CASE STUDY

Meet integration with CRESTON Home Automation

Description

It is described how to configure the Meet entrance panel and the guidelines to develop the CRESTON module to be able to receive the call from the entrance panel on the CRESTON screens, as well as to manage the home automation from the WIT monitor.

Ver 1.0

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INTRODUCTION

The door stations of the Meet system can operate in standard SIP mode, which makes them compatible with systems from many manufacturers. In this case we are going to see how the call from any MEET door station can be routed to a CRESTON home automation system.

This integration does not use a SIP server, so the call will be made directly from the outdoor panel to the display(s).

As an option, one or more Meet monitors can also be installed to receive the call in parallel to the CRESTON screens and take advantage of the call forwarding to the MeetMe application, which allows the call to be received even if the application is closed or in the background.

The WIT monitor can also accept Android applications previously validated by Fermax and can be used both to receive calls from the outdoor panel and to manage the CRESTON home automation system as if it were done from a mobile phone, but with a larger, more convenient and always available screen.

MATERIAL REQUIRED

Any Fermax MEET outdoor panel can be used for this integration as they all support SIP protocol. In the case of a single-family home, the one-way MILO panel (a single pushbutton) will be used. In the case of a building or housing estate, the MILO panel can be used or, if an electronic directory is required, the KIN or MARINE panel.

The outdoor panel may require a power supply or PoE splitter if it does not support PoE, as well as the electric strike.
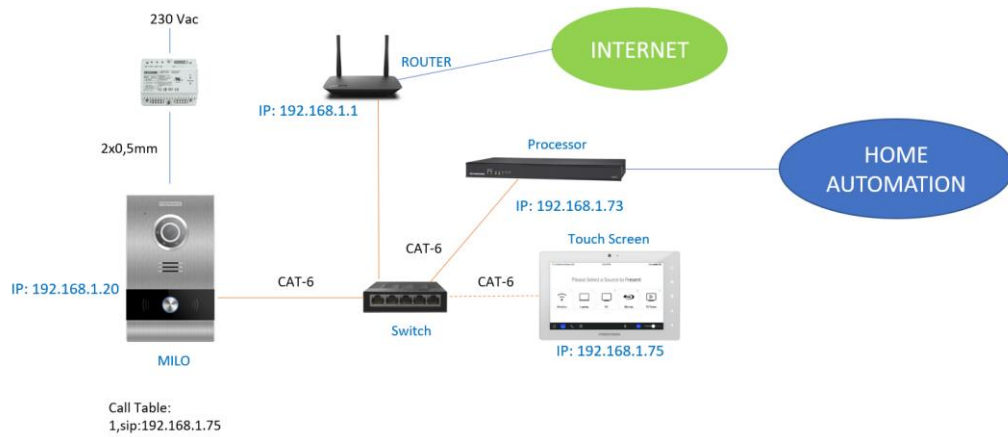
In case of a building installation, where the outdoor panel is shared with all dwellings, in order to maintain the security of the local networks of the dwellings, there are two options:

a) If the CRESTON display is used to receive the call, it will be necessary to use a dual wan router in each home, one connected to the building's video door entry network and the other to the home's network router.
b) Alternatively, if the WIT 10" monitor ref. 14831 is used, the installation is simplified as the WIT monitor itself isolates the building's network from the local network of each home. In this case, the WIT monitor requires the CRESTON-app application to manage the home automation system. The call forwarding to the mobile phone must be carried out with the Fermax MeetMe app and an internet connection to the building is required.

BASIC SCHEME

1) Single-family.
   The usual MEET system installation scheme is used, with the only additional requirement of connecting the panel to the local network of the home installation, where it concur with the CRESTON processor and display.
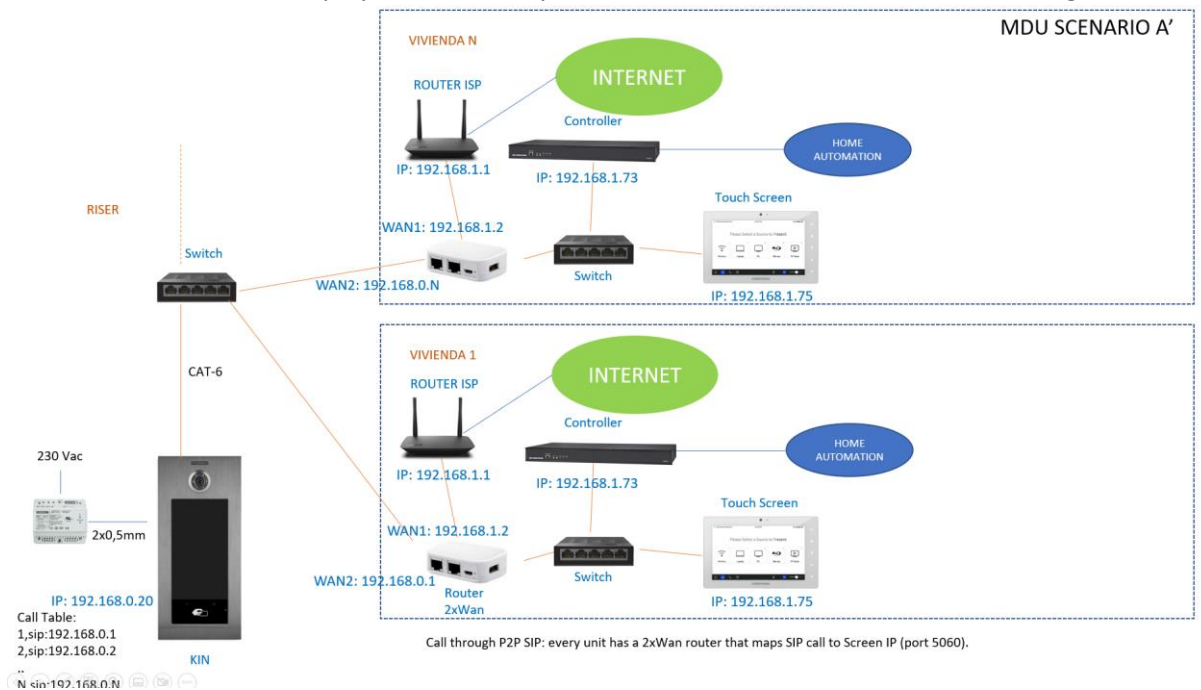
230 Vac

ROUTER

INTERNET

IP: 192.168.1.1

2x0,5mm

Processor

HOME AUTOMATION

IP: 192.168.1.73

CAT-6

Touch Screen

IP: 192.168.1.20

CAT-6

CAT-6

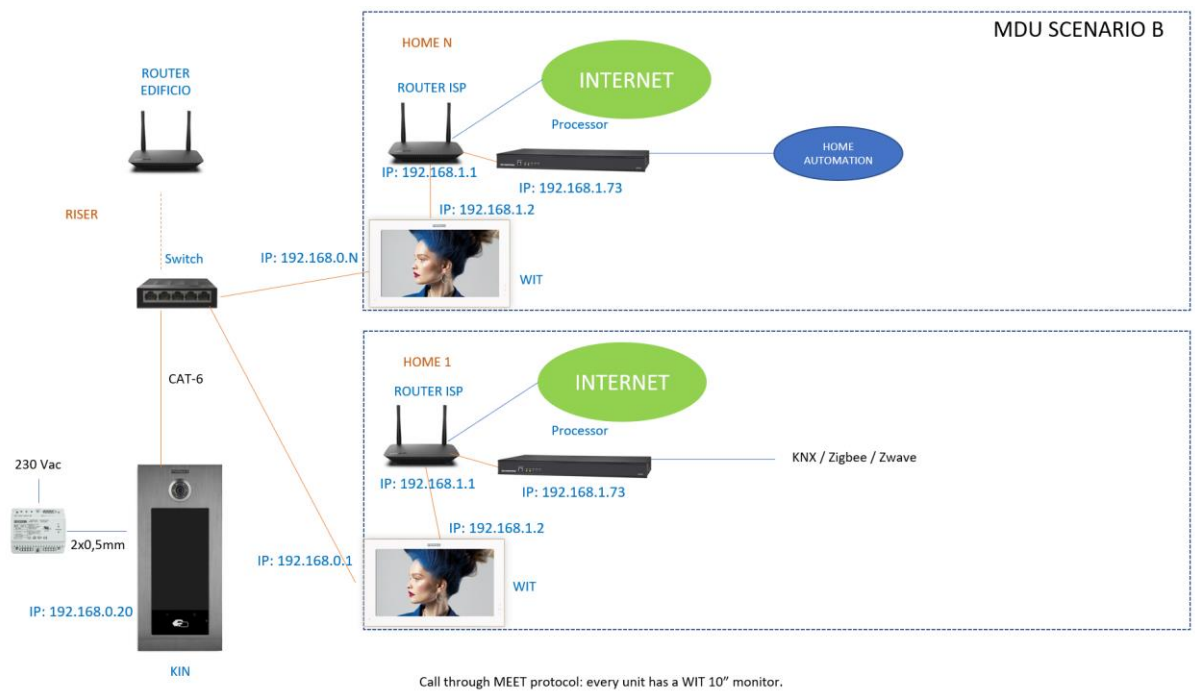Switch

IP: 192.168.1.75

MILO

Call Table:
1,sip:192.168.1.75

2) Building (MDU)

There are two installation options:

a. With CRESTON display, it is necessary to install a dual wan router in each dwelling.

MDU SCENARIO A'

VIVIENDA N

ROUTER ISP

INTERNET

Controller

HOME AUTOMATION

IP: 192.168.1.1

IP: 192.168.1.73

Touch Screen

RISER

WAN1: 192.168.1.2

Switch

Switch

WAN2: 192.168.0.N

IP: 192.168.1.75

VIVIENDA 1

ROUTER ISP

INTERNET

CAT-6

Controller

HOME AUTOMATION

IP: 192.168.1.1

IP: 192.168.1.73

230 Vac

Touch Screen

WAN1: 192.168.1.2

2x0,5mm

WAN2: 192.168.0.1

Switch

Router 2xWan

IP: 192.168.1.75

IP: 192.168.0.20
Call Table:
1,sip:192.168.0.1
2,sip:192.168.0.2
..
N sip:192.168.0.N

KIN

Call through P2P SIP: every unit has a 2xWan router that maps SIP call to Screen IP (port 5060).

b. With WIT 10" monitor

Call through MEET protocol: every unit has a WIT 10" monitor.

INSTALLATION

No special requirements, following the installation protocol of a Meet system outdoor panel.

CONFIGURATION

OUTDOOR PANEL

To configure the outdoor panel, use a browser and access the IP address assigned to the entrance panel, by default 10.1.0.1 (building entrance panel) or 10.1.1.2 (one-way panel) and enter the user *admin* and default password *123456*.

The following steps will be followed:

1) Network settings

The IP address within the local network assigned to the entrance panel and the rest of the network parameters will be indicated: mask, Gateway or router to access the internet. The software IP does not need to be changed if there is no building administrator with the management software.

After saving this information, it will be necessary to connect again to the web server of the entrance panel via the newly assigned IP address in order to continue the configuration.

2) SIP service configuration

In the **SIP** Configuration section, the ACTIVATE SIP tick will not be activated since the communication is peer to peer, without a server.

Note: The SIP TRUNK option should not be used in this type of application.

3) Receiver configuration
   a. One-way panel.

In the SIP CALL section, the receiver associated with the call of the individual pushbutton of this panel must be indicated. Indicate the flat number configured in the GENERAL tab ('101' by default) and as the assigned number sip:IP value assigned to the CRESTON screen and click on SAVE. The table will be automatically filled in. In the example, the flat is 10 and the IP of the screen is 192.168.1.3.

If there is more than one screen that has to receive the call, its IP shall be indicated after the first one, separated by ';'. For example:

sip:192.168.1.3;sip:192.168.1.4

will call displays with IP ending in 3 and 4.

b. Building panel.

For scenario A, a CSV table must be configured with the assignment of the house dialling number and the IP of the WAN1 of the double wan router of each house. The CSV file format can be downloaded from the **SIP CALL** section of the panel's web server, EXPORT option.

An example is the following:

```
APARTMENT,NUMBER,
1,sip:192.168.0.1,
2,sip:192.168.0.2,
3,sip:192.168.1.3,
```

The dialling call code of the home is given first and, separated by a comma, the text 'sip:' and the IP of the home router, one line per home.

In the example, calling home 1 will call the Meet monitor installed in the home (if any) and also the CRESTON screen managed by the router with IP 192.168.0.1.

To load the CSV file on the panel, select the file created and click on the IMPORT button. The CSV's call list will appear on the screen. Sometimes it is necessary to refresh the browser screen by clicking on the corresponding icon:

For scenario B it is not necessary to configure the SIP CALL section as the call is made via MEET protocol, and when dialling the call code, it will be received on the MEET monitor with the same house number.

4) Camera resolution settings

In the GENERAL section of the outdoor panel, a suitable camera resolution must be selected. 640x480 resolution does not cause any problems with CRESTON displays. You can try a higher resolution (1024x720) and see that you do not suffer from image stalls.

CRESTON SCREEN

Considerations to be taken into account in the CRESTON screen are as follows:

- Configure a static IP or, failing that, assign an IP in the router associated with its MAC, the one used in the outdoor panel to call it, because if you choose dynamic and change it when restarting the screen or the router, you will have to change the call destination IP in the outdoor panel.
- Configure SIP P2P mode. This is configured in the configuration menu: Diagnostics> Rava Test> Rava Setup. This is the default mode.


CRESTON PROCESSOR

A module associated with the FERMAX outdoor panel must be configured using VisionTools ProE for the user interface and SimplWIndows for the operating logic, with the following considerations:

- Add the corresponding display model (within the models that allow SIP communication).
- Within the parameters of the screen, there is the VOIP Reserved Joins extension where all the management of the module is done:
  o Open_Door: Door Activation (by sending DTMF #)
  o Answer: it will pick up the call
  o Hangup: Can be used to hang up or reject a call.
  o Mute: Mute audio on the screen
  o Incoming_fb: Incoming call signal

- o   Mute_fb: Screen mute enabled
- o   Call_Terminated_fb: End of call signal
- o   Call_to_Videodoor: Sending SIP address of panel to make call from the screen (auto-on)
- o   Incoming_URI_fb: String that will indicate the origin of the call.
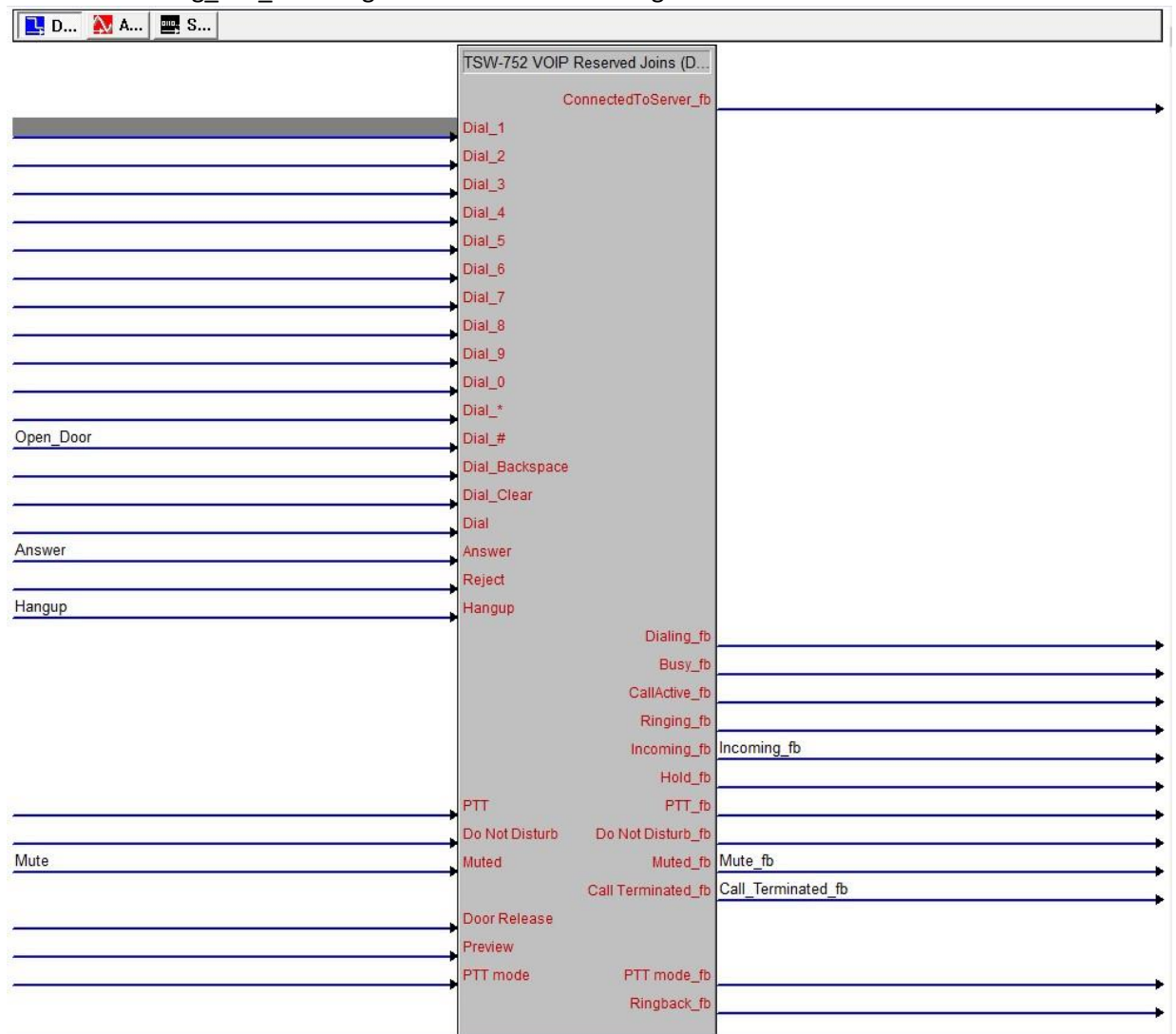
- Since this module does not support video, the rtsp stream provided by the outdoor panel camera must be used for video reception. The URL to be used is the following:

      rtsp://admin:123456@Panel_IP:8554/ch01

      where:

         123456 is the default password for the outdoor panel web server (or use the one that has been changed).

         Panel_IP is the IP of the outdoor panel.

         The image quality is set in the GENERAL menu of the web server of the entrance panel.

- For the door opening there are two options:
  - o   Send a DTMF Inband ('*' or '#')
  - o   Send the command: http://IP/cgi-bin/ext/control.cgi?op=unlock

      Where:

      - ▪   IP is the IP address of the outdoor panel.
      - ▪   The credentials of the web server (admin:123456) must be sent via Basic Authorization.

An example of an UI is the following:

There are buttons to connect at will to 2 outdoor panels (parking and home), a mute button to mute the audio, buttons to accept, reject and end the call, a button to open the door and a bar to regulate the conversation volume.

OPERATION

To call the specific flat, press the individual button (single line panel) or enter the associated call code and confirm with the corresponding button (depending on the panel, this will be the bell button or 'B' on MILO and MARINE panels or the off-hook icon on KIN panels).

Direct code call

The panel will generate the call to both the home's Meet monitor (if any) and the CRESTON display associated with that home, which will announce the call from the panel.

Pressing the answer button will display the video from the camera and open the two-way audio channel. The time delay is limited to 120". You have the option to open the door at any time.

If the MEET monitor is used in the home, it is also possible to receive the call in the MeetMe app, provided there is an internet connection in the building.

CRESTON APP INSTALLATION ON MEET MONITOR

Download the MEET_CRESTON file and connect to the IP video door phone network where the MEET Monitors are located.

Open the MEET System Upgrade Tool software, select the Creston_app_A10 file as IMG1 and air_runtime_A10 as IMG2, and set the IP address range of the monitor(s), in the example 192.168.1.83-83 (single monitor).
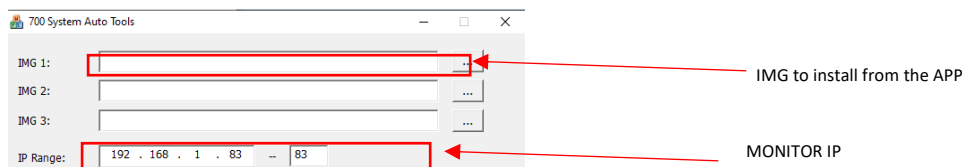
Press "Start" to start downloading the application to the monitor(s). Once installed, the monitor will reboot.

Monitor > Go to the Installer menu (password 6666) and open the APPs menu.

Select the "Creston" APP and assign an icon to it. The Adobe AIR APP must not be selected. Save the changes.

The application will be displayed on the home screen of the monitor.

Once we open it, we must register the installation by clicking on the + icon at the bottom right. The + icon is hidden under the icon of the 3 dots, pressing it repeatedly activates it. We will be asked to enter the IP of the home processor, port and ID of the User Interface that we want to assign to this screen (Meet monitor):

Friendly Name / Location	Fermax
Use Local Project	OFF
Host name or IP Address	192.168.1.88
HTTP Port	80
IP ID	03
CIP	41796
Room ID	

When saving, it will download the processor configuration (a few seconds) and will display the menu with the available options that have been configured from the Toolbox. The operation is the same as for the CRESTON screen, except for the video door entry function, which will be dispensed with in the module as it is native to the Fermax monitor and simplifies operation.

The application can remain always active, as in a CRESTON screen. When a call is received, it will be interrupted momentarily to attend to it and, when the call is finished, it will be displayed again at the point in the menu where it was interrupted. The monitor has a 60 second time-out to standby in which the display is turned off, if not acted upon, to maintain the durability of the TFT and reduce power consumption. Touching the screen again will return the application to the same point where it was displayed before the sleep.