







Technical manual

Version 2.0

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www.astrum.com.tr/en/products/inspinia info@astrum.com.tr







GRAND



SLIM





GENERAL INFORMATION

ASTRUM Ltd. Şti.

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This manual will provide all information and techniques about product, for installing and using. We reserve the right to make changes to the manual without prior notification.

You are allowed to make a single copy for backup purpose.

Please read and be familiar with instruction before getting started and keep the manual for later use.

You are always welcome to inform use of errors or make suggestions for improving the program.

Manual and the Software are protected by copyright. All rights are reserved.

Symbols and Notifications



Caution!

Important points need to take into account while configuration.



Hint

Additional notes and information.

"......" Double quotes: Functions or step which user must perform.

Italic Italic: Description for objects and pictures.

BOLD Bold: Illustrates names of buttons, menus or elements.





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Technical specification

Hardware Information's

Power Supply: 12V DC

Display Options: TN 7" with capacitive touchscreen

IPS 10" with capacitive touchscreen

Hardware: ARM A7 Dual-Core 1.2 GHz, Mali400MP2

2 GB DDR3 Ram / 8 GB NAND flash

Wi-Fi + Bluetooth two-in-one module (optional)

Standard Interfaces: LAN RJ45 (1x) Gbe interface

USB 2.0 (1x)

Digital Output (2x) 24V DC Relay

Digital Input (5x) 12V DC IN

Optional Interface: KNX (1x) TP

SCS (1x) TP

RS232/RS485 (1x) two-in-one module

Galvanic isolated Modbus (1x)

VRF communication port (1x) (check supported brands)

Multimedia: Speaker (2x) 0,5 watt and microphone with noise cancellation

Housing Type: Aluminum colored black

Protection grade IP 20

Working Humidity: 5% - 90% at 25°C

Working Temperature: -10°C - +35°C





Software Information's

Standard Technologies: Built-in web server

Internet upgradable

Customizable UI and web interface

VoIP (check supported brands)

Connectivity: KNX

SCS

Modbus RTU RS232/RS485 (soon)

Web server implementation (via SDK) (soon)

Controllable Elements: Illumination

Heating / Cooling

Air conditioning (Thermostat and VRF)

Curtain and jalousie

Security objects

Valves

Concierge (with Smart Console)

IP cameras (H.264) with ONVIF protocol

VoIP Intercom (only authorized brands)

User Interface: Web/Html5 (All operating systems)

App support (iOS / Android)

Unlimited clients (up to 16 parallel connections)

Browser Compatibility: Chrome / Firefox / Safari

Operating System: Android 4.2.2 (customized)





Setup and Maintenance

Configuration Interface: Online / offline through web interface

Backup / restore of the project

Select connectivity

Navigation menu with access to all functions

Drag & Drop all controllable elements

Setup and Maintenance: Network

Date / time

Language support (soon)

Selection of graphical elements

Software update

Software license

Rooms / Pages: Unlimited pages and rooms

Layout in grid and background view

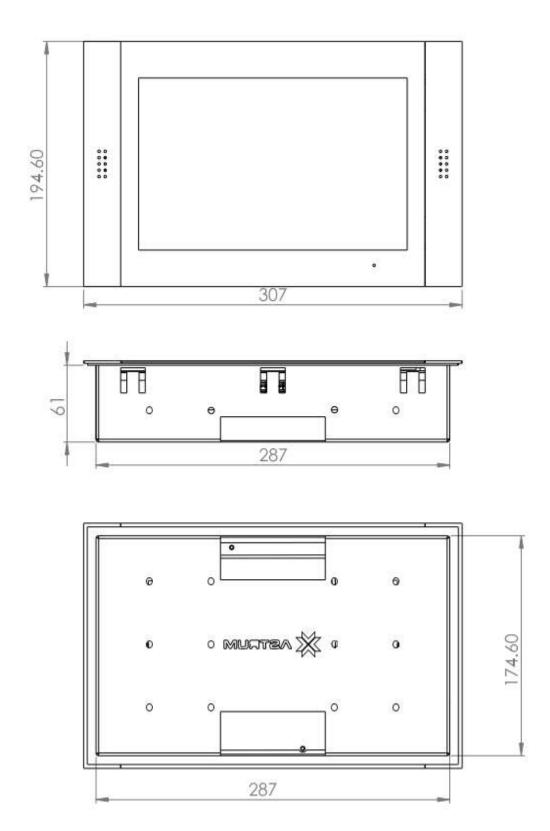
Background customizable

Positioning of the functions

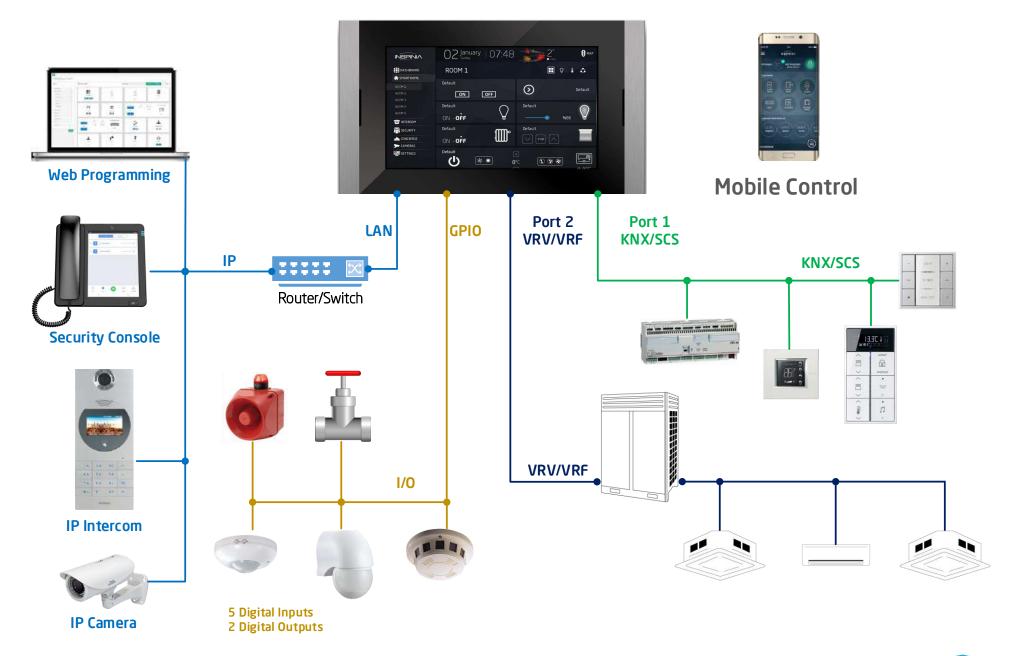




Dimensions



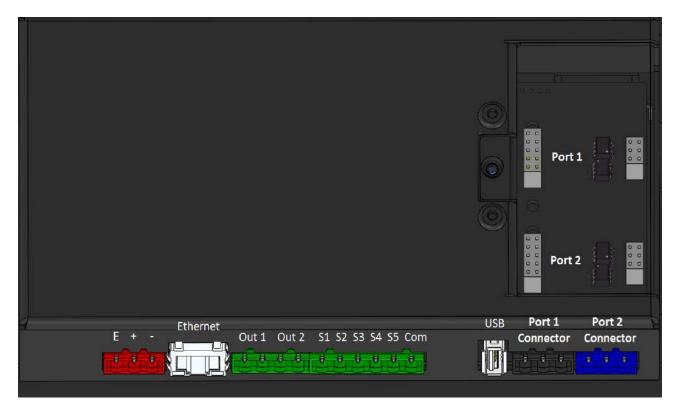








Connections



Rear side of the INSPINIA: Connection ports

Power Supply: 12V DC

Ethernet: 10M/100M/1000M (IEEE 802.3)

Port 1: Add-on port for VRF/Modbus modules

Port 2: Add-on port for KNX/SCS modules

Port 1 Connector: Bus line connection of Port 1. Polarity (X Y E) or (+ - E)

Port 2 Connector: Bus line connection of Port 2. Polarity (X Y E) or (+ - E)

USB: For Multimedia purposes

I/O Port:

Output 1: Relay 24V DC Output 2: Relay 24V DC S1-S5: Digital Input

Com: Common Pin for S1-S5





Introduction

INSPINIA based on build-in web server which provides elegance design, simple possibility to supervise and monitor home & building automation system. INSPINIA can integrate with a wide range of protocol and standards such as worldwide KNX standard, VRV/VRF, SCS, Modbus RTU RS232/485. Listed protocol types can be provide through connecting special modules to the **Port 1** and **Port 2** existed on the rear side of Touch panel.

On the other hand, as BMS Bus line protocol one of followings KNX or Bticino can be set as default bus line.

Bticino is part of the International Group Legrand and operates both on the Italian market and on the Worldwide. Bticino uses OpenWebNet communication protocol which is available in INSPINIA.

Access to the System

Access to the system realizes through entering individual IP Address and Port number of the device to the Web Browser. First check the IP Address of the device, from Touchscreen go to "Settings/Connection".



View from INSPINIA: "Setting/Connection"

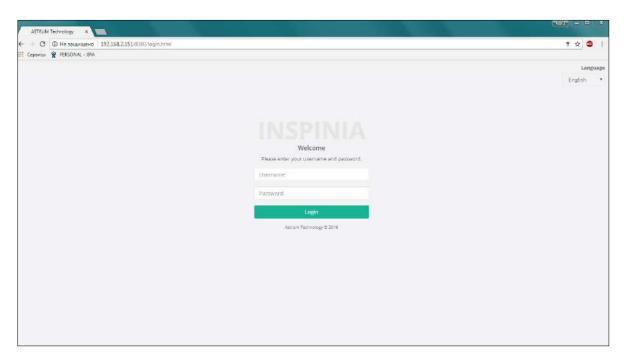




After, open your Web browser and Enter the IP Address and Port number



Default Port number is: 8080



View from browser: Login page

In order to reach this page, you need to make sure that your PC/MAC or your mobile device is connected to the same network as INSPINIA.

Types of the Access:

- Local access: IP address and port number of device inside local network is required.
- Remote access: You will need to redirect Local IP Address of the panel to the Public IP Address.



Recommended Web browsers: Google Chrome / Safari / Firefox.

Authorization to the system originates through two types of sessions.

| Username | Password | Description |
|----------|----------|--|
| user | user | Intended for end-user can monitor and control. |
| admin | admin | Intended for integrators, has unlimited |
| | | authorization to Settings |



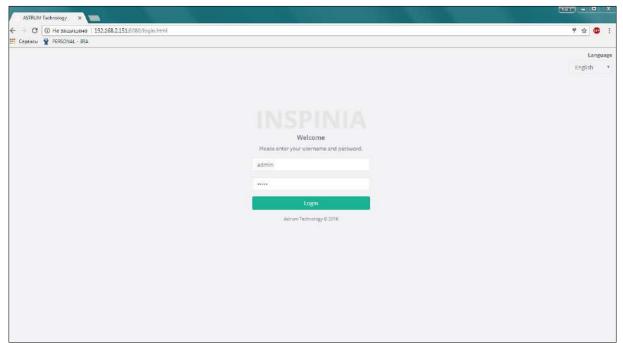




Following username and password are default and further can be change after first access to the system. These types of configurations rely on integrators preferences.

Guidance recommend to integrators, not give full access to the system due to troubles which may occur in a future with settings from end-user side.

In our case we will use **admin** account for managing configuration of the system.



View from browser: Login page

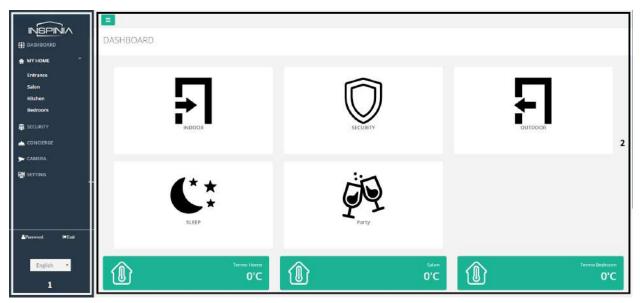




Main Page



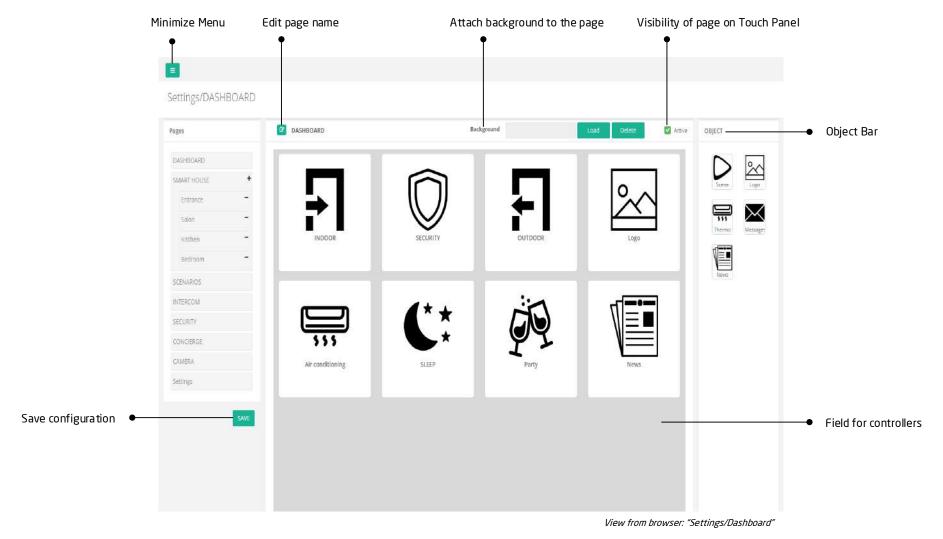
Web Interface



View from browser: Main Page

- 1) Menu bar: consist of all menu options.
- 2) Dashboard: View of Dashboard from Web interface.





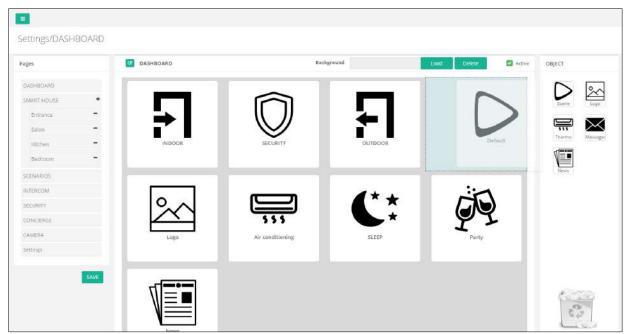


• You need to "Save" your changes after each step or each slight change in system before the skipping or going to other pages. Otherwise your changes won't be save and will stay the same.



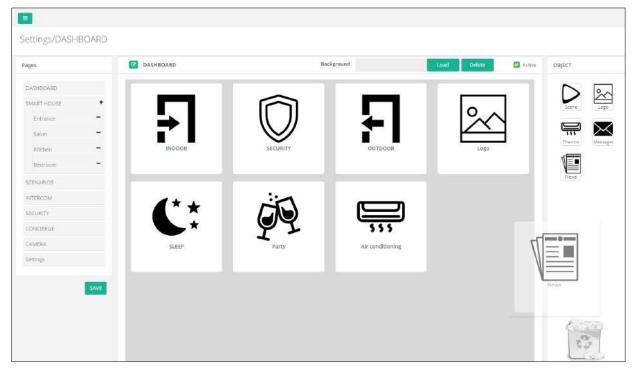


• Adding Controllers fulfills through picking "Object" from bar and dropping it to the Dashboard field.



View from bowser: "Settings/Dashboard/Pick an object"

• If you want to **Delete** any **Controller** from Dashboard just pick an object and drop it to the right corner of the window.



View from bowser: "Settings/Dashboard/Pick an object"



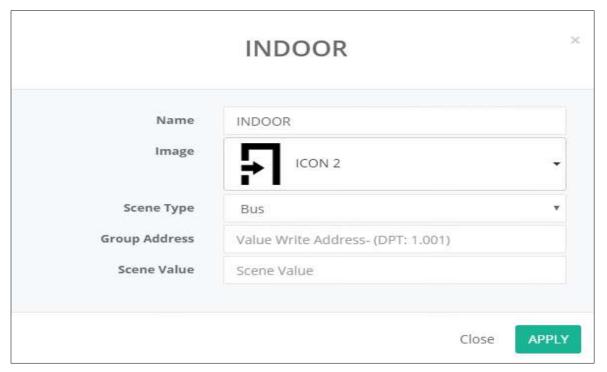


Object Bar



• Shortcuts:

Adding Shortcuts provides short ways to your favorite Scene by one click.



View from Browser:" Settings/Dashboard/Add Scene"

Name: Gives name to Shortcut

Image: Catalog of the icons for Shortcut

Scene Type: Can be set as Local Scene, Bus Line or both Scene & Bus

Scene: Choose scene from Scenarios

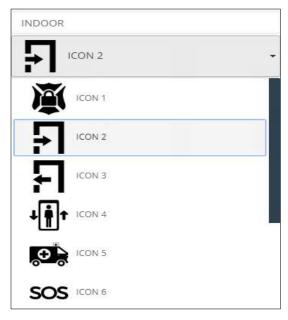
Group Address: Enter the group address of KNX/SCS project







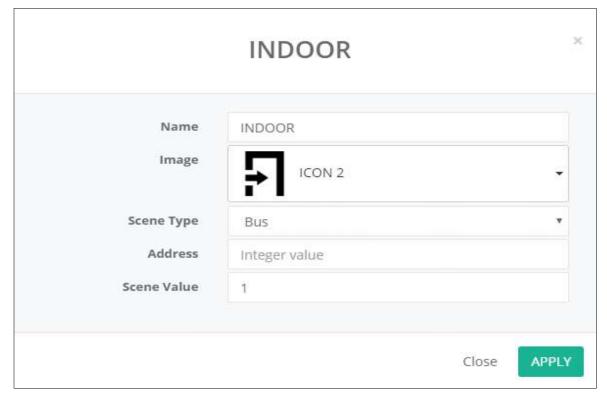
Try to choose most common **Icon** to your **Shortcut** from catalog.



View from Browser:" Settings/Dashboard/Shortcut Options"



As was mentioned before in the system two types of bus line can be set as a default. Now in a case when the default bus line is set as **Bticino**.



View from Browser:" Settings/Dashboard/Add Scene"







• Dashboard Logo

Uploads picture on the dashboard. The format of the picture should be as follows.

Max. Size = 5MB, Resolution =320x400 pixels or square of them.



View from browser:" Settings/Dashboard/Add Logo"



• Ambient Temperature

Temperature from all thermometer and air conditioners will show up on the dashboard.



View from INSPINIA:" Dashboard"



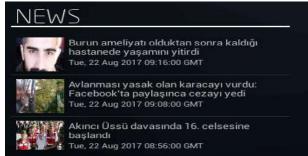




News

Renders list of News headlines, which will inform you with a latest news from several newspapers with a set update times.





View from browser:" Settings/Dashboard/Add News".

View from INSPINIA:" Dashboard"



Message

Receives massages and announcement from concierge or security of the buildings. Following service mostly depends on the Administration of the building. (additional Console device required)



View from INSPINIA:" Dashboard"

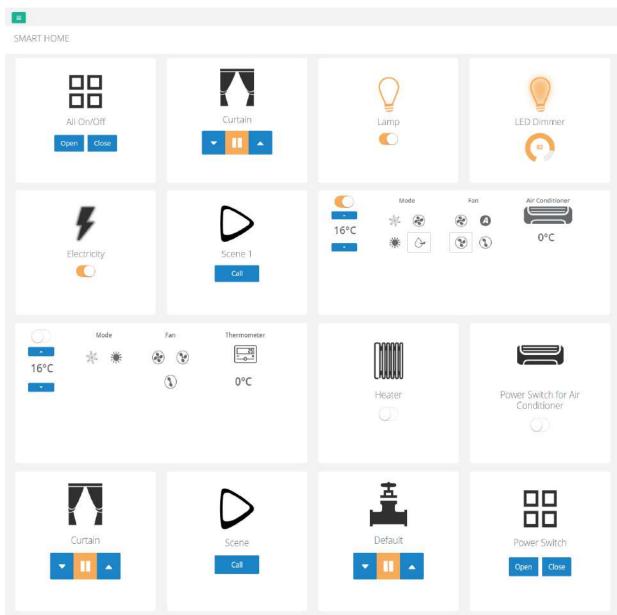


• Competency of having both NEWS and MESSAGES at the same time limited in INSPINIA. For that reason, you need to choose one of them.





Smart Home



View from browser: "Smart Home"

- Consist of controllers, scenarios which provides control and management of all part of your house.
- Also by creating other separate rooms, controllers and scenarios can be add to them for more comfortable conditions.







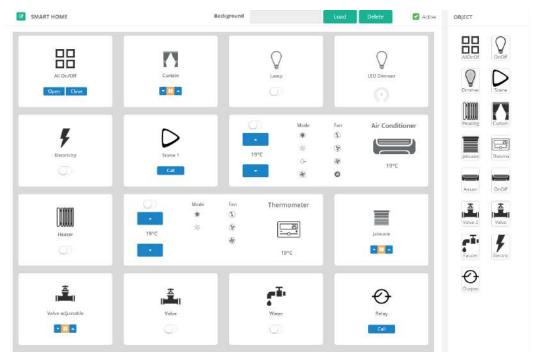
- The **Icons** of the **Objects** represents the intended purpose of the controllers in a graphical way and changes depending on the current state of the controllers **(On/Off/Open/Close)**.
- In the case of Curtain, Jalousie or Valve motors used as actuator, for that three buttons are available **(Move Up, Move Down and Stop)**.
- For the Air Conditioners or Thermometers extra following buttons available (Mode, Fun Mode, Temperature scale).





Settings

• From the settings of the Smart Home you can Add, Delete or Edit controllers and scenarios.



View from browser: "Settings/Smart Home"



• For a basic package, totally 100 controllers can be added. Starting from 100 or more will cost extra payment.

Adding Controllers



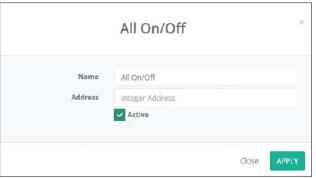
• All On/Off

Group On/Off controller.

Following "Group Address" for **KNX** and "Integer Address" for **Bticino** should be entered.



Default Bus line KNX: "Settings/Smart Home/Add All on/off".



Default Bus line **Bticino**: "Settings/Smart Home/Add All on/off



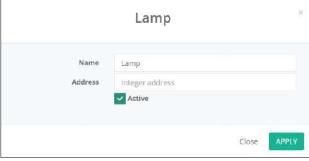




•On/Off

On/Off controller for Illumination purposes





Default Bus line KNX: "Settings/Smart Home/Add on/off".

Default Bus line Bticino: "Settings/Smart Home/Add on/off".



• Dimmer

Controller for DALI gateway which is capable of dimming function so brightness of the illuminator can be regulated.



Default Bus line KNX: "Settings/Smart Home/Add Dimmer".



Name LED Dimmer

Address Integer Address

Active

Close APPLY

LED Dimmer

Default Bus line **Bticino**: "Settings/Smart Home/Add Dimmer".



Scene

Controller allows to call Scenarios from Bus line or Scenarios from panel.

Types of Scene: Bus/Scenarios/Bus & Scenarios



Name Scene
Scenario Type Bus
Address Integer value
Scene Value

Close APPLY

Default Bus line KNX: "Settings/Smart Home/Add Scene".

Default Bus line **Bticino**: "Settings/Smart Home/Add Scene".







Heater

Controller specified for heating systems such as: Heaters, Heating batteries...





Default Bus line KNX: "Settings/Smart Home/Add Heater".

Default Bus line Bticino: "Settings/Smart Home/Add Heater".



• Curtain & Jalousie

Controller for Curtain & Jalousie



Default Bus line KNX: "Settings/Smart Home/Add Curtain".

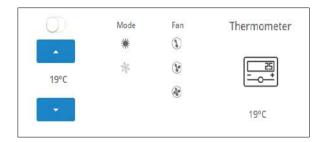


Default Bus line **Bticino**: "Settings/Smart Home/Add Curtain".

Thermometer & Air conditioner

Controller intended for air conditioners and thermometers.

Provides functions such as Fan Speed, Mode and Temperature set.



View from Browser: "Settings/Smart Home/Thermometer object".



View from Browser: "Settings/Smart Home/Air Conditioner object"



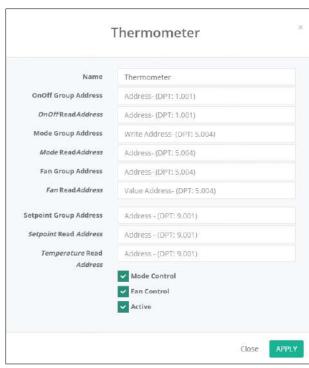


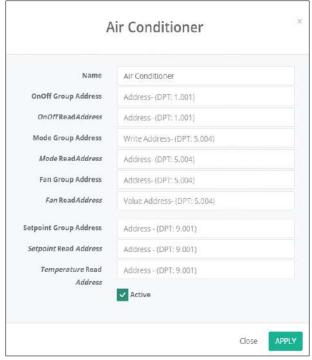
Power switch: On/Off button.

Button Up/Down: Set the temperature.

Mode: Mode control.

Fan: Fan speed control.

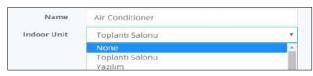




Default Bus line KNX: "Settings/Smart Home/Add Thermometer".

Default Bus line KNX: "Settings/Smart Home/Add Air Conditioner"

• If you choose VFACE or VMODE from settings. Additional line will show up for selecting indoor units from VRF system.



• Following addresses should be checked from KNX project and in a proper way should be fulfilled in appropriate fields.

Mode Control: Allows to control Mode of air conditioner from touch panel.

Fan Control: Allows to control Fan speed of air conditioner from touch panel.

Active: Visibility of controller on Touch Panel.



Default Bus line **Bticino**: "Settings/Smart Home/Add Thermometer".



Default Bus line **Bticino**: Settings/Smart Home/Add Air Conditioner".







Valve

Controller for Valve actuators.



Default Bus line KNX: "Settings/Smart Home/Add Valve".



Default Bus line Bticino: "Settings/Smart Home/Add Valve".



• Adjustable Valve

Controller for Valves which have adjustability features.



Default Bus line KNX: "Settings/Smart Home/Add Adjustable Valve".



Default Bus line **Bticino**: "Settings/Smart Home/Add Adjustable Valve".



• Relay

Dry contact (220VAC 3A). Can be used for several purposes as an example for calling elevator to your floor.



View from Browser: "Settings/Smart Home/Add Relay".





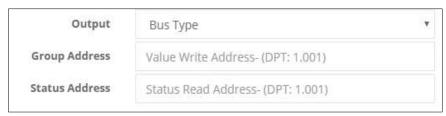
Name: Edit name

Work Type: Choose the function of the controller: On-Off or Pulse

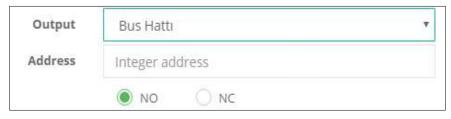
Output: Bus Type or Digital output

Digital OUT: Choose Digital Output which are available on rear side of Touch panel.

Bus Type: Need to fulfill associated addresses



Default Bus line KNX: "Settings/Smart Home/Add Relay".



Default Bus line **Bticino**: "Settings/Smart Home/Add Relay".

• Below you can choose the state of the Relay as Normally Closed or Normally Open. As initial condition of actuator.



External Ports

Depending on the project additional Relay modules can be added to the Ports and can be used as External Port-1,2.



• On/Off air conditioner

On/Off controller for air conditioners.



Default Bus line KNX: "Settings/Smart Home/Add On/Off Con".



Default Bus line **Bticino**: "Settings/Smart Home/Add On/Off Con".





Scenarios

- Customizable scenarios can be created by integrator or end-user. Various actions can be defined such as KNX control, also can be set as schedule which will be triggered automatically.
- With scenario, it's possible to define initial state of controllers, set alarm status and create single-time or weekly schedules to run.

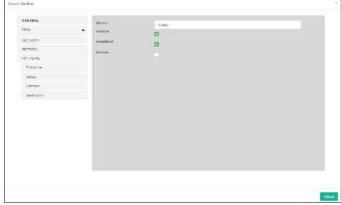


View from INSPINIA: "Scenarios"

- Indoor: means you are Home so water, electricity, gas, lights in corridor are turned ON.
- Outdoor: means you are going out so it's turning OFF all devices except the devices which needs electricity all the time (refrigerator).
- **Sleep:** this mode is before going to bed, light can be dimmed so slight luminance will be in rooms and can control also temperature in the rooms.
- For more information about creating scenarios from INSPINIA video tutorials are available in our web page.

Settings

• General: Edit Name, Visibility on Touch panel, allow end-user to Modify, Delete the Scene.



View from Browser: "Settings/Scenarios/Add Scene".





• Time: Can set the scheduler for Scene by defending day and time.



View from Browser: "Settings/Scenarios/Add Scene/Time".

• **Security:** You can activate several types of actuators, security objects while **Scene** apply.



View from Browser: "Settings/Scenarios/Add Scene/Security".

• Section: Please choose in which part or rooms of you house want to see this Scene.

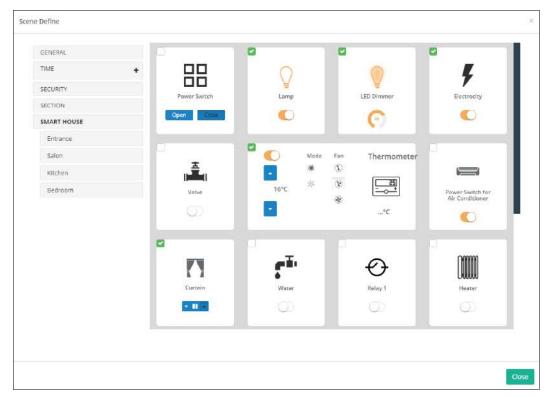


View from Browser: "Settings/Scenarios/Add Scene/Section".





• Smart Home: Firstly, select controller by putting tick after choose state of controller.



View from Browser: "Settings/Scenarios/Add Scene/Smart Home".

• Following Functions are also available from INSPINIA.



View from INSPINIA: "Scenarios"

- Edit: You can make a change in existing Scenes.
- Add: New Scenes can be added.
- Proceeding same steps, you can configure the Scene from INSPINIA which is also available in video tutorials on





Intercom

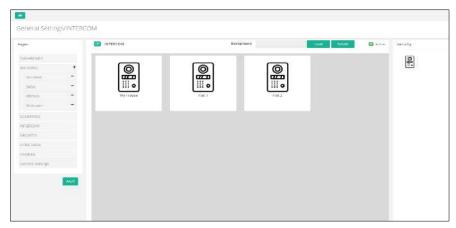
- Intercom is inevitable and most important part of any Smart Buildings. Now with INSPINIA by using VOIP it easy to establish.
- Each INSPINIA will take its own individual IP address and name during configuration.
- No need for SIP Server, system will automatically search and define all possible clients inside the network.
- For apartment outdoor video solutions two types of brand (Bticino, Dahua) can be supported without any additional setting.
- For other types of outdoor devices additional settings may be required.



View from INSPINIA: "INTERCOM"

Address Book: Provides all visible contact which you have inside residence. **Favorites**: Provides Favorite contacts which can be added from address book. **Door**: Switch for opening doors.

Settings



View from Browser: "Settings/INTERCOM"

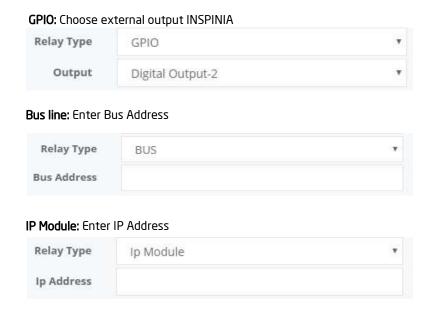






View from Browser: "Settings/INTERCOM"

- Intercom IP Address: IP Address of Digital Call Entrance Panel (Outdoor Intercom Module).
- Relay type: For UNLOCK the door. It has several types:



• NO / NC: State of Relay.



As a solution for IP door Lock/Unlock system we have Device: **Network I/O Module.**More information about module and configuration is available through link: http://astrum.com.tr/

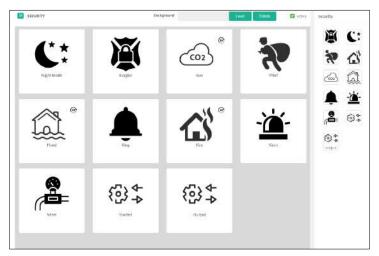




Security

Following section is responsible for Security of building or house. These becomes possible by mounting specified Sensor and Alarm. Here are some examples

- Gas Alarm: specific sensor will be set up, while detecting any gas leakage it will give alarm, will turn OFF valve and will inform related employment.
- Motion Alarm: while nobody at home motion sensor will be activated, if any movement detected it will turn alarm ON and informs you.
- Flood Alarm: Fire Alarm: in a same manner list of alarm can be settled by specific sensor and during any income signals it will inform client.



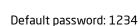
View from Browser: "Settings/Security"



Objects which have 24 inside the circle will stay Active all the time. Least of Object can be set according to the wish.

• Set an Alarm: From INSPINIA coming to "Security" section Choose Alarm type.





View from INSPINIA: "Security"

By entering the password, you will be able to activate or deactivate alarm.





Settings

There are two types of Alarms which can be Set from INSPINIA or Mobile Application:



• Burglar

| | Burglar | |
|-------------------------|------------|-------------|
| Arming Duration | 20 | |
| Disarm Duration | 20 | |
| Alarm Installation Type | Auto Setup | |
| Sensor | | |
| Output | | , |
| | | Close APPLY |

View from Browser: "Settings/Security/Burglar"

Arming Duration: Is the time delay before alarm is activated.

Disarm Duration: Is the time delay before alarm is deactivated.

Alarm Installation Type: Auto setup / Setup by password.

Sensor: Choose the sensor for Input signal. It can be added from security object bar.

Output: As a response to the Burglar choose which type of action you want to apply.



Night Mode



View from Browser: "Settings/Security/Add Night Mode"

Arming Duration: Is the time delay before alarm is activated.

Disarm Duration: Is the time delay before alarm is deactivated.

Alarm Installation Type: Auto setup / Setup by password.

Sensor: Choose the sensor for Input signal. It can be added from security object bar.

Output: As a response to the Burglar choose which type of action you want to apply.

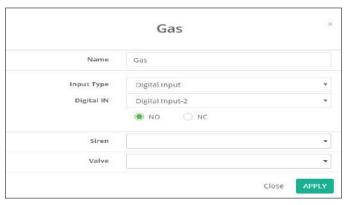




Four Alarms below can't be set, they will stay always Active. During any detection, these alarms will trigger desired Output actuator. Can be assumed as sensors.



• GAS Alarm



View from Browser: "Settings/Security/Add Gas"

Input Type: Digital Input / Bus.

Digital IN: Digital Input / KNX Address

• As a response to the Gas alarm it will turn ON Siren and will close Gas valve



Motion Alarm



View from Browser: "Settings/Security/Add Motion Alarm"

Input Type: Digital Input / Bus.

Digital IN: Digital Input / KNX Address

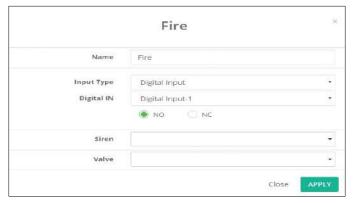
24h Zone: Putting tick will provide to stay Active all the time.







• Fire Alarm



View from Browser: "Settings/Security/Add Fire Alarm"

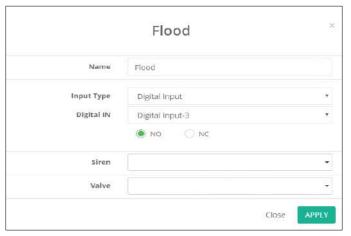
Input Type: Digital Input / Bus.

Digital IN: Digital Input / KNX Address

• As a response to the Fire you can select controllers from Siren and Valve



• Flood Alarm



View from Browser: "Settings/Security/Add Flood Alarm"

Input Type: Digital Input / Bus.

Digital IN: Digital Input / KNX Address

• As a response to the Fire you can select controllers from Siren and Valve







Doorbell

This controller is for Doorbell.



View from Browser: "Settings/Security/Add Ring"

Bell Sound: Catalog of doorbell rings.

Input Type: Define source of input signal.

Digital IN / Address: Set the Input or KNX address.

Rtsp URL: For the Camera, real time stream.

Rtsp Timeout: Duration of real time stream from Door.



• Siren

Adding Siren for Emergence situation. After adding Siren, it will be available as Outputs in all Alarms.



View from Browser: "Settings/Security/Add Siren"

Alarm Output: Digital Output / Bus Type

Digital OUT: Define the output external Pin from INSPINIA

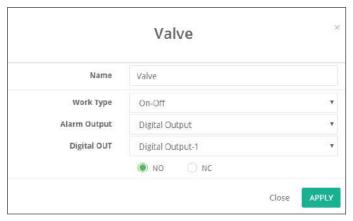






Valve

Controller for the valve actuator. After adding Valve, it will be available in all Alarms.



View from Browser: "Settings/Security/Add Valve"



Started

Every time when the system will stand by or in the case of Power Surge, sends signal/pulse to the Bus Line.

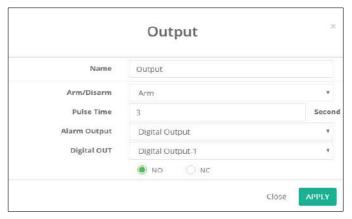


View from Browser: "Settings/Security/Add Started"



Output

In the case of activating/deactivating Alarm, sends signal/pulse through Bus line or Digital output.



View from Browser: "Settings/Security/Add Output"





Concierge

This section is mostly depending on administration of building, hotel or residence. Administration will define the types of services which can be exhibit. After specified services will be add to **Concierge** section.



View from INSPINIA: "Concierge"

Getting benefit from services is simple, push the Available service and set the detail of the service.

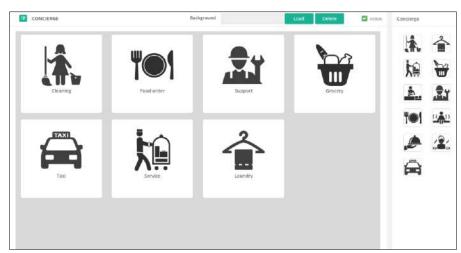


View from INSPINIA: "Concierge/Choose Service"





Settings



View from Browser: "Settings/Concierge"

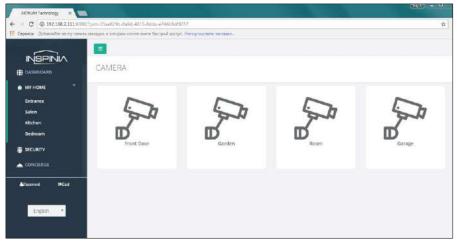
Choose most common Object to your service after fulfill contact information.



View from Browser: "Settings/Concierge/Add Cleaning"

Camera

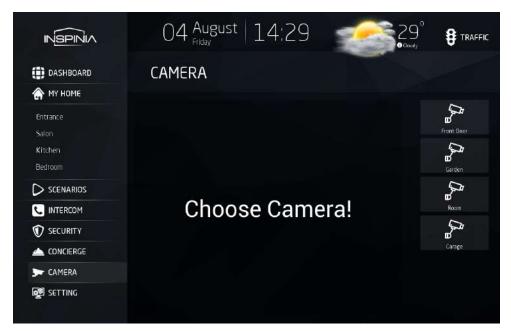
This section displays video streams of compatible IP cameras which is mounted around building. The video streams can be accessed within the local network or by remote access through mobile application.



View from Browser: "Camera"





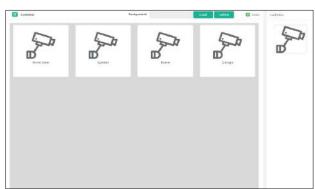


View from INSPINIA: "Camera"

Http URL

Mobile

Settings





View from Browser: "Settings/Camera/Add Camera".

rtsp://admin:admin@172.16.16.43/live

Front Door

Front Door

554

If you want to enable live stream on your mobile app, you need to redirected Cameras Local IP addresses to static IP address using port forwarding.

Name: Edit name

Http URL: Enter URL address

Public port: Please enter public port number which you used in forwarding.

Mobile: Available on mobile app

Rtsp URL: Enter Rtsp URL of camera which can be defined through search button.



• As Camera solutions, we are supporting ONVIF standard and H264 protocol.





Defining camera: Push "*Rtsp URL*", choose Camera depend on resolution.



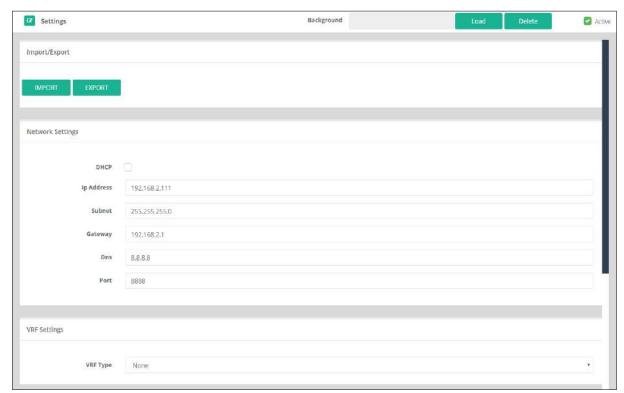
View from Browser: "Settings/Camera/Add Camera/Rtsp URL".

If you are unable to find cameras from searching please enter Rtsp URL manually. Check tutorial on web page





General Settings



View from Browser: "Settings/ Settings".

Import/Export:

Exports following Settings or Imports the existing Setting(.json).

Network Settings:

It can be set through DHCP or Manually

- Be attentively with network setting, during defining IP address don't mix them and fill all the lines.
- **Port:** Required to enter port number, which need to be defined while redirecting local IP address to the Public IP address for the remote control.

VRF Settings:

VFACE / VMOD

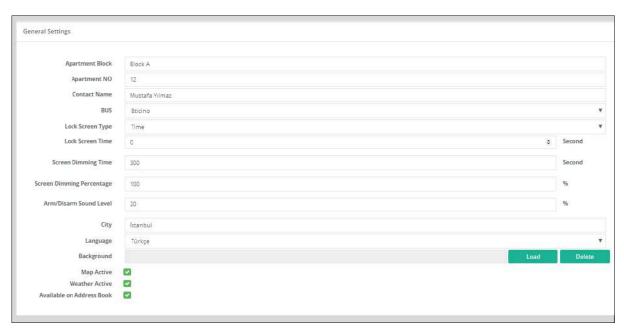
- **VMODE:** Extra VRF Add-on module required, module is unique for each type of brands you need to mention it while ordering. After plugging and selecting the brand click to the search button. Video tutorial is available on
- VFACE: If you have VFACE product already mounted to your apartment please enter the IP Address of system and refresh page as a result you'll see the list of all Indoor units. System will automatically search and finds all Indoor units.



View from Browser: "Settings/ VRF Settings".







View from Browser: "Settings/ Settings".

Apartment Block: Enter building name/number.

Apartment NO: Enter flat number.

Contact Name: Enter resident information.

BUS: Select default Bus line: KNX / Bticino.

Lock Screen Type: Select screensaver type: Password / Time / Logo.

Lock Screen Time: Time before locking screen.

Screen Dimming Time: Time before dimming brightness of screen

City: Located city

Language: English, Türkçe, Русский

Background: Changes background of the Dashboard

Map Active: Visibility of TRAFFIC feature on Information Bar

Weather Active: Visibility of Weather feature on Information Bar

Available on Address book: Visibility of Panel on Address Book







View from Browser: "Settings/ Settings".

Security Password: Code of Security menu in INSPINIA

Username: Client username (Don't use any space while giving the name)

Web Password: Client password

Web Password Again: Enter again Client password

Web Admin Password: Code for Web Admin (Operator)

Web Admin Password Again: Enter again Code for Web Admin (Operator)

Panel Admin Password (Numeric): Administrator password of INSPINIA

Version: Views software version. Can be updated if its available.

