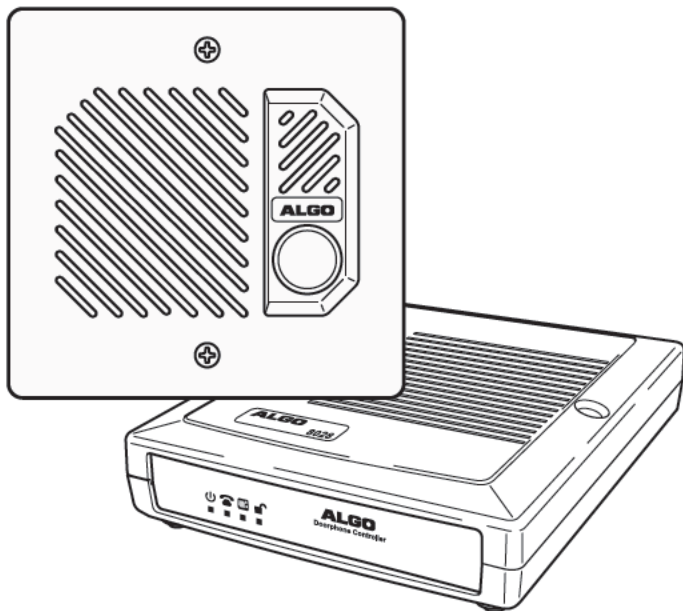


# ALGO



## **8028 SIP Doorphone** *Installation and User Guide*

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Algo Communication Products Ltd., Burnaby, BC Canada V5J 5L2

[www.algosolutions.com](http://www.algosolutions.com)

241008-01

Document #: 90-000548

## Important Safety Notice

The 8028 SIP Doorphone is designed and tested to comply with EN 60950-1:2006 safety requirements.

**When the Doorphone Controller 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.**

If outdoor wiring will be connected to the Doorphone Controller then the power supply provided with the Doorphone Controller must first be connected to a properly Earthed mains supply. Under no circumstances can the Doorphone Controller be disconnected from Earth ground while connected to outdoor wiring.

## Support

Algo is pleased to offer telephone or email support relating to installation issues, applications assistance, or general product inquiries.

### Algo Communication Products Ltd.

4500 Beedie Street

Burnaby, British Columbia

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support@algosolutions.com

604.454.3792

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Algo products are warranted against defect in workmanship for a period of 12 months after installation not to exceed 18 months from date of manufacture.

## FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, or 4) Consult the dealer or an experienced radio/TV technician for help.

# Table of Contents

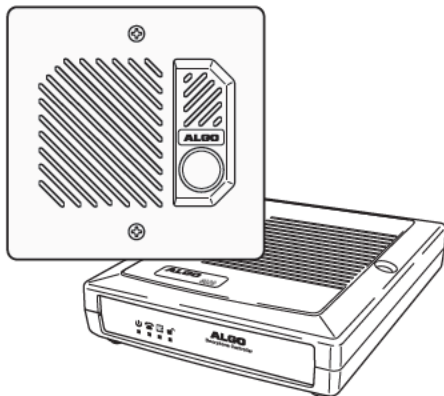
Support . . . . .	2
FCC Compliance . . . . .	2
Important Safety Notice . . . . .	2
<b>Introduction . . . . .</b>	<b>4</b>
Features . . . . .	4
<b>Quick Install &amp; Test . . . . .</b>	<b>5</b>
<b>Applications . . . . .</b>	<b>6</b>
Typical Applications for Auxiliary Inputs and Outputs . . . . .	6
<b>Door or Gate Control Basics . . . . .</b>	<b>8</b>
Door Release . . . . .	8
<b>Setup and Installation . . . . .</b>	<b>10</b>
<b>Programming and Configuration . . . . .</b>	<b>11</b>
Web Interface Control Panel . . . . .	11
<b>NAT . . . . .</b>	<b>19</b>
STUN Server . . . . .	19
Asterisk and other SIP Servers . . . . .	19
<b>Auto-Provisioning (via TFTP) . . . . .</b>	<b>20</b>
MD5 Checksum . . . . .	20
Generating a generic configuration file . . . . .	21
Generating a specific configuration file . . . . .	21
<b>Connections and Lights . . . . .</b>	<b>22</b>
Auxiliary Dry Contact Outputs . . . . .	22
Auxiliary Dry Contact Inputs . . . . .	22
LED Details . . . . .	23
Connection Details . . . . .	24
<b>Specifications . . . . .</b>	<b>25</b>
<b>Related Doorphone Products . . . . .</b>	<b>28</b>

# Introduction

Ideal for secure business entrances, emergency intercom, and residential gates, Algo's 8028 SIP Doorphone 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 8028 SIP Doorphone will work with most hosted or enterprise SIP-based servers supporting third-party SIP endpoints.

The 8028 Doorphone includes a Control Unit, Door Station, and Power Supply. The Control Unit and Door Station can be connected with a single twisted pair wire up to 1,000 feet (300 m) with the Door Station located outdoors and the Control Unit in a dry indoor location.



## Features

- Suitable for commercial or residential applications
- Door Station connected by a single twisted wire pair
- Full duplex capable hands-free voice communication at the Door Station
- Door control relay contacts and available 24 Vdc 0.3 A strike power
- Auxiliary dry contact inputs and outputs from Doorphone Controller and Door Station
- Programmable via Web Interface
- International 110/220 V, 50/60 Hz switching power supply
- Regulatory: CSA/UL, FCC Class B, CE, EN60950-1 2006 CB Scheme

## Quick Install & Test

The 8028 SIP Doorphone requires minimal configuration for a typical installation. Programming is only required to enter the SIP account details, and for more advanced applications.

1. Connect the power supply to the Power Jack of the Doorphone Controller and plug into an available AC outlet.
2. Flush or surface-mount the Digital Door Station at desired location and connect a twisted telephone wire pair between the "CTRL" terminals of the Door Station and the center pair (red and green) of the supplied Telephone Wiring Jack. Polarity is not important.
3. Using the short six conductor modular cable, connect the Telephone Wiring Jack to the Door Station Jack of the Doorphone Controller.
4. Using an Ethernet cable, connect the Ethernet Jack of the Doorphone Controller to your LAN.
5. Press the Call Button on the Door Station. A recorded voice will speak the IP Address of the device. Enter this address in a PC web browser in order to open the Web Interface. Note: The spoken IP address feature will be automatically disabled after a SIP Server is configured in Step 6 (below).
6. Use the Web Interface to enter the SIP Proxy Server address as well as the user account and password that the 8028 SIP Doorphone will use to register. Also enter the target extension that the Doorphone will call.
7. Press the Call Button on the Door Station, then answer to communicate with the Door Station. Press the digit 6 on the phone keypad to activate the door control relay for three seconds (if applicable).



# 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:

### ***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 Control Unit 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.

### ***Trigger Door Bell from Door Station***

When the Door Station call button is pressed, either (or both) the Door Station or Control Unit 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 Control Unit 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.

### ***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 Doorphone can be configured to cancel Door Opening once the door is opened to prevent "tailgating" by unauthorized personnel.

### ***Unlock Door Indefinitely until Canceled***

The door opening control can be set to unlock indefinitely (using the 'Latch Open Code') until canceled (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 Doorphone 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).

***In-Use and Ring***

Either the Control Unit 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.

# Door or Gate Control Basics

Control contacts are provided from the Doorphone Controller and are typically used for door strike activation or gate control. For security, the door control relay is located in the Controller to avoid entry by tampering. The Door Station dry contact output (OUT) may be configured for 'low security' gate control requiring a low current dry contact.

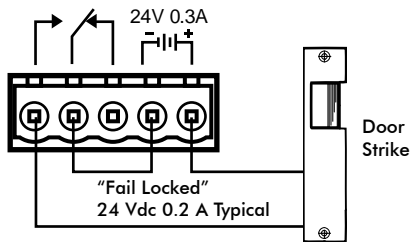
## Door Release

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")

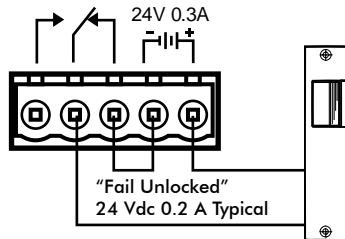
### **Fail Locked / Fail Secure Electric Strike**

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 0.3 A power supply which is suitable for common types of door strikes. 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 door control contacts is 1 A 30 V.

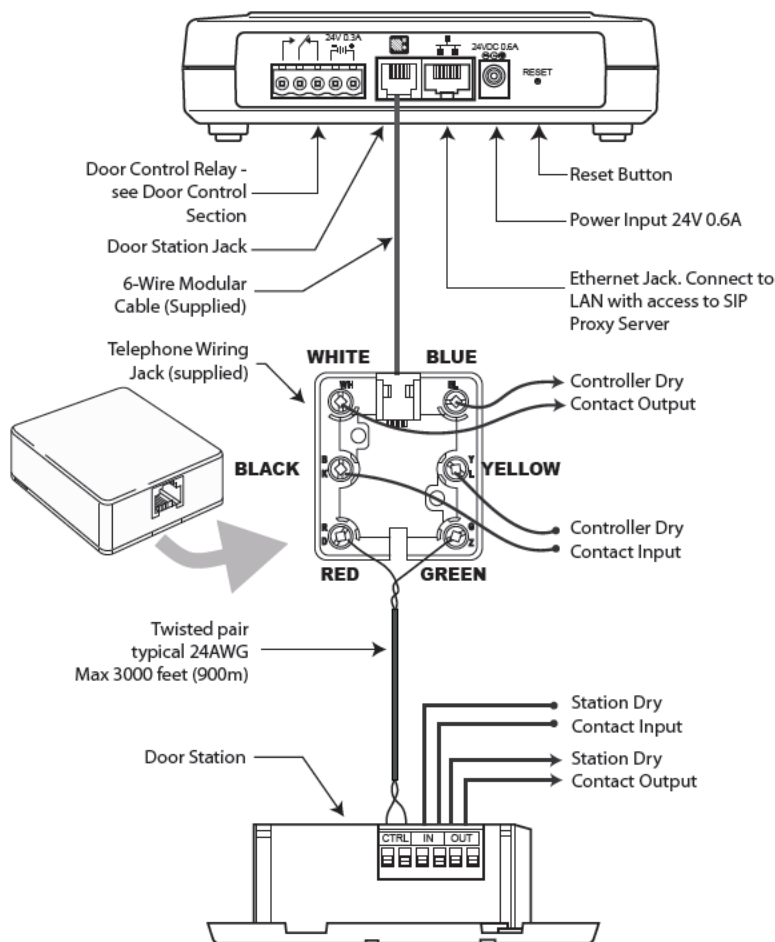
The Door Control relay may also be configured for alternate functionality including In-Use, Ring, and Call Button Press.



*For more information on applications for the 8028 SIP Doorphone, please visit [www.algosolutions.com/8028](http://www.algosolutions.com/8028). The 8028 Doorphone firmware may be modified through the web interface and Algo routinely accepts requests for custom firmware for unique applications.*

# Setup and Installation

8028 SIP Doorphone Controller



# **Programming and Configuration**

## **Connection to Network and Obtaining IP Address**

After connecting the 8028 to a network port, watch for the PWR light to start winking (on and blinking off) during initialization. The 8028 will then attempt to obtain an IP address from the DHCP server. If unsuccessful, the 8028 will default to the fixed IP address 192.168.1.111.

To find the IP address of the 8028, press the Call Button on the Door Station. The 8028 will speak its IP address if it has not yet been configured with a SIP Server address. Alternatively, search the network using the 8028 Locator Tool available for download from [www.algosolutions.com/8028locator](http://www.algosolutions.com/8028locator).

## **Web Interface Control Panel**

The 8028 is programmed using a web interface tool accessed by entering the 8028 IP address into a browser. Using this interface, you can configure the 8028 network settings and select the desired options. These settings survive power cycling and may be programmed in advance prior to site installation.

## Configuration Options

### SIP

☐ SIP

☐ SIP Domain/Proxy

Outbound Proxy (optional)

STUN Server (optional) ⓘ

Registrar (optional)

Register Period (seconds)

Keep-alive Method

Keep-alive Period (seconds)

3600

☒ None ☐ Double CRLF

☐ Extension

Auth ID

Password

Dialing Extension

<b>SIP Domain/Proxy</b>	SIP Server Name or IP address
<b>Outbound Proxy (optional)</b>	Outbound proxy is a proxy (server) that stands between a private network and the Internet.
<b>STUN Server (optional)</b>	Allow communication between SIP server and 8028 if NAT is present (see "NAT" on page 19).
<b>Registrar (optional)</b>	A registrar is a server that accepts REGISTER requests from SIP devices. Configure Registrar if the SIP Proxy does not accept REGISTER requests.
<b>Register Period (seconds)</b>	Maximum requested period of time where the 8028 will re-register with the SIP server. Default setting is 3600 seconds (1 hour). Only change if instructed otherwise.
<b>Keep-alive Method</b>	Maintain connection between the 8028 and the SIP Server if the 8028 is behind NAT.
<b>Keep-alive Period (seconds)</b>	Period of time where the 8028 will send some information to the SIP Server to keep the connection alive.
<b>Extension</b>	The phone number that the 8028 registers with the SIP Server. It will auto-answer any inbound calls.
<b>Auth ID</b>	Authentication ID; Used to register the device on the SIP Server.
<b>Password</b>	SIP password used to register the device on the SIP Server.
<b>Dialing Extension</b>	Phone number to be dialed when the Call button on the door station is pressed.

## Features

### Features

#### Audio Settings

Speaker Volume

Microphone Volume

DSP Noise Reduction ☐ On ☒ Off

Ringback Tone ☒ Enabled ☐ Disabled

#### Inbound Call Settings

Answer Inbound Call ☒ Enabled ☐ Disabled

- Answer Tone ☒ Enabled ☐ Disabled

#### Door Relay Settings

Momentary Open Code

- Duration

- Cancel if Door Opened ☐ Yes ☒ No

Latch Open Code

Latch Closed Code

#### Ring Settings

Outbound Ring Limit

- Cancel if Door Opened ☐ Yes ☒ No

Allow Call Button to End Call ☐ Enabled ☒ Disabled

#### Auxiliary I/O Settings

Controller Output

Door Station Output

Door Relay

Controller Input

Door Station Input

#### Security Settings

Max Door Open

Door Open Alarm

Door Station Disconnected

### Audio Settings

<b>Speaker Volume</b>	Speaker audio level in 3 dB steps (Default: 8)
<b>Microphone Volume</b>	Microphone audio level in 3 dB steps (Default: 7)
<b>DSP Noise Reduction</b>	<ul style="list-style-type: none"> <li>Full Duplex with Noise Reduction</li> <li>Full Duplex without Noise Reduction (Default)</li> </ul>
<b>Ringback Tone</b>	Allows audible ringback tone to be played on Door Station speaker until call is answered <ul style="list-style-type: none"> <li>Enabled (Default)</li> <li>Disabled</li> </ul>

### Inbound Call Settings

<b>Answer Inbound Call</b>	Auto-answer or ignore inbound calls <ul style="list-style-type: none"> <li>Enabled (Default)</li> <li>Disabled</li> </ul>
<b>Answer Tone</b>	An optional beep tone can be played at the Door Station when it answers an inbound call <ul style="list-style-type: none"> <li>Enabled (Default)</li> <li>Disabled</li> </ul>

<b>Door Relay Settings</b>	
<b>Momentary Open Code</b>	1-4 digit DTMF code that can be used to unlock the door for a brief period of time (as set by the Relay Time field). Leave this field blank to disable this feature. (Default: 6)
<b>Duration</b>	The duration for which to unlock the door when the Momentary Open Code is entered.
<b>Cancel if Door Opened</b>	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. Only available if the controller input or door station is configured for Door Sensor mode.
<b>Allow Call Button to End Call</b>	If enabled, allows visitor to end an active call by pressing the Call Button. <ul style="list-style-type: none"> <li>• Enabled</li> <li>• Disabled (Default)</li> </ul>
<b>Latch Open Code</b>	1-4 digit DTMF code that can be used to unlock the door indefinitely. Leave this field blank to disable this feature.
<b>Latch Closed Code</b>	1-4 digit DTMF code that will lock the door again when it is latched open. Leave this field blank to disable this feature.
<b>Ring Settings</b>	
<b>Outbound Ring Limit</b>	<ul style="list-style-type: none"> <li>• No ring</li> <li>• Limit to 1-9 rings (Default: 5 Rings)</li> <li>• No limit</li> </ul>
<b>Cancel if Door Opened</b>	<ul style="list-style-type: none"> <li>• No (Default)</li> <li>• Yes</li> </ul>

## Auxiliary I/O Settings

<b>Controller Output</b>	<ul style="list-style-type: none"><li>• In-Use (Default)</li><li>• Ring</li><li>• Call Button Press</li><li>• Door Control</li><li>• Door Sensor</li><li>• Door Alarm</li></ul>	<ul style="list-style-type: none"><li>• Follow Controller Input</li><li>• Follow Station Input</li><li>• Disabled</li></ul>
<b>Door Station Output</b>	<ul style="list-style-type: none"><li>• In-Use</li><li>• Ring</li><li>• Call Button Press (Default)</li><li>• Door Control</li><li>• Door Sensor</li></ul>	<ul style="list-style-type: none"><li>• Door Alarm</li><li>• Follow Controller Input</li><li>• Follow Station Input</li><li>• Disabled</li></ul>
<b>Door Relay</b>	<ul style="list-style-type: none"><li>• In-Use</li><li>• Ring</li><li>• Call Button Press</li><li>• Door Control (Default)</li><li>• Door Sensor</li></ul>	<ul style="list-style-type: none"><li>• Door Alarm</li><li>• Follow Controller Input</li><li>• Follow Station Input</li><li>• Disabled</li></ul>
<b>Controller Input</b>	<ul style="list-style-type: none"><li>• Door Sensor, Normally Open Input</li><li>• Door Sensor, Normally Closed Input (Default)</li><li>• Manual Door Release Input</li><li>• Door Control Lockout Input</li><li>• Call Button, Normally Open Input</li><li>• Call Button, Normally Closed Input</li><li>• Disabled</li></ul>	
<b>Door Station Input</b>	<ul style="list-style-type: none"><li>• Door Sensor, Normally Open Input</li><li>• Door Sensor, Normally Closed Input</li><li>• Call Button, Normally Open Input (Default)</li><li>• Call Button, Normally Closed Input</li><li>• Disabled</li></ul>	

<b>Security Settings</b>	
<b>Max Door Open</b>	<p>If the Controller or Door Station input is connected to a physical door sensor and also configured in Door Sensor mode (See “Auxiliary I/O Settings” on page 15), then a Door Alarm condition can be triggered if the door remains open for longer than a threshold of:</p> <ul style="list-style-type: none"> <li>• 30 sec</li> <li>• 2 min</li> <li>• 15 min</li> <li>• 30 min</li> <li>• 60 min</li> <li>• 90 min</li> <li>• 120 min</li> <li>• None</li> </ul>
<b>Door Open Alarm</b>	<p>When a Door Alarm condition is detected based on the Max Door Open time above being exceeded, then the 8028 can generate a notification call.</p> <p>Call every:</p> <ul style="list-style-type: none"> <li>• 2 min (Default)</li> <li>• 10 min</li> <li>• 30 min</li> <li>• 1 hour</li> <li>• None</li> </ul>
<b>Door Station Disconnected</b>	<p>If a wiring fault occurs that breaks communication with the Door Station, then the 8028 can generate a notification call.</p> <p>Call every:</p> <ul style="list-style-type: none"> <li>• 2 min</li> <li>• 10 min</li> <li>• 30 min</li> <li>• 1 hour</li> <li>• None (Default)</li> </ul>



## Network

### Network

DHCP

☒ On ☐ Off

VLAN support ⓘ

☒ Enabled ☐ Disabled

VLAN ID(0~4094)

VLAN Priority(0~7)

☐ Advanced Settings

DHCP Timeout (seconds)

60

NTP Server

<b>DHCP</b>	Dynamic Host Configuration Protocol (DHCP) is an IP standard designed to make administration of IP addresses simpler. Normally set to On, DHCP will automatically configure IP addresses for each 8028 on the network. Alternatively, if your IT Administrator has assigned one or more <i>static</i> IP addresses, set the DHCP setting to Off.
<b>VLAN Support</b>	VLAN Tagging (or IEEE 802.1Q) allows sharing of a physical network link by multiple independent networks.
<b>VLAN ID</b>	A 12-bit field specifying the VLAN to which the frame belongs. A value of 0 means that the frame does not belong to any VLAN. The hexadecimal values of 0x000 and 0xFFF are reserved. All other values may be used as VLAN identifiers, allowing up to 4094 VLANs.
<b>VLAN Priority</b>	Priority Code Point (PCP): a 3-bit field which refers to the IEEE 802.1p priority. Values are from 0 (best effort) to 7 (highest); 1 represents the lowest priority.
<b>DHCP Timeout (seconds)</b>	Length of time following a request from an 8028 to the DHCP server that the 8028 will wait before assuming the server is not available. After such time, the 8028 will use its default address (192.168.1.111). Default timeout is 60 seconds.
<b>NTP Server</b>	Network Time Protocol server IP address. Allows device to automatically set its clock by connecting to an external server.

## Admin

### Admin

Device Name ⓘ

doorphone

Password

••••

Re-type Password

••••

Provisioning:

☒ Enabled ☐ Disabled

Prov. Server Method:

☒ DHCP Option 66 ☐ Static

Prov. Static Server:

Prov. Download Method

☒ TFTP ☐ FTP ☐ HTTP

Prov. Download Path

☒ Advanced Settings

Log Level

☒ Error (Low)  
☐ Info (Medium)  
☐ Debug (High)

Log Size (1~1000 KB)

100

Log Method

☒ Local ☐ Network ☐ Both

Log Server IP

<b>Device Name</b>	Name to identify the device in the Algo Network Device Locator Tool.
<b>Password</b>	<p>Password to log into the 8028 web interface.</p> <p>You should change the default password in order to secure the device on the network. If you have forgotten your password, a soft reset will restore the default setting (including <i>all</i> of the device's default settings). To do this, first disconnect power from the 8028 Doorphone Controller. Then press and hold the Reset button on the back of the device, and while doing this, reconnect the power. Continue to hold the Reset button until the LEDs on the front of the controller start to flash.</p>
<b>Provisioning</b>	See "Auto-Provisioning (via TFTP)" on page 20.
<b>Log Level</b>	Amount of information provided in the log files. This value should only be changed if advised by Algo.
<b>Log Size</b>	Amount of internal memory reserved for recording log file. Default is 100 kB.
<b>Log Method</b>	Sets storage location of log file data. Default setting is Local. Choose Network (or Both) to send log messages to any "Syslog" server, an option to prevent loss of data during a powerdown.
<b>Log Server IP</b>	IP address of Log Server if Log Method is set to Network or Both. Format: #.#.#.#

# NAT

NAT (Network Address Translation) is located between a private network and the Internet. When properly configured, it allows an 8028 installed on a private network to have access to the outside world, such as would be required when using a hosted SIP provider (i.e. a SIP server that is remotely located).

Also provides NAT support for both STUN and Asterisk. To configure NAT for the server that applies to your application, follow these steps:

## STUN Server

1. Enter the STUN Server name or IP address
2. Set Keep-alive Method to None
3. Click Save Settings

The screenshot shows the 'SIP' configuration window. The 'SIP Domain/Proxy' field is set to '10.0.0.10'. The 'Outbound Proxy (optional)' field is empty. The 'STUN Server (optional)' field is set to '10.0.0.30'. The 'Registrar (optional)' field is empty. The 'Register Period (seconds)' field is set to '3600'. The 'Keep-alive Method' is set to 'None' (selected with a radio button). The 'Keep-alive Period (seconds)' field is set to '30'.

## Asterisk and other SIP Servers

1. Set Keep-alive Method to Double CRLF
2. Set Keep-alive Period to 30
3. Click Save Settings

The screenshot shows the 'SIP' configuration window. The 'SIP Domain/Proxy' field is set to '10.0.0.10'. The 'Outbound Proxy (optional)' field is empty. The 'STUN Server (optional)' field is empty. The 'Registrar (optional)' field is empty. The 'Register Period (seconds)' field is set to '3600'. The 'Keep-alive Method' is set to 'Double CRLF' (selected with a radio button). The 'Keep-alive Period (seconds)' field is set to '30'.



*The NAT library sends the binding requests for each port every 30 seconds to ensure NAT mapping is valid all the time.*

## Auto-Provisioning (via TFTP)

Auto-provisioning allows installers to pre-configure 8028 units prior to installation on a network. It is typically used for large deployments.

If desired, 8028 configuration files can be automatically downloaded from a TFTP (Trivial File Transfer Protocol) server using DHCP Option 66. Option 66 is a term used by some DHCP vendors to describe DHCP code 66. This option code (when set) supplies a TFTP boot server address to the DHCP client to boot from.



*DHCP must be enabled in order to use DHCP Option 66 for auto-provisioning.*



*FTP and HTTP protocols are also supported, as well as a static Provisioning Server address instead of DHCP Option 66.*

One of two files can be uploaded on the TFTP server:

- generic file `algop8028.conf`, or
- specific file `algom[MAC_Address].conf`



If “Prov. Download Path” is defined as `Prov_Path` (by default it’s empty), and “Prov. Download Method” is set to TFTP, the device will download configuration files from these URLs:

`tftp://Prov_Server/Prov_Path/algom[MAC_Address].conf`

`tftp://Prov_Server/Prov_Path/algop8028.conf`

## MD5 Checksum

In addition to the .conf file, an .md5 checksum file must also be uploaded to the TFTP 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 <http://www.fourmilab.ch/md5> may be used to generate this file.

## Generating a generic configuration file

1. Connect an 8028 on the network
2. Access the 8028 web interface
3. Configure the 8028 with desired options
4. Click on the Services tab and then on Backup Settings
5. Save the file *settings.txt*
6. Rename file *settings.txt* to *algop8028.conf*
7. File *algop8028.conf* can now be uploaded on the TFTP server



*If using a generic configuration file, extensions and credentials have to be entered manually once the 8028 has automatically downloaded the configuration file.*

## Generating a specific configuration file

1. Follow steps 1 to 5 as listed in the section “MD5 Checksum” on page 20.
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 TFTP server.



*The specific configuration file will only be downloaded by the 8028 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 can be found on the back label of the unit.*

# Connections and Lights

## Auxiliary Dry Contact Outputs

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

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 door bell)

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 Doorphone 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.

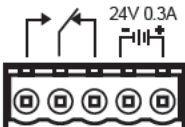






See “Configuration Options” on page 12 for more information on setting up auxiliary inputs and outputs.

## LED Details

<b>Power</b>		<ul style="list-style-type: none"><li>• On steady: Power is OK, but Ethernet Link not established</li><li>• Blinks one second on, one second off: Ethernet Link status OK, but IP Address not yet obtained</li><li>• Light on, blinks off briefly every two seconds: Link and IP Address established successfully</li></ul>
<b>Telephone</b>		<ul style="list-style-type: none"><li>• Off - Not registered with SIP server</li><li>• Light on, blinks off briefly every two seconds: Successfully registered with SIP Server, ready for use</li><li>• Blinks one second on, one second off: error registering with SIP Server – check configuration</li><li>• On steady: offhook or ringing state is currently active</li></ul>
<b>Door Station</b>		<ul style="list-style-type: none"><li>• On steady when door station is connected</li><li>• Flashing indicates communication errors</li></ul>
<b>Lock</b>		<ul style="list-style-type: none"><li>• On when Door Relay is activated</li><li>• May flash to indicate when the door is opened (if the dry contact is triggered, and configured as a door detector)</li></ul>

## Connection Details

<b>Door Control</b> 5 Position Removable Terminal Block	Relay	NO	Normally Open	
		C	Common	
		NC	Normally Closed	
	Auxiliary Power	PWR -	0.3 A (GND)	
		PWR +	0.3 A (24 V)	
<b>Door Station Jack</b> RJ12 Telephone Jack	Center Pair (Red & Green)		Door Station	
	Middle Pair (Yellow & Black)		Dry Contact Input Max 1 kΩ	
	Outside Pair (Blue & White)		Dry Contact Output Max 50 mA 30 V	
<b>Ethernet Jack</b> RJ45 Telephone Jack	Connect to LAN with access to SIP-compliant Proxy Server			
<b>Reset Button</b>	To return all settings to a factory default, press and hold the reset button at startup. Continue to hold the button until all LEDs start to flash.			RESET 
<b>Door Station</b> 6 Position Terminal Block	CTRL	Connect to Door Station Jack of Doorphone Controller		
	IN	Dry Contact Input to Door Station (e.g. Door Contact, Doorbell Switch); Max. 1 kΩ		
	OUT	Dry Contact Output from Door Station (e.g. Gate Control); Max 50 mA 30 V		



# Specifications

Compatibility	SIP
Configuration	Web Interface or TFTP Auto-Provisioning
Network Address	DHCP or static IP address
NAT (Network Address Translation)	STUN Server or Keep-Alive
Speech	Full Duplex Capable
Codec	G.711
Physical	Separate Controller and Door Station

## Controller

Power	AC Mains Adapter 95-230 V 50/60 Hz Included
Indicators	Power, Door Station Status, In-Use, Door Unlock
Network Connection	RJ45 Jack
Installation	Shelf or wall mounted
Environmental	Dry indoor location
Door Control Connection	5 Position terminal strip
Door Control Power	Available 24 V, 300 mA Strike power +/-
Door Control Relay	Relay C, NO, NC phone keypad activated; Maximum 30 V, 1 A
Door Station Connection	RJ12 Jack Center Pair
Door Station Wiring	24 AWG Twisted Pair to 1000 Ft (300 m)
Auxiliary Input Connection	RJ12 Jack Second Pair
Auxiliary Input Electrical	Detects dry contact closure 24 V 4 mA sensing current
Auxiliary Input Functions	Manual door release; Door control lockout; Door sensor NC (Default) or NO; Call button NC or NO; Disabled
Auxiliary Output Connection	RJ12 Jack Outside Pair
Auxiliary Output Electrical	Normally open switch 180 Ohms active; Maximum 30 V, 50 mA
Auxiliary Output Functions	In-Use (Default); Ringing; Call button pressed; Door unlock; Door open (requires door sensor); Door alarm (requires door sensor); Door sensor NC (Default) or NO; Follow Controller input; Follow Door Station input; Disabled

Door Station	
Power	Provided by Controller link
Wiring	Up to 1,000 Ft (300 m) 24 AWG single twisted pair to controller
Signalling	Digital link - bi-directional voice and data
Call Button	Backlit tactile silicon rubber
Connections	6 Position terminal strip - Controller, Aux In, Aux Out
Installation	Flush or surface mounted using supplied plastic bezel; Fits two gang electrical box
Environmental	NEMA 3R Rated for outdoor locations; Ambient temperature -30 to +60° C.
Auxiliary Input Electrical	Detects dry contact closure 5 V, 1 mA sensing current
Auxiliary Input Functions	Door sensor NC or NO; Call button NC or NO (Default); Disabled
Auxiliary Output Electrical	Normally open switch 180 Ohms active; Maximum 30 V, 50 mA
Auxiliary Output Functions	In-Use; Ringing; Call button pressed (Default); Door/gate unlock; Door open (requires door sensor); Door alarm (requires door sensor); Door sensor NC (Default) or NO; Follow Controller input; Follow Door Station input; Disabled



Specifications are subject to change without notice. Some features may only be available in specific firmware or hardware releases.

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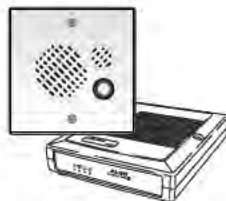
# ALGO

## Related Doorphone Products

### **8028V Tamper-Proof SIP Doorphone**

Same as the model 8028 SIP Doorphone with the exception that the supplied digital door station is a special tamper-proof design. Suitable for environments where there is a high potential for attempted damage or abuse.

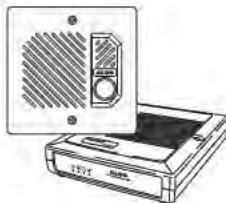
**[www.algosolutions.com/8028V](http://www.algosolutions.com/8028V)**



### **3226 FXO Trunk Port Doorphone**

The 3226 emulates a Central Office (CO) telephone line, allowing it to connect directly to a FXO Gateway or telephone system analog trunk port. Configurable ring cadence and CLID message. Supplied with digital door station with both stainless steel and brass faceplates.

**[www.algosolutions.com/3226](http://www.algosolutions.com/3226)**



### **3228 FXS Station Port Doorphone**

The 3228 emulates an analog telephone set, allowing it to connect to an FXS gateway or telephone system analog station port. Configurable for hotline or extension dialing. Supplied with digital door station with both stainless steel and brass faceplates.

**[www.algosolutions.com/3228](http://www.algosolutions.com/3228)**

