



CASE STUDY

Meet Intercom Panel Integration with C4 HA system

Description

It is described how to configure the Meet entrance panel and the C4 controller to enable call reception from the entrance panel on the C4 screens and App.

INDEX

INTRODUCTION	2
REQUIRED DEVICES	2
SCHEME	3
Single house.	3
Building (MDU)	3
INSTALATION	4
COMMISSIONING	4
C4 CONTROLLER	4
SINGLE HOUSE INSTALLATION	4
MDU INSTALLATION	8
Scenario B	8
Scenario A	8
WORKING MODE	13
OTHER CONSIDERATIONS	14
CONTROL 4 APP UPLOAD ON WIT MONITOR	15

INTRODUCTION

The entrance panels of the Meet system can operate in standard SIP mode, which gives them compatibility with systems from many manufacturers. In this case, we are going to see how the call from the MEET entrance panel can be sent to a C4 home automation system.

The C4 controller of a home automation installation incorporates a SIP server that allows this type of integration, so it will be necessary for the MEET entrance panel to register with this server and assign it a valid extension. There are two ways to do it: manually, by configuring the entrance panel through their web server, or through the auto configuration provided by the Meet driver designed specifically for C4, but this method is **only valid for a MILO one-way panel, it is not compatible with Building panels**.

This driver must be installed in the C4 controller, and it is mandatory to be able to access all the functionalities of the entrance panel. The driver is free to download, but it is necessary to pay a user license to activate it.

Once the driver has been installed, its license is activated and the entrance panel must be configured, it will now be possible to make calls from the entrance panel to the installation's C4 screens and to the C4 App, which allows call forwarding to the mobile. You can also install one or more Meet monitors to receive the call in parallel on them and take advantage of the call forwarding to the MeetMe application.

The WIT monitor also allows you to load Android applications previously validated by Fermax and can be used both to receive calls from the outdoor panel and to manage the C4 home automation as if it were done from the mobile, but with a larger and more comfortable screen and a simplified installation.

REQUIRED DEVICES

Any Fermax MEET entrance panel can be used to carry out this integration since they all support SIP protocol. In the case of a single-family home, the one-way MILO panel (a single button) will be used. In the case of a building or condominium, the MILO DIGITAL panel can be used or, if an electronic directory is required, the KIN or MARINE panel.

The entrance panel may require a power supply or PoE splitter if it does not support PoE, in addition to requiring the electric lock release.

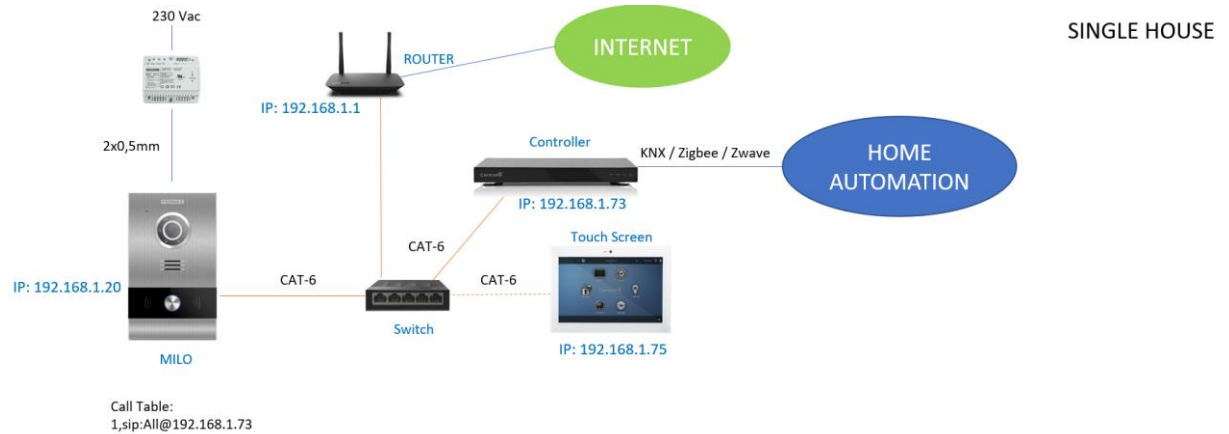
In the case of building installation, in which the outdoor panel is shared, there are two options:

- a) If the C4 screen is used, a router with a double Wan port will be necessary to isolate the home network from the building network. Call forwarding to the mobile is done through the C4 app. It will be necessary to have a proxy that allows the entrance panel to be registered in each of the SIP servers of the C4 controller of each home. Control 4 recommends using the Communication Server MDU controller.
- b) If a WIT 10" monitor ref. 14831 is used, installation is simplified since the WIT monitor itself isolates the building's network from the local network of each home. In this case, the WIT monitor requires the C4 App to be installed. Call forwarding to the mobile must be done with the Fermax MeetMe app and an internet connection in the building is required.

SCHEME

Single house.

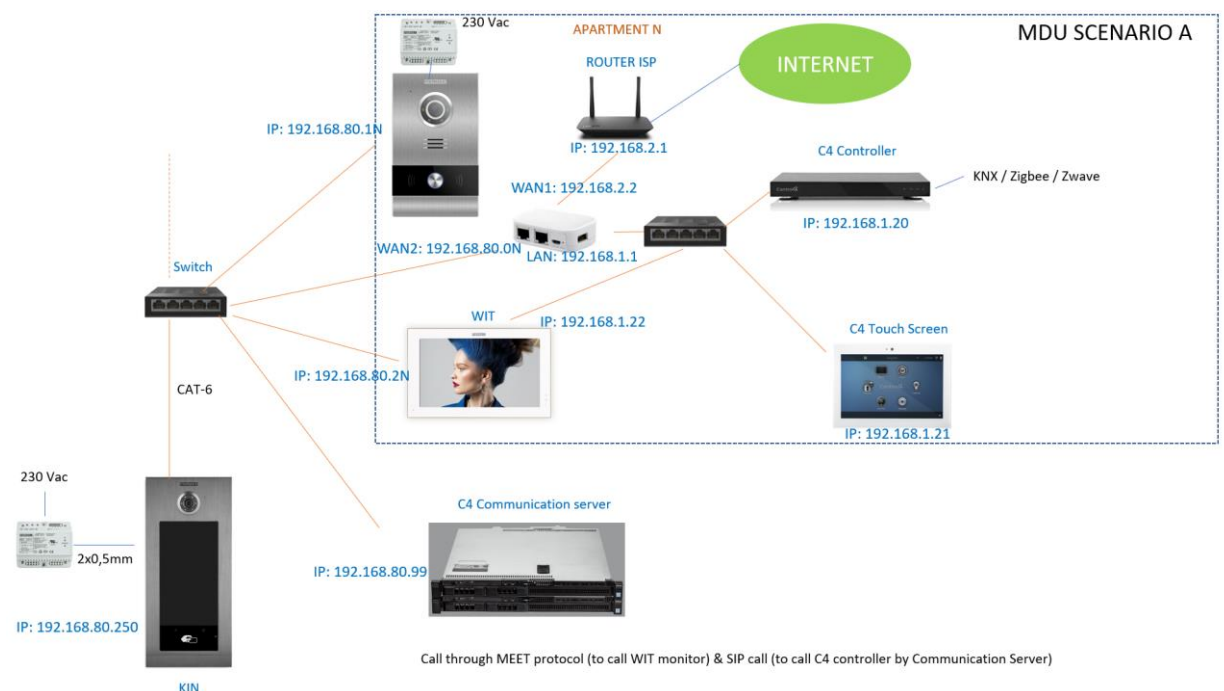
The usual installation scheme of the MEET system is used, with the only additional requirement of connecting the panel to the local network of the home installation, where it concurs with the C4 controller.



Building (MDU)

There are 2 options:

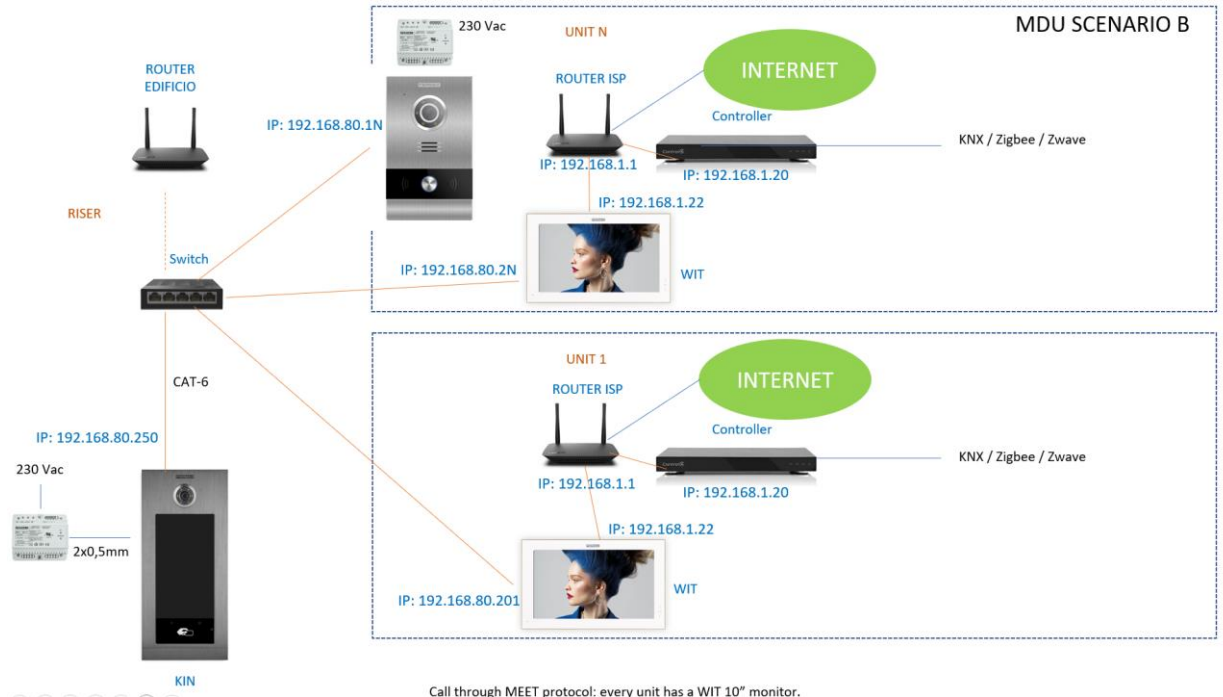
- With Control 4 screen as call receiver.



This option will require a C4 MDU communication server (CS) to maintain registration on each of the C4 controllers and panels. All Meet devices are connected to the same lan, together the CS. Every unit requires a double wan router to isolate the private lan of each unit from the other units and entrance lan. This diagram shows a complete example, so individual panel in each unit is optional and also the WIT monitor.

Call divert must be done with C4 app, unless an internet connection is provided at building level, so Meetme app can be used.

b) With WIT 10" monitor ref. 14831



This scenario is simpler because we earn the communication server and the double wan router and C4 driver in each unit. WIT monitor must have installed Control4 app as described in last chapter. One way panel is optional. Call divert to smartphone must use Meetme App and a common internet connection must be provided.

INSTALLATION

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

COMMISSIONING

C4 CONTROLLER

First of all, you must download the driver from this [link](#) and it should be left in the 'Documents/Control4/Drivers' folder. Control 4 controller must use a static IP. Be sure you have driver version 20230223 or later.

The MAC of the C4 controller must be checked in order to request the license. Visit the following link to purchase the licence <https://shop.fermaxaus.com.au/control4-driver/> Once purchased you will receive two emails. First email will be the confirmation of your purchase. The second email will request your MAC address of the C4 controller. Upon reply, a valid licence will be sent to you.

SINGLE HOUSE INSTALLATION

Once the license is obtained, the configuration can begin:

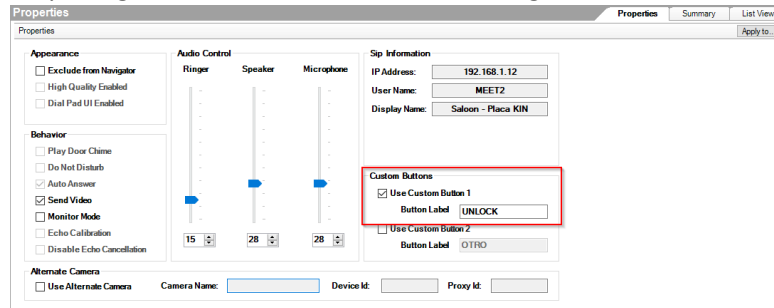
- Open the C4 'Composer' application and search for 'FERMAX' driver.

- Add to project by right clicking on the the driver '*Fermax Placa Milo Door Station Driver*'.
- Change the name of the added device if necessary. By default, two devices are created: the intercom panel and the inner camera of the panel.
- Update the following parameters:

- Enter the license code received and check it is activated.
- In *Driver Information* indicate:
 - Select panel Model.
 - IP address of the entrance panel.
 - Port 80 (leave the one that comes by default).
 - Username: admin
 - Password: 123456. This is the default password for the Meet outdoor panel, if it had been changed for security reasons (recommended), enter the new one.
- In *SIP Information* indicate:
 - SIP SERVER: do not modify. This data is important to configure the entrance panel manually.
 - SIP USER: You can leave the one shown or change it. This value must be configured on the entrance panel.

- SIP PASS: You can leave the one shown or change. This value must be configured on the entrance panel.
- Intercom Group: select which groups should receive the call from the entrance panel.

- Add the opening button in the User Interface and give it a name:



ENTRANCE PANEL

As mentioned before, the one-way entrance panel allow automatic configuration from the C4 controller (Properties, Action tab) if you want to use it as Block 1, Unit 1, otherwise it is not recommended. However, the manual configuration process is very simple, and it is recommended to increase the security of the entrance panel and avoid leaving the default IP.

Manual configuration.

To configure the entrance panel, you must use a browser and access the IP address assigned to the entrance panel, 10.1.1.2 (one-way panel) and enter the username *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 have internet access. The *software IP* does not need to be changed if there is no building manager with the management software.

DEVICE	NETWORK SETTINGS
GENERAL	
NETWORK	
ACCESS	
FACIAL RECOG.	
IP CAMERA	
SIP	
SIP TRUNK	
SIP CALL	
ADVANCED	
PINCODE	
QR ACCESS	
RESET	

IP:	192.168.1.214
MASK:	255.255.255.0
GATEWAY:	192.168.1.1
DNS:	8.8.8.8
SOFTWARE IP:	192.168.1.220
SW. PIN:	*****
SAVE	

When saving this information, it will be necessary to connect again to the web server of the entrance panel through the new assigned IP address to continue the configuration.

2) SIP service configuration

In the SIP Configuration section, the IP of the C4 SIP server will be indicated (192.168.1.213 in this example), as shown in the screen below.

Enter the username and password assigned to the entrance panel in the previous step.

DEVICE	SIP SETTINGS
GENERAL	
NETWORK	
ACC	
SIP	
SIP TRUNK	
SIP CALL	
ADVANCED	
PINCODE	
RESTORE	

ENABLE SIP: ☒ [SEARCH SIP STATUS](#)

SIP SERVER: sip:192.168.1.213

DOMAIN: 192.168.1.213

STUN IP:

STUN PORT: 5060

H.264: 102

SIP USER: MEET2

SIP PASS:

CONVERSATION: 120s

RING TIME: 30s

SAVE

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

3) Receiver configuration

In the SIP CALL section, the receiver associated with the call of the individual push-button of this panel must be indicated. The apartment indicated in the GENERAL tab (10 in this example) is indicated and as the assigned number the value: sip: All@192.168.1.213 (the IP assigned to the C4 SIP server) and click on Save. The table will be filled automatically.

DEVICE	SIP CALL SETTINGS
GENERAL	
NETWORK	
ACC	
SIP	
SIP TRUNK	
SIP CALL	
ADVANCED	
PINCODE	
RESTORE	

APARTMENT: 0

NUMBER:

DELETE: ☐

SAVE

APARTMENT	NUMBER	APARTMENT	NUMBER	APARTMENT	NUMBER
10	sip:All@192.168.1.213				

4) Camera resolution settings

In the GENERAL section of the entrance panel, you must choose a suitable camera resolution. The resolution of 320x240 does not give any problem with the screens and the C4 App. You can try a higher resolution (640x480) and see that it does not suffer from image cuts.

GENERAL SETTINGS	
DEVICE	
GENERAL	
NETWORK	
ACC	
SIP	
SIP TRUNK	
SIP CALL	
ADVANCED	
PINCODE	
LOGOUT	

BLOCK:	1
APARTMENT:	1
DEVICE NO.:	1
TYPE:	1W PANEL ▾
LANGUAGE:	ENGLISH ▾
PANEL VOLUME:	1 ▾
VIDEO RESOLUTION:	320x240 ▾
SIP DIVERT MODE:	PARALLEL CALL ▾
DATE FORMAT:	DD/MM/YYYY ▾
DATE:	01 / 01 / 2018
TIME:	02 : 39 : 01
TIME ZONE:	GMT+01:00 ▾
SAVE	

Once the outdoor panel is configured, do the following steps on Composer:

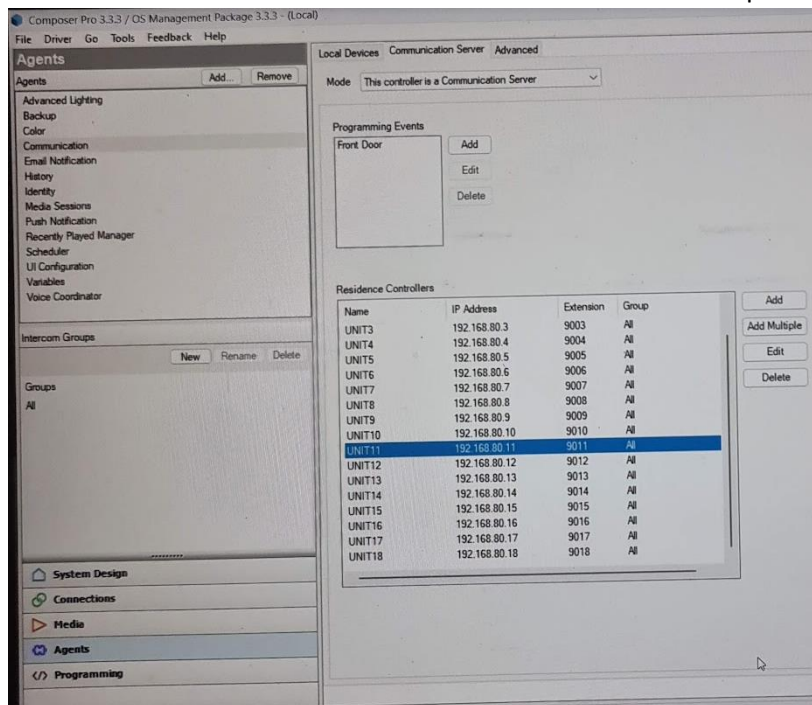
You can check if the panel is correctly configured in the control unit server by clicking on the **VIEW SIP STATUS** link of the SIP tab.

Depending on the selected MDU option (scenario A or B seen before) configuration is more or less complex.

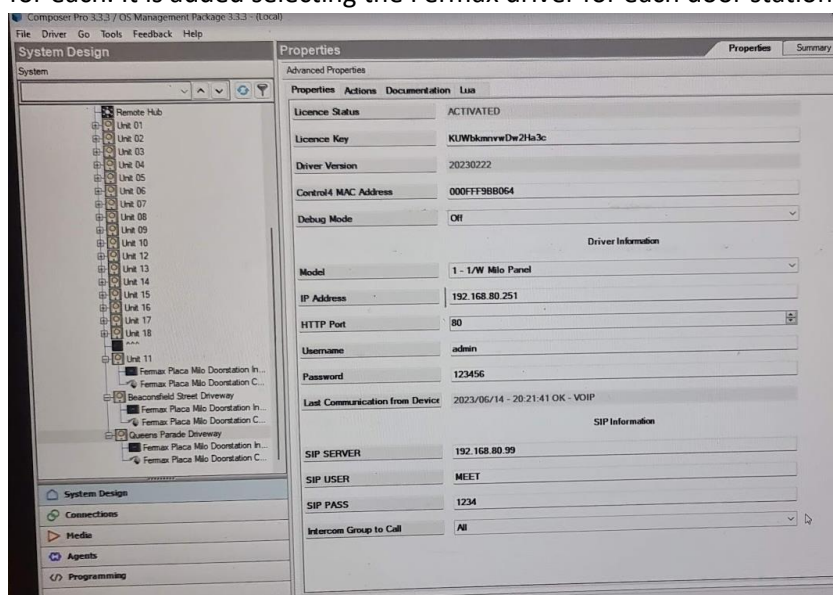
It does not require any special configuration so C4 license is not required. Meet panel and monitor are configured as per Meet basic configuration, so it is neither required the configuration seen in previous Single House chapter. WIT monitor will require to install C4 app as seen in last chapter.

It is required the following steps:

- 1) Connect Composer Pro to MDU Communication server (CS) and add all the individual unit C4 Controllers to the CS. The IP address are the Wan's of each unit and the extension numbers are the extensions that the door stations will use in the call. Example 9011 is for apartment 11.



- 2) Add all the door stations (general entrance and one-way panels) using a unique SIP username for each. It is added selecting the Fermalx driver for each door station.



- 3) Configure **each door station** to be registered on CS, using its web server. For building panel its default IP is 10.1.0.1 and for one-way panel it is 10.1.1.2. Network and General settings are the same described in single house chapter. For SIP server configuration it must be indicated the following information:

SIP SETTINGS

DEVICE
 GENERAL
 NETWORK
 ACCESS
 FACE RECOG.
 IP CAMERA
 SIP
 SIP TRUNK
 SIP CALL
 ADVANCED
 PINCODE
 RESTORE

ENABLE SIP: ☒ SEARCH SIP STATUS • SIP REGISTERED
 SIP SERVER: sip:192.168.80.99
 DOMAIN: 192.168.80.99
 OUTBOUND:
 STUN IP:
 STUN PORT: 5060
 H.264: 102
 SIP USER: MEETBEACON
 SIP PASS: ****
 CONVERSATION: 120s
 RING TIME: 30s
 SAVE

Where IP address of SIP SERVER is that of the CS. SIP user and password is the one created in step 2.

- 4) In the SIP CALL section of the **one-way panels** add the Extension number of the unit it is calling. For example, for apartment 11 it is 9011 so the url would be SIP:9011@(CS_IP address):5060 (**important to add the port number**).

DEVICE
 GENERAL
 NETWORK
 ACC
 SIP
 SIP TRUNK
 SIP CALL
 ADVANCED
 PINCODE
 RESTORE

APARTMENT: 0
 NUMBER:
 DELETE: ☐
 SAVE

APARTMENT	NUMBER	APART
11	sip:9011@192.168.80.99:5060	

- 5) In the SIP CALL section of the **digital panels** create a table with each pair of dialling code and extension associated. The table must be created in a CSV file. The CSV format can be downloaded from the SIP CALL section of the panel's web server, EXPORT option.

DEVICE
 GENERAL
 NETWORK
 ACCESS
 FACE RECOG.
 IP CAMERA
 SIP
 SIP TRUNK
 SIP CALL
 ADVANCED
 PINCODE
 RESTORE

Choose File No file chosen IMPORT EXPORT

APARTMENT	NUMBER	APARTMENT	NUMBER	APART
1	sip:9001@192.168.80.99:5060	2	sip:9002@192.168.80.99:5060	
4	sip:9004@192.168.80.99:5060	5	sip:9005@192.168.80.99:5060	
7	sip:9007@192.168.80.99:5060	8	sip:9008@192.168.80.99:5060	
10	sip:9010@192.168.80.99:5060	11	sip:9011@192.168.80.99:5060	
13	sip:9013@192.168.80.99:5060	14	sip:9014@192.168.80.99:5060	
16	sip:9016@192.168.80.99:5060	17	sip:9017@192.168.80.99:5060	

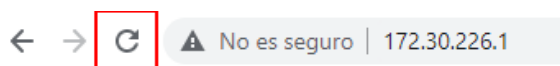
An example is the following:

Apartment,Number,
1,sip:9001@192.168.8.99:5060
2,sip:9002@192.168.8.99:5060
3,sip:9003@192.168.8.99:5060
4,sip:9004@192.168.8.99:5060
5,sip:9005@192.168.8.99:5060
6,sip:9006@192.168.8.99:5060

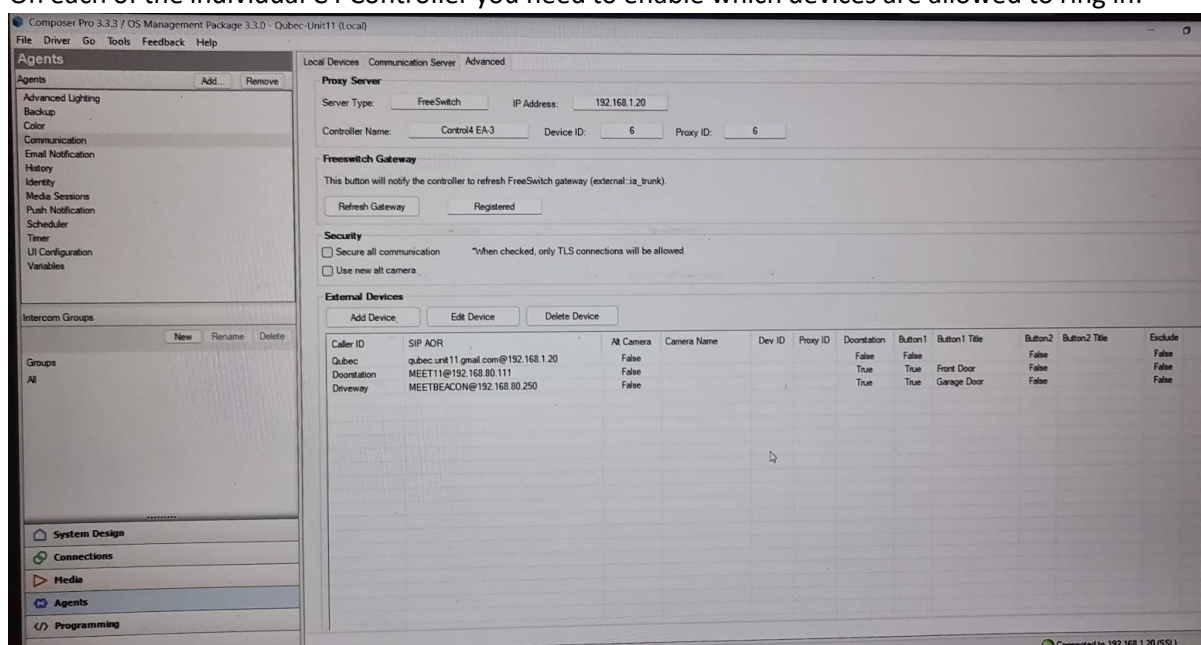
The home's calling code is indicated first, and separated by a comma, the text 'sip:' and the extension associated to the apartment, followed by @ and the IP of the CS. This extension number is the indicated in step 1.

In the example, calling apartment 1 will call the Meet monitor installed in apartment 1 (if any) and also the C4 screen and C4 App associated with the controller in apartment 1.

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

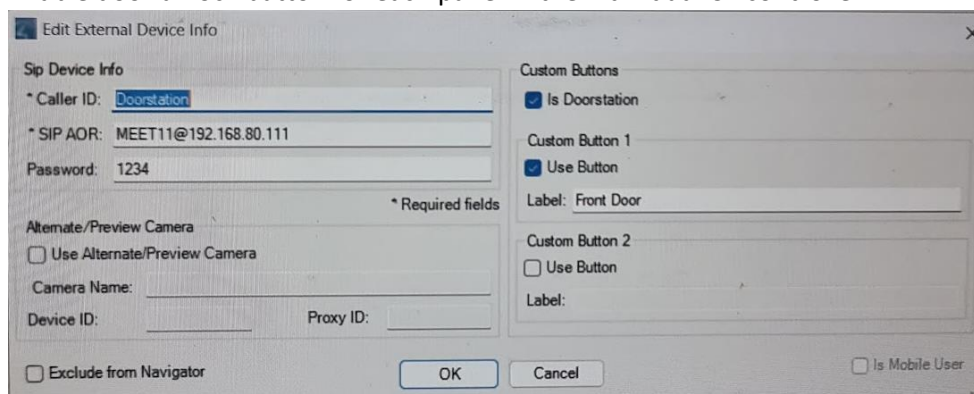


- 6) In the Dual WAN Router of each apartment, you need to configure port forwarding, opening port 5060 redirect to C4 controller IP (192.168.1.20 in the diagram).
- 7) On each of the individual C4 Controller you need to enable which devices are allowed to ring in:

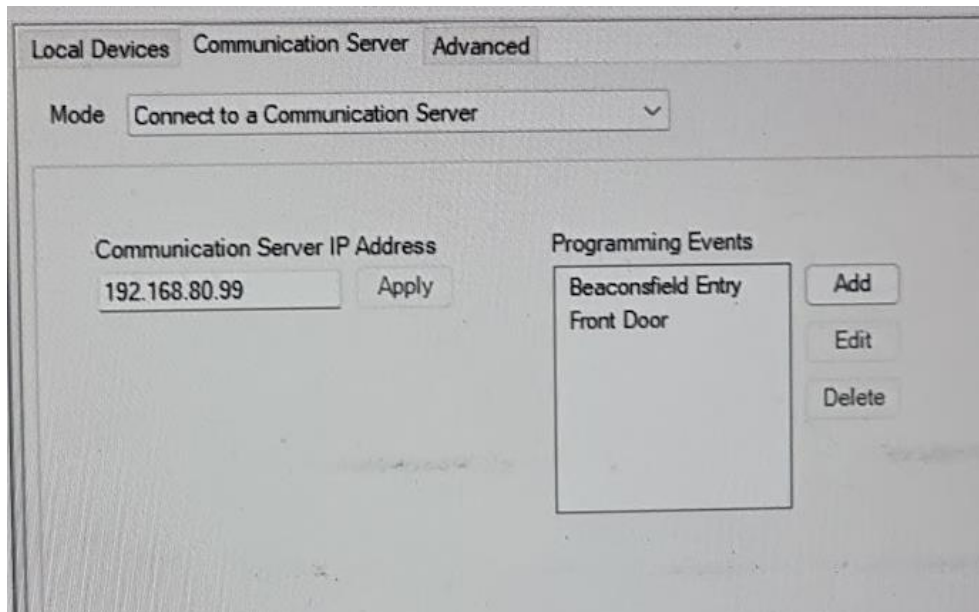


In this example, for unit 11, individual one-way panel (MEET11) and main door station (MEETBEACON). First device is the C4 app user.

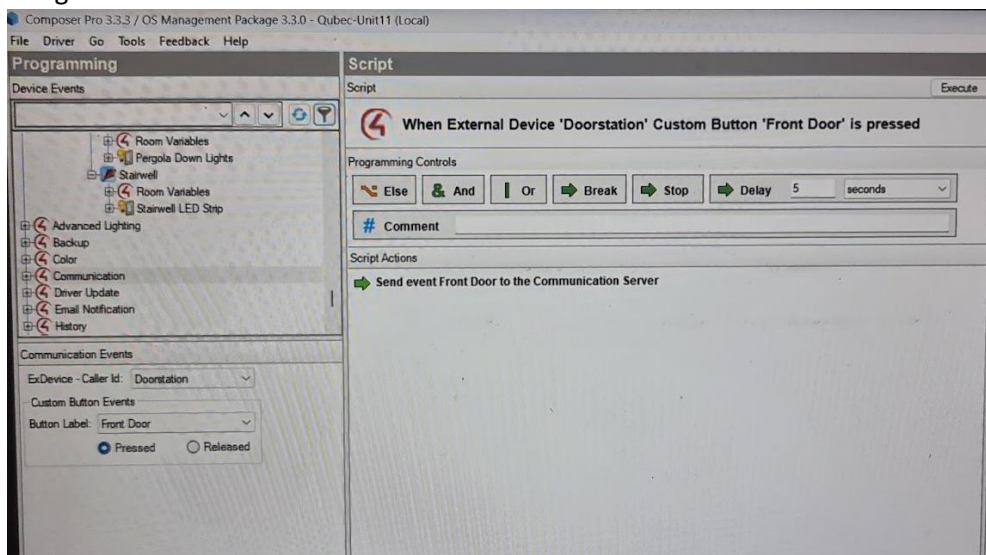
- 8) Enable door unlock button for each panel in the individual C4 controller:



Tick Use Button 1 and assign one label.

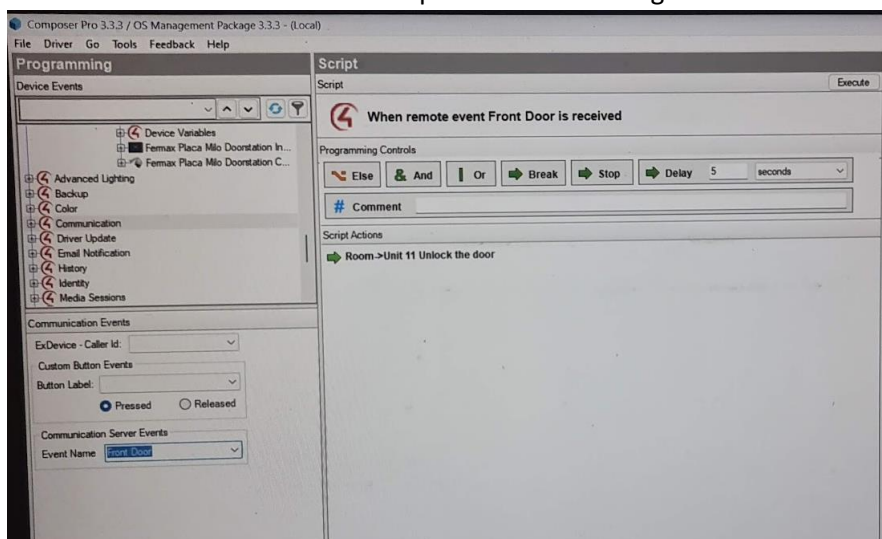


Assign Events for CS.



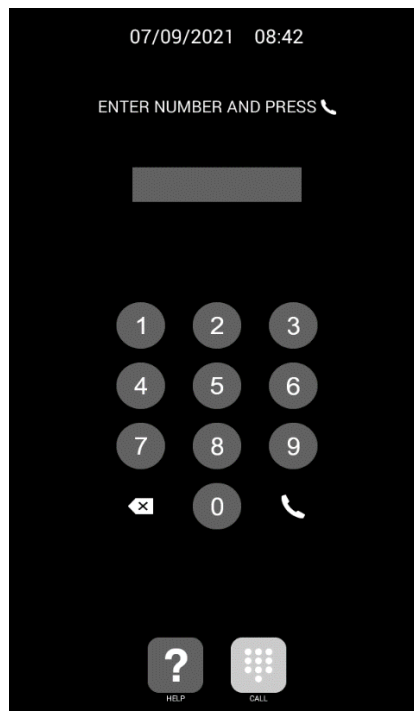
Create one script for each event.

- 9) In the CS controller create one script for each incoming event:



WORKING MODE

To call the specific home, you must press the individual button (one-way panel) or enter the associated call code and confirm with the bell button in MILO or MARINE panel, or hang-up icon on KIN panel.



Direct call through code

The panel will generate the call both to the Meet monitor of the home (if it exists) and to the C4 screen and the C4 App associated with the chosen group, which will announce the call from the panel and show the image from outdoor panel.



Pressing the answer button will open the bi-directional audio channel. The timing is limited to 120". You have the option of opening the door at any time. Door unlock is available pressing on the defined icon.

Auto-on can be done selecting INTERCOM option on main menu.



It is also possible to watch at the image captured by panel camera as a security camera. The driver configures this as a generic camera with RTSP stream access:

Properties

Camera Properties Camera Test

Test

Get Snapshot URL X 640 x Y 480 Test

Get Mjpeg URL X 320 x Y 240 Rate (fps) 5 Test

Get H.264 URL X 320 x Y 240 Rate (fps) 15 Test

rtsp://192.168.1.214:8554/ch01 Test

Status:

OTHER CONSIDERATIONS

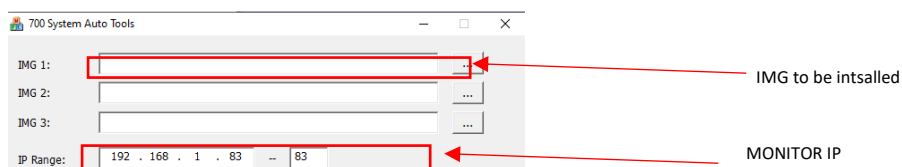
- The driver is compatible with C4 OS 3.0 or higher. This document is based on C4 driver dated 20230223.

Do not use auto-configuration (on Properties, Actions Tab) on digital panels because it blocks them.

CONTROL 4 APP UPLOAD ON WIT MONITOR

Download the file from the following [link](#) and connect to the IP video intercom network where the MEET Monitors are located.

Open the MEET System Upgrade Tool software, select the file C4_32124003_a10 as IMG1 and set the IP address range of the monitor(s), in the example 192.168.1.83-83 (single monitor).



Press "Start" to begin downloading the application to the monitor(s).

Once the monitor is installed it will restart.

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



Select the "Control4" APP and assign an icon to it. Save changes.

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



Once we open it, we must enter the username and password of the installation we want to access. The initial setup download may take a while and fail, but the next time it will connect.

The menu that is displayed is like the one that the C4 screen would show except for the Intercom option, which does not make sense since the internal application of the WIT monitor is used for communication with the street panel.

The application can remain always active, as in a Control 4 screen. When a call is received, it will be temporarily interrupted to answer it and, when the call ends, it will return to the point of the menu where it was interrupted. The monitor has a 60 second return to sleep time in which the screen turns off, if not acted on, to maintain the durability of the TFT and reduce consumption. Touching the screen again will redisplay the application at the same point it was displayed before going to rest.