Panphones IP-SIP & CSIP
Configuration Manual

CSIP V6-4.3-01-EN

07/12/2022

Notice

This document refers to the PANPHONE & CSIP devices with IPSIP telephony interface.

Additional copies of this manual may be obtained from the Manufacturer. Reproduction of this manual or parts thereof without written permission from the Manufacturer is strictly prohibited.

Manufacturer reserves the right to modify the hardware and software described herein without prior notice. However, changes made to the hardware or software described do not necessarily render this publication invalid.

Declaration of conformity

Manufacturer hereby declares that the PANPHONE and CSIP products models complies with the essential requirements specified in the directive 1999/05/EC on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

Content

1.- Introduction *Pag. 4*

1.1.- General description

1.2.- Main characteristics

1.3.- Technical specification

2.- Installation and mounting *Pag. 6*

2.1.- Connection

2.2.- Configuration jumpers

3.- Programming *Pag 9*

3.1.- Main screen

3.1.1.- Home

3.1.2.- SIP account

3.1.3.- Connectivity

3.1.4.- Multimedia

3.1.5.- Relays

3.1.6.- keyboard and push button programming

3.1.7.- Modules and licenses

3.1.8.- Advanced configuration, tools

3.1.9.- User configuration

4.- Additional PCB circuit *Pag. 23*

5.- Mounting accessories *Pag. 24*

6.- Performance and Technical data *Pag. 25*

1.- Introduction

Welcome to the user´s network of **PANPHONE CSIP products.**

The product you purchased is part of a range of communication systems of PANPHONE CSIP for home, offices, multifamily systems for buildings and gated communities or call to nurses in hospitals.

1.1.- General description

The PANPHONE CSIP device is a smart, hands-free IP Intercom that can be connected as a SIP extension of an IP telephone exchange (IP PBX) or to a SIP backbone, either on a local or external network.

It has relays with voltage-free contacts to open up to two doors or other applications (control lights, sirens or activation recording system, etc...), from anywhere. The programming of the PANPHONE CSIP is done through an internal web page (web server), which is accessed from a standard internet browser, from any part of the Ethernet network where the device has been connected. If you are not in a network environment, you can connect to a "crossed" UTP cable.

1.2.- Main Characteristics

- Up to 5 independent SIP accounts with the main audio codecs.
- Communication via PBX or Point-to-Point exchange (p2p) via IP call.
- Wireless communication by WIFI or GSM 4G/LTE
- Relay activation from any extension or phone that supports DTMF.
- Independent speaker and microphone level volume control.
- Device configuration via WEB interface (web server).
- Auto-response for incoming calls.
- **Full-Duplex** audio.
- Echo cancellation.
- Noise cancellation.
- Pre-recorded audios.
- Video-calls possible with optional camera.
- RS485 communication

- Remote audio test.
- Call signal tones.
- History of actions or events.
- Access control history
- Log VoIP traffic.
- Making calls to extensions or IP addresses from the Web.
- Configurable keys.
- Access control system via **PIN** keyboard or **RFID** cards and **QR** code

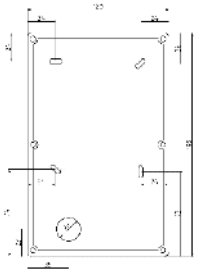
1.3.- Technical specification

- Codec Supported audio: G.711 (u-Law, a-Law), G722, G726, G729, GSM and OPUS.
- Integrated video, **MPEG-4 H.264** Codec (camera only).
- VoIP protocols: SIP-RTP, RFC 3261.
- DTMF detection: RFC 2833.
- Power supply: External source 12 Vdc (10 to 14 Vdc) 1.5A, or via POE power (Power Over Ethernet) 802.3af.
- Available 2 relays: 2A/120Vac - 2A/24Vdc. Independently configurable.
- Operating temperature: -10 + 55^{O}C; storage -10 + 70^{O}C.
- Wiegand 125 KHz RFID card reader (with reader only) and MiFare 13,56 MHz
- QR code reader through the camera (equipment with camera. Codes generated from the application)

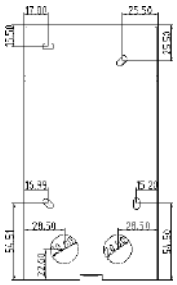
2.- Installation and mounting

Proceed with the installation of the product, according to the type of product that you acquired.

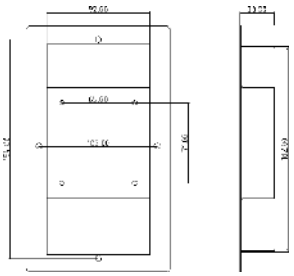
The surface devices have a back cover that will be screwed to the wall where the intercom will be installed.



Front C series



Series 4 surface



Series 4 for flush mounting

You will need

Wall studs

Stud screws

Instructions:

1.- Take the base and mark the holes in the wall.

2.- Drill the right holes.

3.- Install the base by placing the plugs in the holes.

4.- Install the front panel.

5 Install and adjust the safety screw on the bottom of the intercom.

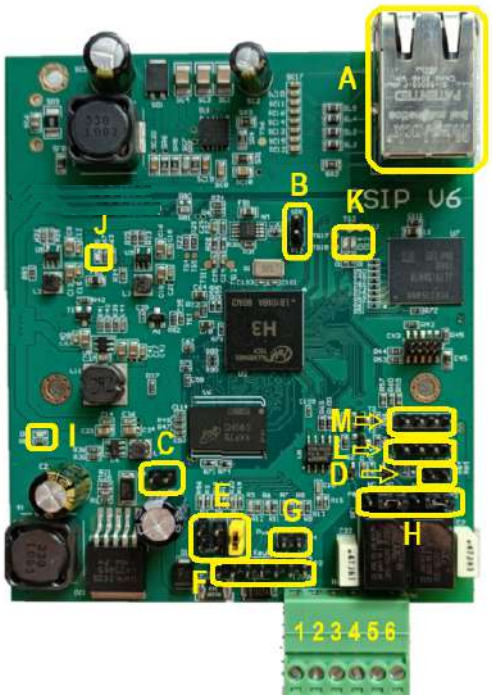
NOTE: In the recessed model, a hole of 182 x 92 mm with a depth of 30 mm shall be made.

For more details and dimensions see mounting accessories, page 24.

2.1.- Connection

The connection points to the board are as follows:

- Ethernet connector: To connect the ethernet cable to the RJ45 connector.
- Green connector: Connect a power supply 12Vdc 1.5A to the power terminal 1 and 2. It is not necessary in case of having POE power through the ethernet connector.
- Output relays. Normally used to control the opening and closing of doors. Relay contacts can be configured as NC (normally closed) or NO (normally open). This configuration is done by relay jumpers on the board (see description of the board). Do not exceed the maximum permitted rating of relay contacts.



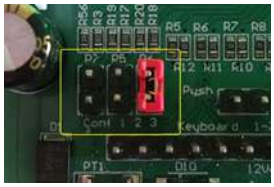
A. RJ45 connector
B. Speaker
C. Microphone
D. Button lighting
E. Configuration jumpers
F. Keyboard
G. Push button
H. Relay contact jumpers (NO, NC)
I. Power supply indicator (red)
J. Status indicator (blue)
K. Ethernet communication indicator (green)
L. RFID connector
M. RS485 connector

Green Conector

- 1- +12 Vdc
- 2- GND
- 3- Relay 1 contact
- 4- Relay 1 contact
- 5- Relay 2 contact
- 6- Relay 2 contact

2.2.- Configuration jumpers

The device has a configuration jumper, which is formed by 3 pairs of pins, 1, 2 and 3. The configuration of these jumpers are only read at the device boot.



Possible configurations:

· **Jumper at position 1**: The 192.168.1.50 address is assigned to the device. The stored network settings are not overwritten. In addition, to access to web server, the user and password entered are not verified. This functionality is useful in case you have forgotten the IP address, user and/or password, and it is not possible to access the web server configuration.

Jumper at position 2: DHCP is assigned to the network configuration. In this case, the NETWORK configuration is overwritten.

Jumper in position 1, 2 and 3: FACTORY RESET. All configuration parameters acquire their default value. The fixed IP address is 192.168.1.50 and for your access to the web server you must use port 8090.

Recovery mode:

If it is not possible to access the configuration interface, because the IP address has been modified and is not remembered, or because the user and password have been forgotten, the following steps must be followed:

The next restart sequence allows access to the device from the factory IP address, **192.168.1.50:8090.** In this step, it is not necessary to know the user and password of access. This restart sequence does not modify any parameters previously configured by the user.

a) Switch off the device
b) Place the jumper at position 1 of the CONF123 C configuration connector
c) Switch on the device
d) Enter the URL in the browser: http://192.168. 1.50:8090 (It is not necessary to know the user and access password)
e) Modify the desired programming parameters.
f) Switch off the device
g) Remove the jumper from the position indicated at point B
h) Switch on the device

3.- Programming

PANPHONE CSIP device programming is done through a web browser (Chrome, or Microsoft Edge to ensure compatibility)
To access the programming menu, the following URL must be indicated in the address bar of the internet browser:

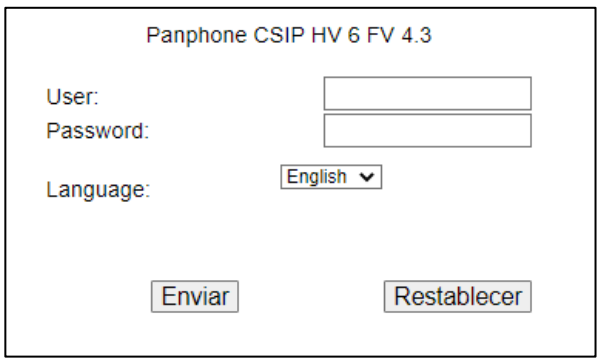
http://192.168.1.50:8090

where 192.168.1.50 is the default IP address, and 8090 is the port associated with the HTTP service.

If this IP address has been modified in the following accesses to the configuration menu, in the address bar of the browser, the URL to indicate will be: **http://new_address_ip:8090**

It should be noted that the IP address of the computer from which the configuration web interface is to be accessed, must be in the same range of IP addresses as the PANPHONE CSIP device. In addition, if you want to program the device without being on a network, you can connect directly to a computer using a "crossed" UTP cable.

The PANPHONE IP must respond with the login screen shown in the following figure:



The default user and password is **admin** and **1234**

3.1 Main screen

If the access data entered is correct, the main screen of the configuration interface is accessed.

The main screen

- **Left side menu**. Here is the main menu with the different categories or configuration submenus. This side menu will be present at all times throughout the navigation through each of the different sections of the interface.

Central Area: In this area, each of the different sections selected in the sidebar will be displayed.

Left side menu:

Home

SIP account

NETWORK configuration

Audio/Video

Relays

Keyboard/Button

Licences

Advanced configuration, tools

Users

3.1.1.- Home

This screen describes the basic data of your Panphone IP.

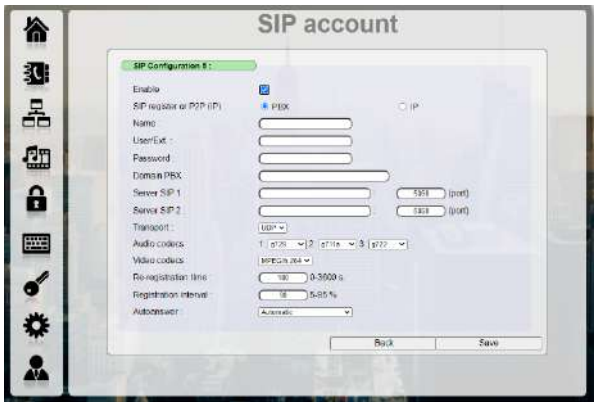
- Current version
- System date and Time
- Active time
- Processor temperature
- Current IP (cable & WIFI)
- Address MAC (cable and WIFI)
- Configuration Jumpers
- Relay status
- 5 Latest events

3.1.2.- SIP account

The network adapter to be used must be selected, cable, WIFI or 4G/LTE.

There are 5 SIP accounts, which can be configured with PBX or IP direct call (p2p).

If calling to an IP address (point-to-point), at least one account must be enabled.



Setting up a SIP account

- **Enable Account** Enable or disable the account.
- **With or Without PBX Registration (switchboard)**

  Select "**Registration**" if you want to connect the PANPHONE CSIP to a PBX exchange.

  To do this, the SIP Protocol is used. In case of a point-to-point communication, IP (p2p) must be selected. In this case, you must specify the port, if it is not 5060, and the user you will call.
- **Name**: Account name.
- **User/Ext**: User or account extension.
- **Clave**: Password recognized by the switchboard.
- **PBX domain**: IP or name in case the PBX requires it. It can be replaced by the IP or machine domain.
- **SIP1 server:** IP address (or domain name) of the main PBX. Verify that the IP address of the PANPHONE IP and that of the main IP PBX are in the same range or are reachable. For p2p calls, here you must enter your Panphone's own IP address.
- **SIP2 server**: IP address (or domain name) of the secondary PBX. Verify that the IP address of the PANPHONE IP and that of the secondary PBX IP are in the same range or are reachable.
- **Transport:** UDP / TCP: SIP transport type

- **Audio codec**: Preference in the choice of audio codecs. Five different types are available: OPUS, G-711 (a-law and u-law), G-722, G-726 and GSM.
- **Video codecs**: H 264 (H265 coming soon)
- **Re-registration time**: Registration time and registration refresh.
- **Registration interval**: maximum time allowed to register an account. Max. 3600 s.

WHITE LIST

List of recognized incoming calls. You can allow or deny the entry of all incoming calls, or do it individually. The format must be indicated as follows: sip:100@192.168.1.50.

OPTIONS

Select the network for SIP connectivity

Adapter used to access from the network; via cable, Wi-Fi, 4G/LTE or private VPN network.

Options parameters:

Maximum communication time, between 0 and 7200 s. (2 hours)

Auto-answer: Before an incoming call, it can be answered manually or automatically.

In manual case, press call button to establish connection.

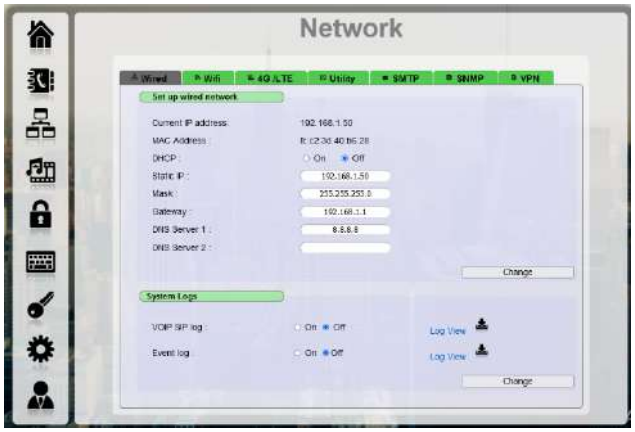
Automatically, it answers immediately after receiving the call, or after 1 ring, 2 rings or 3 rings.

Start port: 1024 - 49152

End port: 1024 - 49152

3.1.3.- NETWORK

These configuration options are located in the Network menu of the side menu.



The device has three different ways of being connected: Cable, WIFI and 4G/LTE.
Moreover, we can find the **Utilities** and **SNMP** tab which are tools for advanced uses.

The way in which it will be connected must be selected, starting with the cable configuration.

If the device does not detect a Wi-Fi or 4G/LTE connection, it will indicate it as No devices connected.

Set up a wired network

Current IP address: This parameter shows the current IP address of the device.
MAC address: This parameter shows the MAC address of the device.
DHCP: On, allows the router to assign a dynamic IP to the device. Off, the user chooses a static IP manually.
IP Address static: An IP address is manually assigned (the DHCP parameter must be in Off).
Subnet mask: Defines the address spectrum of the network.
Gateway: If there is an Intermediate Gateway.
Primary DNS Server: Setting the IP address of the primary name server.
Secondary DNS Server: Setting the IP address of the secondary name server.

System logs

Log VOIP SIP: Traces all SIP protocol communication, both incoming and outgoing on port 5060. Indicated to verify technical problems.
Log events: Registration of the latest events. Call status information, relay activation, etc…

Set up WIFI

Status: Whether or not you are connected or registered by this means.
SSID: Name of the Wi-Fi station.
Search for networks: Search for WIFI stations in our environment.
Password: Access password of our selected WIFI station.
Current IP address: IP address of the Wi-Fi connection
MAC address: MAC address of the internal Wi-Fi module.
DHCP: WIFI IP assignment. On: automatic, Off: manual (fixed or static)
Static IP address: manually assigned fixed IP.
When finished, press the change button.

Set up 4G/LTE

This communication exclusively uses the data line of your SIM card.
Set up 4G/LTE data
Network identifier: Name of the company that supplies the network.

- Network type / level: Network technology, 2G, 3G, 4G / coverage level
- Current IP address: IP address of the 4G module
- IMEI: International Mobile Equipment Identity
- PIN: Personal identification number of the SIM card
- APN: Access Point Name
- Username and password: Username and password of the APN provided by your operator if required.

Network utilities

In this section you have several utilities for configuring the network

- **Gateway**: Here you must select the priority gateway in case you have several types of connectivity (WIFI or 4G)
- **Public IP**: If the equipment has internet connectivity and the DNS are correct, our public IP will appear here.
- **PING TEST**. Basic connectivity test

Network adapter: Cable, WIFI or 4G/LTE (if available)
Address: A 4 ping test is done to this destination.

SNMP
If you want to use the SNMP protocol, you can activate or deactivate it from this section and specify the following fields:

- Community, name, description, location and contact.

VPN
From here you can activate the connection through a VPN using the OpenVPN tool.
To do this, you must have a file-certificate type "Embedded Linux Client" (a single file) in ".conf" format.
Select to connect or not with a VPN (On/Off)
Press upload file (or upload, if you have a configuration file)
Finally, click Save.
When the access via the VPN is successfully created, the VPN IP appears.

3.1.4.- Audio / Video

Audio

Audio level: This section allows you to set the loudspeaker volume as well as the sensitivity of microphone level from 0 to 10. Once changed, the changes must be saved using the SAVE button.

Audio test: Speaker and microphone test. By pressing the TEST button, the operation of the microphone and the speaker is checked. This test analyses the balance between the sound emitted by the speaker and that received by the microphone. It is important to verify that the microphone input hole is not plugged by dirt, insects or any other objects. Tolerance, indicates maximum permissible deviation to consider the test satisfactory. By default, this value is at 10%, being able to change in each test.

Audio language: It possible to choose between no sound, only beep, english or spanish language. After, press Change button.

Video

It is enabled by default and no configuration is required on the PANPHONE CSIP device.

This option will only work on equipment that incorporates a video camera.

The video technical features are:

H264 Codec

Resolution 320x240 QVGA

Baseline profile

Payload type 96

Packetization mode 0 (Single Nat Unit Mode)

For a correct display, these specifications should be taken into account in the video settings on the remote device. In the "Video" window, a capture of the camera integrated in the device is displayed.

RTSP Streaming: It is disabled by default and no configuration is required on the device. Connect if you want to have a video data flow to watch live, access from video recorders, etc... The codec is MPEG-4 Codec and by default it uses a Resolution 640 x 480 VGA

The username, password and port increase the security of the video streaming. After saving this security data, the address that allows access to the video stream appears next to the viewer.

NOTE: This option is not compatible with the QR reading system (see relays tab)

3.1.5.- Relays

Relays can be activated individually; relays 1, 2, 3*, or in combination; relays 1+2. See image.

In addition, the relays can be programmed to be activated by means of a PIN, an RFID (access control by card), QR (QR code reading) and a schedule.

Activation Type: Relays can be activated in four different ways:

Timer: Activated for a specified time. After that time, it is automatically deactivated.

Manual: It is activated and deactivated manually by the indicated command. These commands can be modified in such a way, that it does not interfere with other similar commands.

During communication: It is activated upon receipt of the call and deactivated at the end of the call. You can disable and re-activate them manually with the 8 and 5 keys, but the control becomes manual.

During the ringing: Activation during the incoming ringtone. Only in case of manual response. In case of auto-response, it is not activated.

NOTE: Some of these features may not be available depending on the firmware version of your device. In case you require any functionality not available, contact our technical support department.

* - Relay 3 requires the additional module Optos-Relay3.

PIN

Activation using a PIN number. Up to 250 positions or keys are available.
It is possible to specify at what time that key is operative and the relay that must be activated.
If the code entered is correct, you will hear “door open”. Otherwise, if after pressing a code, you hear a long tone, it indicates that it is incorrect or not recognized.

RFID

Activation using an RFID card. Up to 250 positions or card keys are available.
Likewise, the card's operating hours can be specified, as well as the relay that must be activated.

Calendar
You can create up to 10 different calendars (schedules). Each of them must be identified with a name. By this name it will be recognized when it is used in any of the accesses through PIN or RFID.
In each defined schedule, you must also indicate its start time, end time and day/s of the week covered by that schedule.

QR

Activation by QR code. The reading of the code is done through the device's camera. This code can be obtained by creating it by clicking on "Generate QR". You will be prompted to provide a name for the new code. You can also indicate time and/or date limitations.
NOTE: This option is not supported for streaming video. If video streaming is enabled, QR reading will not work.

Logs
Log of relay activation. The data that appears are date, type, position, time and activated relay.
These histories can be stored for a maximum of 1 year or deleted at shorter intervals: 15, 30, 60, 90, 180 or 360 days.
To delete the records, you must first select the time interval and then press DELETE RECORDS.

Advanced
External database. Address where the data from the LOGs tab can be stored.
This includes your IP address, Base, User Password and SQL QUERY.

3.1.6.- Keyboard / Push button

Image Keypad/pushbutton screen

General configuration

In the "General configuration " tab, must be indicated if our PANPHONE CSIP device is a model with:

- **Keyboard/Push button**. This option is the most common for devices with a keyboard or push-button.
- **Optos-relay 3**. If the additional input/output board (optos) is available, this option must be selected for correct operation.
- **Keyboard and push button opening**. This option allows you to use the keyboard on a regular basis and you can use an additional push button for the direct opening of relay 1. This push button must be connected in PUSH1 (see G-point description of the board). Recommended for the installation of door openers in interior accesses.
- **Length Digits Manual Dialling Call**. The length is indicated in digits that should have all the extensions that are marked manually. Extensions with different digit lengths, are not supported. This field can be set from 1 to 9.
- **Length Digits Dialling Access Key**. The length is indicated in digits that all passwords or passwords that are manually marked must have. This field can be set from 3 to 9. After modifying any of these parameters, press the CONFIRM button.

Configure Push button

In the "Configure Push button" option, you can program the push button in 2 possible modes:

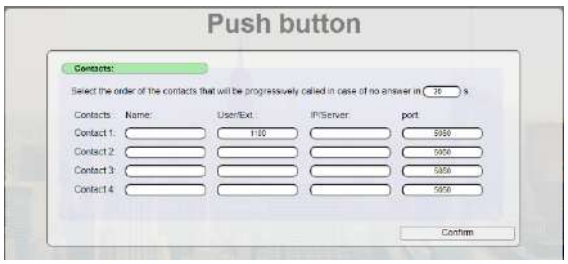
Direct call to extension (using switchboard).

You must indicate the extension number to which you want to make a call, as well as the SIP account from which the call will be made. Then press the CONFIRM button.

Direct call to IP.

The IP address to call, the user and the SIP account from which to call must be indicated. Then press the CONFIRM button. For both cases, it is required to have previously created a SIP account, (see section SIP accounts) and register in switchboard for "extension calls" or IP (p2p) for direct call to IP.

For both cases, it is required to have previously created a SIP account, (see section SIP accounts) and register in switchboard for "extension calls" or IP (p2p) for direct call to IP.



Configure Keyboard

In this section, you can configure the functions of all the keys.

Key functions:

Each of the 12 keys on the keyboard, can be programmed in 6 possible modes:

Single key: Value indicated on the key.

Cancel current dialling. End call: The current call is cancelled and the call is terminated.

Call prefix: If this option is selected, any call function must be preceded by this key. For example, if the 1 key is configured as an extension, to make a call to that extension, and if the # (Call) key is configured as a Call Prefix, it should be marked #. This mode is disabled by default.

Access key code prefix. This option must be chosen if you want to activate a relay by dialling a password on the keyboard of the PANPHONE IP device. For example, if this option is associated with * (default), user 01, and the password is 1234, you should dial * 011234.

Direct call to extension. The key calls the extension indicated by the indicated SIP account.

Direct call to IP. The key calls the indicated IP address, with the user and the SIP account indicated.

If it is used to call an extension through a switchboard, it will be given the data of the extension and SIP account used. If, on the contrary, it is used to make a direct IP call, it will indicate the IP address, the user/ext. and the SIP account used.

For calls through switchboards, it is required to have previously created and enabled a SIP account (see SIP Accounts section).

3.1.7.- Modules and licences

This tab presents the modules and licenses that are installed and activated.
In order to use the applications listed below, you must have the corresponding license installed and activated. Once the license is installed, you can activate or deactivate the module you want.

This license is requested directly from the manufacturer.

API
MODBUS (required to also activate the API)
VIDEO
RFID
RS485
QR

Once we have acted on each module, press the SAVE key.
By default, when the license is installed, the module stays activated.

3.1.8.- Tools

It has several tools:

Test call

Type of call: Via switchboard or direct IP. You can send the call through any of the SIP1- SIP5 accounts. Indicate the extension (by PBX) or the IP address (if direct via IP).
This call does not have a defined time, to launch and end it, it must be done with the confirm button.

Firmware Update

Visualization of the current firmware version. You can update the firmware by selecting it from your computer and then clicking on UPDATE.

Note: Update your computer only if advised by technical support and make sure you have a copy of all the saved data, as you could suffer a reset of the equipment to the factory.

Reboot or restore the device.

Reboot device.

Button that allows you to perform a controlled system reboot.

Restore to factory

This option DELETES all settings and leaves the device reset to factory status. After reset, the device restarts and is accessible from the IP:

http://192.168. 1.50:8090

3.1.9.- User configuration

User: Username: Name to access to the web server (default admin)
New password (password): To change it, insert a new access key. (default 1234)
Repeat new key (password): Repeat the new key.
Confirm with the SAVE button.

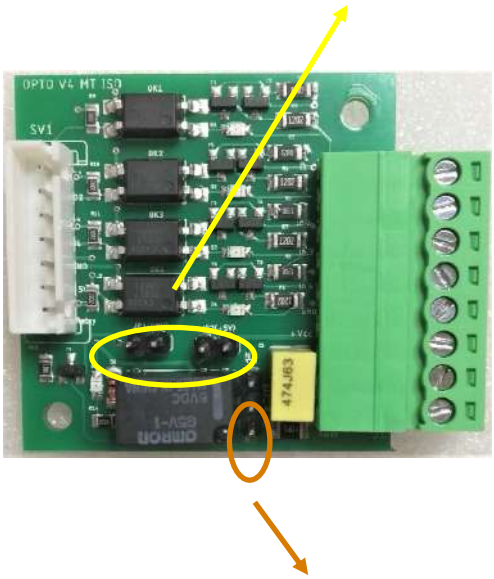
Language: you can select the language

Close session: The session will be closed securely.

4.- Additional pcb OPTO

In case your equipment has the optional OPTO-RELAY3 board, the system will have 4 digital inputs for event control, as well as an additional output relay with a voltage-free contacts.

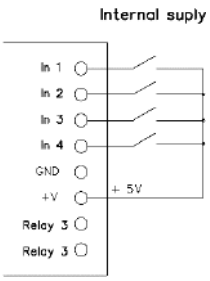
Jumper JP1, JP2



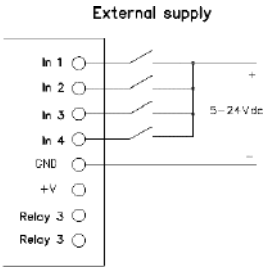
Relay NO or NC

1	In 1
2	In 2
3	In 3
4	In 4
5	GND
6	+V
7	Relay 3
8	Relay 3

Control voltage In 1-4	
Internal supply (JP1 and JP2 connected)	**External supply** (JP1 and JP2 disconnected)
5 V (+V)	5-24 V and GND
Scheme 1	Scheme 2



Scheme 1



Scheme 2

Digital inputs come from different types of sensors, such as smoke detectors, emergency stop mushrooms, motion sensors, home automation control devices, etc...

These inputs can be powered from an internal supply (connected JP1 and JP2 jumpers) or an external 5-24Vdc supply (disconnected JP1 and JP2 jumpers) (see table control voltage and schemes).

When an input has been activated, a call is made using one of the SIP accounts created on the board. Inputs are recognized by the system as follows:

Input 1; call only with SIP account 2 enabled

Input 2; call only with SIP account 3 enabled

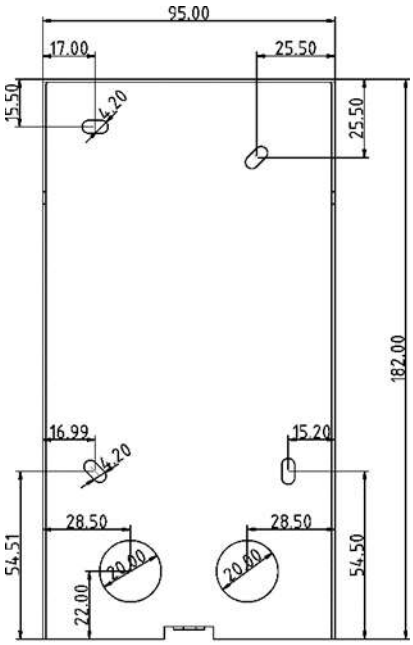
Input 3; call only with SIP account 4 enabled

Input 4; call only with SIP account 5 enabled

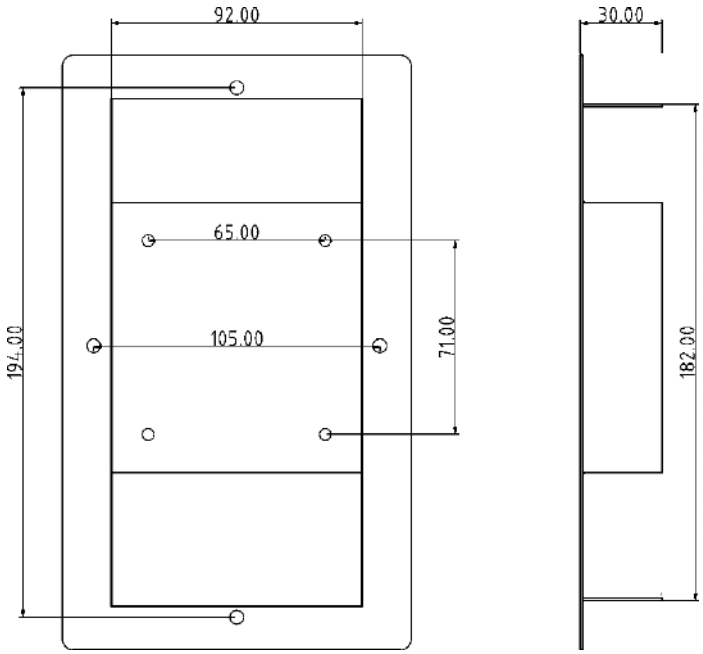
Relay: The relay contacts function can be preselected by the board jumper as normally open (NO) or normally closed (NC). The rating of these contacts is 24Vdc/2A 120Vac/2A.

5.- Mounting accessories

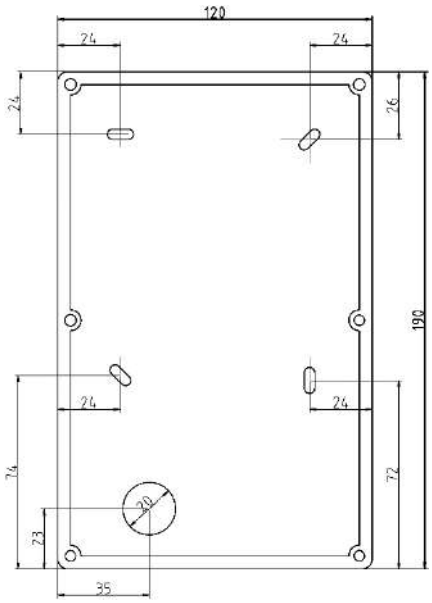
Frame and covers for mounting
(All measurements in mm)



SERIES 4 SURFACE
BACK COVER



SERIES 4 FOR FLUSH MOUNTING
FRAME



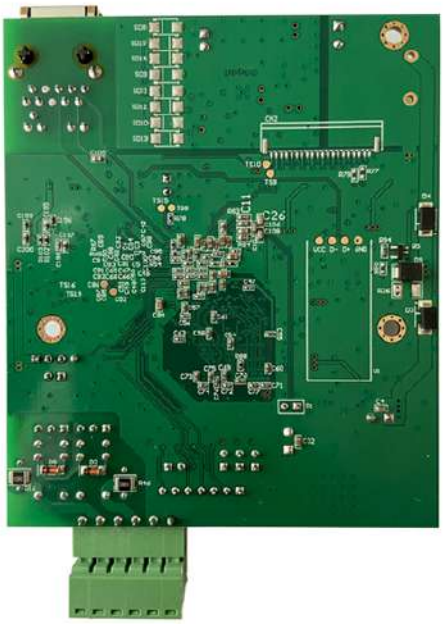
SERIES C, BACK GREY
BACK COVER

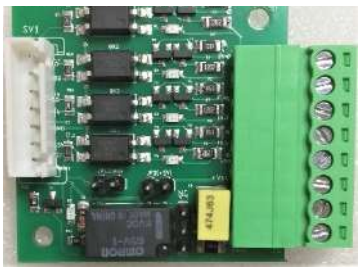
6.- Performance and technical data

CSIP V.6 board performance

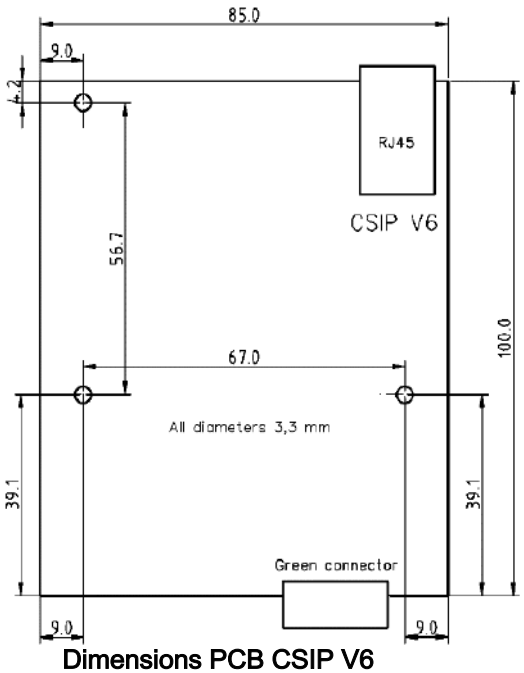
85,00 mm

100 mm





PCB OPTOS 42 X 42 mm (optional)



Dimensions PCB CSIP V6

Technical data

Signaling protocol	
SIP 2.0 (RFC - 3261)	
Buttons	
Buttons	1 or 12-key keyboard 0-9,# and *
Audio	
Microphone	1 microphone elect
Speaker:	2W
Audio	Echo cancellation and ambient noise reduction
Audio	Full duplex
Sound pressure for 1kHz to distance 1m:	77,5dB
Audio stream	
Codecs:	G.711

Interface	
Power supply	12V±15% / 2A DC or PoE
PoE: INJECTOR	PoE 802.3af (class 0 - 12.95W) Must be ACTIVE, with auto-negotiation. Passive POE can damage the equipment.
LAN:	RJ-45, 10/100BASE-TX with function Auto-MDIX
Passive switch:	NC/NO contacts, max 24V/2A DC, 120V/2A AC
Supported protocols:	SIP2.0, RTP, HTTP, HTTPS, Syslog
Processor	
Processor Features	Processor Allwinner tech SoC H3, 4 core with AR, cortex-A7 to 2 Ghz. GPU MALI-up to 600 mhz.
Mechanical properties	
Operating temperature:	-40°C – 55°C
Storage temperature:	-40°C – 70°C
Storage relative humidity:	10% - 95% (non-condensing)
Degree of coverage:	
Dimensions:	100 x 85 mm

SPECIAL FEATURES

Remote door opening (relay activation) with code dialing from any extension or external phone.	YES
Call status voice messages (open-door, call-in progress, door closing and others) Messages can be customizable and in different languages.	YES
PCB with independent relays, with voltage-free contacts ideal for connecting electrically activated doors or external devices (card readers, fingerprint, etc.). Controllable normally closed or open.	2
Input ports for external pushbuttons or sensors.	1
Wiegand ports (proximity and biometric sensors).	1
LED outputs for indicators (standby, call, communication, etc.)	1
Expansion OPTO card with 4 additional inputs and 1 relay output.	Available (Optional)
DHCP support.	YES
Traffic Logs Management.	YES
Remote administration.	YES
Local and remote configuration via web interface.	YES
Remote operation check.	Yes, by IP connection and audio test

	(micro and speaker).
Notification of I/O events by SIP call.	(Optional)
Integration with management platforms through APIs.	Available (Optional)
MODBUS protocol (integration with Scada).	YES