elektriker installieren zu lassenv.

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），以太网供以太网供电（PoE），以太网供通过 CAT5 或 CAT6 线路联接至 IEEE 802.3at PoE+ or 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。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，以太网供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。

⚠ INSTALLATION

EARTH GROUNDING MAY BE REQUIRED

This guide provides important safety information which should be read thoroughly before permanently installing the product. Earth grounding is required for installations with door station wiring that leaves the perimeter of a building due to the potential for over-voltage fault conditions.

Note that this requirement does not apply when a door station is installed indoors or on the outside wall of a building if the wiring runs directly into the building.
Earth grounding can be achieved by connecting the 8028 (G2) control unit power jack to earth ground using either the supplied ground strap directly to a suitable ground point or by use of the optional Algo 75-00004 24Vdc Power Adapter to socket outlet with a protective earthing connection.
It is highly recommended that when an earth ground is required the control unit be located in a restricted area and that the control unit be secured in place and cable ties used to prevent accidental disconnect of the connection to earth ground. This connection should be verified by a qualified electrician and routinely check as a safety precaution.
Under no circumstances can the Control Unit be disconnected from earth ground while connected to outdoor wiring.

⚠ EMERGENCY COMMUNICATION

If used in an emergency communication application, the 8028 SIP Doorphone (G2) should be routinely tested. SNMP supervision is recommended for assurance of proper operation. Contact Algo for other methods of operational assurance.

⚠ WET OR OUTDOOR ENVIRONMENTS

The 8028 SIP Doorphone's controller is intended for indoor locations with the Door Station is intended for 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 Door Station 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 or IEEE 802.3at compliant network PoE/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

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perimeter without adequate lightning protection. Please see information in 'Installation' section above.

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Overview

Introduction

Ideal for secure business entrances, emergency intercom, and residential gates, Algo's 8028 SIP Doorphone (G2) provides hands-free intercom capability, entrance security with door unlock control, rugged weatherproof design, and superior audio performance.

Fully compatible with SIP industry standards, the SIP Doorphone will work with most hosted or enterprise SIP-based servers supporting third-party SIP endpoints.

The 8028 is a two component product for easy installation into existing construction utilizing existing intercom wiring at the door. No network connectivity is required at the outdoor intercom and the door relay connection is located safely indoors. The "Control Unit" must be installed in a dry indoor location. The "Door Station" may be located indoors or outdoors and is connected to the control unit with a single twisted pair wire (typically 24AWG) up to 1,000 feet (300 m) in length. The single wire pair carries low voltage power and digital communication in both directions as well as connectivity supervision.

What is Included

- 8028 SIP Doorphone (G2) "Control Unit"
- Outdoor rated digital "Door Station" (model 3201) with Stainless Steel Faceplate
- Outdoor rated surface mount bezel & gasket kit for door station
- Wall mount bracket for control unit
- Network Cable 6^{ft} (2m)
- Earth Grounding Strap
- 2x terminal blocks (one 5-pin connector, one 6-pin connector)
- Flat head screwdriver
- Getting Started Sheet

What is not Included

- Optional 24V DC Power Supply (Order code 75-00004)
- Physical Door Sensor
- Door Strike
- Door Strike Power Supply

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What's New (compared to the original 8028)

The 8028 SIP Doorphone (G2) is the next generation of the popular Algo 8028. The doorphone has upgraded hardware capable of running the latest security and encryption standards, including TLS & SRTP, ensuring secure communication with hosted SIP providers.

Designed to include all the features of the original 8028, the second generation has a number of new features such as PoE/PoE+ power input, and built-in terminal block.

As the device now runs on a new hardware platform, note that the firmware files are different compared to the original 8028. For assistance migrating provisioning files for this new device, please contact Algo support.

Applications

Typical Applications for Auxiliary Inputs and Outputs

The 8028 architecture and digital link between the Door Station and Controller provides flexible options using the auxiliary inputs and outputs. These are some typical applications.

Hands-free Visitor Communication and Door/Gate Control

Visitors press the call button on the 8028 intercom station to initiate calling to a configured extension such as a security desk or hunt group. Answering the intercom call enables two-way communication with the visitor. During the intercom call the telephone keypad can be used to enter a door open code (e.g. digit 6, or up to four digits). Once activated the 8028 access control relay will permit a momentary unlock of the entrance for the visitor to gain access through the door or gate in a secure and efficient manner.

Cancel Ring When Door Opened

In a residential or warehouse installation it is not uncommon for the door to be answered in person before the phone is answered. Either Door Station or Controller inputs can be configured to cancel ring if the door is opened before a call is answered. This requires a normally closed or normally open contact to detect door open (not included).

Trigger Door Bell from Door Station

When the Door Station call button is pressed, either (or both) the Door Station or Controller dry contact output can be configured to activate a door bell or auxiliary alerting system in addition to phone ring.

Trigger Door Station from External Button/Event

Either the Controller or Door Station can accept a dry contact closure to activate the Doorphone as if the call button had been pressed. This could be an external doorbell button, PIR detector, or some other system.

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Cancel Door Open Relay once Door Opened

The door opening control can be set for activation (using the 'Open Code') up to 30 seconds (set by the 'Relay Time' setting) to allow sufficient time for entry. For security, the 8028 can be configured to cancel Door Opening once the door is opened to prevent "tailgating" by unauthorized personnel.

Unlock Door Indefinitely until Cancelled

The door opening control can be set to unlock indefinitely (using the 'Latch Open Code') until cancelled (using the 'Release Code') that locks it again. This allows an entrance to be used repeatedly for a period of time without requiring multiple activations of the door control relay.

Anti-Door Tamper

A feature of the 8028 is to ring the telephone(s) with a warning alert in the event a door is ajar due to tampering (such as a door blocked open after being legitimately released for a visitor). Requires physical door sensor (not included).

In-Use and Ring

Either the Controller or Door Station can be configured to provide a dry contact output during ring or in-use for channel selection (typically) of third party video monitoring systems.

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Setup and Installation

Getting Started - Quick Install & Test

This guide provides important safety information which should be read thoroughly before permanently installing the product. Earth grounding is required for installations with door station wiring that leaves the perimeter of a building due to the potential for over-voltage fault conditions.

Note that this requirement does not apply when a door station is installed indoors or on the outside wall of a building if the wiring runs directly into the building.

1. If earth grounding is required (read safety caution above) then make that connection first before connecting the control unit to the network or door station.
2. Flush or surface-mount the Digital Door Station at desired location and connect the “CTRL” terminals of the Door Station to the Control Unit pluggable terminal block positions indicated by the door station icon ( ). Note that a yellow caution sticker must first be removed from the Control Unit pluggable terminal socket.
3. Connect the 8028 (G2) Control Unit to a network port. If the network switch supports PoE (IEEE 802.3af 15W) or PoE+ (IEEE 802.3at 30W) then the control unit will power up as indicated by the blue power light on the front. If the network switch does not provide PoE then a PoE injector may be used or the optional Algo 75-00004 24Vdc Power Adapter.
4. The red LED illuminated call button on the front of Door Station will turn on. After about 30 seconds, a beep will signal the completion of the boot process.
5. After the boot is complete, press the call button on the Door Station to hear the IP address. (Once the SIP Server field is populated in the 8028 web interface, the call button will contact the preconfigured extension when pressed.) The IP address may also be discovered by momentarily pushing the reset button next to the RJ45 jack or downloading the Algo locator tool to find Algo devices on your network: www.algosolutions.com/locator
6. Access the 8028 SIP Doorphone web page by entering the IP address into a browser (Chrome, Firefox or Edge) and login using the default password ***algo*****.**
7. Enter the IP address or the name for the SIP server into the SIP Domain field under the **BASIC SETTINGS > SIP** tab.
8. 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.

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9. Verify the extension is properly registered with the SIP server in the Status tab. Ensure the SIP Registration is “Successful”.
10. Press the Call Button on the Door Station, then answer the phone to communicate over the Door station. Press the digit 6 (default value) on the phone keypad to activate the door control relay for three seconds (if applicable).

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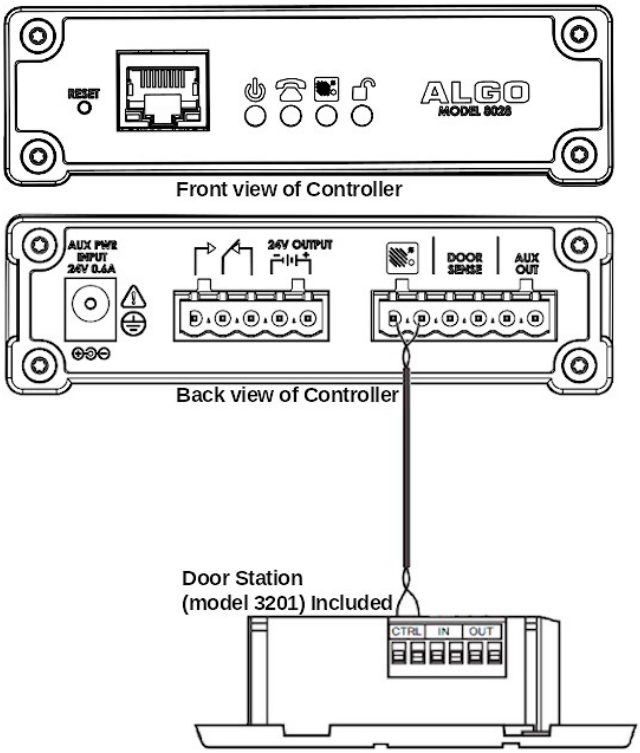
Installation

Power Options

The 8028 has three power options: PoE, PoE+, and Power Supply (Sold Separately).

> ⚠ *Important: If any wiring goes beyond the perimeter of the building, then an earth ground must be connected for electrical safety reasons. This can be accomplished with either the Algo Power Supply (Sold Separately), or the included ground wire (when powered by PoE).*

Installation

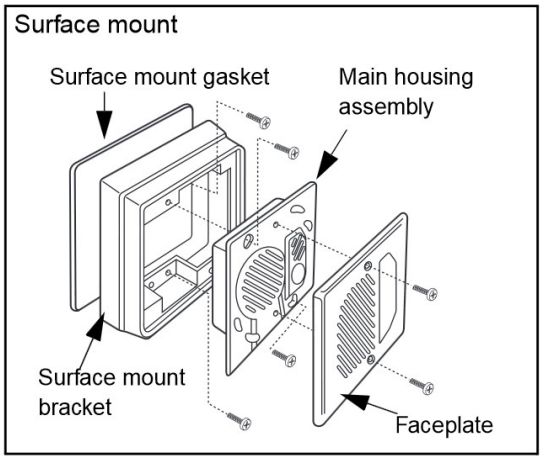


Door Station Installation

The Door Station, provided with the 8028 Doorphone kit, 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 Door Station is located on the outside wall of a building and the wiring is inside the perimeter of the building.

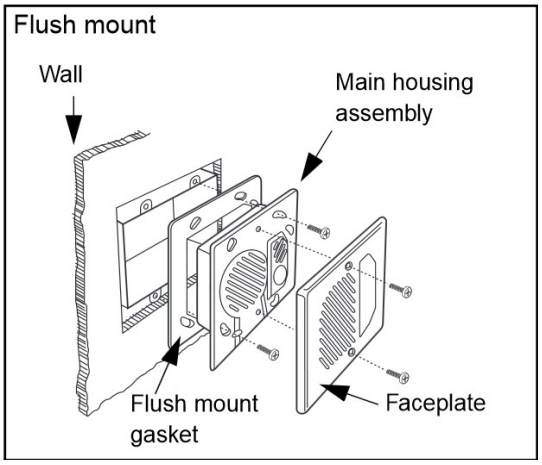
1. Remove the Door Station faceplate
2. Determine if you want a flush or surface mount installation

For surface mount:



- Discard the smaller flush mount gasket.
- Verify the correct orientation of the surface mount gasket.
- Thread the wires through the center hole of the larger surface mount gasket, then through the surface mount bezel.
- Attach the surface mount bezel to the wall with drain slot DOWN and gasket behind. The purpose of the gasket is to prevent water ingress behind the bezel or into the wall cavity. If the wall surface is irregular then a sealant may be required to prevent water intrusion. Do not block the water drainage slot located on the bottom edge of the bezel.
- Connect the wire pair to the Door Station “CTRL” terminals. Wiring is polarity independent.
- Fasten the Door Station to the surface mount bezel and install faceplate

For two-gang flush mount (or surface mount using Algo 3100 or electrical box with conduit):



- Discard the larger surface mount gasket and bracket.
- Place the surface mount gasket onto the rear of the door station against the flange.
- The purpose of the gasket is to prevent water ingress behind the Door Station or into the wall cavity. If the wall surface is irregular then a sealant may be required to prevent water intrusion. Do not block the water drainage slot located on the bottom front edge of the Door Station.
- Connect the wire pair to the Door Station “CTRL” terminals. Wiring is polarity independent.
- Fasten the Door Station to the electrical box and install faceplate.

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Programming and Configuration

The 8028 is configurable using the web interface or provisioning features.

After boot up, the red call button will turn on and the 8028 will have obtained an IP address. If there is no DHCP server the 8028 will default to the static IP address **192.168.1.111**.

Before the 8028 is configured, the call button on the Door Station can be pressed to play the IP address over the speaker. (Once the SIP Server field is populated on the 8028 web interface, the call button will contact the pre-configured 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 Chrome, Firefox or Edge. The web interface should be visible and the default password will be ***algo*** in lower case letters.

Door or Gate Control Basics

The Door Control relay in the Control Unit can be used for unlocking a door or gate. No power supply is required for most gate systems which require only a relay contact. Door strikes and magnetic locks require power to lock or unlock depending on configuration.

For security, the door control relay is located in the Control Unit to eliminate entry by tampering.

When another system is already controlling a door (handicapped access, card reader etc) then the 8028 may be wired as an additional control system.

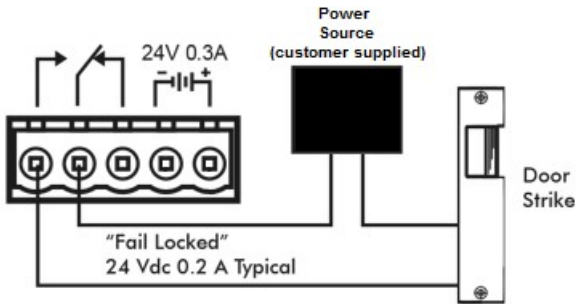
Door Release

Door release typically involves energizing or de-energizing a door strike which pivots to allow a locked door to open without retraction of the latch bolt. There are two different types of door strikes:

- "Fail Locked" (or "Fail Secure")
- "Fail Unlocked" (or "Fail Safe")

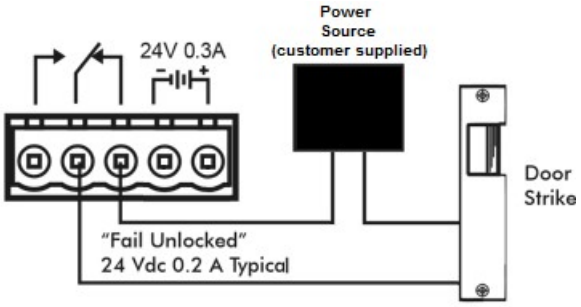
Fail Locked / Fail Secure Electric Strike

These require power to release and remain locked during power failure. The door may still normally be opened from the outside with a key, or from inside without a key. The door control relay is used to apply power to release the door.



Fail Unlocked / Fail Safe Electric Strike

These (as well as magnetic locks), require power to lock and become unlocked during power failure.

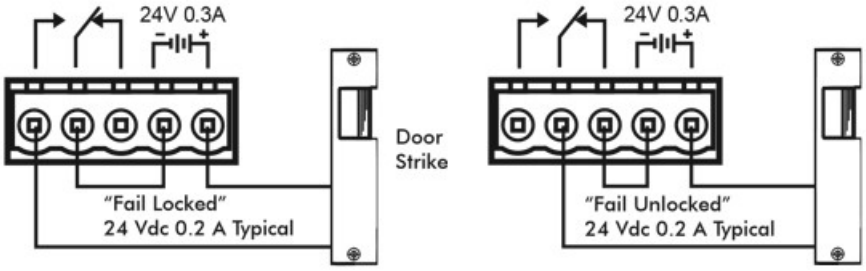


The door control relay is used to maintain power to the door lock (NC and C contacts) which is interrupted to release the door. Magnetic locks may require override systems to allow safety exit in the event of fire.

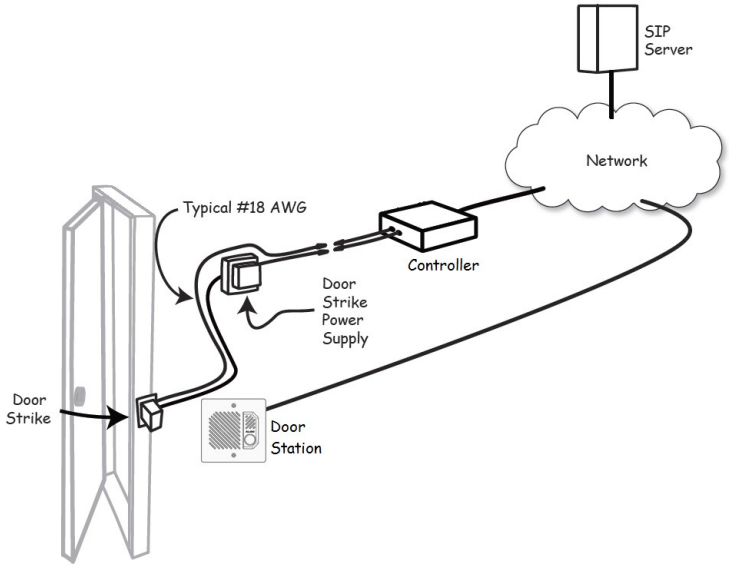
Power Supply

The Doorphone Controller provides an auxiliary 24 V **(0.25A using power supply, 0.5A using PoE+, not available with regular PoE)** power supply which is suitable for common types of door strikes. If set to follow door control, then this terminal can be wired directly to the door strike (if compatible), without needing to be also wired through the relay.

If more current or a different voltage is required, then the customer must provide a matching power supply for the electric strike or magnetic lock. Maximum switching capability of the 8028 door control contacts is 1 A, 30 V.



Pre-Wiring Instructions



Please visit the Pre-Wiring Notes document for more information.

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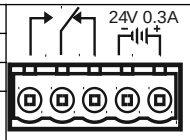
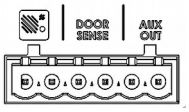
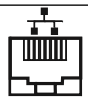
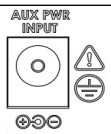
Wiring Connections (Controller)

Controller 5 Position Removable Terminal Block	Relay (30V 1A)	NO	Normally Open	
		C	Common	
		NC	Normally Closer	
	24V Auxiliary Power Output (PoE+ or optional power supply needed)	PWR -	0.25A – Power Supply 0.5A - PoE+	
		PWR +		
Controller 6 Position Terminal Block	Door Station	Connect to CTRL terminal of Door Station		
	Door Sensor	Input to Controller (e.g. Door Contact, Doorbell Switch); Max 1kOhm		
	Aux Out	Output from Controller Max 50mA 30V		
Ethernet Jack RJ45 Jack	Connect to LAN with access to SIP-compliant Proxy Server.			
Reset Button	To return all settings to a factory default, power up the unit and wait until the Power Led flashes, and then press and hold the reset button until the LED start to double flash. ***Do not press the reset button until the LED flashes.***			RESET
Power Jack	Optional Power Supply	This is an optional power jack if not using PoE/PoE+. Also use for earth GND. (Please refer to power options on p.12)		

Wiring Connections (Door Station)

Door Station 6 Position Terminal Block	CTRL	Connect to Door Station terminal of Controller	
	IN	Dry Contact Input to Door Station (e.g. Door Contact, Doorbell Switch); Max 1kOhm	
	OUT	Internal opto-coupler with 2V drop from Door Station (e.g. Gate Control); Max 50mA 30V	

Auxiliary Dry Contact Outputs

Both the Controller and the Door Station provide a dry contact output for connection to auxiliary devices. Maximum switching capacity is 30 V 50 mA.

The Door Station's output contains an internal opto-coupler, not a true relay, so it will incur a voltage drop of about 2V.

Default operations are as follows:

- Doorphone Controller Output = In-Use (commonly used for camera control)
- Door Station Output = Call Button Press (commonly used to activate a secondary doorbell)

Other options for Doorphone Controller output include Ring and Call Button Press. Other options for Door Station output include In-Use and Door Control.

Auxiliary Dry Contact Inputs

Both the Controller and Door Station can detect a dry contact closure from auxiliary devices. A non-capacitive and non-inductive low voltage and low current is used to detect contact closure.

Default operations are as follows:

- Doorphone Controller input = Door Sensor Normally Closed (used to detect door open)
- Door Station input = Call Button Normally Open (used to detect external doorbell switch)

Options for Doorphone Controller input include Door Sensor Normally Closed, Door Sensor Normally Open, Manual Door Release, Door Control Lockout, Call Button Normally Closed, and Call Button Normally Open.

Options for Door Station input include Door Sensor Normally Closed, Door Sensor Normally Open, Call Button Normally Closed, and Call Button Normally Open.

LED Indicators

 **Power**

On steady: Link and IP Address established successfully

Flashing: Ethernet Link status OK, but IP Address not yet obtained

 **Telephone**

Off: Not registered or error registering with SIP server

On steady: Successfully registered with SIP Server, ready for use

Flashing: off-hook or ringing state is currently active

 **Door Station**

On steady: the door station is connected

Off: Communication errors with the door station, or not connected

 **Unlock**

On steady: Door Relay is activated.

Testing the door control feature: the “unlock” light on the 8028 will turn on (and the mechanical relay may be heard) when the Open Code is pressed from the telephone keypad during a call with the 8028. This light shows the state of the relay, and verifies that it has activated. If the “unlock” light activates, but the door fails to unlock, please contact your electrician to check the connections and wiring to the door strike. If the “unlock” light does not turn on, verify that the phone sends a DTMF signal to the Doorphone.

Reset

To return all settings to a factory default, reboot or power cycle the 8028. Wait until the Power Led flashes, and then press and hold the reset button until the LED start to double flash.

Do not press the reset button until the SIP LED begins flashing.

A reset will set all configuration options to factory default including the login password.

Once booting has completed, pressing the call button in the doorstation will cause the device to speak its IP address over the speaker.

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TLS for SIP Signaling and Provisioning

Algo devices that support firmware 1.6.4 or later support Transport Layer Security (TLS). This feature adds security by ensuring that Algo products can trust the hosted SIP server. This is useful for when third-party devices or attackers may try to intercept, replicate, or alter Algo products, and try to connect to the server. TLS protocol will ensure that third parties cannot read/modify any actual data. Previously security was less of a concern because phone systems were on isolated networks, but hosted services are becoming increasingly more common. Using a hosted SIP service requires traffic to be sent over the public internet and thus much more susceptible to attacks. Signed certificates are an important piece in the Algo device's operation, to ensure the security, integrity, and privacy of its communication. Algo components that use TLS are **Provisioning** and **SIP Signaling**.

These Algo devices each come pre-loaded with certificates from a list of trusted certificate authorities (CA), which are installed in the hardware at the time of manufacture. Note these pre-installed trusted certificates are not visible to users and are separate from the 'certs' folder.

The TLS handshake happens to make sure that the client and server can trust each other, and once that trust is established, the two parties can freely send encrypted data and decrypt any data that they receive. After the TLS handshake process is complete, a TLS session is established, and the server and client can then exchange messages that are symmetrically encrypted with shared (pre-master) secret key.

For further details reference the Algo TLS guide for SIP Signalling and HTTPS Provisioning.

Uploading Public CA Certificates to Algo SIP Endpoints

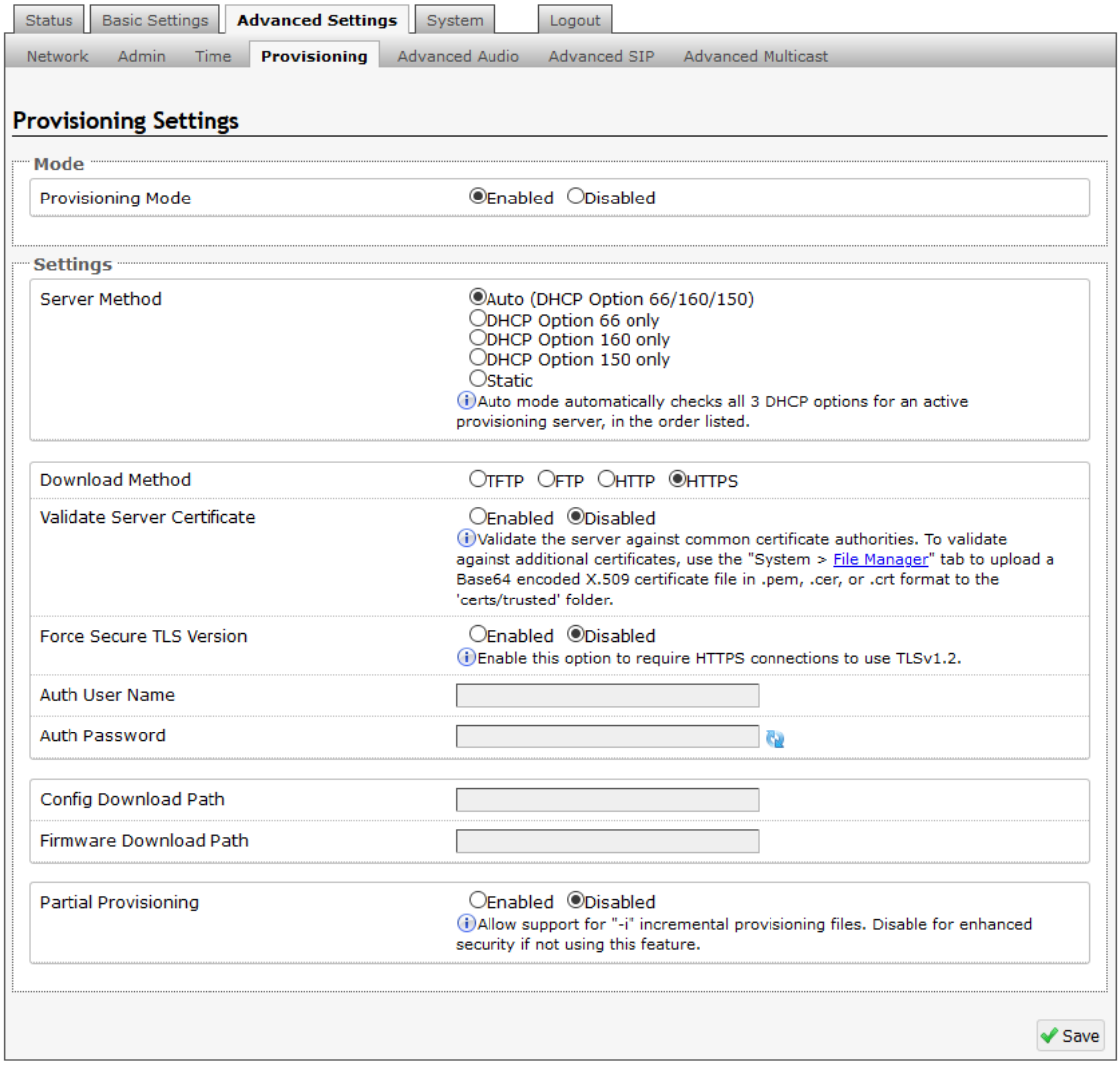
To install the public CA certificate on the Algo 8028, follow the steps below:

1. Obtain a public certificate from your Certificate Authority (any valid X.509 format certificate can be accepted).
2. In the web interface of the Algo device, navigate to the **System -> File Manager** tab.
3. Upload the certificate files into the '**certs/trusted**' directory. Click the Upload button in the top left corner of the file manager and browse to the certificate.

For **SIP** TLS and **Provisioning** TLS, the default public CA certificates are used. Alternatively any valid X.509 format certificate is supported.

HTTPS Provisioning

Provisioning can be secured by setting the 'Download Method' to 'HTTPS' (under the **Advanced Settings > Provisioning** tab). This prevents configuration files from being read by an unwanted third-party. This resolves the potential risk of having sensitive data stolen, such as admin passwords and SIP credentials.



> ⚠ *Important: To verify the server 'Enable' the 'Validate Server Certificate' option. This then checks if the certificate that is provided by the server is signed by any of the CAs included in the list of trusted CAs (used by the Debian infrastructure and Mozilla browsers). If we receive a certificate signed by any of these CAs, then that server will be trusted.*

The 'Validate Server Certificate' parameter can also be enabled through provisioning:

```
prov.download.cert = 1
```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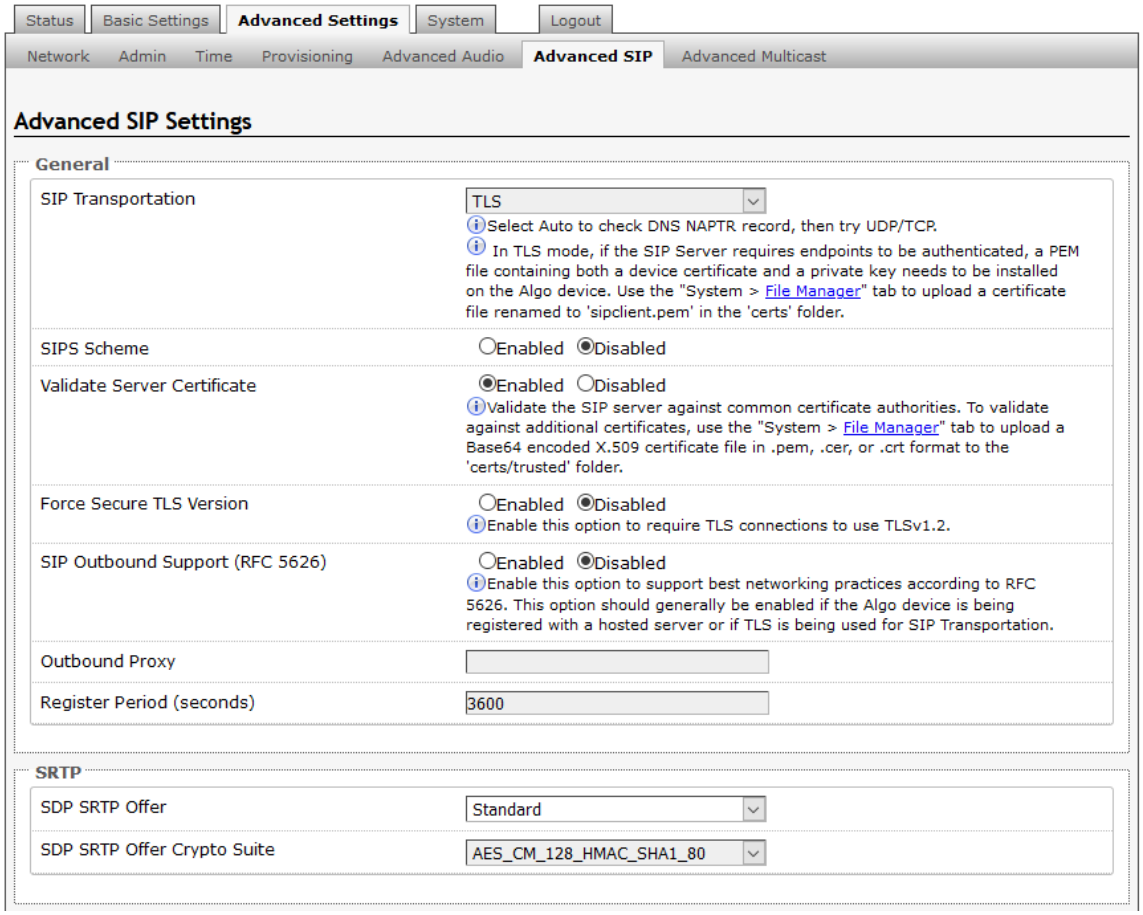
SIP Signaling (and RTP Audio)

SIP signalling is secured by setting 'SIP Transportation' to 'TLS' (under the **Advanced Settings > Advanced SIP** tab). Setting it to 'TLS' ensures that the SIP traffic will be encrypted. The SIP signalling is responsible for establishing the call (the control signals to start and end the call with the other party), but it does not contain the audio.

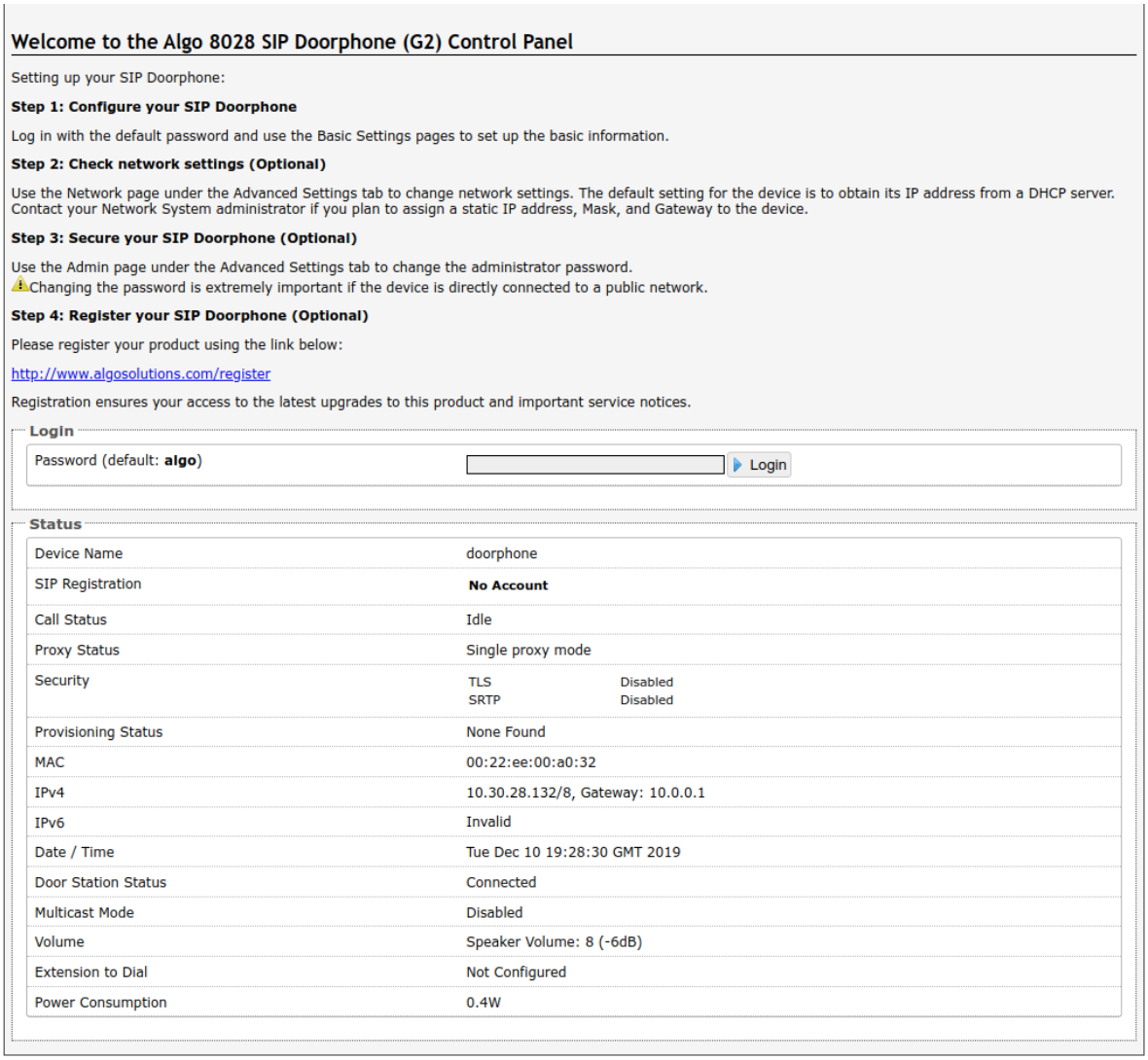
For the audio (voice) path, use the setting '**SDP SRTP Offer**'. Setting this to '**Optional**', means the SIP call's RTP audio data will be encrypted (using SRTP) if the other party also supports audio encryption. If the other party does not support SRTP, then the call will still proceed, but with unencrypted audio. In order to make audio encryption mandatory for all calls, set '**SDP SRTP Offer**' to '**Standard**'. In this case, if the other party does not support audio encryption, then the call attempt will be rejected. Force Secure TLS Version option may be used to to require TLS connections to use TLSv1.2.



Important: In order for a SIP server to validate the Algo device, an additional certificate has to be manually installed on the 8028. To add this user certificate file use any valid X.509 format and have the file named 'sipclient'. This is done by manually adding a file named 'sipclient', which contains a device certificate and private key, to the 'certs' folder (under the 'System' tab File Manager').

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 is accessed by entering the 8028's IP Address into a web browser.

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

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Status

The device's Status page will be available before and after log on. The section can be used to check the 8028's SIP Registration status of the SIP extension, Call Status, Proxy Status, Extension to Dial, Door Station 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.*

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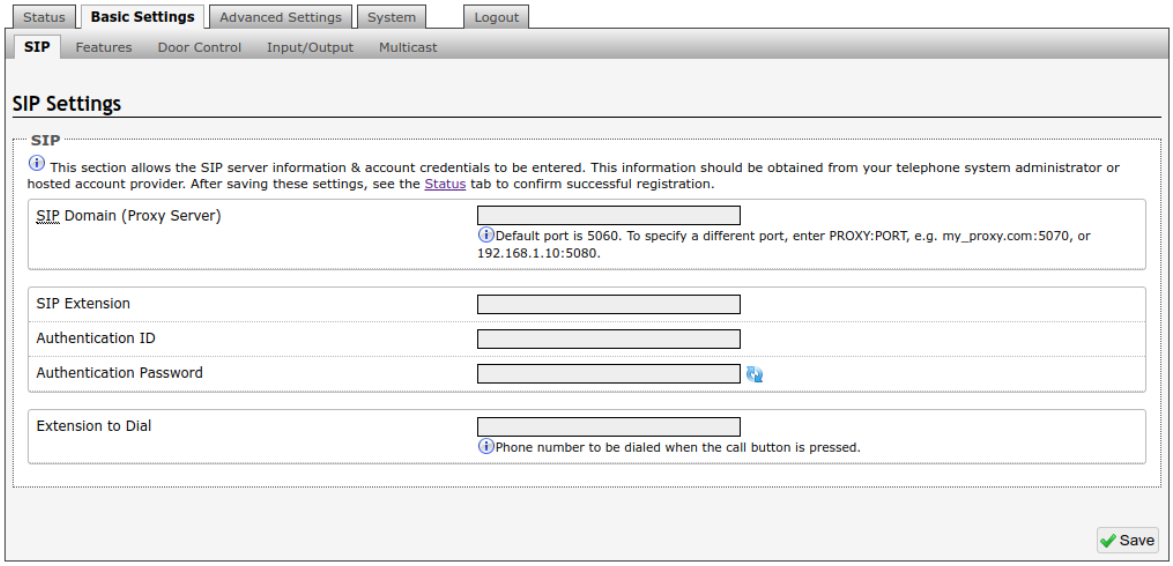
Web Interface Basic Settings

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

This is the SIP extension used to register the 8028 with 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.

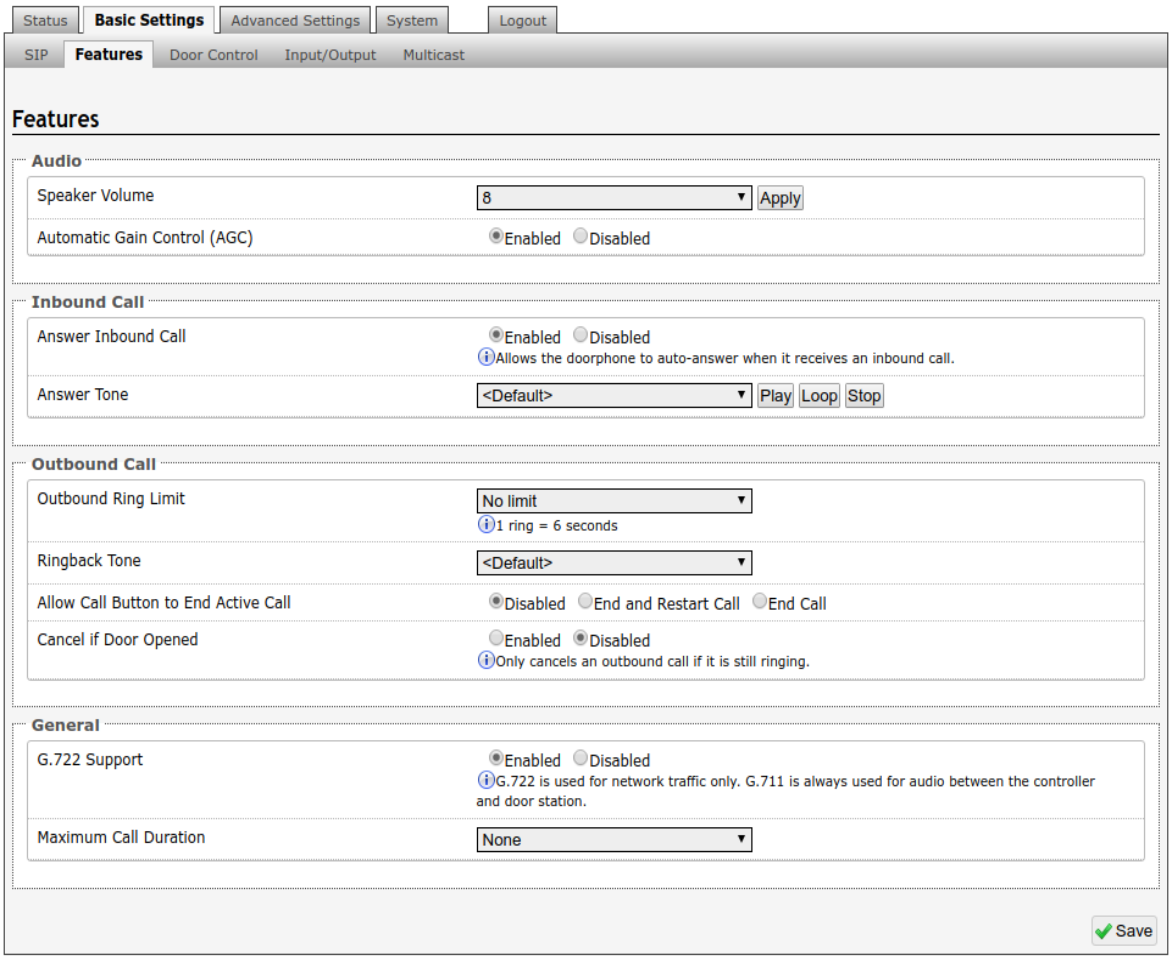
Display Name

Enter a "Display Name" that will be sent when the SIP call is made. The PBX and phone(s) will have to be configured to display this message as the Caller ID.

Extension to Dial

Enter the phone number that will be dialed when the call button on the door station is pressed. This can also be a Hunt Group number. Ensure that voice mail is not reached.

Basic Settings Tab – Features



Speaker Volume

Select speaker audio level of the 8028 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 8028 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

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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 8028 will go back to an idle state.

Ringback Tone

Select an audible ringback tone to be played on the 8028 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.

Cancel if Door Opened

If enabled, cancels an outbound call only if it is still ringing.

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 8028 returns on-hook.

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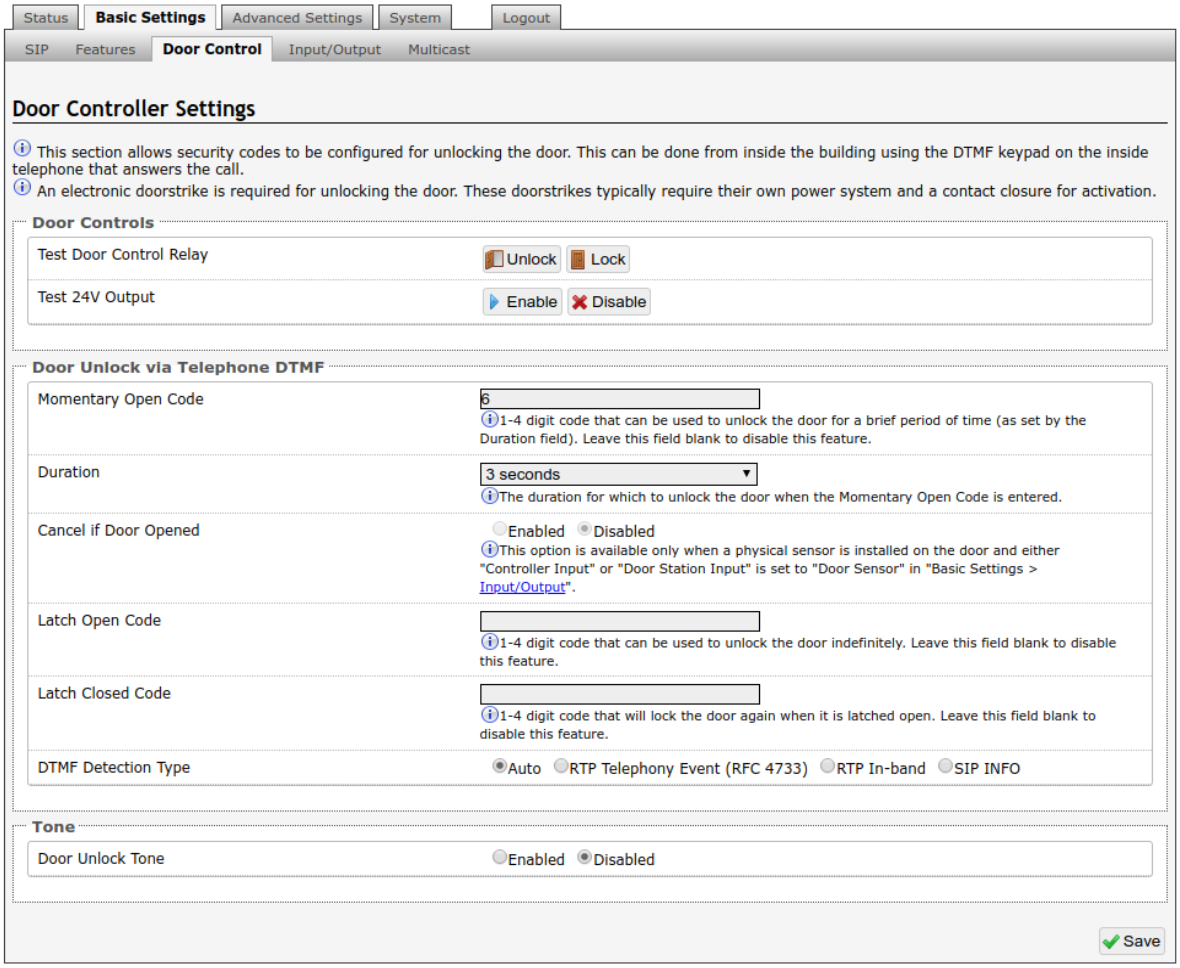
Basic Settings Tab – Door Control



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.

Cancel if Door Opened

Cancels the door unlock (i.e. locks the door again) if the door has been opened to ensure it cannot be opened a 2nd time. This option is available only when a physical sensor is installed (not included) on the door and either "Controller Input" or "Door Station Input" is set to "Door Sensor" in **Basic Settings > Input/Output** tab.

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.

DTMF Detection Type

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

Door Unlock Tone

Allow a tone to be played when the door is unlocked to create awareness.

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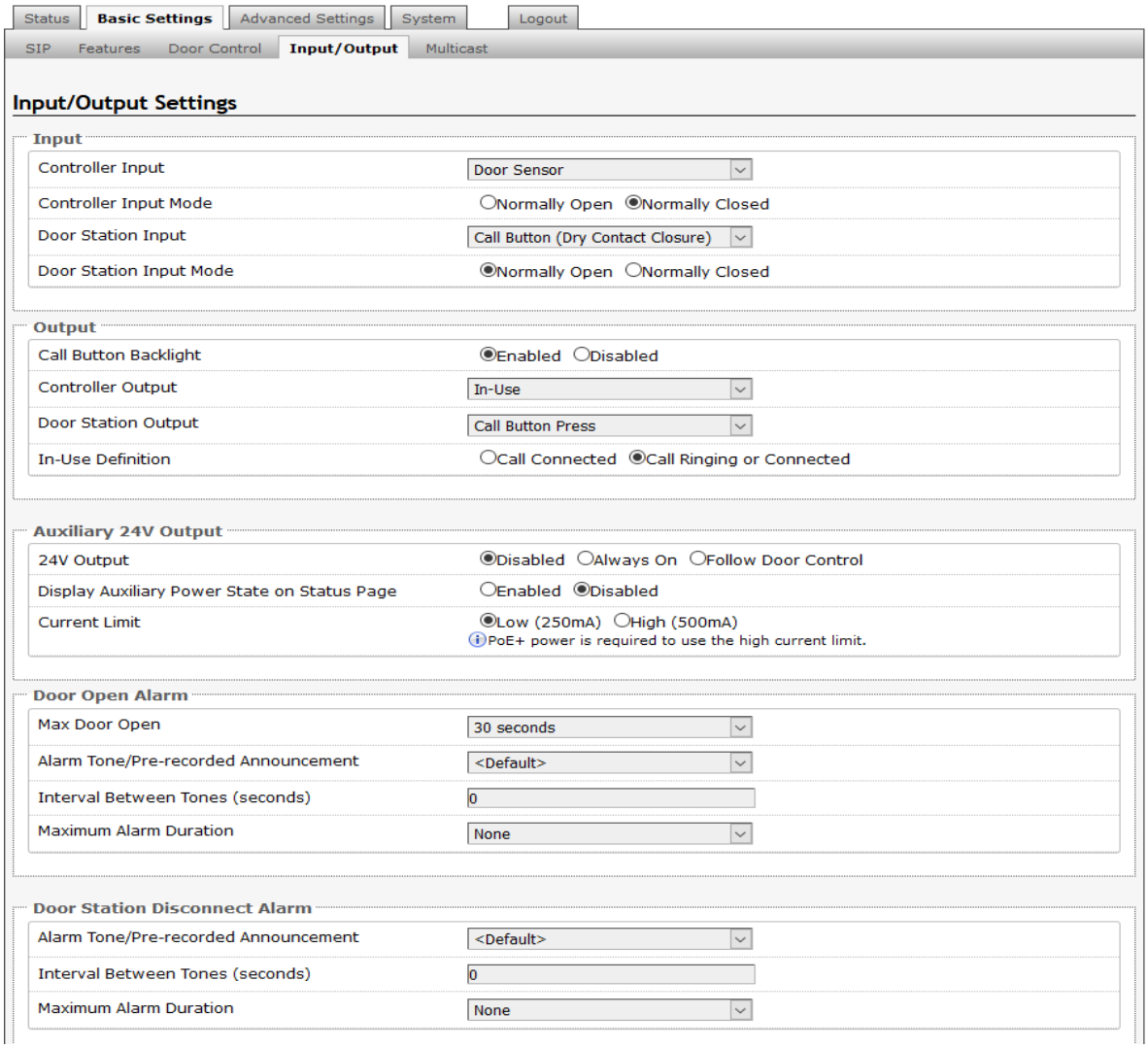
Basic Settings Tab – Input/Output



Controller Input / Input Mode

Select input type to the Controller:

- Disabled
- Call Button (Dry Contact Closure) Normally Open or Normally Closed
- Door Sensor Normally Open or Normally Closed
- Manual Door Release
- Door Control Lockout

Door Station Input / Input Mode

- Disabled
- Call Button (Dry Contact Closure) Normally Open or Normally Closed

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- Door Sensor Normally Open or Normally Closed

Call Button Backlight

Enable or disable the Call Button's red backlight.

Controller Output / Door Station Output

Output can be configured to trigger one of the following Controller / Door Station events:

- In-Use
- Ring
- Call Button Press
- Door Control
- Door Sensor
- Door Alarm
- Follow Controller Input
- Follow Door Station Input

In-Use Definition

Select the meaning of the "In-Use" status to be either "Call Connected" or "Call Ringing or Connected".

24V Output

Set Auxiliary 24V output to be disabled, always on, or to follow door control. If set to follow door control, then this terminal can be wired directly to the door strike (if compatible), without needing to be also wired through the relay.

Display Auxiliary Power State on Status Page

If enabled, status of Auxiliary Power State will be shown on the status page.

Current Limit

Set current limit to low or high.

Max Door Open

Alarm will be triggered if the door remains open for longer than the selected duration.

Alarm Tone/Pre-recorded Announcement

Pre-loaded tones or custom loaded tones/recorded announcement can be used as an alarm tone.

Interval Between Tones (seconds)

Only visible if an alarm tone has been selected in the setting above. Set interval between the alarm tones.

Maximum Alarm Duration

Only visible if an alarm tone has been selected in the setting above. Set maximum alarm duration.

Basic Settings Tab – Multicast

Multicast IP Addresses

Each 8028 SIP Doorphone has its own IP address, and shares a common multicast IP and port number (multicast zone) for multicast packets. The 8028 is able to act as a multicast Slave, allowing it to receive multicast messages (i.e. one-way audio) from a Master device and play it over the intercom speaker.

Note: The 8028 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.

1. Multicast IP addresses range: 224.0.0.0/4 (from 224.0.0.0 to 239.255.255.255)
2. Port numbers range: 1 to 65535
3. By default, the 8028 SIP Doorphone 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 8028 SIP Doorphone 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.

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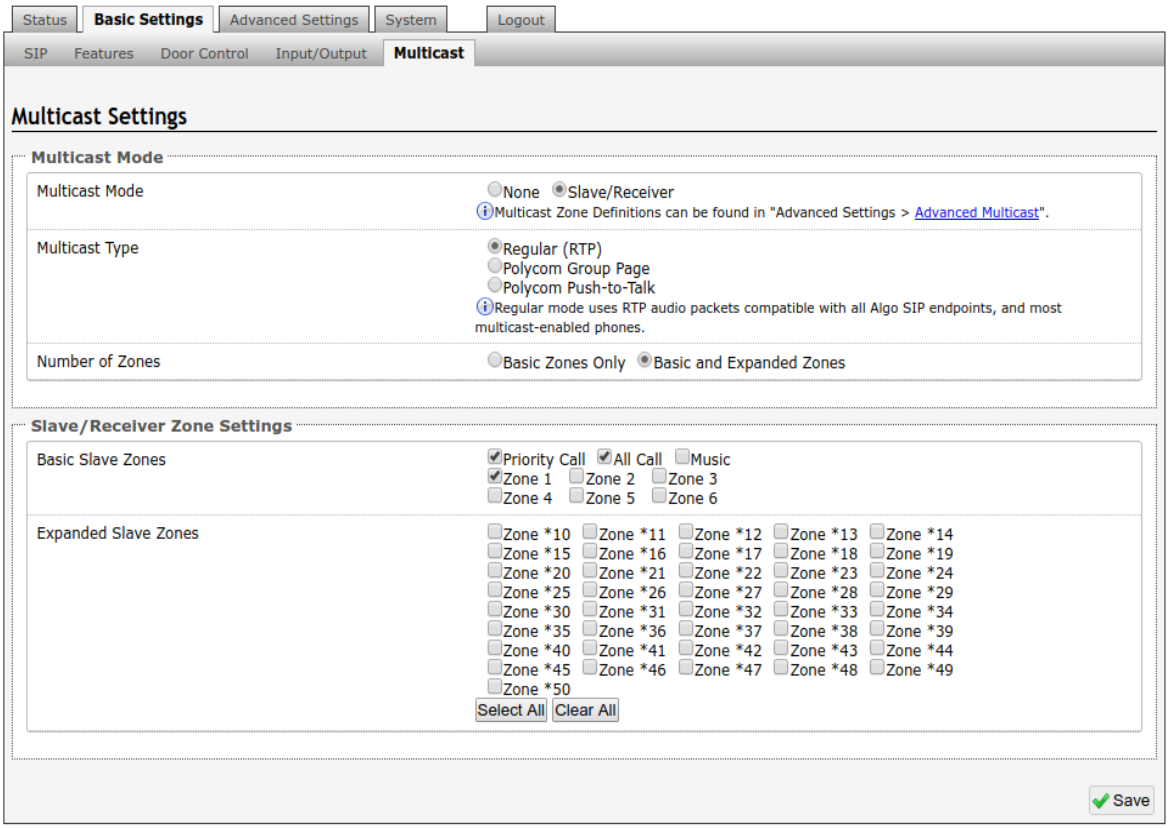


Multicast Mode (Slave Selected)

If Slave mode is enabled the Door Station's speaker will activate when receiving a multicast message.

Multicast Type - Regular

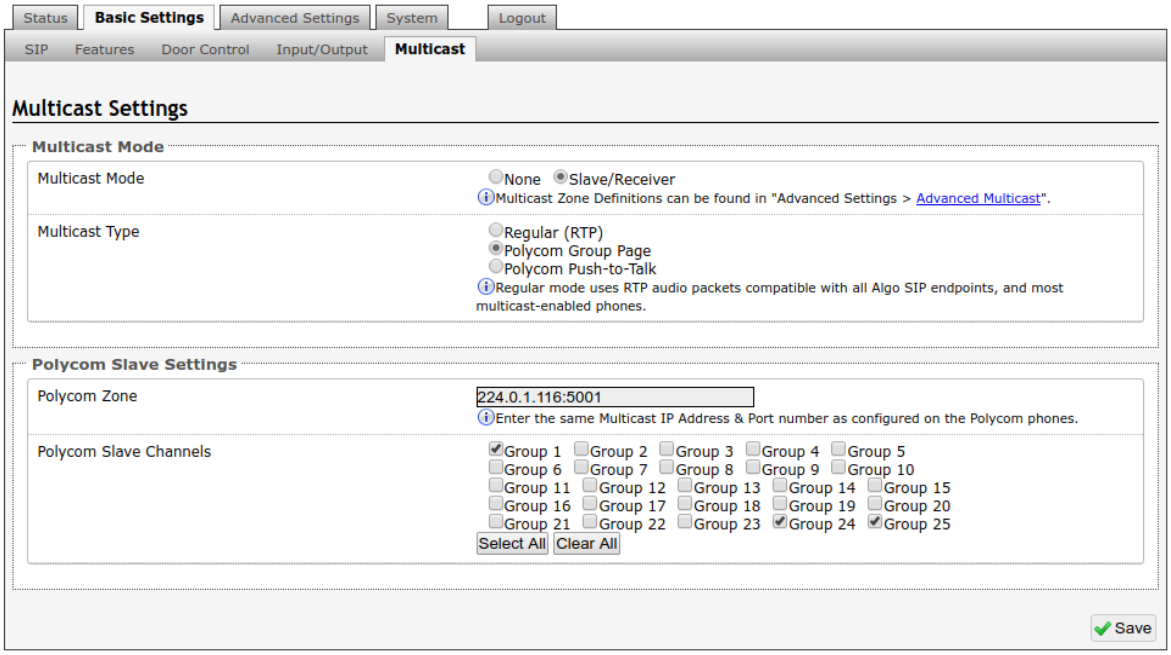
Select "Regular" if receiving multicast from other Algo SIP endpoint(s) and/or multicast-enabled phone(s) that use RTP audio packets.

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 8028 SIP Doorphone to monitor. Note that multicast zone priority is based on the zone definition list order (top to bottom) available under **Advanced Settings > Advanced Multicast tab**.



Multicast Type – Polycom Group Paging/Push-to-Talk

The 8028 SIP Doorphone may receive multicast paging compatible with Polycom ***"on premise group paging"*** protocol.

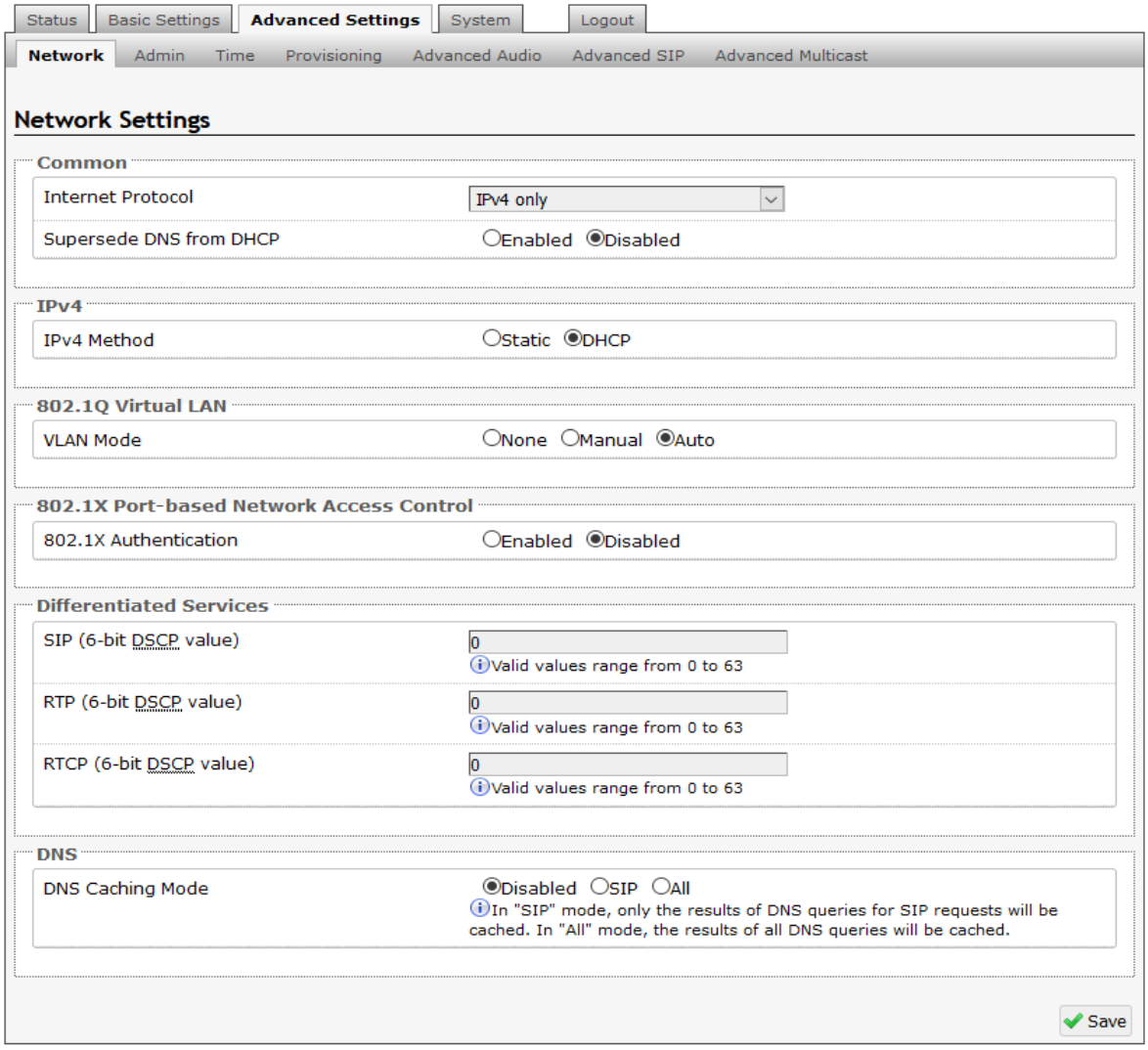
To configure the 8028 as a slave to play Polycom page announcements, select "Group Page" or "Push-to-Talk". Then enter the Polycom Zone (IP Address and Port) that matches the configuration of the Polycom phones and Channels. The "Default Channel" is the target group in a Polycom paging environment.

The Polycom phone used as page audio source for the 8028(s), must be configured to use either G.711 or G.722 audio codec. **The Polycom phone(s) must also be configured with the "Compatibility" setting ("ptt.compatibilityMode") <u>disabled</u>** 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



Internet Protocol

Select between IPv4 only or IPv4 and IPv6.

Supersede DNS from DHCP

Ignore DNS server received from DHCP to use a static one instead.

IPv4 Method

DHCP is an IP standard designed to make administration of IP addresses simpler. When DHCP is selected, it will automatically configure the IP addresses for each 8028 on the network. Alternatively the 8028 can be set to a static IP address.

IPv6 Method

Select between DHCP or static. If static is selected enter the IPv6 address and gateway information.

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

Only visible if VLAN Mode is set to Manual. 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

Only visible if VLAN Mode is set to Manual. 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.

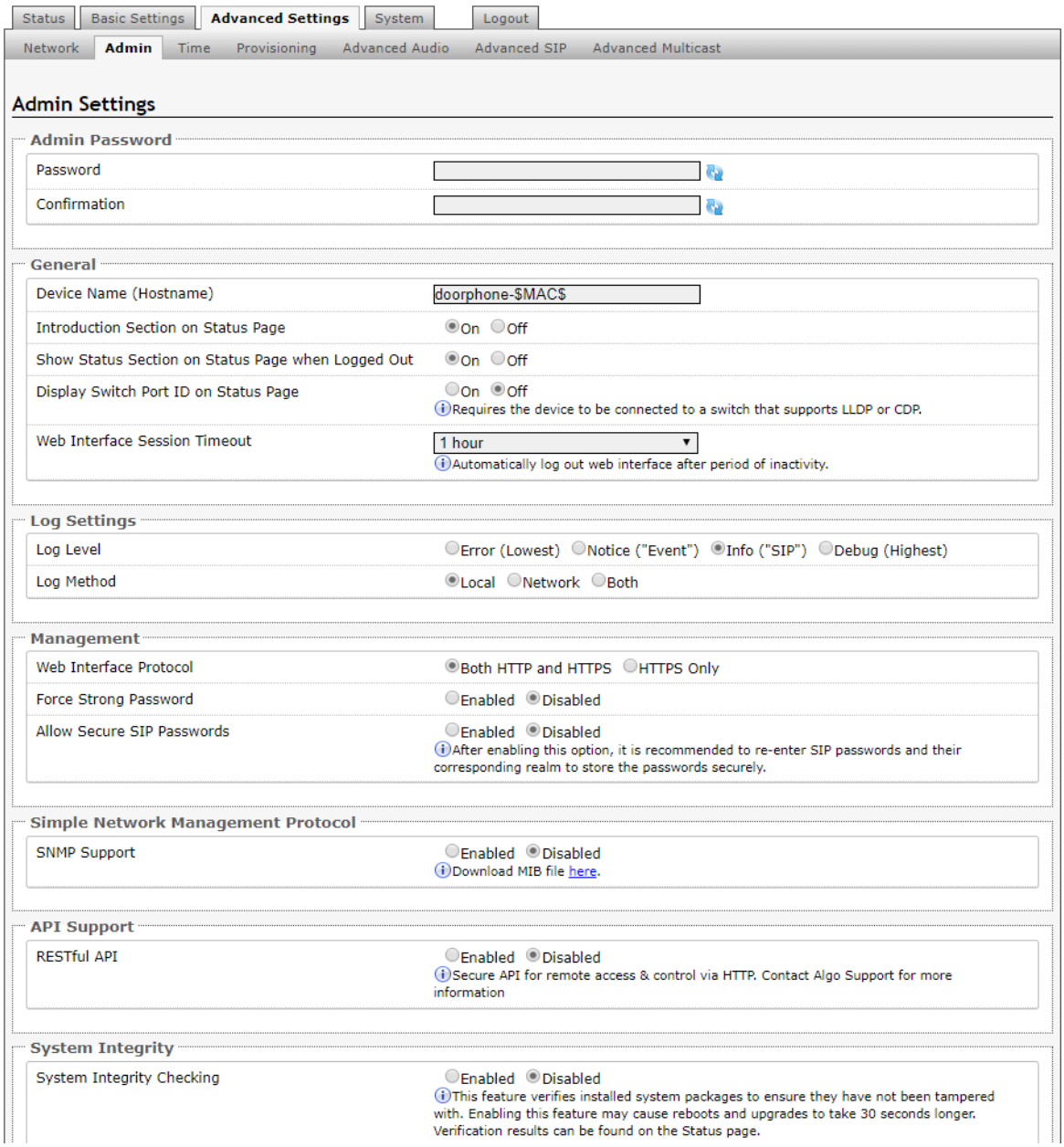
Differentiated Services (6-bit DSCP value)

Provides quality of service if the DSCP protocol is supported on your network. Can be specified independently for SIP control packets versus RTP and RTCP 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 8028 SIP Doorphone 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.

Display Switch Port ID on Status Page

Switch port ID can be displayed on the status page, however the switch must support LLDP or CDP.

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 8028 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

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, 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).

SNMP Support

The 8028 SIP Doorphone will respond to a simple status query for automated supervision. SNMPv3 security may be enabled. Contact Algo technical support for more information.

RESTful API

Secure API for remote access & control via HTTP. Contact Algo 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.

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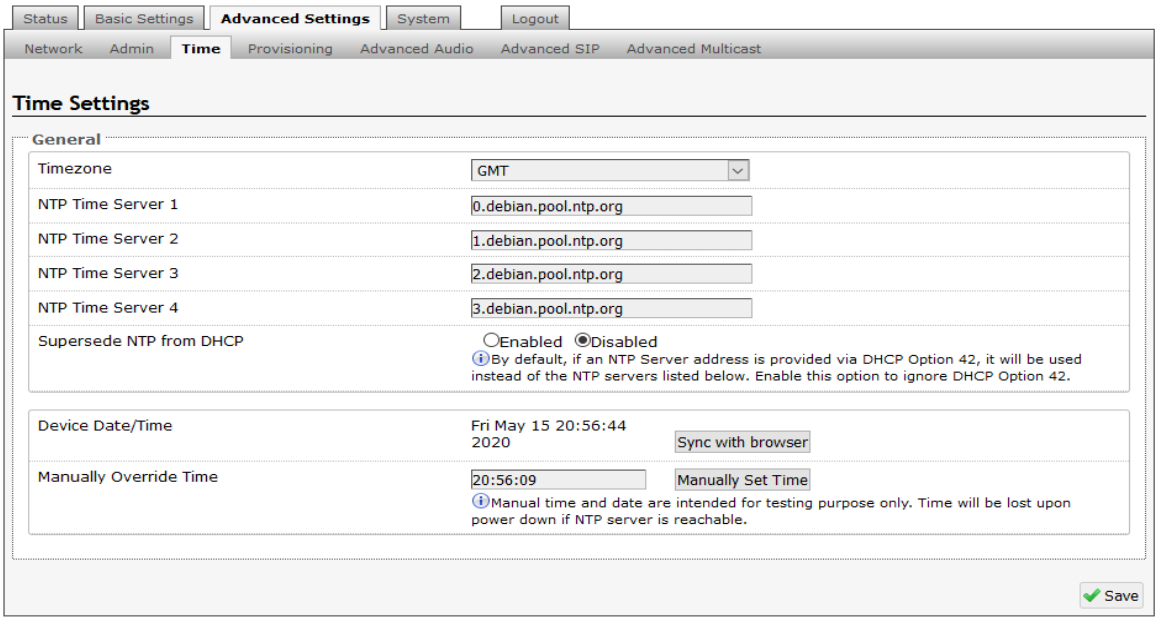
Advanced Settings Tab – Time

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



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.

Supersede NTP from DHCP

By default, if an NTP Server address is provided via DHCP Option 42, it will be used instead of the NTP servers listed below. Enable this option to ignore DHCP Option 42.

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.

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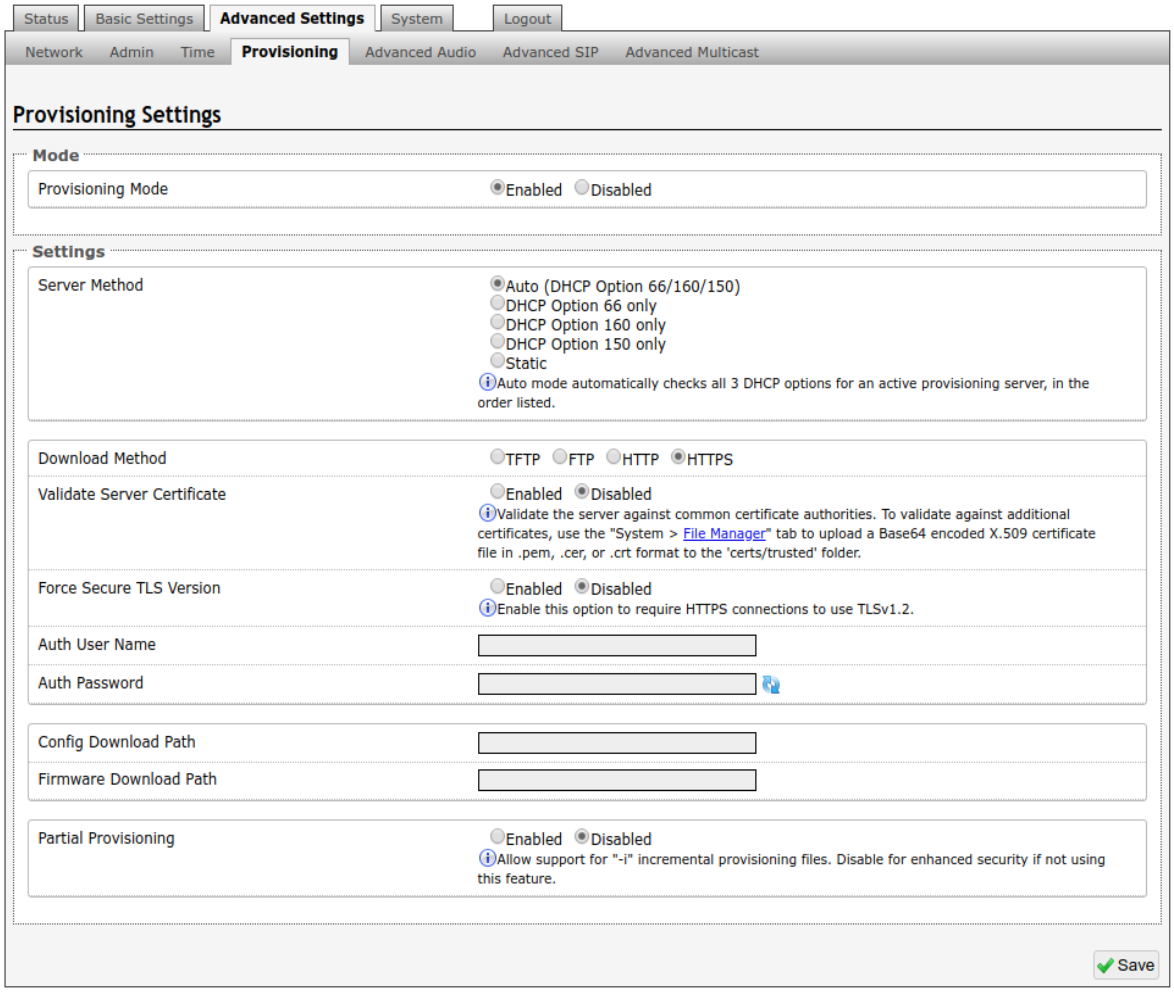
Advanced Settings Tab – Provisioning



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.

Provisioning allows installers to pre-configure the 8028 SIP Doorphone units prior to installation on a network. It is typically used for large deployments to save time and ensure consistent setups.

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, the 8028 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 8028 Doorphone) **algop8028g2.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 (for TFTP mode only). 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

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 the 8028 to the network
2. Access the 8028 Web Interface Control Panel
3. Configure the 8028 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 algop8028g2.conf
8. File algop8028g2.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 8028 SIP Doorphone has automatically downloaded the configuration file.

Generating a specific configuration file

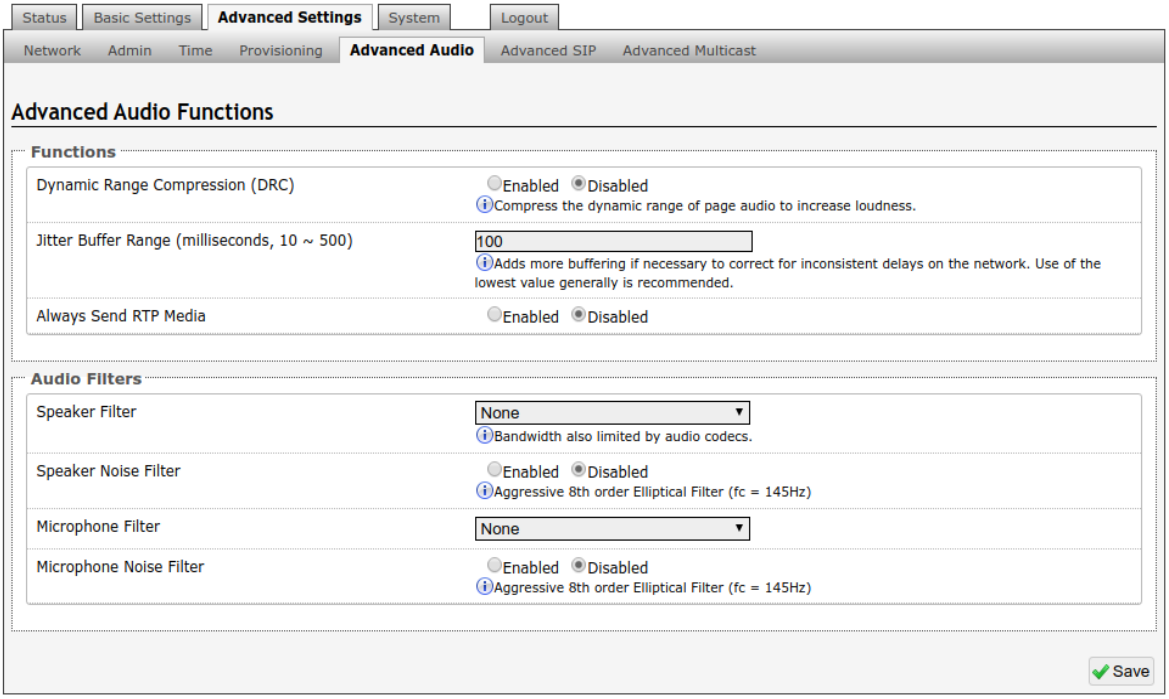
1. Follow steps 1 to 6 as listed in the section "Generating a generic configuration file".
2. Rename file settings.txt to algom[MAC address].conf (e.g. algom0022EE020009.conf)
3. File algom[MAC address].conf can now be uploaded on the Provisioning server.

The specific configuration file will only be downloaded by the 8028 SIP Doorphone with the MAC address specified in the configuration file name. Since all the necessary settings

can be included in this file, the 8028 will be ready to work immediately after the configuration file is downloaded. The MAC address of each 8028 SIP Doorphone can be found on the back label of the unit.

For more Algo SIP endpoint provisioning information, see: www.algosolutions.com/provision

Advanced Settings Tab – Advanced Audio



Dynamic Range Compression (DRC)

If enabled, compresses the dynamic range of page audio to increase loudness.

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.

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).

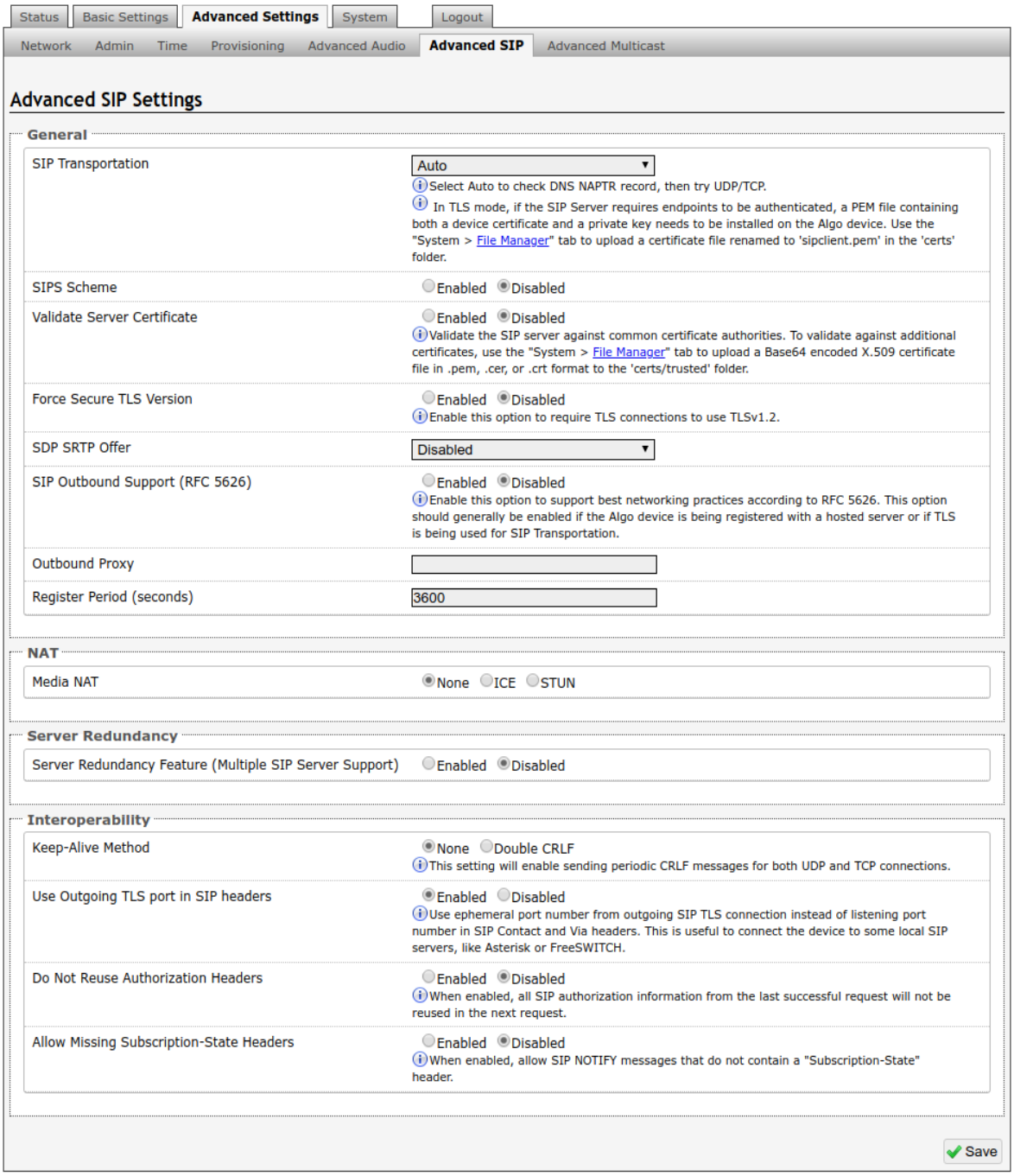
Microphone Filter

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’ or ’Auto’. Enabling SIPS Scheme requires the SIP connection from endpoint to endpoint to be secure.

Validate Server Certificate

Enable this option to validate the SIP server against common certificate authorities. To validate against additional certificates, use the **System > File Manager tab** to upload a Base64 encoded X.509 certificate file in .pem, .cer, or .crt format to the 'certs/trusted' folder.

Force Secure TLS Version

Enable this option to require TLS connections to use TLSv1.2.

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 8028 SIP Doorphone will re-register with the SIP server. Default setting is 3600 seconds (1 hour). Only change if instructed otherwise.

SDP SRTP Offer

Setting ‘SDP SRTP Offer’ to ‘Optional’, means the SIP call’s RTP data will be left unencrypted if the other party does not support SRTP. Setting ‘SDP SRTP Offer’ to ‘Standard’, encrypts RTP voice data, meaning the normal audio RTP packets will now be secure (SRTP). This means SIP calls will be rejected if other party does not support SRTP. The ‘Standard’ option secures the audio data between parties, by making sure that it’s not left out in the open for third parties to later reconstruct and listen to.

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 8028 Doorphone 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 8028 SIP Doorphone will attempt to register with the backup servers. If enabled, the 8028 SIP Doorphone will always attempt to register with the highest priority server.

Backup Server #2

If backup server #1 is unreachable the 8028 SIP Doorphone will attempt to register with the 2nd backup server. If enabled, the 8028 SIP Doorphone 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 8028 SIP Doorphone 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.

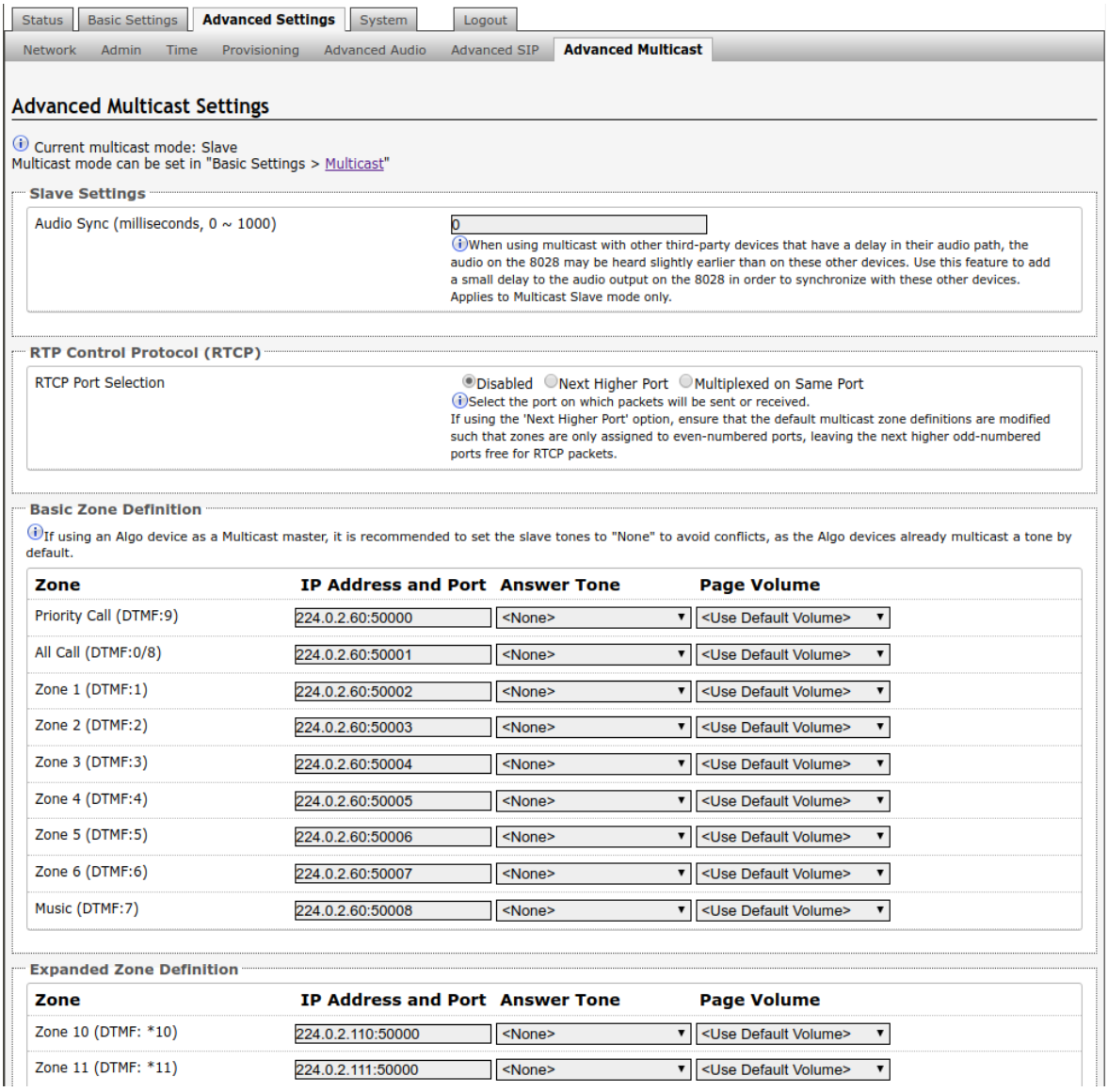
Do Not Reuse Authorization Headers

When enabled, all SIP authorization information from the last successful request will not be reused in the next request.

Allow Missing Subscription-State Headers

When enabled, allow SIP NOTIFY messages that do not contain a "Subscription-State" header.

Advanced Settings Tab – Advanced Multicast



Note: The settings on this tab are only available when in multicast slave mode

Audio Sync

When paging to the 8028 SIP Doorphone as well as other third party devices, the low latency of the 8028 may cause the audio to lead other devices. By adding audio delay up to one second, the 8028 may be synchronized with other endpoints or telephones that have greater latency.

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.

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.

Answer 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.

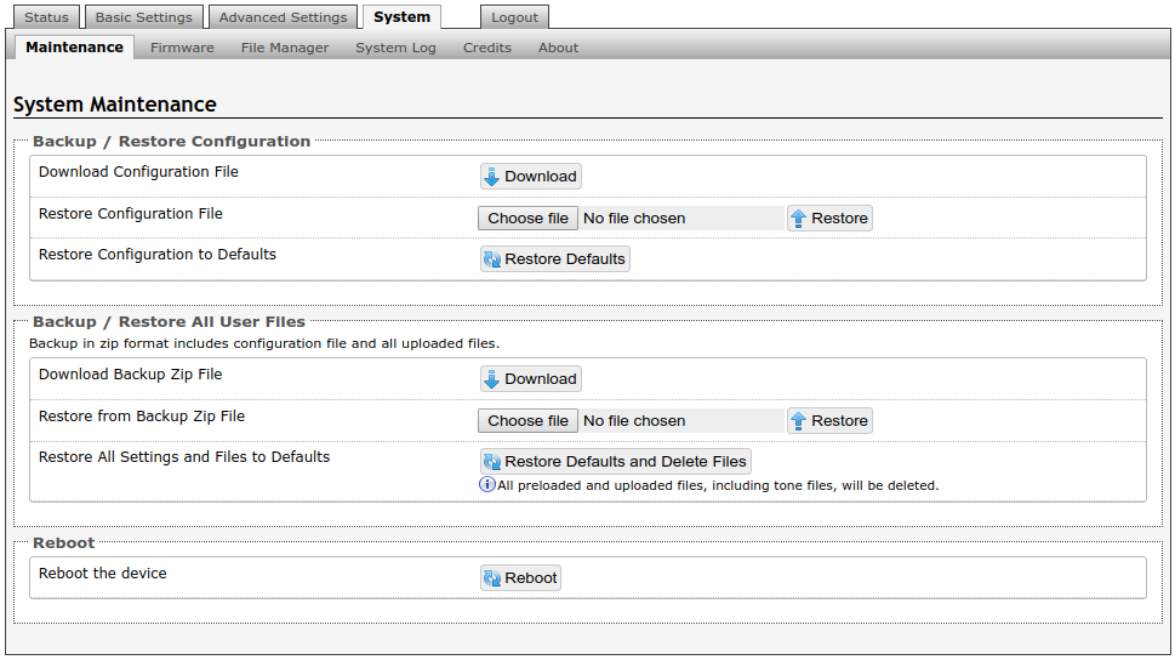
Polycom Slave Tones

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 8028 is set as a Multicast Slave and “Polycom Group Page” or “Polycom Push-to-Talk” are selected in the Basic Settings > Multicast tab.

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 8028 SIP Doorphone (G2) 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

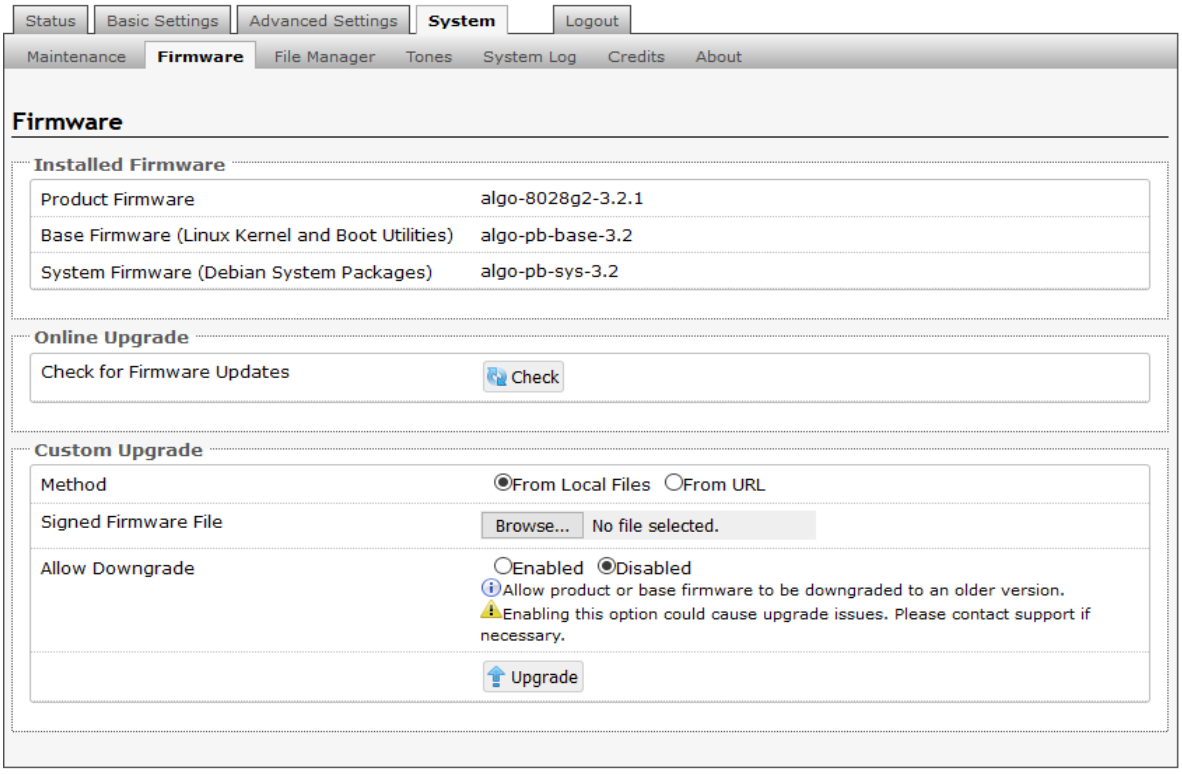
Restore All Settings and Files to Defaults

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.

System Tab - Firmware



Check for Firmware Updates

Automatically check for new firmware version. Please note internet connection is required.

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.

Allow Downgrade

Allow product or base firmware to be downgraded to an older version. Only use this under advice of Algo technical support.

How to upgrade the 8028 SIP Doorphone Firmware

1. From the top menu, click on System, then Firmware.
2. In the Upgrade section, click on Choose File and select the 8028 SIP Doorphone (G2) firmware file to upload. Note that a SFW file must be loaded.
3. Click Upgrade

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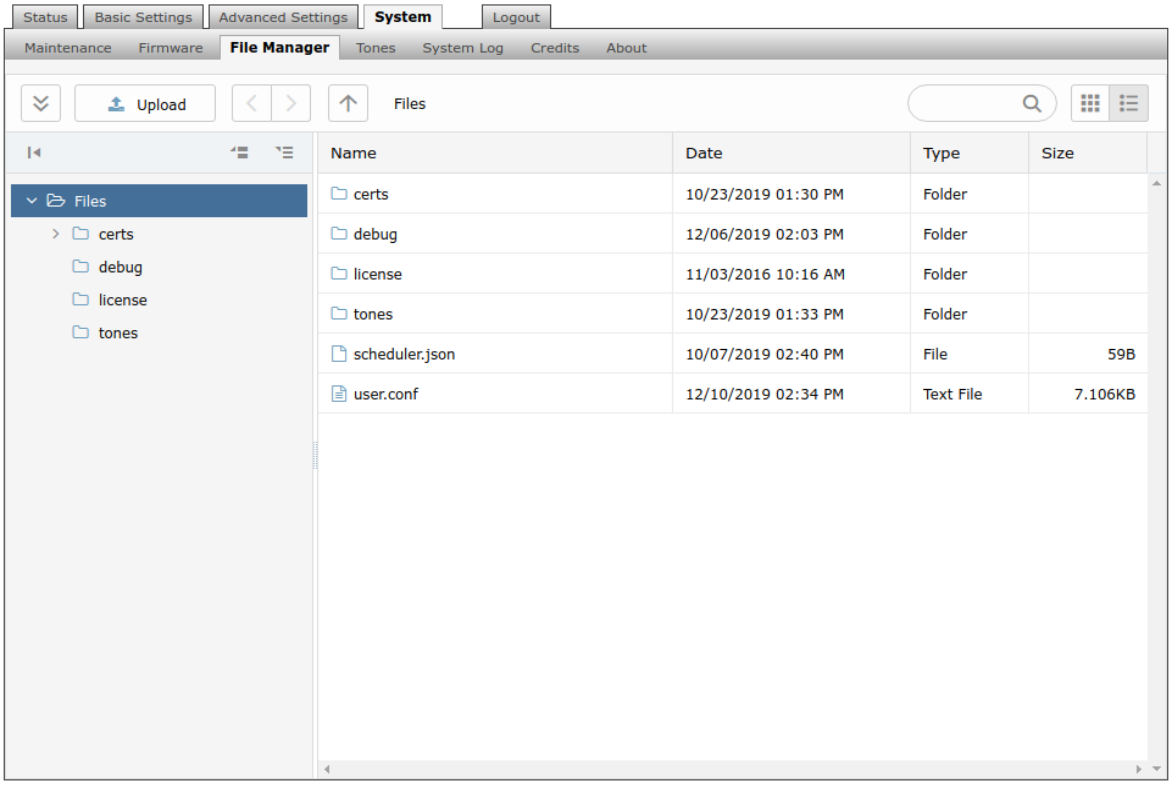
www.algosolutions.com
(604) 454-3792
support@algosolutions.com

4. After the upgrade is complete, confirm that the firmware version has changed (refer to top right of Control Panel).

System Tab - File Manager



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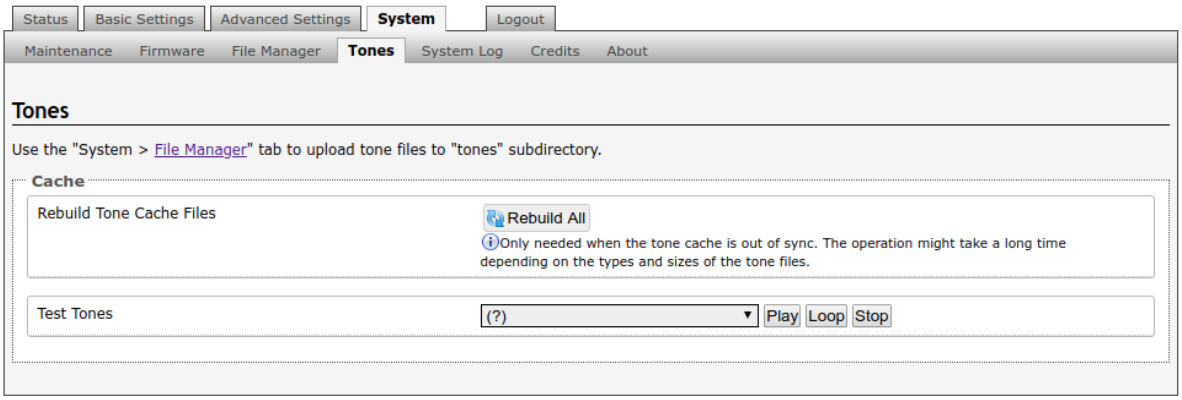
System Tab – Tones



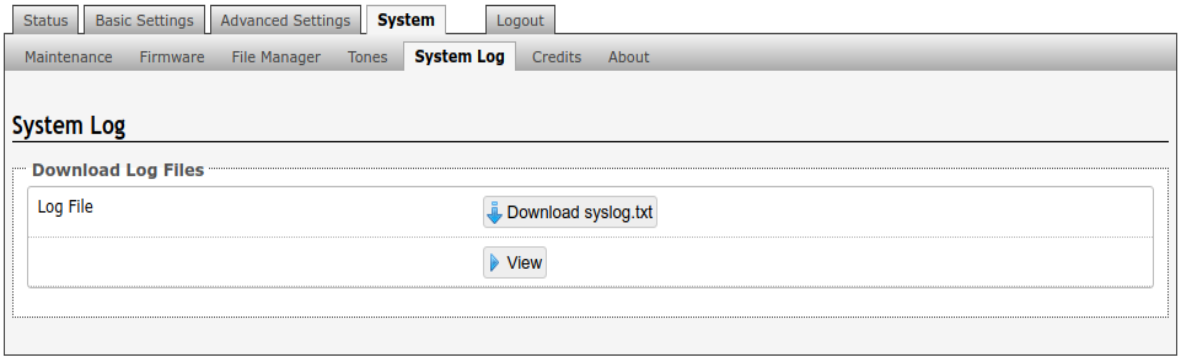
Rebuild Tone Cache Files

Only needed when the tone cache is out of sync. The operation might take a long time depending on the types and sizes of the tone files.

Test Tones

Default tones and custom tones can be tested.

System Tab – System Log



System log files are automatically created and assist with troubleshooting in the event the 8028 SIP Doorphone (G2) does not behave as expected.

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Specifications

Power Input:

48 V PoE IEEE 802.3af Class 0

- Max Power: 9W (PoE), 23W (PoE+), 14W (power supply)
- Idle Power: 2.5W (PoE), 2.5W (PoE+), 2.5W (power supply)
- Optional power supply available
- Also supports PoE+ (IEEE 802.3at), for additional power to 24V Auxiliary Power Output capable of activating compatible door strikes

SIP:

One extension to initiate or answer call
SIP Signalling/Transport Protocols: UDP, TCP, TLS, RTP, SRTP

Multicast & Third-Party Compatibility:

Receive only RTP Multicast (up to 50 Zones),
Receive only Polycom Group Page

Configuration & Provisioning:

Configuration: Web interface or provisioning server
Web Interface: HTTP, HTTPS
Provisioning: TFTP, FTP, HTTP, HTTPS
DHCP Options 66, 150, 160
Reboot via SIP 'check-sync'
Supervision: Compatible with any third party SNMP monitoring software or the Algo 8300 Controller

Networking:

Networking: IPv4, DHCP, VLAN
Link Layer: LLDP, CDP
QoS: DSCP (SIP, RTP, RTCP)
NAT: STUN, TURN, CRLF Keep Alive, SIP Outbound
Address Resolution: DNS, SRV Record
Redundancy: Secondary and tertiary SIP server
Time: NTP Server (up to four).

Audio:

Microphone: Single Wideband
Audio Codecs: G.711 u-law, G.711 A-law, G.722 Wideband.

Wiring:

Up to 1000 Ft (300m) 24 AWG single twisted pair between the Door Station and the Controller

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Input/Output: Built-in Call Button: Backlit tactile silicon rubber

Controller 5 Position Removable Terminal Block	Relay (30V 1A)	NO	Normally Open
		C	Common
		NC	Normally Closer
	24V Auxiliary Power Output (PoE+ or optional power supply needed)	PWR -	0.25A – Power Supply 0.5A - PoE+
		PWR +	
Controller 6 Position Terminal Block	Door Sensor	Max 1kOhm	
	AUX OUT	Max 50mA 30V	
Door Station 6 Position Terminal Block	IN	Max 1kOhm	
	OUT	Max 50mA 30V	

Environmental & Mechanical:
Doorstation rated for Outdoor Use CSA/UL NEMA 3R (appropriate gaskets may be required)
Operating temperature -30 to 60° C (-22 to 140 F)
Controller rated for indoor use 0 to + 40° C (32 to 104° F); 10-95% RH non-condensing
Dimensions (Door Station): 4.5" x 4.5" x 1.50” (11.5 cm x 11.5 cm x 4.0 cm)
Weight (Door Station): 0.5 lbs (0.2 kg)
Dimensions (Controller): 6.75" x 4.3" x 1.18" (17.2 cm x 10.9 cm x 3.0 cm)
Weight (Controller): 0.25 lbs (0.1 kg)
Weight (Shipping): 1.85 lbs (0.8 kg)

Compliance: EN60950:2001, IEEE 802.3-2008, RFC3261, RoHS, CE, FCC Class A, CISPR 22 Class A, CISPR 24, CSA/UL (USA & Canada).

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.

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