

5.3

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VoIP Intercom Integration Manual



DELÉGO SERVER Visualisation webserver

EK-DEL-SRV01 / EK-DEL-SRV01-M

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1 Introduction

1.1 Scope of this manual

This document contains all the information for the configuration of DELÉGO SERVER as a SIP server for IP phones and door intercom phones. In particular, a detailed description is given of the specific configuration of DICO, the multi-function intercom door station with face recognition by EKINEX.

The present user manual is part of the suite of application manuals dedicated to the DELÉGO SERVER, available on the section dedicated to this product in the EKINEX website. Before reading this document, it is recommended to consult the following application manuals:

REF	DOCUMENT	DESCRIPTION
[D1]	DOCUMENTATION PLAN	Overview of the application manuals of DELÉGO SERVER
[D2]	GENERAL FUNCTIONS - APPLICATION USER MANUAL	General installation manual of the webserver
[D3]	DICO INTEGRATION GUIDE	Complete step-by-step guide to the configuration of DICO, DELÉGO SERVER and DELÉGO PANEL for door entry audio and video calls

These documents are available for download in the area of the EKINEX website dedicated to the webserver.

1.2 Conventions

The following conventions are used in this manual:

[KEY]	The keyboard keys that the installer must press are shown in square brackets
<i>Courier</i>	Software messages generated by the DELÉGO SERVER configuration software are reported in the "courier" font
<i>Function name</i>	Names of buttons, table fields or other graphic elements of the user interface of the DELÉGO SERVER configuration software are shown in italics
	Information note
	Important note that requires particular attention

1.3 Safety information

DELÉGO SERVER is a product intended for trained and specialized personnel only; anyone who interacts with the device must first read this documentation, especially this safety information. This document supplements and does not replace any legislation or legal directives on safety.

The device has been developed following the safety regulations currently in force; however, it is not possible to exclude with certainty possible damage or interactions with other devices during its operation. The device

complies with EMC guidelines and harmonized European standards; any modifications to the device may affect EMC compatibility.

The supply voltage must be strictly within the range indicated in the GENERAL FUNCTIONS application manual and on the device; risk of fire or explosion if powered outside this range. The CE declaration of conformity of the device can be requested from EKINEX®, at the references on the site www.ekinex-delego.com.



In compliance with Directive 2002/96/EC the DELÉGO SERVER electronic device must be disposed of in the appropriate facilities and not in the collection of solid urban waste.

1.4 Warnings

- This application manual is aimed at installers, system integrators and designers.
- The assembly, electrical connection, configuration and commissioning of the appliance can only be carried out by specialized personnel in compliance with the applicable technical standards and the laws in force in the respective countries
- Opening the appliance case causes the immediate interruption of the warranty period
- In the event of tampering, compliance with the essential requirements of the applicable directives for which the appliance has been certified is no longer guaranteed.
- EKINEX defective appliances must be returned to the manufacturer at the following address:
Ekinex S.p.A. Via Novara 37, 28010 Vaprio d'Agogna (NO)

1.5 Copyright

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This application manual, the DELÉGO SERVER software and the DELÉGO iOS and Android apps are subject to copyright; all rights are reserved. Copying, reproduction, translation and/or modification, even partial, are expressly prohibited unless approved in writing by EKINEX®.

1.6 Open Source Licenses

DELÉGO SERVER contains open source software, such as the Linux operating system and its kernel. These software components are subject to various open-source licenses, including:

- GNU General Public License (GPL), <https://www.gnu.org/licenses/gpl-2.0.html>
- GNU Lesser General Public License (LGPL), <https://www.gnu.org/licenses/lgpl-2.0.en.html>

If you own a product, for a period of 3 years from the last production date, you can request from EKINEX the source code of the software components licensed under the GNU General Public License (GPL) or the GNU Lesser General Public License (LGPL), and use, distribute and modify them in accordance with the respective licenses.

EKINEX cannot be considered responsible in any way for the source code thus distributed, which is provided without guarantees. EKINEX cannot also be held responsible for any damage or consequence resulting from modifications (additions / removals) made to this software by third parties, unless specifically authorized.

1.7 More information

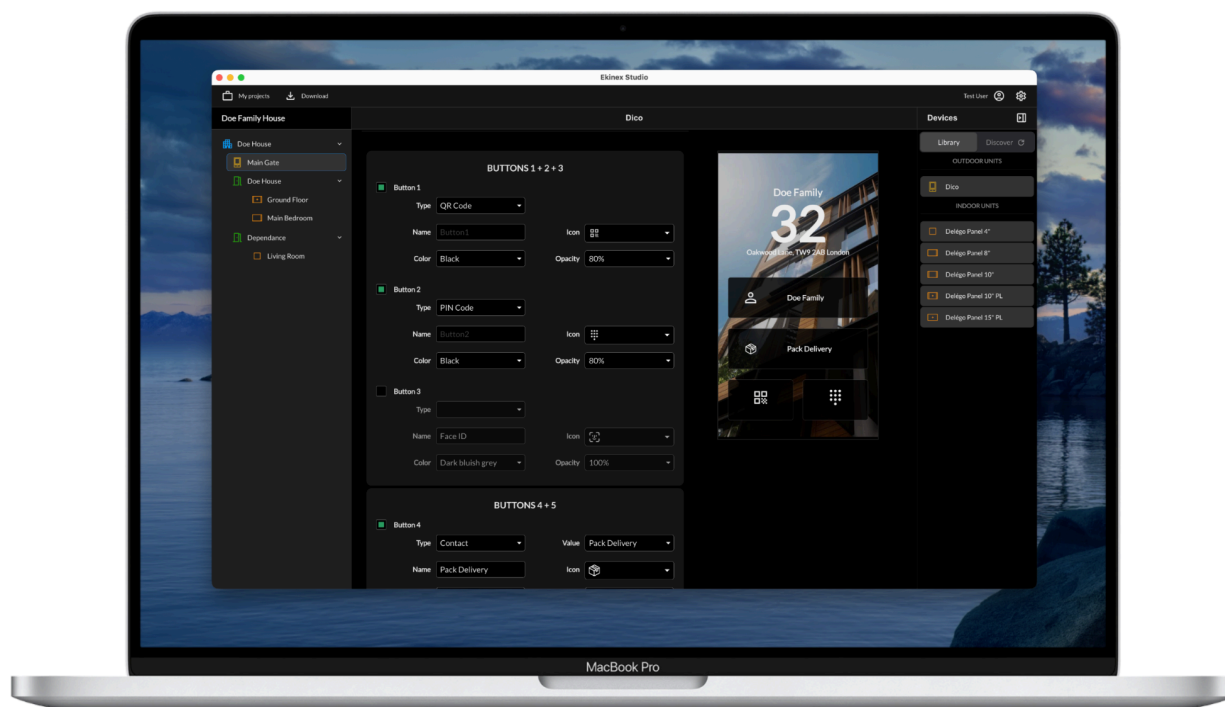
- For further information on the product, you can contact EKINEX technical support® to the e-mail address: support@EKINEX.com or consult the website www.EKINEX.com
- EKINEX® is a registered trademark of Ekinex S.p.A.
- KNX® ed ETS® are registered trademarks of KNX Association cvba, Brussels

The company reserves the right to make changes to this documentation without notice.

2 Ekinex Studio

Starting from release 2.8.0 it is no longer recommended, as the primary solution for intercom applications, to use DELÉGO SERVER as the SIP server for DICO and the DELÉGO PANELS.

For an easier configuration of the door phone and the panels, which does no longer require a SIP server like DELÉGO SERVER, it is recommended to use the new software EKINEX STUDIO.



The functionalities described in this manual remain available for special applications and for integrations with 3rd party devices, and for compatibility with installations created previously.

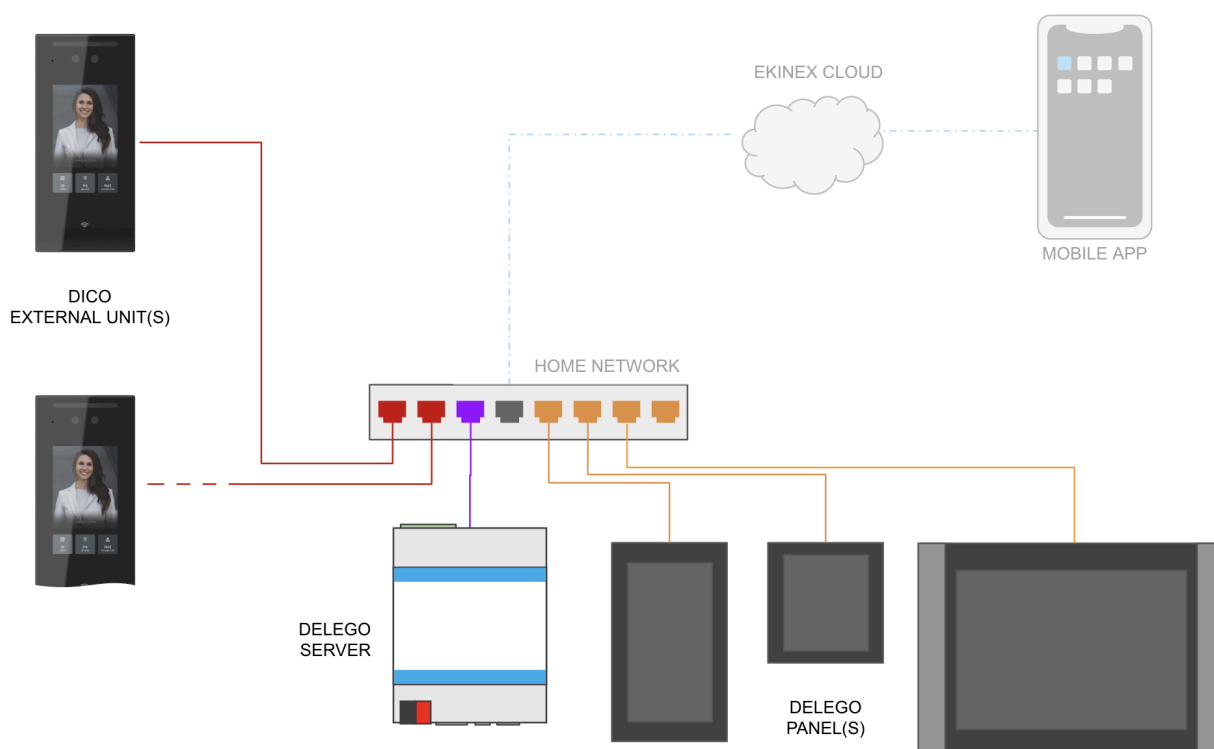
3 General overview

3.1 Introduction

DELÉGO SERVER can be used to orchestrate DICO door intercom unit(s), DELÉGO PANEL and 3rd party devices (door stations or IP phones) in order to manage door entry audio and video calls in a flexible and integrated way.

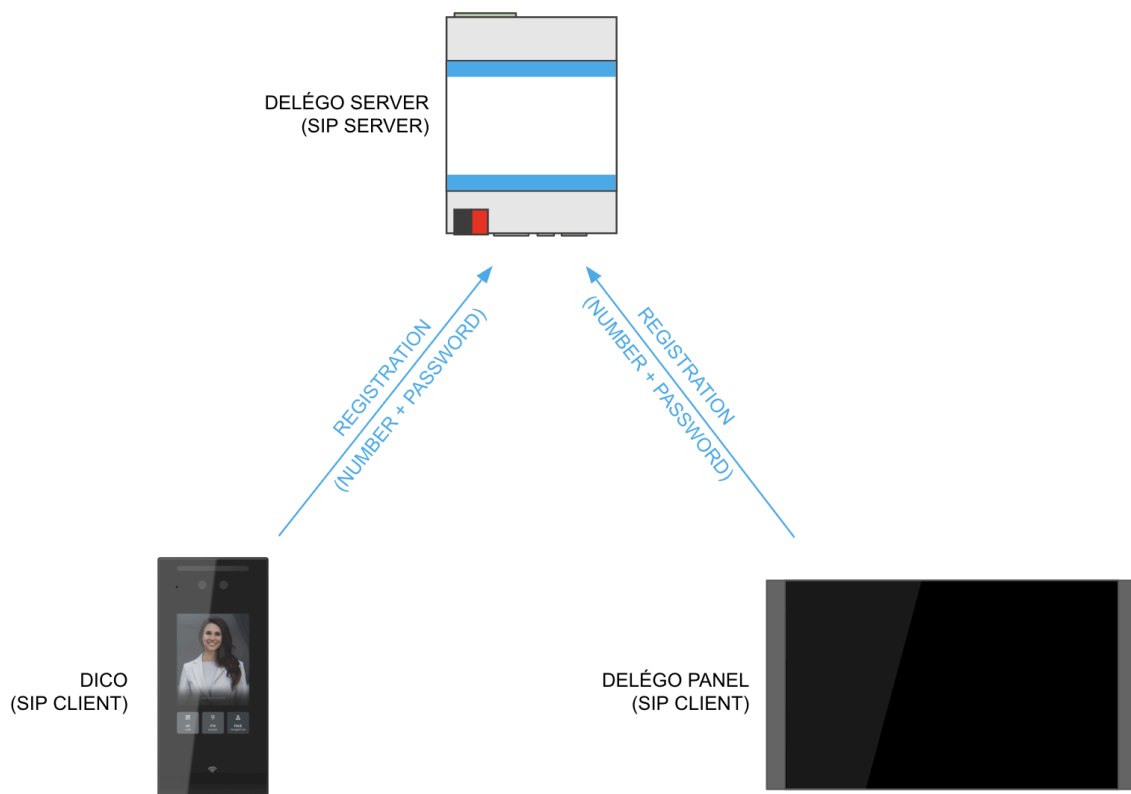
3.2 SIP protocol

The communication protocol used for the door entry management is called SIP; any eventual 3rd party device to be integrated must comply with this standard. All the involved devices must be in the same local network; the DICO app for smartphones works with the Ekinex Cloud in a different way, and for this reason, it is not a topic for this manual.



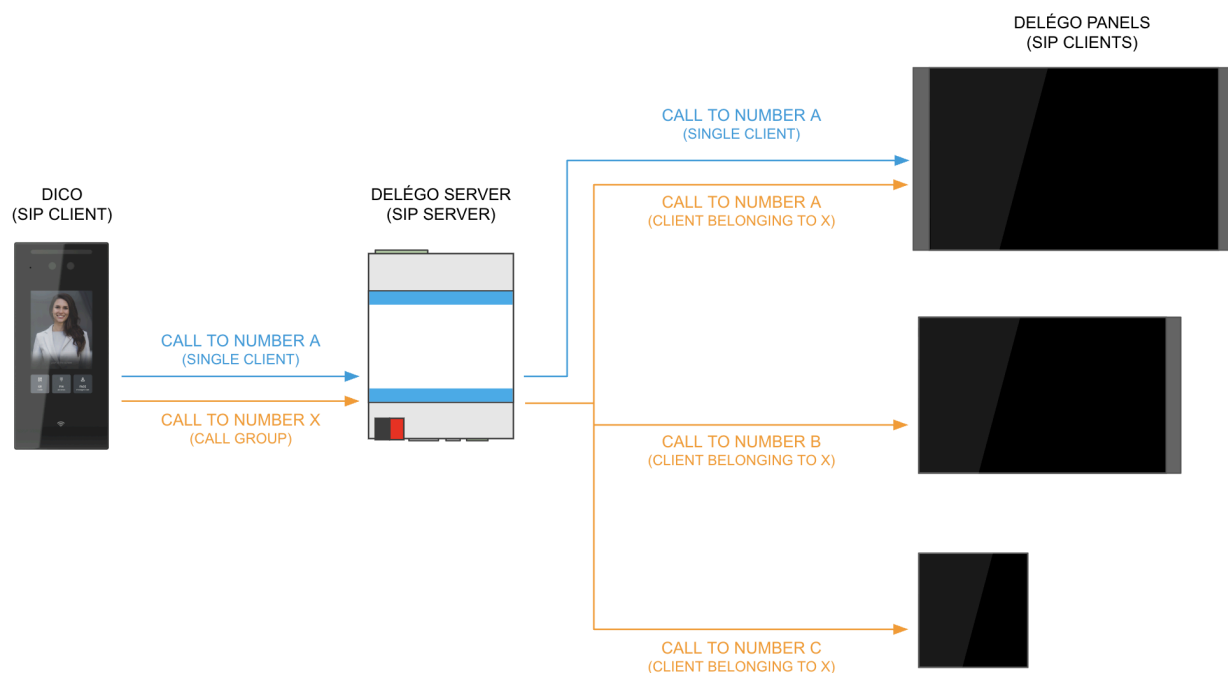
The SIP protocol requires a (single) server that coordinates all the other devices, acting as clients; in the Ekinex solution, the SIP server can be the DELÉGO SERVER or a DELÉGO PANEL belonging to the SMART series (8" or 10"). This manual covers the case of the DELÉGO SERVER as the SIP server.

In order to operate together, the SIP clients must *register* themselves to the SIP server, with a unique number (the *username*) and a password:



Once they are registered, they can originate calls, asking the server to be put in communication with a number, or receive calls from other devices, vehiculated by the server.

The number called by a SIP client can be another single SIP client, or a *call group*; in this second case, the server makes all the SIP clients (belonging to that group) to ring, and the first answering handles the call (and the other called parties stop ringing).



Due to these principles, the configuration requires the following steps to be followed:

1. The SIP clients (DICO, DELÉGO PANEL or 3rd party devices) must be declared in DELÉGO SERVER by assigning a number and a password
2. The same number, password and the IP address of the SIP server, must be entered in the *SIP account* configuration of the clients, in order to instruct them how to register
3. One or more *call groups* must be eventually created, if multiple calls have to be done (e.g. when a button is pressed on the display of the DICO door station)

At the moment these steps have been done, all the interested devices can communicate together with audio and video calls. Normally, in order to complete the configuration, the following operations must be done on the external unit(s) and the touch panel(s) - but they do not strictly affect the SIP communication coordinated by DELÉGO SERVER (and therefore are not covered by this manual):

- The buttons on the display of DICO (or eventually the physical buttons of 3rd party external units) must be assigned to the desired number to be called
- The DELÉGO PANELs must be instructed to send the appropriate commands for the opening of doors and gates

4 Indoor units

4.1 Delégo configuration

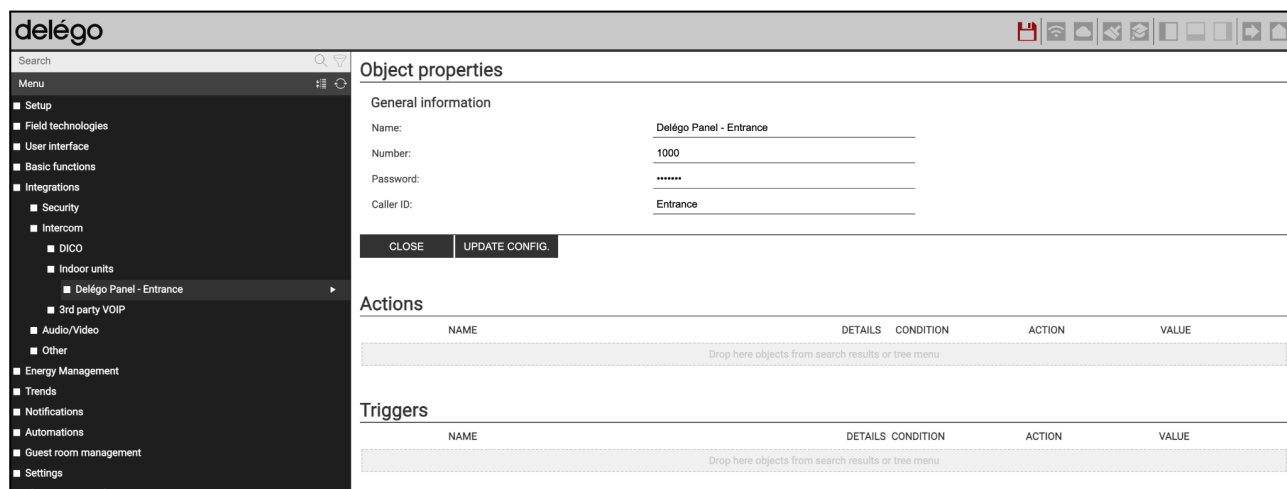
This section contains the instructions for the declaration of the DELÉGO PANELS, or any other 3rd party IP phone, to be used as indoor units to receive calls from the door station.

Enter the following section in the administration menu

INTEGRATIONS > INTERCOM > INDOOR UNITS

and press the [+] button in the toolbar. Enter the new item details page, and fill the following parameters:

NAME	Description to identify the indoor unit (DELÉGO touch panel)
NUMBER	Assign a number that will be used to identify the indoor unit. Suggested number: 1000, 1001 etc...
PASSWORD	Assign an arbitrary alphanumeric password that will be required to access the internal unit with the SIP protocol Suggested password: "abc1000", "abc1001" etc...
Caller ID	Label displayed on the display of the recipient of a call from this IP phone. Leave blank to use the name/number set above.
DTMF PROTOCOL	It allows you to choose between the following protocols: • RFC2833 • INBAND (AUDIO) • SIP INFO <i>Note: this option is available only when the EXPERT mode () is active</i>



delégo

Search

Menu

- Setup
- Field technologies
- User interface
- Basic functions
- Integrations
 - Security
 - Intercom
 - DICO
 - Indoor units
 - Delégo Panel - Entrance
 - 3rd party VOIP
 - Audio/Video
 - Other
- Energy Management
- Trends
- Notifications
- Automations
- Guest room management
- Settings

Change password

Object properties

General information

Name: Delégo Panel - Entrance

Number: 1000

Password:

Caller ID: Entrance

CLOSE UPDATE CONFIG.

Actions

NAME	DETAILS	CONDITION	ACTION	VALUE
Drop here objects from search results or tree menu				

Triggers

NAME	DETAILS	CONDITION	ACTION	VALUE
Drop here objects from search results or tree menu				

Once done, press the **UPDATE CONF** button to apply the changes.

4.2 Delégo Panel configuration (Smart)

The configuration of DELÉGO PANEL SMART, in order to work with DELÉGO SERVER and DICO, can be entirely done through its web interface.

The configuration instructions can be found in the following documents:

- DELÉGO PANEL SMART CONFIGURATION MANUAL
- DICO INTEGRATION GUIDE

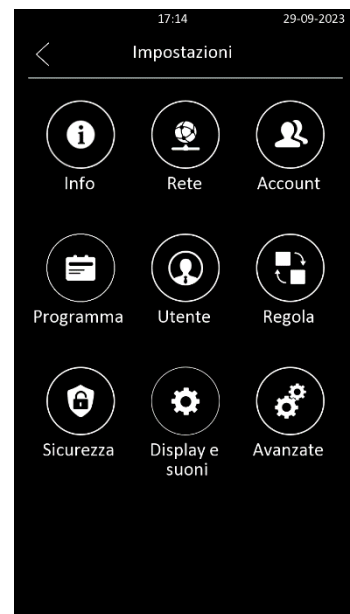
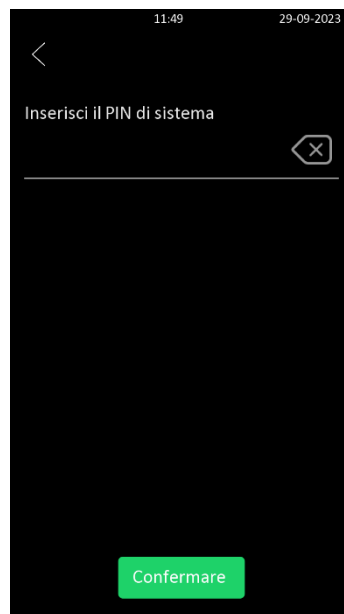
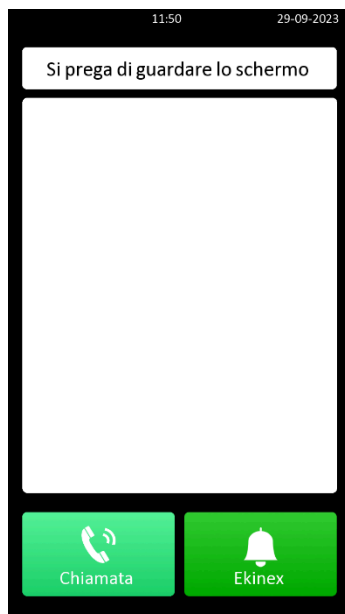
5 DICO

5.1 Preliminary operations

5.1.1 DICO IP address identification

To configure a DICO unit in DELÉGO SERVER it is necessary to enter its IP address. If it is not already known, proceed as follows:

- Touch the screen of the DICO video intercom to turn it on
- Press anywhere on the screen and hold your finger down until you are asked for a password
- Enter the administration password (default: “admin”) and confirm
- Select the NETWORK item (NETWORK if the device is set in English)
- Identify the IP address on the network configuration detail screen



5.2 Delégo Server configuration

5.2.1 General settings

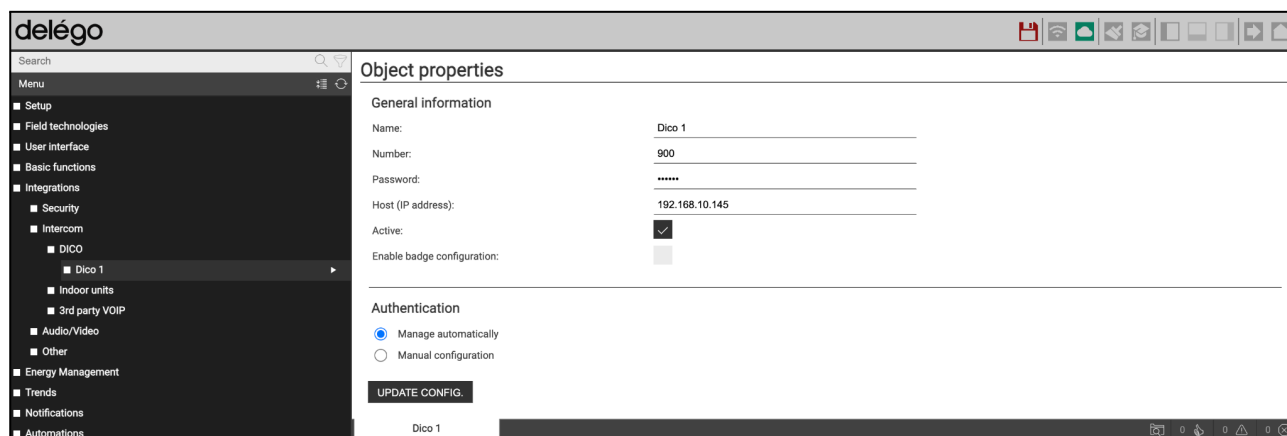
To configure a DICO door station, select the menu item

INTEGRATIONS > INTERCOM > DICO

and press the [+] button in the toolbar. Enter the new item details page, and fill the following parameters:

NAME	Description to identify the external unit
------	---

NUMBER	Assign a number that will be used to identify the external unit. Suggested number: 900, 901 etc...
PASSWORD	Assign an arbitrary alphanumeric password that will be required to access the external unit with the SIP protocol Suggested number: "abc900", "abc901" etc...
HOST	Enter the IP address of the DICO external unit you intend to interface.
DTMF PROTOCOL	It allows you to choose between the following protocols: • RFC2833 • INBAND (AUDIO) • SIP INFO <i>Note: this option is available only when the EXPERT mode () is active</i>
ENABLE BADGE CONFIGURATION	Used by the GUEST ROOM MANAGEMENT module (refer to the dedicated manual for further information)



5.2.2 Authentication

AUTOMATIC MODE

If the default "manage automatically" option is selected for the AUTHENTICATION, DELÉGO SERVER automatically assigns a strong username and password to the door station, and uses them for the communication. This approach is highly recommended.



After the saving, the automatically assigned username and password become available to be copied and pasted in the web interface of the DICO, which must be used to configure its parameters not under the control of DELÉGO SERVER.

MANUAL MODE

In case of "manual configuration", it is preliminarily needed to enable, in the DICO unit, the communication channel with DELÉGO, called HTTP API.

Configure the desired authentication mode in the web interface of DICO, choosing from the following options:

NOBODY	Authentication not enabled. Not recommended for safety reasons.
ALLOW LIST	It is possible to specify up to 5 IP addresses of devices which are allowed to call the HTTP API. If you intend to use a DELÉGO SERVER as a SIP server (PBX), enter its IP address in one of the fields available as trusted IP addresses.
BASE DIGEST TOKEN	Regardless of the authentication technology, enter the user and password that must be entered by devices that call the HTTP API. Note: These credentials do not necessarily have to coincide with the video intercom administration credentials, as they are used solely for interaction with other devices.

After having done this operation in DICO, return to DELÉGO SERVER and enter the same AUTHENTICATION METHOD, USERNAME and PASSWORD.

Once the configuration is complete, press the UPDATE CONF button and wait a few seconds; if the data entered are correct, the ACTIVE selector is enabled, and the entrance panel can be used, configuring it appropriately (as specified below). If not, check the correctness of the IP address and authentication data.

5.2.3 Additional settings

In the moment the communication has been established, the following additional settings can be configured; they are automatically saved into the DICO outdoor unit without the need to open its web interface.

RELAY

TRIGGER DELAY	Time (in seconds) to keep the INTERNAL RELAY or the SECURITY RELAY active, before releasing it after an opening command.
---------------	--

	Press the TEST button to check interactively the correct functioning.
--	---

LANGUAGE

	Select the language used on the display of the DICO unit
--	--

LAN NETWORK

	Select if the DICO unit must operate with an automatic address (DHCP) or in STATIC mode; in the second case, enter also the IP address, subnet mask and default gateway to be assigned to the unit.
--	---

AUDIO

VOLUME	Adjust the volume respectively of the VOICE FEEDBACK, the MICROPHONE and the integrated SPEAKER
ENABLE DOOR OPENING TONE	When selected, each time the RELAY is triggered, a sound effect is reproduced

LIGHT

LIGHTING MODE	Select the strategy for the integrated LED to be switched ON: - AUTOMATIC (triggered by the motion sensor during night) - OFF (forced always OFF)
STATUS LIGHT INTENSITY	Brightness of the status LED light

VIDEO

ENABLE RTSP	When selected, the integrated IP camera can be streamed to DELÉGO app or any 3rd party application in RTSP format
FORMAT	Select one of the following formats: - Horizontal - Vertical (default)

After any change to these parameters, press the SAVE button to send the new settings to the DICO unit.

5.3 DICO configuration

Refer to the DICO configuration manual for the setup of the SIP ACCOUNT 2.

6 Third party outdoor units

6.1 Introduction

It is possible to configure third-party outdoor units in DELÉGO SERVER, if they are SIP compatible.



In order to configure the items described in this chapter, a VOIP voucher must be acquired and the corresponding license entered in DELÉGO SERVER.

6.2 Delégo Server configuration

Enter the DELÉGO configuration section and select the menu

INTEGRATIONS > VOIP INTERCOM > 3RD PARTY VOIP > OUTDOOR UNITS

Press the [+] button in the toolbar, enter the details page and fill the following parameters:

NAME	Description to identify the external unit
NUMBER	Assign a number that will be used to identify the external unit. Suggested number: 900 (901, 902... in case of multiple outdoor units)
PASSWORD	Assign an arbitrary alphanumeric password that will be required to access the external unit with the SIP protocol Assign a sufficiently secure password to prevent possible intrusions.
HOST	Optional field. Allows you to set the IP address of the external station; it is advisable to leave the field empty unless there are particular needs.
DTMF PROTOCOL	It allows you to choose between the following protocols: • RFC2833 • INBAND (AUDIO) • SIP INFO <i>Note: this option is available only when the EXPERT mode () is active</i>

Once setup is complete, press the button *UPDATE CONF.* to apply the changes.

6.3 Third party intercom configuration

Refer to the technical documentation of the 3rd party intercom to configure its SIP ACCOUNT, so it registers to the IP address of DELÉGO SERVER with the credentials entered in the previous step.

7 Call groups

Multiple indoor units can be called when an incoming call is received by the DELÉGO SERVER; to do this, a calling group containing such indoor units must be created, and the outdoor unit must be instructed to call the calling group.

To create a new call group, enter the section

INTEGRATIONS > VOIP INTERCOM > 3RD PARTY VOIP > CALL GROUPS

and press the [+] button in the toolbar. Enter the details page and fill the following parameters:

NAME	Name assigned to the group call
NUMBER	Number associated with the group call. When this number is dialed, all the members will ring.
TIMEOUT	Number of seconds for automatic hanging up when no indoor unit answers the call

Once the new call group has been created, the internal units to be associated must be dragged and dropped from the menu (or from the search results) into the MEMBERS section.

When finished, press the UPDATE CONFIG button to apply the changes. The number associated with the call group can now be associated with the external units to be called when the keys are pressed.

8 Phone lines

8.1 Introduction

It is possible to connect DELÉGO SERVER to an external service / PBX based on SIP technology by configuring a so-called "phone line" in the appropriate section of the VOIP technology administration menu.



In order to configure the items described in this chapter, a VOIP voucher must be acquired and the corresponding license entered in DELÉGO SERVER.

8.2 Delégo Server configuration

After creating a new line in the menu section

INTEGRATIONS > VOIP INTERCOM > 3RD PARTY VOIP > PHONE LINES

enter the following parameters in the details page:

NAME	Identifies the telephone line within DELÉGO SERVER
USERNAME PASSWORD	Username and password to be used both for registering a VOIP GATEWAY and for connecting to an external SIP PROVIDER. The password must be established as desired and entered both in DELÉGO and in the device in question, taking care to choose a strong password possibly made up of numbers, letters and special characters.
TYPE	Choose whether the line must use a GATEWAY or a SIP PROVIDER
HOST PORT	Specify any address or domain name in the case of a SIP provider or PBX, and related communication port
ID	Label (without spaces or special characters) used by the system to manage the telephone line
PREFIX	Specify a number to precede external telephone numbers (e.g. "0").
TELEPHONE NUMBER	Indicate the telephone number associated with the external line, including the area code

DESTINATION CALLED	Specify who should ring when a call comes in via the external line: • Number of an IP telephone • Number of a call group • Name of a user or his VOIP number
LEVEL	Specify the confidence level of the line, choosing between "FRIEND" (default), "USER" or "PEER". If the default "FRIEND" setting is not adequate, use one of the alternatives, referring to the GATEWAY / PROVIDER documentation for interfacing with an "ASTERISK" system.

If you choose a connection to a SIP PROVIDER as the TYPE, you must also specify the following additional information:

HOST	IP address or domain name of the SIP PROVIDER
REGISTER	Specify whether the connection requires recording or not (usually yes, if you want to receive calls via the line)

9 Revision history

The following table contains the most relevant changes in the software releases, concerning the topics of this application manual:

Release	Changes	Date
2.8.0	Introduced reference to the new software EKINEX STUDIO which makes no longer necessary a SIP server for intercom applications with DICO and the DELÉGO PANELS Removed specific instructions for the configuration of DICO and 3rd party devices, by referring to the specific technical documentation instead.	15/04/2026
2.7.0	New organization of the chapters and adaptation to the new software release	01/09/2025
2.6.0	First revision of the document	02/04/2025



Before the software release 2.6 the application manuals of DELÉGO SERVER were organized differently. An exact correspondence with older versions of the manuals and the changelog could not be found for this reason.