

USER MANUAL

IPC-S2 250017

SLAVE FOR EKOAX





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Installation

The internet user unit by coaxial, model IPC-S2 allows you to perform in combination with the main headend unit, model IPC-M2 and M3, a fast and secure internet installation through the coaxial cable.

In this chapter you will find the following information:

- Packaging and accessories of the IPC-S2.
- Hardware features of the IPC- S2.
- Installing the IPC-S2.
- Connect the IPC-S2.

Packaging and accessories

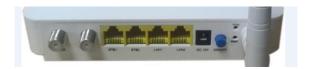
In the IPC packaging, in addition to the manual, the following components are included:





Hardware features

Rear panel



- RF IN "CABLE": Radio frequency signal input.
- RF OUT "TV": Radio frequency signal output.
- LAN1 y LAN2: Ethernet LAN ports to connect a PC. Can work in router and bridge mode
- STB1 STB2: Ethernet ports to connect a PC. The user's IP address can be obtained through a top-level device. Used for IP TV.
- DC 12V: Power supply connector.
- ON/OFF: On/off button.
- Reset: Reset button.

Front panel

The device has the following status LEDs:



- POWER: In green, it will indicate that the equipment is connected to the current.
- LOOP: On, it will indicate that there is some loop, in the network.
- **LINK:** In green with slight flickering, it is working properly. Off, the IPC-S2 is turned off or there is no communication with the headphone.
- LAN1-2: In green, the LAN port has established an Ethernet connection to another device (for example, a PC). With flickering in green, it's in the process of transmitting or receiving data. Power off, the IPC-S2 is turned off or there is no Ethernet connection to another device.
- STB1-2: In green, the LAN port has established an Ethernet connection to another device (for example, a PC). With flickering in green, it's in the process of transmitting or receiving data. Power off, the IPC-S2 is turned off or there is no Ethernet connection to another device.
- WIFI: In green it is working correctly. Off, the computer is turned off or there is no WiFi connection set.



IPC-S₂ 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 or STB 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-S2 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-M 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-S2

Accessing the IPC-S2 slave device

This chapter explains how to access and configure the IPC-S2 slave after completing the wiring as explained in the previous chapter.

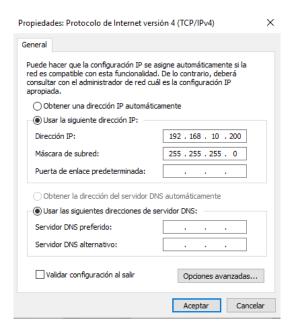
This chapter contains the following sections:

- Preparation for IPC-S2 web management
- Enter Web Management

Prepare IPC-S2 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 192.168.10.X(2-254), subnet mask 255.255.255.





2. Perform a "ping" to the IPC's IP address (by default 192.168.10.1). 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.

```
Microsoft Windows [Versión 10.0.18362.418]
(c) 2019 Microsoft Corporation. Todos los derechos reservados.

C:\Users\Lab\ping 192.168.10.1

Haciendo ping a 192.168.10.1 con 32 bytes de datos:
Respuesta desde 192.168.10.1: bytes=32 tlempoxim TTL=64
Respuesta desde 192.168.10.1: bytes=32 tlempoxim TL=64
Respuesta desde 192.168.10.10.
```

Web Management Access

1. Open an internet browser and enter the following IP address: http://192.168.10.1. By clicking "Enter" will appear the login screen.



- 2. The credentials to access as an administrator are: Username: admin. Password: admin.
- 3. Having done so, press Enter to access the device management.

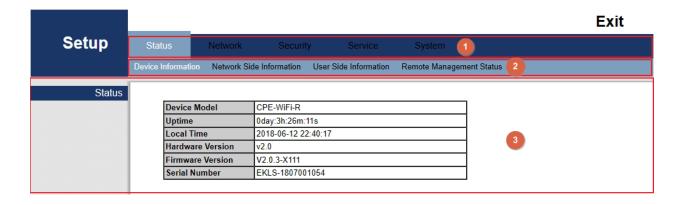
Note: it is possible to change the password from the web management interface.



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 menu area.
- 3. Area to show the results.

Main menu

- Status: Device information, Network Side Information, User Side Information, Remote Management Status.
- Network: Broadband Setup, LAN Setup, WLAN Setup, Move Device, Remote Management, User Number Limit, Time Setup.
- Security: Denial of Service, URL Filtering, IP Filtering, MAC Filtering.
- Application: ALG Setting. Dynamic DNS. UPnP. DMZ Setting. Port Forward. IGMP Setting.
- Service: Port Forwarding, DDNS, UPNP Setup, Advance NAT, Telnet Server, IGMP, Policy Route, Policy DNS.
- System: System Log, Save/Upgrade Setup, Reboot, Admin Account Management, Diagnosis, Manual Inform, Language.

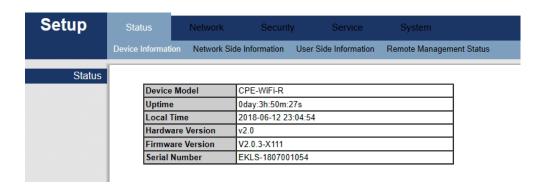


Status

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

Device information

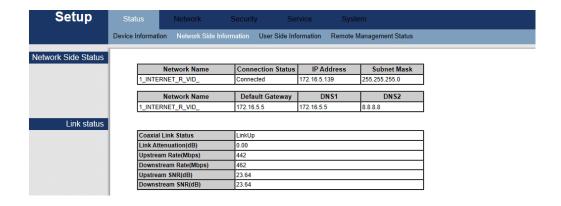
Click on the "Device information" section in order to access the following screen:



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

Network Side Information

The menu will display the following network-related information:





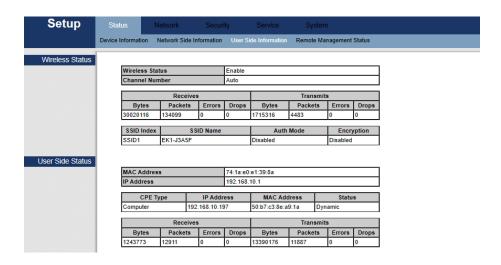
The page will display the status of the WAN connection. Displays the name of the current WAN connection, connection type, connection status, default gateway, IP address obtained, subnet mask, preferred DNS1 and DNS2.

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

User Side Information.

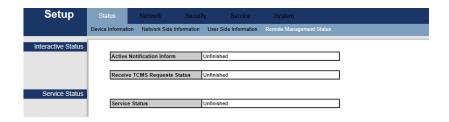
It will display different information such as Wi-Fi status, errors and packets sent and received from same, as well as the SSID status and encryption.

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

Displays the remote management status.



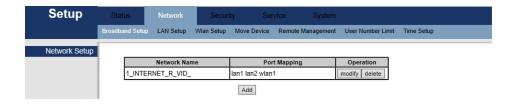


Network

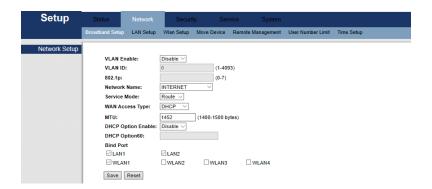
The operating parameters of both the WAN, LAN or WLAN (Wi-Fi) can be configured and managed from this menu.

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.



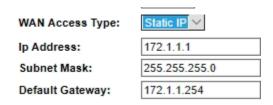
- VLAN Enable:
 - o Enable: Enable VLAN.
 - o Disable: Disable VLAN.
- VLAN ID: The VLAN assigned.
- 802.1p: A priority to the VLAN, with 1 being the lowest and 7 highest is assigned.
- Network Name:
 - o TR069: The connection which is used for TR069.
 - o INTERNET: The connection is used for INTERNET, and does not withstand TR069.
 - o TR069_INTERNET: The connection is used for INTERNET and TR069.
 - o Other: For other options.

Service mode:

- o 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.

WAN Access Type:

- o **DHCP**: Acquires dynamic IP. And if you choose DHCP, the router will automatically get the IP address from a higher layer device.
- o Static IP: We assigned an IP manually.



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

WAN Access Type:	PPPoE V
PPPoEUser Name:	
PPPoEPassword:	ê



- MTU: Packet size.
- DHCP Option Enable: Enables an optional DHCP.
- DHCP Option60: By default 600831STB.
- Blind Port: Assignment of a port with the WAN service. The default WAN connection for all
 ports is in Router mode. If a new WAN connection is chosen in Bridge mode, a Router mode
 port can be assigned/unassigned. Different WAN connections can be configured to offer
 several services to users.

Note: all ports are defined by default in Router mode. If a connection is established in Bridge mode, the chosen port will be disconnected from the WAN. The WAN connection will be shared with all ports 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.

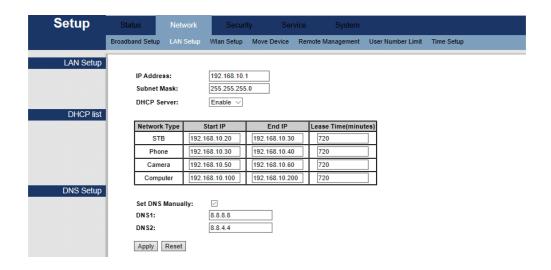
LAN Setup

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: 192.168.10.1
- 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 (192.168.10.1) 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 ∨

Network Type	Start IP	End IP	Lease Time(minutes)
STB	192.168.10.20	192.168.10.30	720
Phone	192.168.10.30	192.168.10.40	720
Camera	192.168.10.50	192.168.10.60	720
Computer	192.168.10.100	192.168.10.200	720

 Set DNS Manually:
 ...

 DNS1:
 8.8.8.8

 DNS2:
 8.8.4.4

DHCP Server: Enable/disable the DHCP function.

Reset

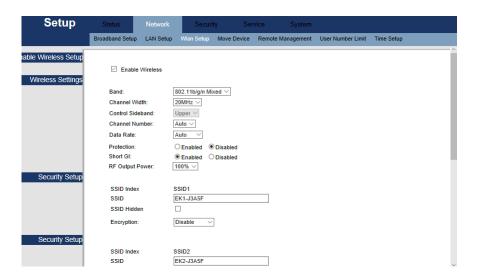
- Start IP: The IP address from which the DHCP server will commence providing IP addresses to network users.
- End IP: End address of the range of IPs supplied by the DHCP server.
- Lease Time: The time that a user is permitted to be connected through the IP address provided automatically. This enables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

Apply



WLAN Setup

In this section it is possible to activate / deactivate the WiFI network, define the wireless channels, type of operation.



- Enable Wireless: Enable / disable WLAN.
- Band: Wi-Fi protocol with which it is broadcasted.
- Channel Width: Channel bandwidth.
- Control Sideband: It cannot be configured.
- Channel Number: Set the working channel manually (selection of the proposed list), or set to automatic mode.
- Data Rate: Wi-Fi connection speed, automatic default.
- Protection: Wifi protection, by default disabled.
- Short GI: By default, enabled this option improves wifi network performance.
- RF Output Power: Wi-Fi power output.
- SSID: Identifies the "set" of services with a specific Wi-Fi network.
- Hide SSID: Tick this option to hide 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 Management

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



User Number Limit

Set a maximum user limit.



Timer Setup

The time can be configured in several ways. It is possible to do it 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.

Denial Service

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

Also, we can select packages per Second and degree of protection (Low/High).



URL Filtering

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





IP Filtering

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



MAC Filtering

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



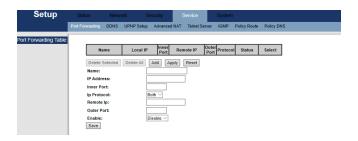


Service

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

Port Forwarding

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



DDNS

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





UPNP Setup

It allows us to activate the UPnP protocol. Universal Plug and Play (UPnP) is a network protocol that allows compliant devices to automatically set port forwarding rules for themselves. Whatever device that communicate with each other and share data over your network.



Advance NAT

Enables and disables different protocols.





Telnet Server

Enables Telnet access to the device.



IGMP

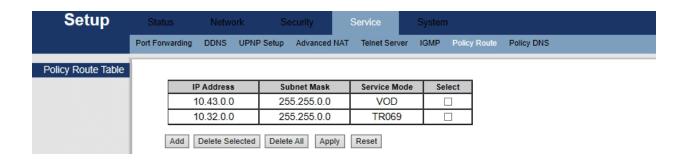
Enables to activate as IGMP proxy and IGMP Snooping for multicast package management.





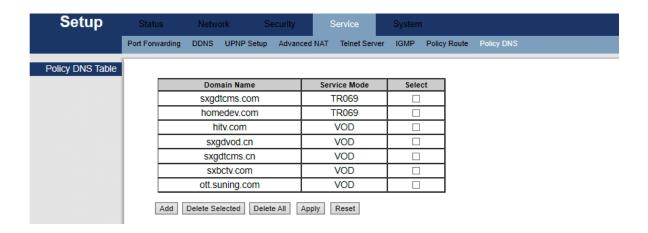
Policy Route

These are team policy-based routing rules. If necessary, we can add to manually configure or modify existing ones.



Policy DNS

These are policy-based DNS rules for the computer. We can add if necessary to manually configure or modify existing ones.





System

System maintenance menu that includes the options: System Log, Save/Upgrade Setup, Reboot, Admin Account Management, Diagnosis, Manual Inform, Language.

System Log

The "Enable Log" option can be selected to enable / disable the device's action log, including emergency indications, alerts, critical points, errors, warnings. In total 8 categories can be selected depending on the operation of the device.





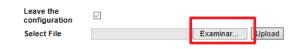
Save/Upgrade Setup

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.

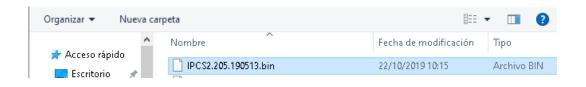
Also, this menu will show us the current version installed now, in our case the V2.0.5-X111.

To upgrade we follow the next steps:

1. Click



2. Select the file



Click Upload





Then It will appear that the system is loading, we just have to wait for the process to finish. Be careful not to disconnect the device or leave it without supply voltage.



Reboot

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

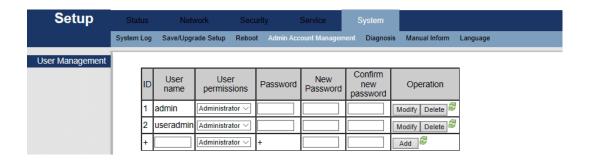




Admin Account Management

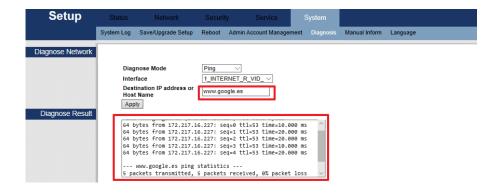
Team management can be done with two different levels of access and therefore two different users. Choose the user in question and assign/modify the access keys for each of them. Also, is possible to add new users.

With administrator level we will have all privileges meanwhile as a user does not.



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

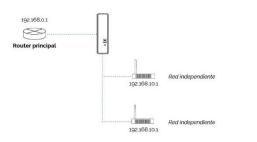
Two languages can be selected, that is, English or Chinese.





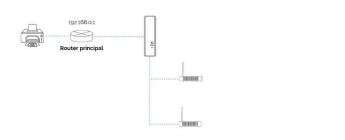
Installation Examples

Instalación 1: Modo Router



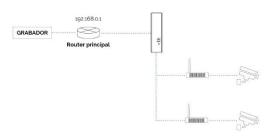
^{*} Los equipos IPC no ven que hay en la red principal 192168.0.1 Tampoco entre ellos

Instalación 2: Modo Bridge



^{*} Los equipos están en la red principal, viendo si hay otros dispositivos. Pueden utilizar la impresora. Nota: Entre elios no pueden ver que hay conectado

Instalación 3: Modo Bridge con cámaras



Nota: Para su correcto funcionamiento, el grabador ha de estar en el router principal. La comunicación entre equipos de esclavo-esclavo no es posible



Features

Property	Description
Consumption	<8W
Power supply	12V/1A
Dimensions	160×120×32 mm
Working temperature	0°C~50°C
Storage temperature	-40°C~85°C
Moisture	10%~90% non-condensing
Storage humidity	10%~90% non-condensing