

v2.0

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LYNX-BUSING Integration

FERMAX



dominium
FERMAX home management

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Introduction

Basic Concepts

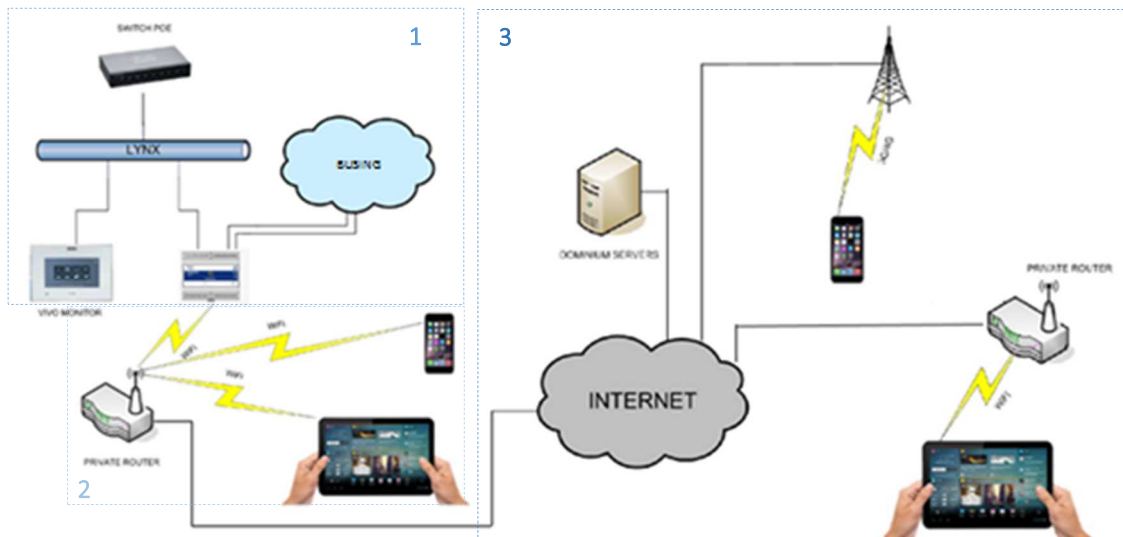
Web server Dominion (ref. 9862 / ETHBUS3) is a device that makes possible the control of a BUSING installation through a customized visualization to be designed, accessible from user terminals: LYNX monitors and portable smartphone and iOS / Android tablet devices.

The device must be programmed using free SIDE Fermax software. It also allows timings, sending push notifications, ...

The LYNX monitor (VIVO or SMILE LYNX) has an APP to install through which it is possible to connect to the Dominion web server, download the designed visualization and control the home automation installation.

At the same time, it is possible to connect to the BUSING installation via iOS / Android smartphone / tablet, both locally and remotely, in case of having contracted Internet connection in the house.

Generic installation Scheme



1. Control BUSING installation from LYNX monitors ...
2. ... from mobile devices via local WiFi connection (optional) ...
3. ... and from mobile devices via 3G / 4G remote connection (optional)

The installation will consist, in general, of:

A web server (9862 / ETHBUS3) for each independent **BUSING (housing)** installation.

A switch with two or more free ports per housing for the connection of:

A certain number of monitors (PoE / non-PoE).

The web server of each house (not PoE)

A WiFi router provided by the Internet Service Provider (ISP) **for each separate installation.**

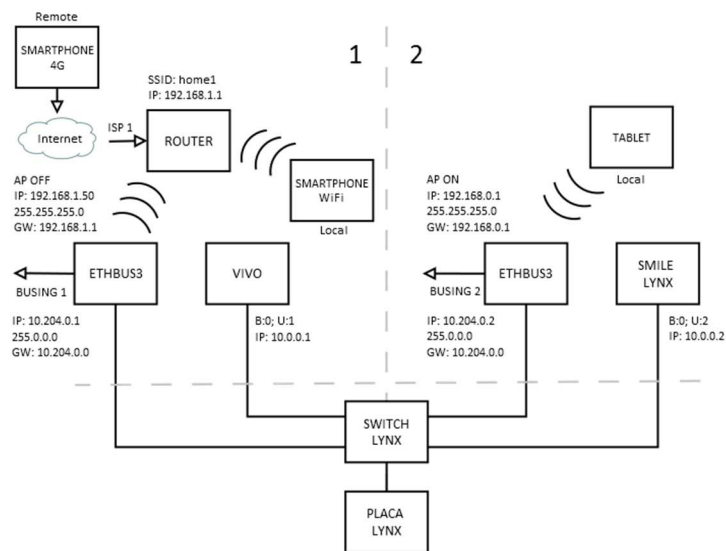
The Dominion web server (ETHBUS3) is also capable of generating its own Wi-Fi network with a limited range to allow local control without the need for a third-party Wi-Fi router. In this case it is possible to increase the scope by installing additional access points.

Case Study

Description

1. IP video intercom system composed of one access and two apartments (House 1 and House 2).
2. One monitor per apartment: House 1 has a VIVO, House 2 has a SMILE LYNX.
3. Each apartment will manage a BUSING installation (BUSING 1 and BUSING 2), using independent Dominion web server (9862 / ETHBUS3) devices.
4. The first apartment will have Internet connection through ISP 1, which provides a Wi-Fi router of a certain manufacturer; The second has no contracted Internet connection.
5. Renters of House 1 can control the BUSING 1 installation from a mobile device locally and remotely; renters from House 2, will only be able to control the BUSING 2 installation locally.

Installation Scheme



Recordatorio: máximo 100 metros desde switch a cada dispositivo conectado

Required Material

LYNX

- 1622 - Lynx video module W
- 7368 - 2 Push button. 102V
- 7333 - Frame 3V-S4
- 8854 - Flush box S4(3V)
- 4813 - Power supply 12VDC/2A
- 1617 - LYNX Switch 4 PoE + 4
- 1620 - VIVO Monitor (+1605 connector)
- 1650 - SMILE TOUCH LYNX Monitor (+1655)

DOMINIUM

- 9862 - ETHBUS3 / Web server (2 units)

THIRD PARTY

- 1 router *Vivienda 1* suministrado por *ISP 1*

Programming

It is recommended to separate the total of the works by performing the differentiation shown below. This way of working tries to minimize the time necessary to program the installation, avoiding that we have to identify each one ETHBUS3 in installation to change its network configuration, looking for an Internet connection to upload the visualizations and to create users, installing the APP with SD card housing by housing, etc.

1. Office tasks:

Previous requirements

1. Network: router configured with Class A addresses (10.xxx.yyyy.zzz)², network mask 255.0.0.0 and Internet connection.
2. Software:

Ingenium Tracker: ETHBUS Network Configuration Software.

<http://www.fermax.com/fermax-files/1c433befbd4a1350fc2ceda3815cd000/6113/Trackerv21.zip>

SIDE Fermax: Visualization Design Tool.

http://ingeniumsl.com/actualizacionSiDEFERMAX/SiDE_Fermax.rar

Ingenium aSC: APP for LYNX monitors.

<http://www.fermax.com/fermax-files/271f784520cbdd7bdcf84d8cc622051/6113/IngeniumASC.zip>

Programming: BUSING installation control from LYNX monitors

Devices	Tasks
ETHBUS3	<ol style="list-style-type: none"> 1. Wired network configuration. 2. Display settings.
LYNX Monitors	<ol style="list-style-type: none"> 3. Installing the APP. 4. APP settings.

2. Installation tasks:

Previous requirements

1. BUSING: programmed and tested BUSING installations
2. Network: home router installed and running (if applicable)

Programming: Controlling the BUSING installation from mobile devices

Devices	Tasks
ETHBUS3	5. Wi-Fi network configuration.
Mobile devices	6. APP installing and settings.

Use the following table to save the configuration.

Apartment		ETHBUS3			Project	Network	
#	Control type	IP Address	User	Password	File	SSID	Password

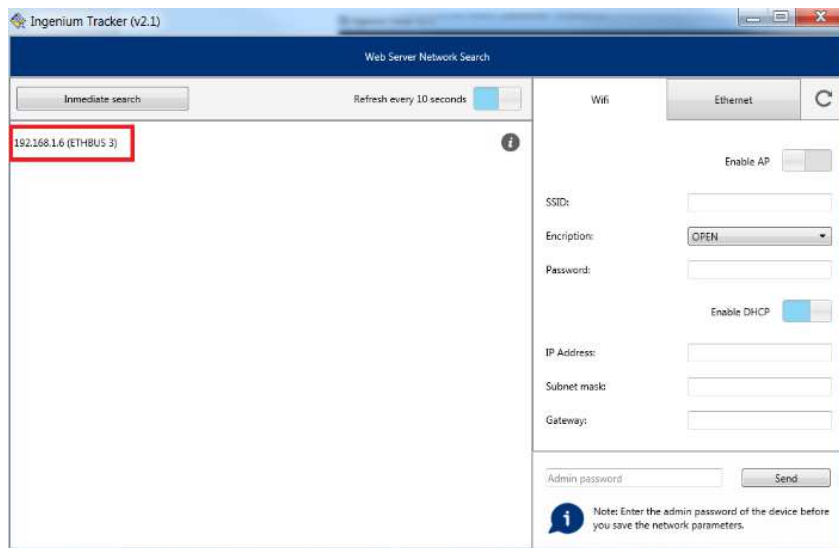
² With the new Lynx 3.0 version onwards, the network is no longer required to be of the Class A type but is kept in the document for

1. BUSING control from LYNX monitors

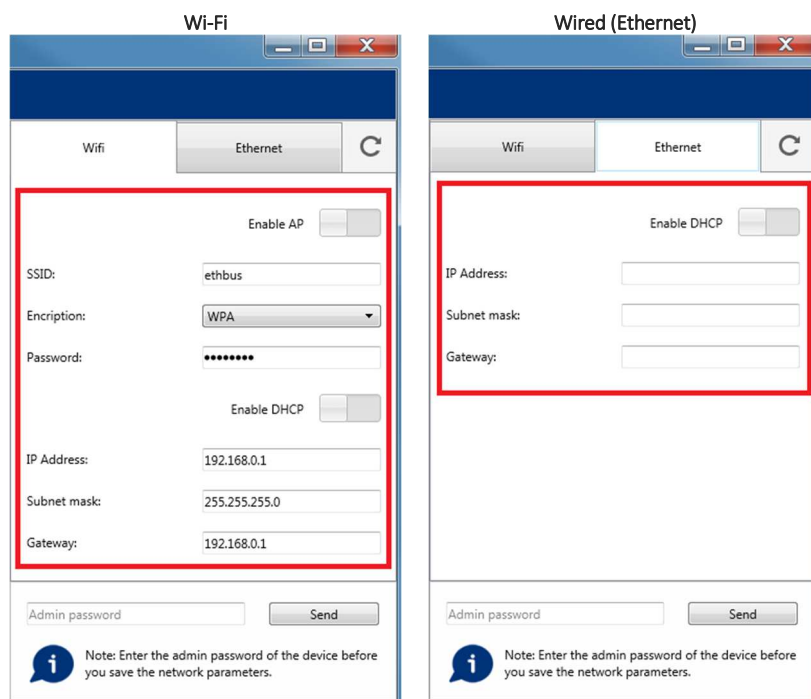
1.1. Configuring the Wired Network on ETHBUS3 devices.

Goal	Set ETHBUS3 to have a valid IP address within the LYNX network
Considerations	<p>The default IP address of the Dominion web server is 192.168.1.6</p> <p>It is not necessary to change the IP range of the network to perform the initial detection</p> <p>By agreement, all LYNX network IP servers will be in the range 10.204.XXX.YYY</p> <p>The default password for connecting to ETHBUS3 is 1234</p>

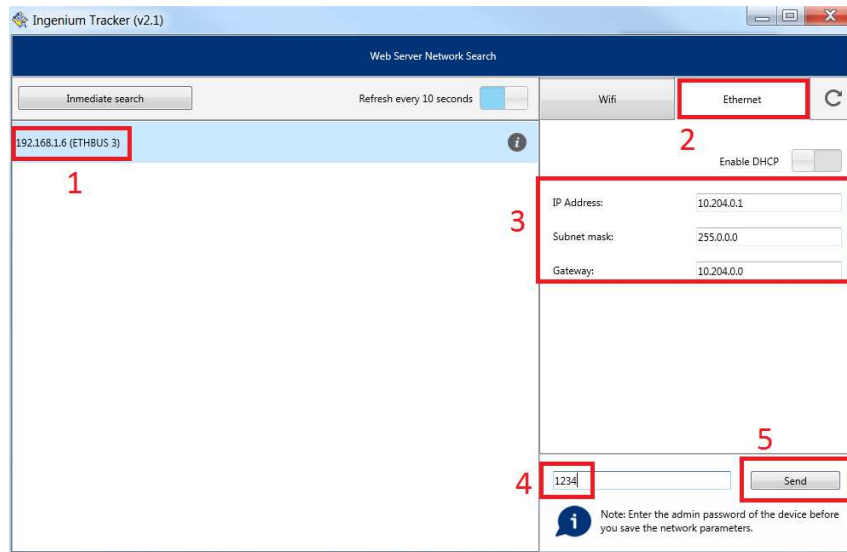
- 1) Connect the ETHBUS3 and our PC to the office router with LAN 10.xxx.yyy.zzz
- 2) Run the Ingenium Tracker application (Tracker v2.1.exe). After a few seconds, a list will appear with the detected devices



By clicking on the device, we can see your Wi-Fi configuration and wired by default:

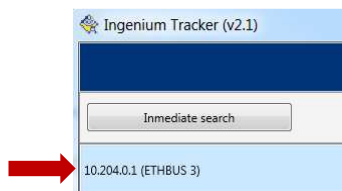


- 3) Click the device to configure and adjust the wired network parameters (LYNX).



- 4) Close the application and reopen it. Wait for the device to be detected again in Ingenium Tracker before continuing.

Result The device is already within the range of IPs of the LYNX network and is accessible from LYNX monitors



Repeat for all ETHBUS3 of the installation.

#	Apartment	ETHBUS3			Proyecto	Network	
	Control Type	IP Address	User	Password	File	SSID	Password
1	Local+remote	10.204.0.1					
2	local	10.204.0.2					

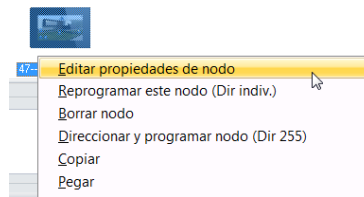
1.2. Configuring the displaying on ETHBUS devices

Goal	Upload on the ETHBUS3 the control display of each BUSING installation
Considerations	The wallpaper (background) pictures must have a resolution of 640x480px

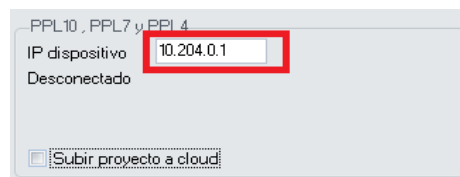
- 1) Install the **SIDE Fermax** visualization tool.
- 2) Create a new folder in which we will save the projects of each house.
- 3) Open the SIDE Fermax, click on "Web Server Plans" and design the visualization of the first apartment.



- 4) Click on "Installation modules" and add a new device "PPL10, PPL7" type.
- 5) Right click > Edit node properties.



- 6) Set the IP address conveniently and press OK:



- 7) Press the right mouse button again and select "Reprogram this node". Press the Program button and wait a few seconds for the device to restart.
- 8) Creation of user for remote access (house 1): access through web browser to <http://10.204.0.1:8000> and go to the Settings menu, user configuration section.
- 9) Save the folder and create the visualization of the next house starting from the previous one.

Result All ETHBUS have the visualization of their house to control their installation KNX.

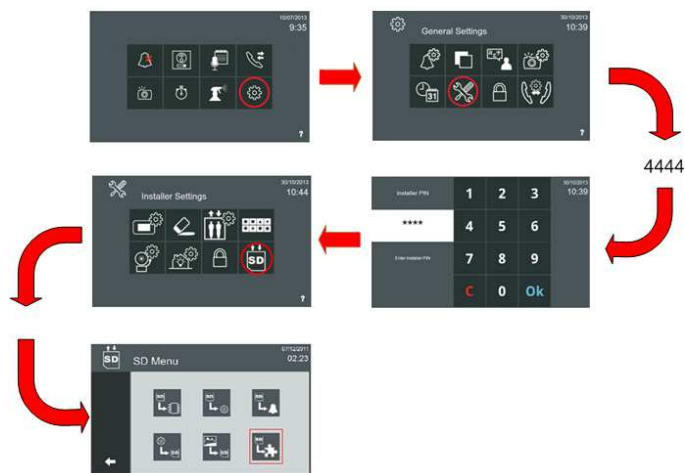
Apartment		ETHBUS3			Project	Network	
#	Control type	IP Address	User	Password	Folder	SSID	Password
1	Local + remote	10.204.0.1	colon121	kt7G4PPn	colon121		
2	local	10.204.0.2			colon122		

1.3.APP installation on LYNX monitors

Goal	Enable control of KNX installations from LYNX monitors using the visualization previously designed
Considerations	VIVO monitor: During the installation process an SD card is required. Default configuration on SMILE monitor: IP 10.0.0.1; User: admin; Password: admin

VIVO Monitor (case study House 1)

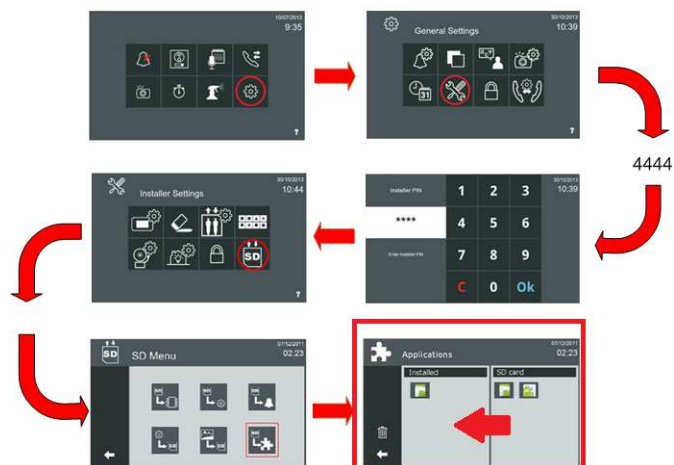
- 1) Connect the monitor to the 10.xxx.yyy.zzz LAN of the office.
- 2) Format the SD card from our PC.
- 3) Insert the SD card into the LIVE monitor.
- 4) Go to the "SD MENU".



The VIVO monitor create in the SD card the following folder structure:

- .android_secure
- application
- DCIM
- fermamaxconf
- fermamaxupdate
- LOST.DIR
- picture
- ringtones

- 5) Copy the file "*IngeniumASC.apk*" in the folder "application" of the SD card.
- 6) Go back to the "SD MENU" and drag the APP from the "SD Card" section to "Installed".



The APP will be shown in the "Installed" section, indicating that it has been installed correctly.

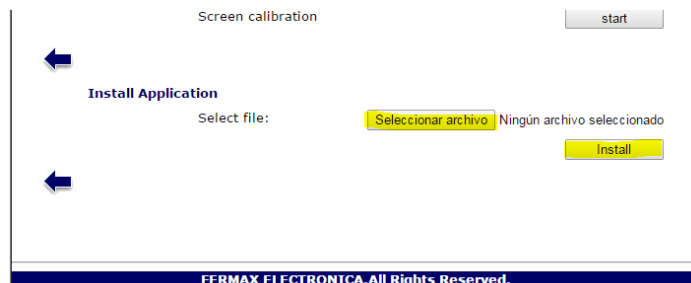
In case there is more than one VIVO monitor we will have to extract the SD card from the former monitor and repeat step 6 in each one.

SMILE Monitor (case study house 2)

- 1) Connect the monitor to the 10.xxx.yyy.zzz LAN of the office.
- 2) Open a web browser and access the SMILE web configuration menu (http://10.0.0.1).
- 3) System Management> Upgrade.



- 4) Install Application> Select file, select the "IngeniumASC.apk" file previously downloaded and press "Install".



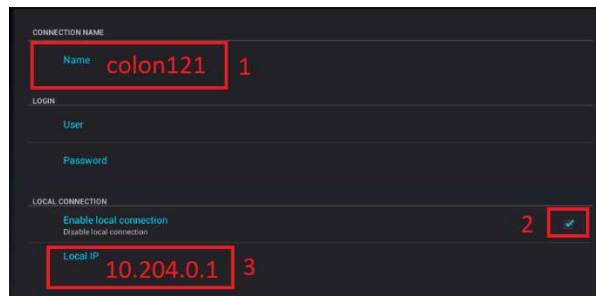
After a few seconds, a message confirming the installation of the APP will be showed.

Repeat these steps on all SMILE monitors in the installation.

1.4. Configuring the APP on LYNX monitors.

- 1) Open the newly installed APP on the monitor and press the "+".
- 2) Connect the ETHBUS3 associated with this housing to the LAN 10.xxx.yyy.zzz of the office.

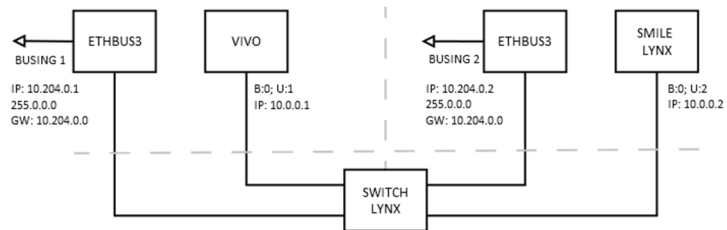
- 3) Enter a Name, check "Activate local connection", set the local IP to the IP address of the ETHBUS3 home and press "Save". Example House 1:



- 4) Click on the newly created configuration and select the "Download" option. After a few seconds, the visualization designed for the control of this house will be shown.

Repeat for the rest of the monitors of the installation.

Results APP installed and correctly configured on all LYNX monitors of the installation



2. BUSING installation control from iOS/Android mobile devices

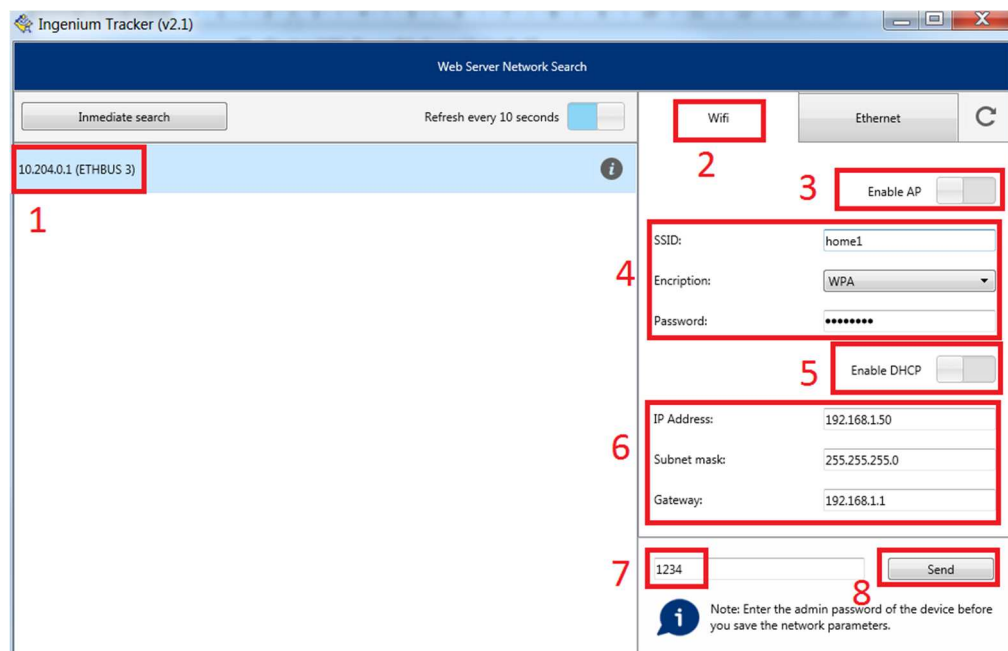
Goal | Set ETHBUS3 device to allow connection to them via smartphone / tablet

2.1. Setting up the Wi-Fi network on ETHBUS3 devices

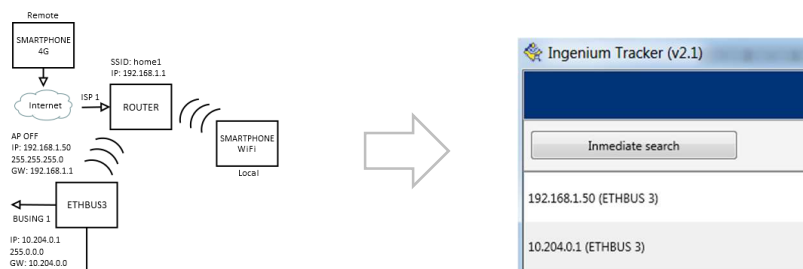
- 1) Connect to the LYNX network of the installation.
- 2) Run the Ingenium Tracker application.
- 3) Select the appropriate ETHBUS3 and adjust your Wi-Fi parameters depending on availability or Wi-Fi router in the home.

A) Wi-Fi router available (case study House 1)

1. Obtain the connection data to the home network (usually available on the Wi-Fi router) and configure the ETHBUS3 conveniently. Assign a free static IP address on the Wi-Fi LAN. Generally, routers dynamically allocate in the range 100-255 so an address below this range is recommended (ex.: 192.168.1.50).



1. Close "Ingenium Tracker" software and reopen it.
2. After a few seconds, both connections will appear, wired Ethernet for LYNX connection (10.204.0.1) and wireless (192.168.1.50).

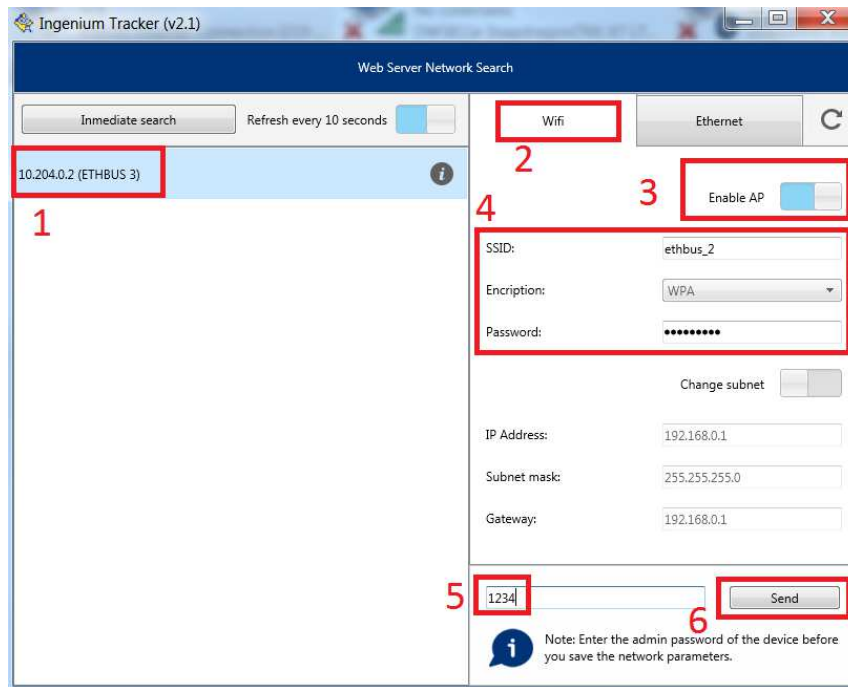


B) Wi-Fi router not available (case study House 2)

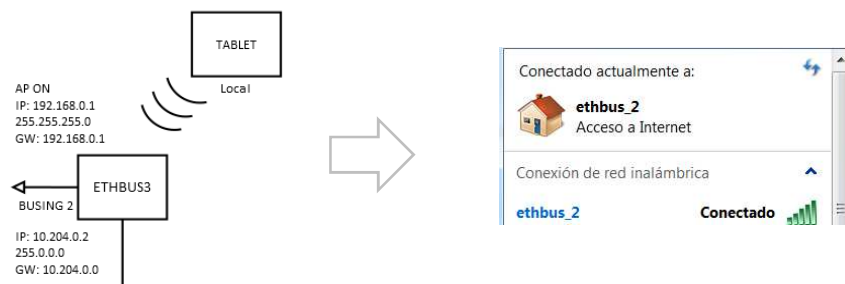
Generate via ETHBUS3 a network for the connection of mobile devices. The IP address of ETHBUS3 will be 192.168.0.1.

Tip: SSID = "ethbus_" + House number

Secure password generated by key generator: <https://password.es/>



The new network generated will be visible from any mobile device after a few seconds.



NOTE: Remember the limited scope of this solution. It is recommended to install signal repeaters.

#	Apartment	ETHBUS3			Project	Network	
		Control type	IP Address	User		Password	Folder
1	Local + remote	10.204.0.1	colon121	kt7G4PPn	colon121	home1	Ver router
2	Local	10.204.0.2			colon122	ethbus_2	OoCJUfwK

2.2. Installing and configuring the APP on mobile devices

1) Search for APP for mobile devices.

IOS: Ingenium iSC <https://appsto.re/en/arkGE.i>

Android: Ingenium aSC

<https://play.google.com/store/apps/details?id=com.ingenium.ingeniumasc>

2) Download and install the APP.

3) Configure the connection interface with the ETHBUS3 depending on the case:

A) Local and remote connection (case study House 1)

1) Connect the mobile device to the Wi-Fi network generated by the home Wi-Fi router.

2) Open the iOS / Android APP.

3) Press the "+".

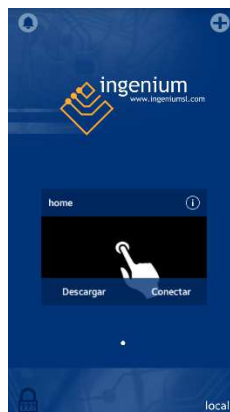
4) Assign a "Name" for the connection.

5) Set User and Password according to parameters saved by SIDE Fermax.

Apartment		ETHBUS3			Project	Network	
#	Control type	IP Address	User	Password	Folder	SSID	Password
1	Local + remote	10.204.0.1	colon121	KT7G4PPn	colon121	home1	See router
2	Local	10.204.0.2			colon122	ethbus_2	OoCJUfwK



6) Press "Save". When "Connecting" for the first time with the visualization we will be asked to download it by clicking the "Download" button.



B) Local control (case study House 2)

- 1) Connect the mobile device to the Wi-Fi network generated by the ETHBUS or by third party device.
- 2) Open the iOS / Android APP.
- 3) Press the "+".
- 4) Assign a "Name" for the connection.
- 5) Check the box "Activate local connection" and enter the IP address of ETHBUS3.



- 6) Press "Save". When "Connecting" for the first time with the visualization we will be asked to download it by clicking the "Download" button.



Result APP installed and correctly configured on mobile user devices, allowing control of the BUSING installation locally / remotely as appropriate.