EKSELANS BY ITS

USER MANUAL

IPC 24 / IPC AC

250020/250021

Slave devices for EKOAX+

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V03

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Installation

The coaxial internet user unit, IPC 24 and IPC AC model, enables performing a fast and secure internet installation via coaxial cable in combination with the main header-end unit, IPC-M300 model.

- IPC 24 or IPC AC packaging and accessories
- IPC 24 or IPC AC hardware features
- IPC 24 or IPC AC installation
- IPC 24 or IPC AC connection

Packaging and accessories

In the IPC packaging, in addition to the manual, the following components are included:

User unit

Ethernet Cable

Power supply unit

Hardware features

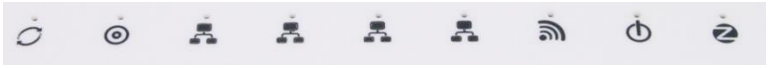
Rear panel

IPC 24

IPC AC

- **CABLE:** Radio frequency signal input.
- **TV:** Radio frequency signal output.
- **Ethernet:** LAN1 -LAN4: Ethernet LAN ports to connect a PC directly to the equipment. It can function in router mode.
- **DC 12V:** Power supply connector
- **ON/OFF:** On/off button.
- **Reset:** Reset button.
- **Antenna:** 1 Wi-Fi antenna in the IPC 24 and 2 antennas in the IPC AC.
- **USB:** USB Port **ONLY IN IPC AC**

Front panel



IPC 24 IPC AC

The device has the following status LEDs:

IPC 24

- EOC: (Ethernet Over Coaxial): If green, the device is functioning correctly.
- CAB: If green with slight flickering, it is functioning correctly. Off, the device is switched off or there is no communication with the head-end device.
- LAN1-4: If green, the LAN port has established an Ethernet connection with another device (for example, a PC). If flashing green, it is in data transfer or data reception process mode. Off, the device is switched off or there is no Ethernet connection with another device.
- WIFI: If green it is working correctly. Off, the device is switched off or there is no established Wi-Fi connection.
- POWER: If green, it will indicate that the equipment is connected to the power supply and is functioning correctly.

IPC AC

- EOC: (Ethernet Over Coaxial): If green, the device is functioning correctly.
- CAB: If green with slight flickering, it is functioning correctly. Off, the device is switched off or there is no communication with the head-end device.
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- WIFI: If green it is working correctly. Off, the device is switched off or there is no established Wi-Fi connection.
- POWER: If green/red with slight flickering, it will indicate that the equipment is connected to the power supply and is functioning correctly.

IPC 24/IPC AC Installation

The user unit enables accessing the internet, either through a Wi-Fi connection or via connection to a PC to one of the LAN ports of the equipment.

It is important to bear in mind that the range of the Wi-Fi network will depend on the location of this user unit. For best results, a series of recommendations is specified below in this regard:

1. Locate the IPC in the area/room where computers, tablets are located. The connection will improve if it is in the line of sight of this IPC user unit.
2. Attempt to locate the equipment far away from possible sources of interference, such as fans, Wireless security systems, microwaves, 2.4 GHz transmitters or cordless telephone base stations.
3. Likewise it is recommended to keep the equipment away from metal surfaces.

IPC 24/IPC AC Connection

To connect this user unit, follow the steps below:

1. Connect the LAN port to a device (for example, a PC).
2. Connect the RF IN connector to the coaxial cable from the distribution network, which will be connected to the IPC-M300 head-end device.
3. Run power to the device through the supplied power supply.
4. Press the On/Off button on the rear panel to put into operation the IPC. The LED will flash green/red.

Operating the IPC 24/IPA AC

Accessing the IPC 24/IPC AC slave device

This chapter explains how to access and configure the IPC 24 and IPC AC slave after completing the wiring set up procedure as explained in the previous chapter.

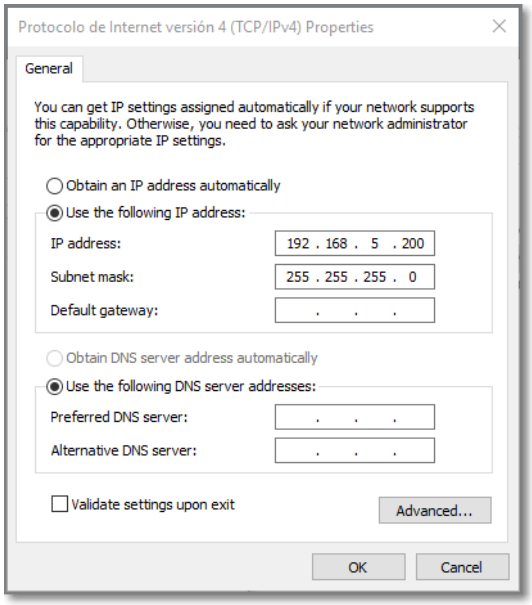
This chapter includes the following sections:

- Configuration preparation.
- Slave access..

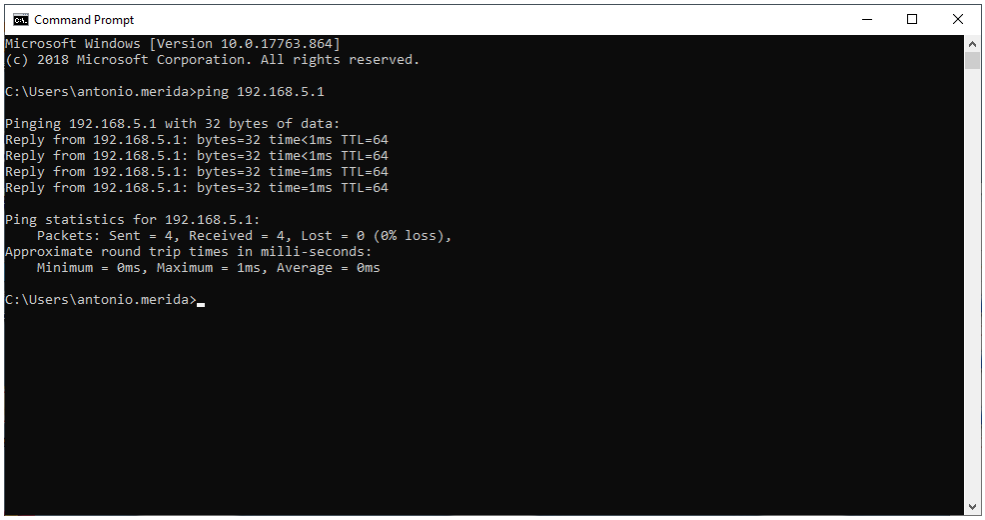
Prepare IPC 24/ IPC AC for web management

Prior to accessing the IPC it is important to verify that the connection between the equipment and PC is correct. It is recommended to follow the steps below

1. Configuration of the IP address of the PC to 192.168.5.X (2 ~ 254), subnet mask 255.255.255.0. In order to become easy the configuration EK have the application Ek NET Adapter, you will be able to configure the network adapter easily. You can download from https:https://ek.plus/software/ you will find a new section "EK NET ADAPTER".



2. Perform a "ping" to the IPC's IP address (by default 192.168.5.1). If the PC receives a correct response to the ping command, this will mean that the connection between the PC and the IPC is correct.



Web Management Access

1. Open an internet browser and enter the following IP address: http://192.168.5.1. By clicking "Enter" will appear the login screen for the IPC 24/IPC AC.

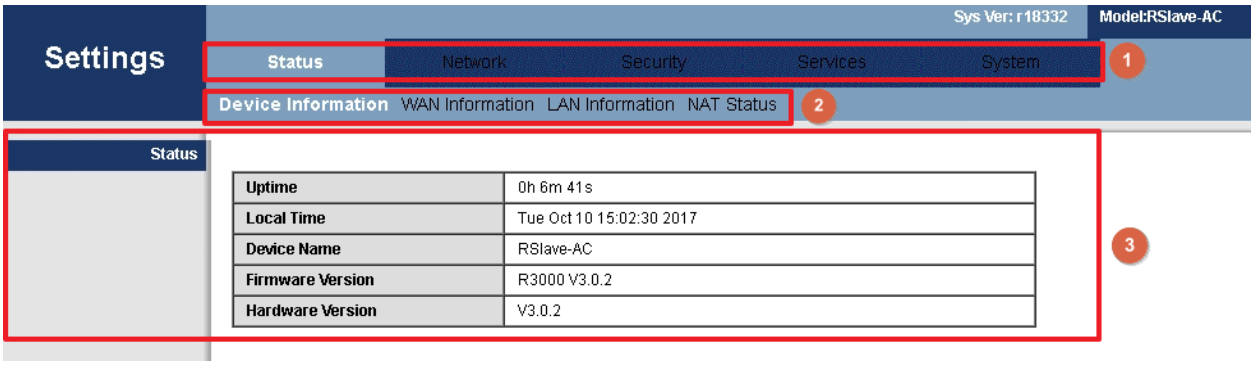
2. The credentials to access as an administrator are: Username: **ekselans** Password: **ek.plus.**
3. Having done so, press Enter to access the device management.

Note: it is possible to change the password from the web management interface.

Web management interface

The web management interface will allow for a quick configuration of different functions of the IPCs.

Introduction



The interface consists of three areas as shown in the previous image:

1. Main menu area
2. Sub area menu
3. Area to show the results.

Main menu

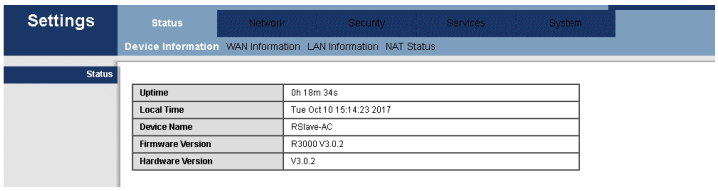
- **Status:** Device information, WAN Information, LAN Information, Remote Management Status (ONLY IN IPC 24), NAT Status
- **Network:** Broadband Setup, LAN Settings, QoS, WLAN 2 (ONLY IN IPC AC), WLAN, Remote Control **(ONLY IN IPC 24)**, Time Synchronisation
- **Security:** Firewall, URL Filtering, MAC Filtering, IP/Port Filter, Remote Web Management, Proto Filters.
- **Services:** DDNS, Advance NAT, Port Forwarding, IGMP.
- **System:** Administration, Backup/Flash Firmware, Reboot, Language.

Status

The "Status" section includes submenus which displays different WAN and LAN connection values.

Device information

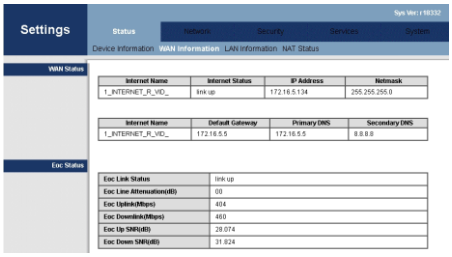
Click on the "Device information" section in order to access the following screen:



The model, functionality of the model in question, hardware version and software version will be displayed.

WAN Information

The menu will display the following network-related information:



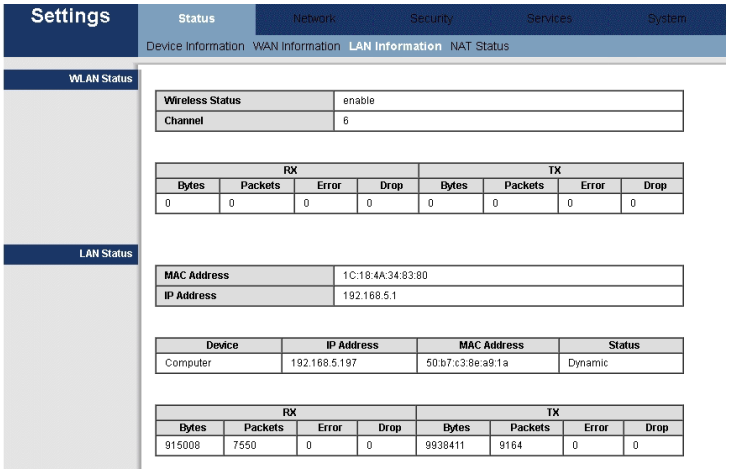
The page will display the status of the WAN connection. Displays the name of the current WAN connection, connection type, connection status, default gateway, IP address obtained, subnet mask, preferred DNS1 and DNS2.

It will likewise display the connection values with the head-end, such as: attenuation, entry/exit, and noise levels.

LAN Information.

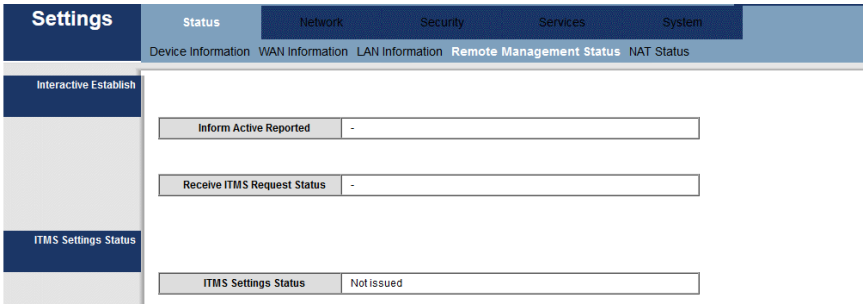
It will display different information such as Wi-Fi status, errors and packets sent and received from same, as well as the SSID status and encryption.

It will likewise display information as regards the LAN, the MAC of the slave or in the event of having a device connected to its IP and the errors in the packets sent and received.



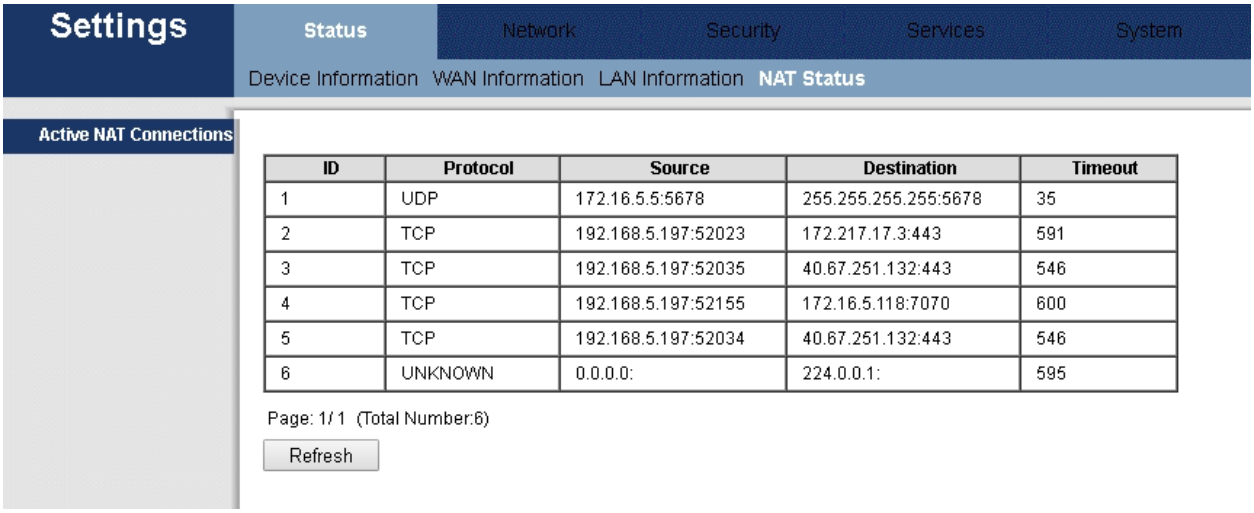
Remote Management Status **(ONLY IN IPC 24)**

Displays the remote management status.



NAT Status

Displays the NAT information. Protocol with the output stack, destination stack and its maximum time.

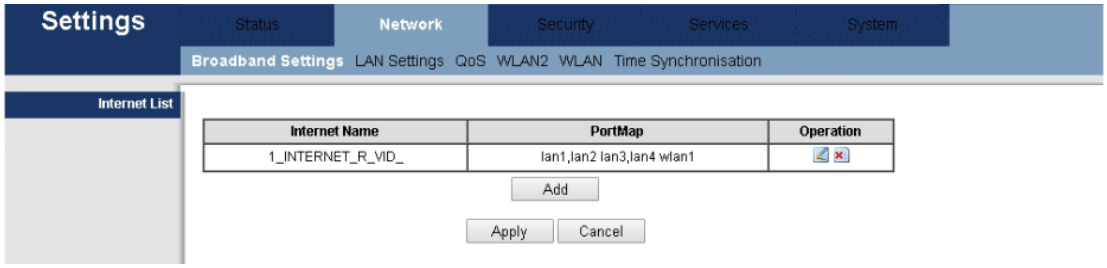


Network

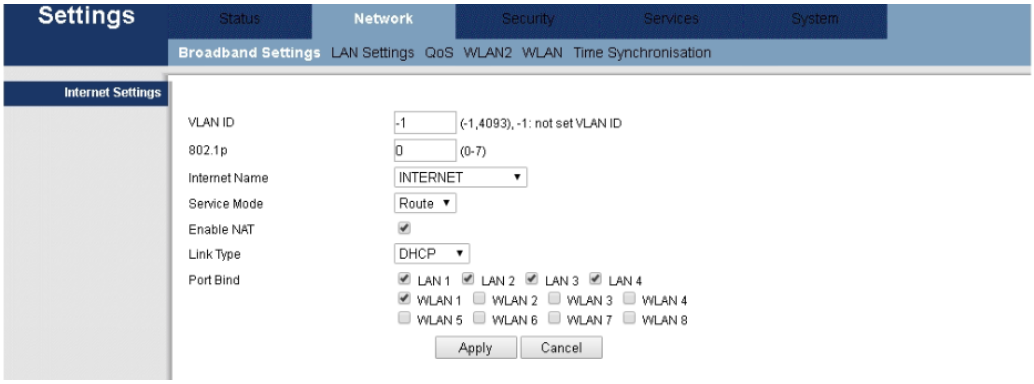
The operating parameters of both the WAN, LAN or WLAN (Wi-Fi) can be configured and managed from this menu.

Broadband Setup

The Network is configured by default. A new network can be changed, deleted or added. Different WAN connections can be configured to offer various services to users.



In the event of changing or creating a new network, the following options are specified below:



Through this option, the WAN network settings are made. The WAN connection can function under "route" mode or "bridge" mode. A LAN or Wi-Fi port can be connected in the WAN connection in the Bind Port component.

- VLAN ID: A number to the enabled VLAN can be assigned.
- 802.1p: A priority to the VLAN, with 1 being the lowest and 7 highest is assigned.
- INTERNET NAME:
  - TR069: The connection which is used for TR069.
  - INTERNET: The connection is used for INTERNET, and does not withstand TR069.
  - VOIP: CONNECTIONS AND USES FOR IP Voice
  - INTERNTET_VOIP: The connection is used for INTERNET and VOIP.
  - TR069_INTERNET: The connection is used for INTERNET and TR069.
  - Other: For other options.
- Service mode:
  - Route: When the connection is established in Router mode, the WAN IP can be obtained in three ways: DHCP, static or PPPoE. It is the default mode.
  - Bridge: It does not manage the IP, operates in a transparent manner by acquiring the DHCP from another router. By acting transparently, everything will remain within the network of the router which provides the service. If this operating mode is selected, the PC or any other device will obtain the IP address of a higher layer device after connection.
- ENABLE NAT: Enable/disable NAT in the connection.
- LINK Type:
  - DHCP: Acquires a dynamic IP. And in the event of choosing the DHCP, the router will obtain the address IP automatically from a higher-layer device.
  - Static IP: An IP is manually assigned.

- PPPoE: Acquiring an IP via PPP protocol, a username and password will be assigned.

- Bind Port: Assignment of a door with the WAN service. The default WAN connection for all doors is in Router mode. If a new WAN connection is chosen in Bridge mode, a Router mode door can be assigned/unassigned. Different WAN connections can be configured to offer several services to users.

Note: all doors are defined by default in Router mode. If a connection is established in Bridge mode, the chosen door will be disconnected from the WAN. The WAN connection will be shared with all doors specified in router mode except those defined in Bridge mode.

It is necessary to select a connection type in the WAN connection configuration. And as mentioned earlier, one of three modes can be selected: static, DHCP and PPPoE depending on the application.

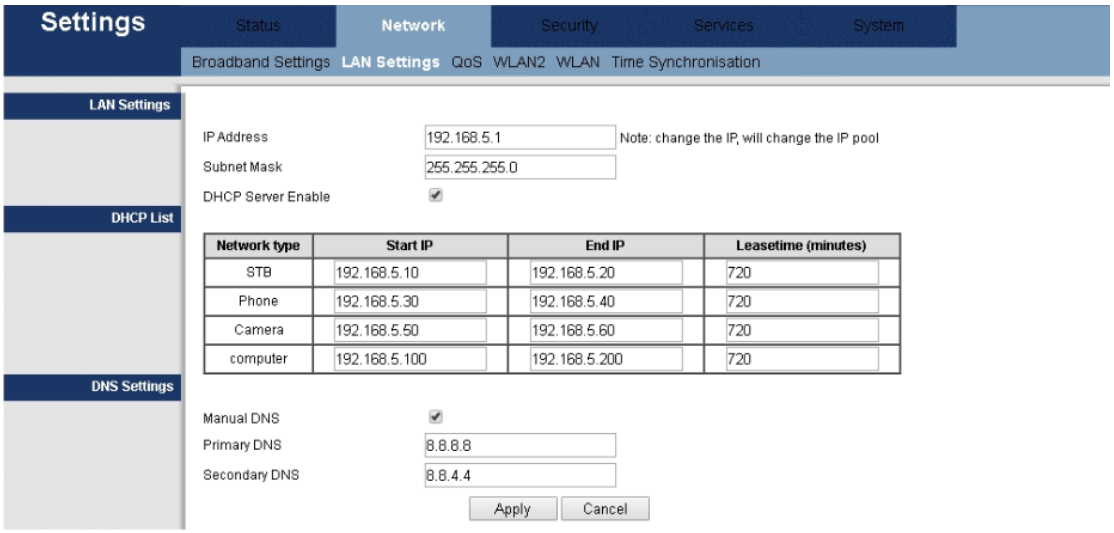
LAN Settings

This menu enables the configuration of the IP services of the LAN network, such as the DHCP.

The IPCs are preconfigured in router mode, to use private IP addresses in the section of the LAN, and to act as a DHCP server. The default configuration of the LAN router is:

- IP LAN Address: 192.168.5.1
- Subnet mask: 255.255.255.0

These addresses are part of the range of private addresses for use in private networks and are available for most applications. If the network on which the IPC will be installed requires a different IP address system, it can be changed in the "LAN Settings" menu as shown in the following image.

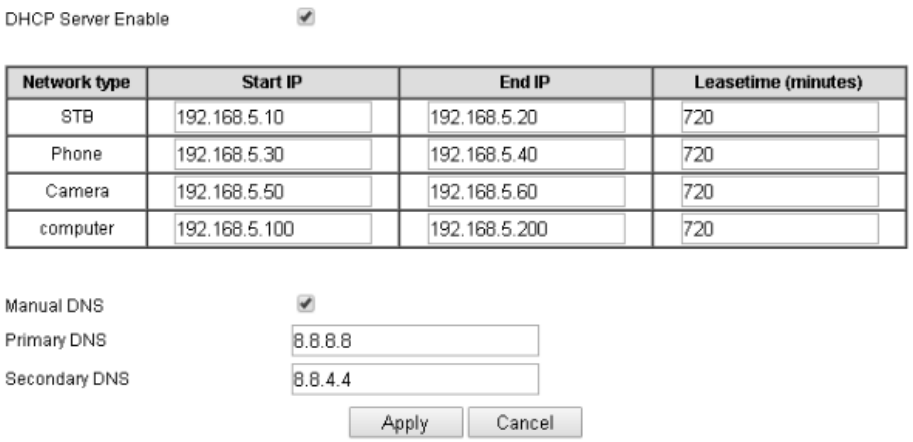


Note 1: In the event of changing the LAN IP addresses on the router while it is connected through a browser, the router will be disconnected. It will then be necessary to open a new connection using the new IP address and to enter once again.

By default the IPC acts as a DHCP server. It assigns an IP, DNS server and the default Gateway to all PCs connected to the LAN network. The default IP address (192.168.5.1) is also the Gateway address. The IPC will assign the IP addresses to all connected PCs, selecting these addresses from a range of addresses specified in the "LAN Settings" screen.

DNS: Server which enables access to websites via their names. If the internet provider requires specific information on these servers, select this option and enter the IP addresses of the DNS servers.

Note 2: DHCP is the abbreviation for Dynamic Host Configuration Protocol, which automatically assigns IP addresses, subnet mask and default gateway to LAN users.



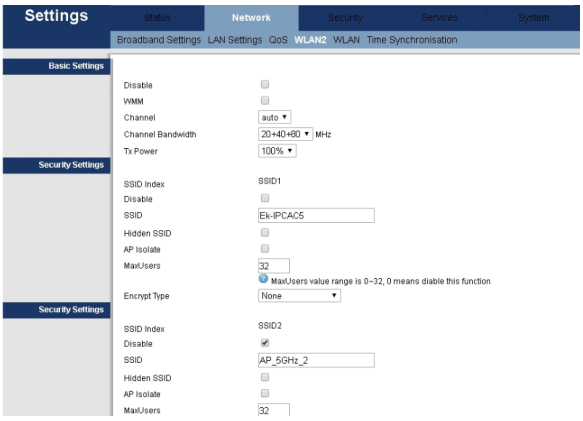
- **DHCP Server:** enable/disable the DHCP function.
- **IP Pool Starting Address:** The IP address from which the DHCP server will commence providing IP addresses to network users.
- **IP Pool Ending Address:** End address of the range of IPs supplied by the DHCP server.
- **Lease Time:** The time that a user is permitted to be connected through the IP address provided automatically. This enables the reassignment of IP addresses which are no longer in use.

QoS

It enables activating the Quality of Service to prioritise packages depending on their type.

WLAN2 **(ONLY IN IPC AC)**

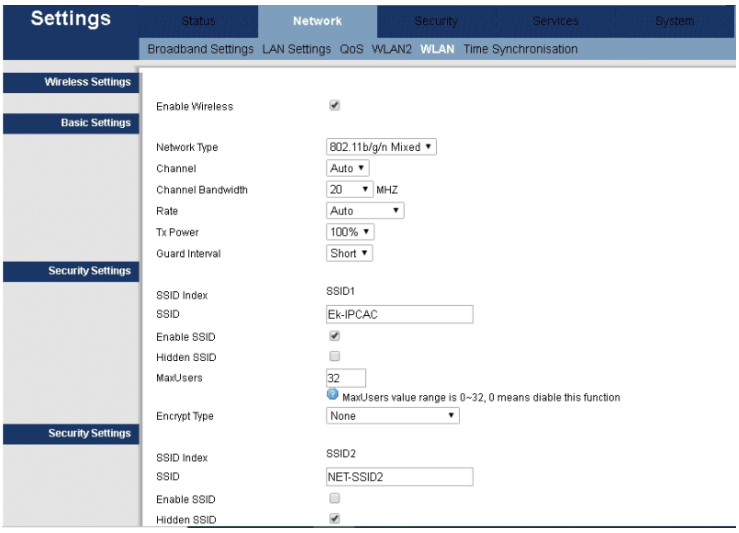
In this section it is possible to enable/disable the 5Ghz Wi-Fi network, specify the Wireless channels, type of operation.



- **Disable:** Enable/disable WLAN.
- **WMM:** Enabling the Wi-Fi Multimedia. This function provides quality of service (QoS) to multimedia applications and prioritises the transfer of this data. For all persons who have class N routers (IEEE 802.11N) it is NECESSARY to enable this function in order to synchronise and pass data more quickly. If this function is disabled, the router will be limited to 54Mbps.
- **Channel:** Set the working channel manually (selection of the proposed list), or set to automatic mode.
- **Channel Bandwidth:** Channel bandwidth.
- **Tx Power:** Wi-Fi power output.
- **SSID:** Identifies the "set" of services with a specific Wi-Fi network
- **Disable SSID:** Enables/disables the SSID.
- **Hide SSID:** Tick this option to hide the SSID.
- **AP Isolate:** Enables to isolate the Wi-Fi network from the main network.
- **Max Users**: Maximum users permitted in the SSID.
- **Encryption method: Select the encryption type:** None, WEP, WPA- PSK, WPA2 –PSK and Mixed WPA2/WPA –PSK. In the event of selecting an encryption method, it will be necessary to configure the identification method and password.

WLAN

In this section it is possible to enable/disable the Wi-Fi network, specify the Wireless channels, type of operation.

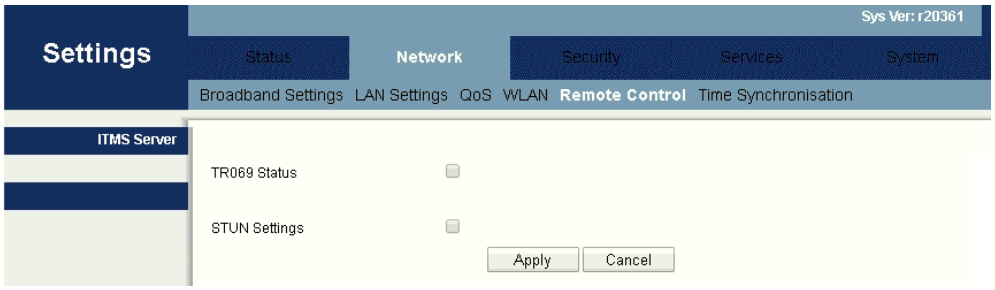


- **Enable:** Enable/disable WLAN.
- **Network Type:** Wi-Fi protocol with which it is broadcasted.
- **Channel:** Set the working channel manually (selection of the proposed list), or set to automatic mode.
- **Channel Bandwidth:** Channel bandwidth.
- **Rate:** Wi-Fi connection speed, automatic default.
- **Tx Power:** Wi-Fi power output.
- **SSID:** Identifies the "set" of services with a specific Wi-Fi network
- **Enable SSID:** Enable the SSID.
- **Hide SSID:** Tick this option to hide the SSID.
- **AP Isolate:** Enables to isolate the Wi-Fi network from the main network.
- **Max Users:** Maximum users permitted in the SSID.

- **Encryption method:** Select the encryption type: None, WEP, WPA- PSK, WPA2 –PSK and Mixed WPA2/WPA –PSK. In the event of selecting an encryption method, it will be necessary to configure the identification method and password.

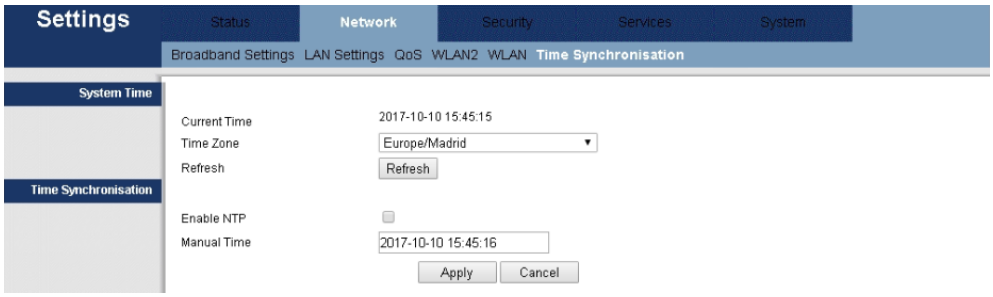
Remote Control **(ONLY IN IPC 24)**

The protocol used by operators to remotely configure ADSL routers or cable modems can be enabled/disabled.



Time Synchronisation

The time can be configured in several ways. It is possible to do so manually, by default the NTP (Network Time Protocol) is not enabled in order to obtain the time automatically.

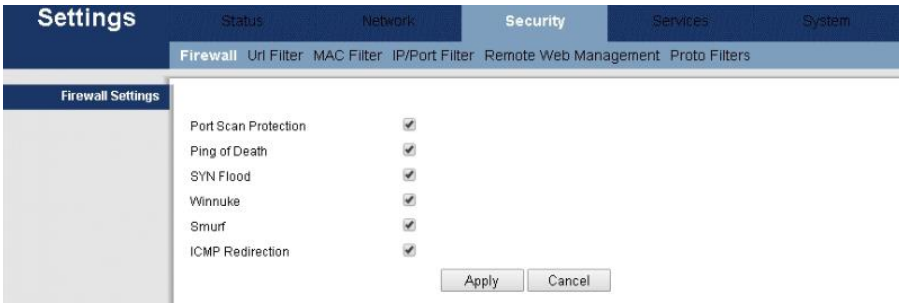


Security

From this section the several types of security on the equipment can be configured.

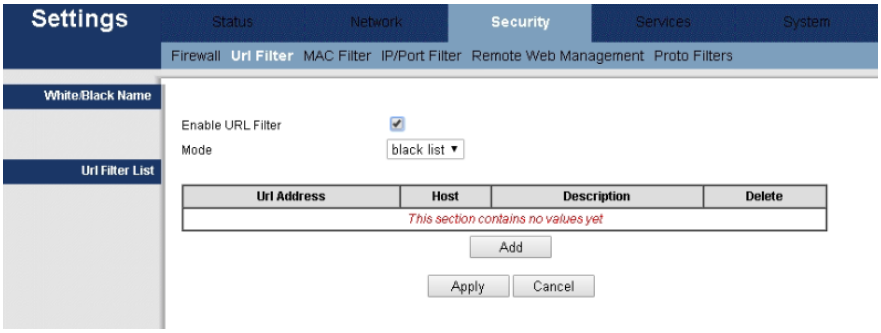
Firewall

The different types of protection can be selected By default: SYN, TCP/UDP PortScan, ICMP, Smuft, Ping of Death, Winnuke.



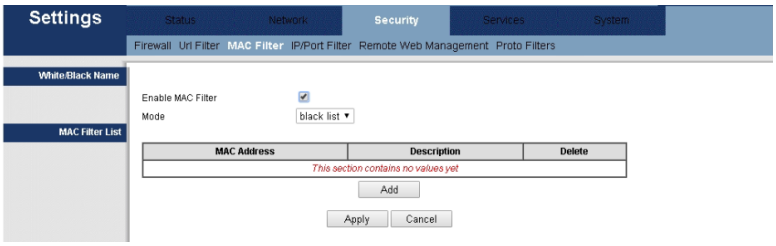
URL Filtering

Option which permits adding a filtering table for URLs. Click the "Add" button to add the rules to be established, then "Apply".



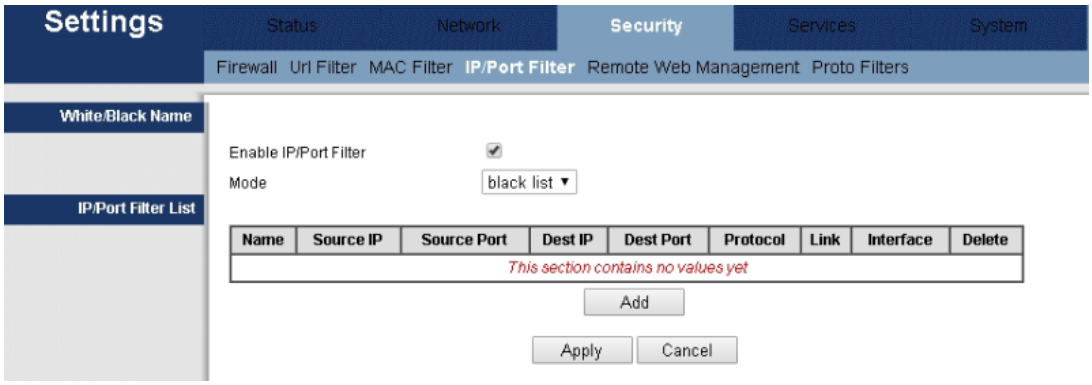
MAC Filtering

Via this option the MAC filtering can be enabled/disabled. Click the "Add" button to add the desired rules, then "Apply".



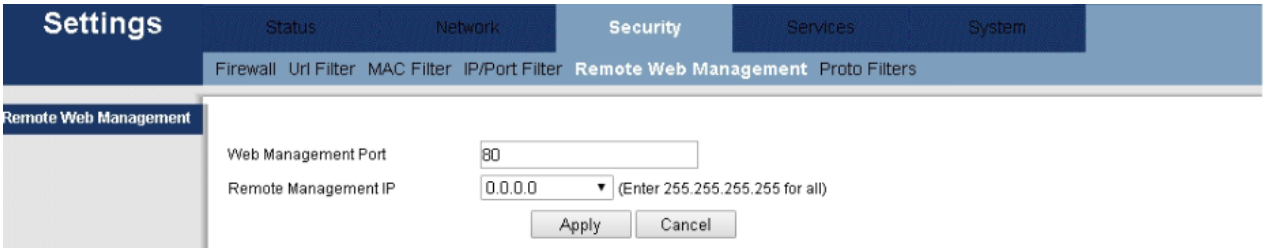
IP Filtering/Port Filter

Via this option the IP filtering can be enabled/disabled. Click the "Add" button to add the desired rules, then "Apply".



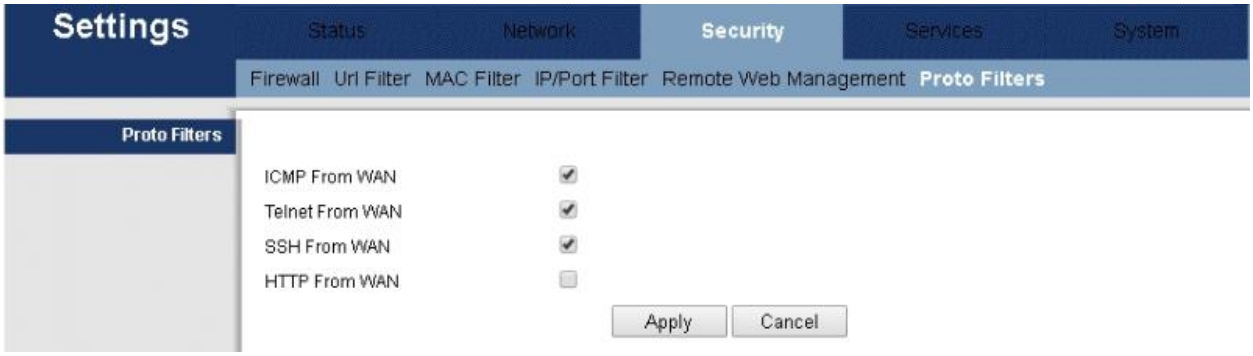
Remote Web Management

Enables the configuration of the IP and the port for remote access.



Proto Filters

Enables the configuration of the IP and the port for remote access.

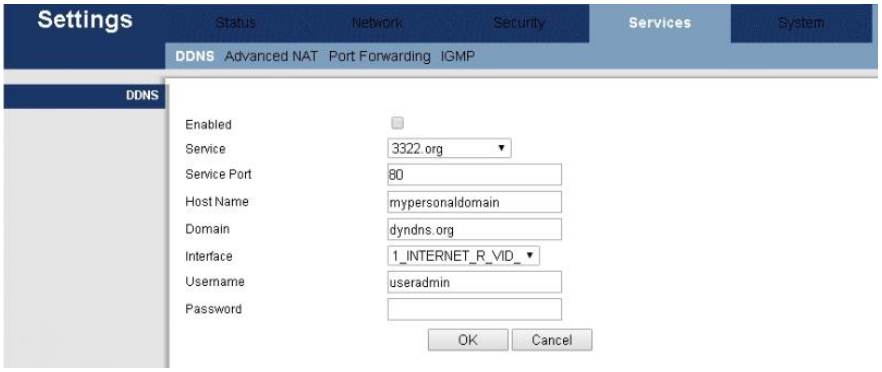


Service

In the "service" section ports can be redirected or different parameters configured such as DDNS, UPNP Setup, among others.

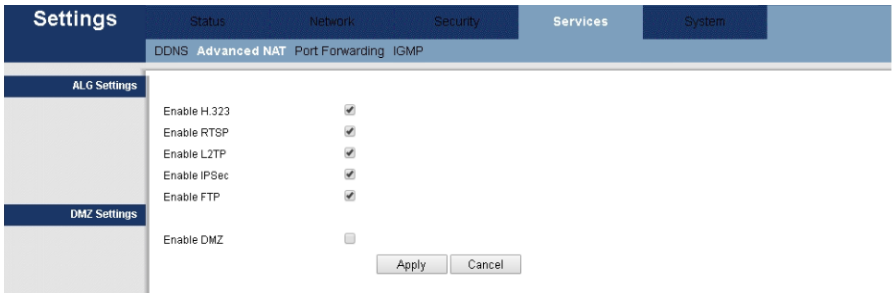
DDNS

A Dynamic Domain Name System can be undertaken if registered on the websites of the different providers and following the necessary steps.



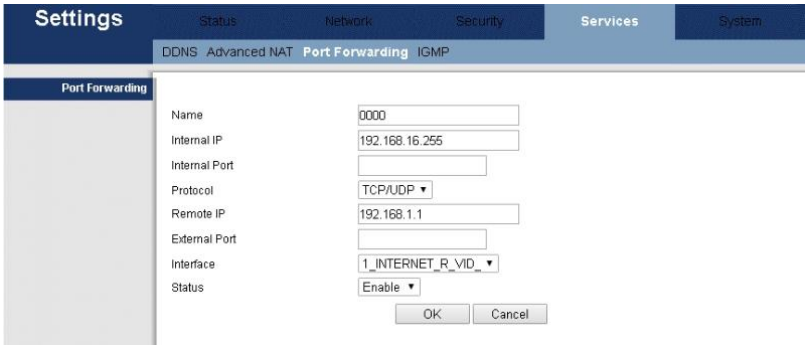
Advance NAT

Enables to disable different protocols.



Port Forwarding

The destination source address and origin source ports to redirect ports can be added.



IGMP

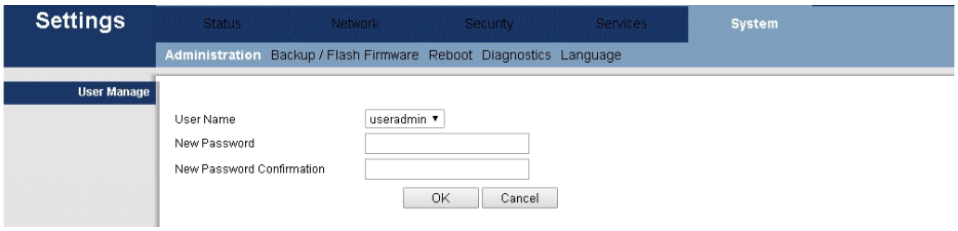
Enables to activate as IGMP proxy and IGMP Snooping for multicast package management.

System

System maintenance menu where to manage access to the equipment, reset or modify the Firmware or language changes.

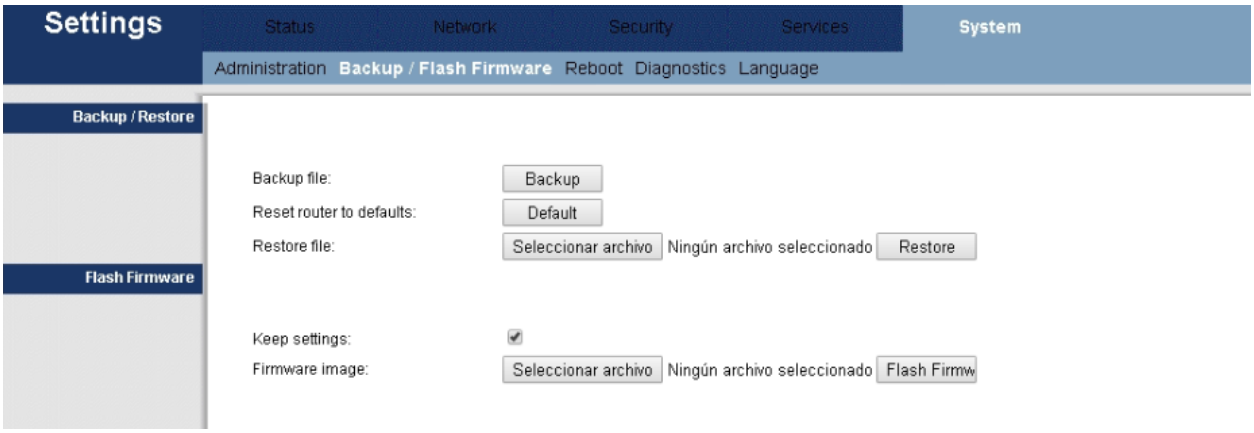
Administration

In this section the user and the password to access the device can be modified.



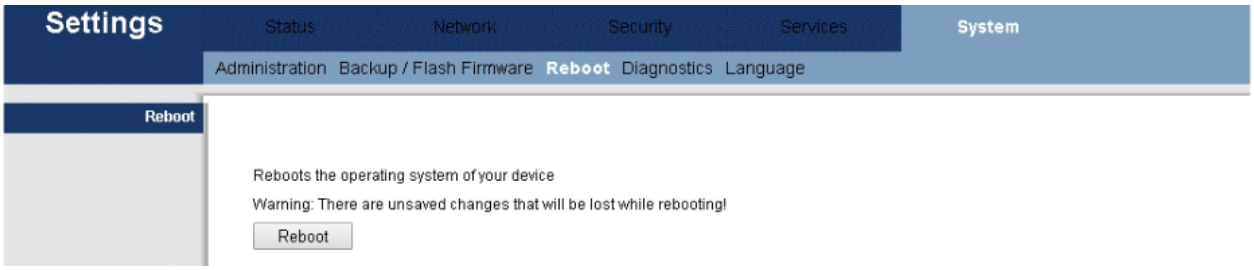
Backup /Flash Firmware

From this tab a backup and reload (Backup file/Restore file), perform a default reset "Reset router to defaults:" or update the "Firmware image" system can be carried out.



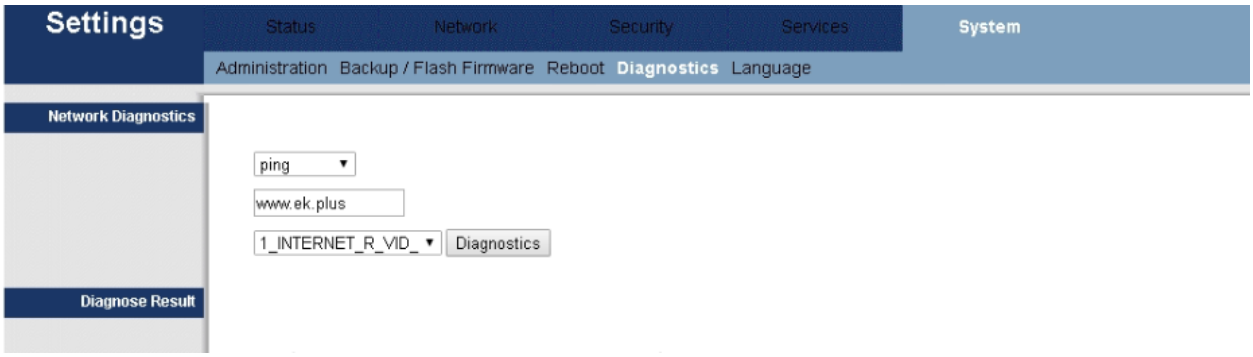
Reboot

This option enables a device reset. To that end click the "Reboot" button which will appear by selecting this option.



Diagnosis

A web address can be pinged in order to verify that the internet is available on the equipment. Select a Google page given that the webpage which appears by default does not function for web security.

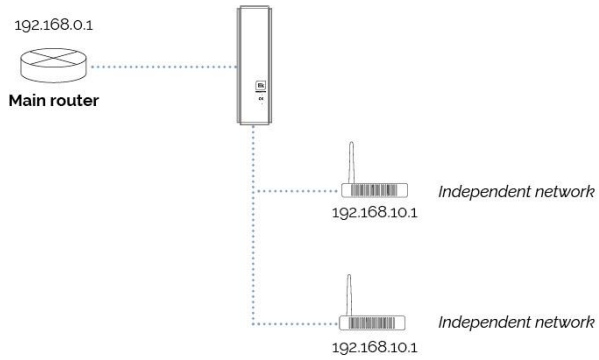


Language

Two languages can be selected, that is, English or Chinese.

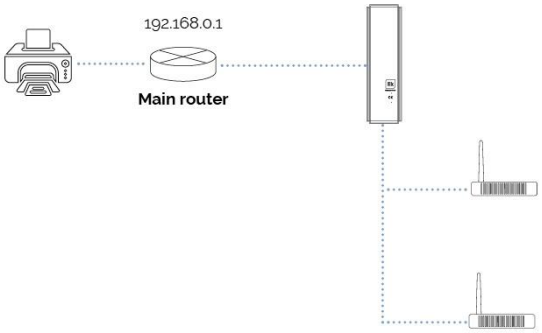
Installation Examples

Installation 1: Router Mode



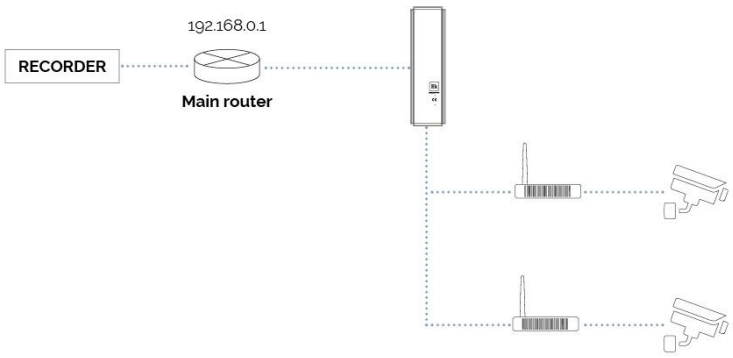
* *IPC devices do not see what is in the main network 192.168.0.1. Neither among them*

Installation 2: Bridge mode



* *The computers are in the main network, seeing if there are other devices. You can use the printer.*
***Note**: Between them they can't see what's connected*

Installation 3: Bridge mode with cameras



***Note**: For proper operation, the recorder must be on the main router. Communication between slave-slave equipment is not possible*

Characteristics

Property	Description
Consumption	<5W
Power supply	12V/1A
Sizes	160×120×32 mm
Working temperature	0℃～50℃
Storage temperature	-40℃～85℃
Humidity	10%～90% non-condensing
Storage humidity	10%～90% non-condensing