

# USER MANUAL

# IPC 24 / IPC AC

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# 250020/250021

Slave devices for EKOAX+



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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



- 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:

#### <u>IPC 24</u>

- 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.
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- 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/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..

#### Preparazione per la gestione web dell'IPC 24/IPC AC

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  $\sim$  254), subnet mask 255.255.255.0

Protocolo de Internet versión 4 (TCP/I	Pv4) Properties	<
General		
You can get IP settings assigned auton this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator	
Obtain an IP address automatical	у	
Use the following IP address:		
IP address:	192.168.5.200	
Subnet mask:	255.255.255.0	
Default gateway:		
Obtain DNS server address autom	natically	
Use the following DNS server add	resses:	
Preferred DNS server:		
Alternative DNS server:		
Validate settings upon exit	Advanced	
	OK Cancel	



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.

Command Prompt	-	×
Microsoft Windows [Version 10.0.17763.864] (c) 2018 Microsoft Corporation. All rights reserved.		^
C:\Users\antonio.merida>ping 192.168.5.1		
Pinging 192.168.5.1 with 32 bytes of data: Reply from 192.168.5.1: bytes=32 time<1ms TTL=64 Reply from 192.168.5.1: bytes=32 time(Ims TTL=64 Reply from 192.168.5.1: bytes=32 time=1ms TTL=64 Reply from 192.168.5.1: bytes=32 time=1ms TTL=64		
Ping statistics for 192.168.5.1: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 1ms, Average = 0ms		
C:\Users\antonio.merida>_		
		~

#### Web Management Access

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

(		
	FL	
	LN	
E	SELANS BY IT	S
Lisemame:		
Desquard:		
Passworu.		
Login	Reset	Register

- 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

				Sys Ver: r183	332 Model:RSlave-AC
Settings	Status	Network	Security	Services System	
	Device Informatio	n WAN Informatio	on LAN Information NAT Status	2	
Status					
	Uptime	0	Dh 6m 41s		
	Local Time	Т	Tue Oct 10 15:02:30 2017		
	Device Name	F	RSlave-AC		3
	Firmware Version	F	R3000 V3.0.2		
	Hardware Version	ı V	√3.0.2		

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:

Settings	Status Net	work Security Services System
	Device Information WAN Info	ormation LAN Information NAT Status
Status		
	Uptime	Oh 18m 34s
	Local Time	Tue Oct 10 15:14:23 2017
	Device Name	RSlave-AC
	Firmware Version	R3000 V3.0.2
	Hardware Version	V3.0.2

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:

				Sys Ver: r 1833
Settings	Status			
	Device Information WAN In	formation LAN Info	rmation NAT Status	
WIN Status	1			
	Internet Name	Internet Status	IP Address	Netmask
	1_INTERNET_R_VID_	linkup	172.16.5.134	255.255.255.0
	Internet Name	Default Gatewa	y Primary DNS	Secondary DNS
	1_INTERNET_R_VID_	172.16.5.5	172.16.5.5	8.8.8.8
Eoc Status				
	Eoc Link Status	link up		
	Eoc Line Attenuation(dB)	00		
	Eoc Uplink(Mbps)	404		
	Eoc Downlink(Mbps)	460		
	Eoc Up SNR(dB)	28.074		
	Eoc Down SNR(dB)	31.824		

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.

ettings	Status							
	Device Inform	ation WAN I	nformatio	n LAN Inform	ation NAT S	tatus		
WLAN Status								
	Wireless St	tatus		enable				
	Channel			6				
		1	RX			D	ĸ	
	Bytes	Packets	Err	or Drop	Bytes	Packets	Error	Drop
	0	0	0	0	0	0	0	0
LAN Status	0 MAC Addre	0	0	0	0	0	0	0
LAN Status	0 MAC Addre	0 \$\$	0	0 1C:18:4A:34:8 192:168:5.1	0	0	0	0
LAN Status	0 MAC Addre IP Address	0 ss	0	0 1C:18:4A:34:83 192.168.6.1	80	0		0
LAN Status	0 MAC Addre IP Address	ss vice	0       	0 1C:18:4A:34:83 192.168.5.1 PAddress	0 :80 	0 Address	0 St	atus
LAN Status	0 MAC Addre IP Address De Computer	0 ss vice	0 IF 192.168.5	0 1C:18:4A:34:8: 192.168.5.1 P Address 5.197	0 :80 50:b7:c3:8e:	0 Address a9:1a	0 St Dynamic	atus
LAN Status	0 MAC Addre IP Address Computer	ss vice	0 IF 192.168.5	0 1C:18:4A:34:8: 192.168.5.1 • Address 5.197	0 :80 50:b7:c3:8e:	0 Address a9:1a T)	0 St Dynamic	atus
LAN Status	0 MAC Addre IP Address Computer	ss vice	0 IF 192.168.5 RX Err	0 1C:18:4A:34:8 192:168:5.1 9 Address 5.197 or Drop	0 :80 50:b7:c3:8e: Bytes	Address a9:1a Packets	0 St Dynamic K Error	atus

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

Displays the remote management status.

Settings	Status	Network	Secu	rity Servic	es Sysl	em
	Device Information	WAN Information	LAN Information	Remote Managemer	nt Status NAT Statu	5
Interactive Establish						
	Inform Activ	ve Reported	-			
	Receive ITMS F	Request Status	-			
ITMS Settings Status						
						_
	ITMS Setti	ngs Status	Notissued			



#### NAT Status

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

Settings		Status	Netwo	ork Security	/ Services	System
	D	evice Informa	ation WAN Informa	tion LAN Information N	AT Status	
Active NAT Connections	-					
		ID	Protocol	Source	Destination	Timeout
		1	UDP	172.16.5.5:5678	255.255.255.255:5678	35
		2	ТСР	192.168.5.197:52023	172.217.17.3:443	591
		3	ТСР	192.168.5.197:52035	40.67.251.132:443	546
		4	ТСР	192.168.5.197:52155	172.16.5.118:7070	600
		5	ТСР	192.168.5.197:52034	40.67.251.132:443	546
		6	UNKNOWN	0.0.0.0:	224.0.0.1:	595
		Page: 1/ 1 (To	tal Number®)	•	•	·
		Defrech				
		Reiresn				



### 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.

Settings		Status	Network		Security	Services	Syster	m
	в	roadband Settings	LAN Settings	QoS	WLAN2 WLA	N Time Synchronisation	I	
Internet List								_
		Internet I	Name		I	PortMap	Operation	
		1_INTERNET	[_R_VID_		lan1,lan2	lan3,lan4 wlan1	2	
					Add			_
					Apply Ca	ncel		

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

Settings	Status	Network	Security Services System
	Broadband Settings	LAN Settings QoS	WLAN2 WLAN Time Synchronisation
Internet Settings			
	VLAN ID	-1	(-1,4093), -1: not set VLAN ID
	802.1p	0	(0-7)
	Internet Name	INTERNE	T T
	Service Mode	Route 🔻	]
	Enable NAT		
	Link Type	DHCP	•
	Port Bind	🗹 LAN 1	🖉 LAN 2 🖉 LAN 3 🖉 LAN 4
		🗹 WLAN	1 WLAN 2 WLAN 3 WLAN 4
		WLAN	5 WLAN 6 WLAN 7 WLAN 8
			Apply Cancel

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.

Ek ekselans by its

- 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
  - o 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.
  - o TR069\_INTERNET: The connection is used for INTERNET and TR069.
  - o **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.
  - o Static IP: An IP is manually assigned.

Link Type	Static IP 🔻
IP Address	
Subnet Mask	
Gateway	
Primary DNS	
Secondary DNS	

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

Link Type	PPPoE .
PPPoE Account	
PPPoE Password	
Service Name (Optional)	
Idle Time (Optional)	Minutes
MTU (Optional)	(64~1492)

• 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.

ettings	Status	Network	Security	s	ervices	System
	Broadband Setting	gs LAN Settings QoS	WLAN2 WLAN	Time Synchro	nisation	
LAN Settings						
	IP Address	192.168.5	.1	Note: change	the IP, will change the IP	, bool
	Subnet Mask	255.255.2	55.0	]		
	DHCP Server Enab	ile 🖉				
DHCP List						
	Network type	Start IP	End	IP	Leasetime (minut	es)
	STB	192.168.5.10	192.168.5.20	)	720	
	Phone	192.168.5.30	192.168.5.40	)	720	
	Camera	192.168.5.50	192.168.5.60	)	720	
	computer	192.168.5.100	192.168.5.20	10	720	
DNS Settings	l					
	Manual DNS					
	Primary DNS	8.8.8.8		]		
	Secondary DNS	8.8.4.4		1		
			Apply Can	cel		

**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

Network type	Start IP	End IP	Leasetime (minutes)	
STB	192.168.5.10	192.168.5.20	720	
Phone	192.168.5.30	192.168.5.40	720	
Camera	192.168.5.50	192.168.5.60	720	
computer	192.168.5.100	192.168.5.200	720	

Manual DNS	×
Primary DNS	8.8.8
Secondary DNS	8.8.4.4
	Apply Cancel

1

- 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.

Mode	OTHER V	
Enable		
Bandwidth	1000000	(0-1000*1000*100)bps
Enable DSCP Mark		
Enable 802.1P	Disable 🔹	
Plan	SP 🔹	
Queue	Priority	Enable
1	Highest	
2	Higher	
3	High	
4	Middle	
5	Low	
6	Lowest	
	Enter QoS Class	

Apply Cancel

#### 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.

Settings	Status	Network	Security			System
	Broadband Settings	LAN Settings QoS	WLAN2 WLAN	Time Sync	hronisation	
Basic Settings						
	Disable					
	WMM					
	Channel	auto 🔻				
	Channel Bandwidth	20+40+8	0 🔻 MHz			
	Tx Power	100% •				
Security Settings						
	SSID Index	SSID1				
	Disable					
	SSID	Ek-IPCA	C5			
	Hidden SSID					
	AP isolate					
	MaxUsers	32				
		🙆 MaxUs	ers value range is	0~32, 0 mea	ns diable this fund	tion
	Encrypt Type	None	٣			
Security Settings	l i					
	SSID Index	SSID2				
	Disable					
	SSID	AP_5GH	z_2			
	Hidden SSID					
	AP Isolate					
	MaxUsers	32				

- 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.

Settings	Status	Network Security Services System
	Broadband Settings LA	N Settings QoS WLAN2 WLAN Time Synchronisation
Wireless Settings		
	Enable Wireless	2
Basic Settings		
	Network Type	802.11b/g/n Mixed *
	Channel	Auto 🔻
	Channel Bandwidth	20 • MHZ
	Rate	Auto 🔹
	Tx Power	100% 🔻
	Guard Interval	Short •
Security Settings		
	SSID Index	SSID1
	SSID	EK-IPCAC
	Enable SSID	
	Hidden SSID	
	MaxUsers	32
		MaxUsers value range is 0~32, 0 means diable this function
Socurity Sottings	Encrypt Type	None •
Security Securitys		89ID2
	SSID Index	NET SSID2
	Solu	INE I-SSIUZ
	Enable SSID	

- 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.

						Sys Ver: r20361
Settings		Network				
	Broadband Settings	LAN Settings QoS	WLAN	Remote Control	Time Synchronisation	
ITMS Server						
	TR069 Status					
	STUN Settings					
			Apply	Cancel		

#### **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.

Settings	Status	Network	Securit	y Services	System	
	Broadband Settings	LAN Settings QoS	WLAN2 WLAN	Time Synchronisation		
System Time						
	Current Time	2017-10-	10 15:45:15			
	Time Zone	Europe	/Madrid	¥		
	Refresh	Refresh	h			
Time Synchronisation						
	Enable NTP					
	Manual Time	2017-10	-10 15:45:16			
			Apply C	Cancel		



# 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.

Settings	Status	Network	Security	Services	System
	Firewall Url Filter MA	AC Filter IP/Port Filter	Remote Web Man	agement Proto Filters	
Firewall Settings					
	Port Scan Protection				
	Ping of Death	۲			
	SYN Flood	۲			
	Winnuke	۲			
	Smurf				
	ICMP Redirection				
		A	oply Cancel		

#### **URL** Filtering

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

Settings	Status Ne	twork	Security	Services	System				
	Firewall Url Filter MAC Filter	r IP/Port Filter F	Remote Web Mana	agement Proto Fil	Iters				
White/Black Name									
	Enable URL Filter								
Url Filter List	Mode	black list 🔻							
	Url Address	Host	Desc	ription	Delete				
	This section contains no values yet								
	Add								
		Apply Cancel							



#### MAC Filtering

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

Settings	Status	Network	Security	Services	System				
	Firewall Url Filter MAC F	ilter IP/Port Filter I	Remote Web Manag	ement Proto Filters					
White/Black Name									
	Enable MAC Filter Mode	🜌 black list 🔻							
MAC Filter List									
	MAC Address Description Delete								
	This section contains no values yet								
	Add								
		Арр	ly Cancel						

#### 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".

Settings	Status Network				Security Services			;		
	Firewall	Url Filter MA	C Filter IP/Port	Filter Re	emote Web M	lanagement	: Proto	Filters		
White/Black Name										
	Enable IF Mode	Enable IP/Port Filter 🖉 Mode black list 🔻								
IP/Port Filter List										
	Name	Name         Source IP         Source Port         Dest IP         Dest Port         Protocol         Link         Interface         Delete								
	This section contains no values yet									
	Add									
				Apply	Cance	I				



#### Remote Web Management

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

Settings	Status	Ne	twork	Security	Sen	vices	System	
	Firewall Url Filter	MAC Filter	IP/Port Filter	Remote Web N	lanagement	Proto Filters		
Remote Web Management								
	Web Management F	Port	80					
	Remote Manageme	ent IP	0.0.0	<ul> <li>(Enter 255.2)</li> </ul>	55.255.255 for al	II)		
			A	Apply Canc	el			

#### Proto Filters

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

Settings	Status		Security	Services	
	Firewall Url Filter	MAC Filter IP/Port Filte	r Remote Web Mana	gement Proto Filters	
Proto Filters					
	ICMP From WAN				
	Telnet From WAN				
	SSH From WAN				
	HTTP From WAN				
			Apply Cancel		



# 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.

AT Port Forwarding IGMP 3322.org 80 mynersonaldomain
3322.org
3322.org
3322.org    B0  mynarsonaldomain
80 mynarsonaldomain
mynersonaldomain
mypersonaldomain
dyndns.org
1_INTERNET_R_VID_ *
useradmin

#### Advance NAT

Enables to disable different protocols.

Settings	Status	Network	Security	Services	System
	DDNS Advanced NA	Port Forwarding IGM	0		
ALG Settings					
	Enable H.323	•			
	Enable RTSP				
	Enable L2TP	✓			
	Enable IPSec				
	Enable FTP	×			
DMZ Settings					
	Enable DMZ				
		Appl	y Cancel		



### Port Forwarding

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

DDNS Advanced NAT Port Forwarding IGMP         Port Forwarding         Name       0000         Internal IP       192.168.16.255         Internal Port	Settings		Network Security	Services	System:
Port Ferwarding         Name         0000           Internal IP         192.168.16.255         Internal Port           Internal Port		DDNS Advanced NAT Po	rt Forwarding IGMP		
Name         0000           Internal IP         192.168.16.255           Internal Port	Port Forwarding				
Internal IP 192.168 16.255 Internal Port Protocol TCP/UDP  Remote IP 192.168 1.1 External Port Interface 1_INTERNET_R_VID_  Status Enable		Name	0000		
Internal Port Protocol TCP/UDP Remote IP 192.168.1.1 External Port Interface I_INTERNET_R_VID_ Status Enable		Internal IP	192.168.16.255		
Protocol TCP/UDP Remote IP 192.168.1.1 External Port Interface 1_INTERNET_R_VID_ Status Enable		Internal Port			
Remote IP     192.168.1.1       External Port		Protocol	TCP/UDP .		
External Port Interface It_INTERNET_R_VID_  Status Enable		Remote IP	192.168.1.1		
Interface 1_INTERNET_R_VID_  Status Enable		External Port			
Status Enable •		Interface	1_INTERNET_R_VID_ *		
		Status	Enable •		

#### IGMP

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

Settings	Status	Network	Sea	irity	Services	System
	DDNS Advanced NAT	Port Forwarding	IGMP			
IGMP Snooping						
	Enable IGMP Snooping	Enable	•			
IGMP Proxy						
	Enable IGMP Proxy	Disable	•			
			Apply	Cancel		



# 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.

	twork Security Services	System
Administration Backup/Fla	sh Firmware Reboot Diagnostics Language	
User Name	useradmin 🔻	
New Password		
New Password Confirmation		
	OK Cancel	
	Status No Administration Backup / Fla User Name New Password New Password Confirmation	Status     Network     Security     Services       Administration     Backup / Flash Firmware     Reboot     Diagnostics     Language       User Name     useradmin •

### 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.

Settings	Status			curity		System	
	Administration	Backup / Flash Fi	rmware Reboot	Diagnostics La	inguage		
Backup / Restore							
Flash Firmware	Backup file: Reset router Restore file:	to defaults:	Backup Default Seleccionar arch	ivo Ningún archi	ivo seleccionado	Restore	
	Keep setting Firmware im	s: age:	Seleccionar arch	ivo Ningún archi	vo seleccionado F	ash Firmw	



#### Reboot

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

Settings	Status	Network	Security	Services	System
	Administration Bac	kup / Flash Firmware Re	boot Diagnostics	Language	
Reboot					
	Reboots the oper Warning: There a Reboot	rating system of your device re unsaved changes that will	be lost while rebootin	gl	

#### 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.

Settings	Status	Network	Security	Services	System
	Administration Ba	ckup / Flash Firmware R	eboot Diagnostics?	Language	
Network Diagnostics					
	ping    vww.ek.plus  1_INTERNET_	R_VID_			
Diagnose Result					
Diagnose Result	www.ek.plus	R_VID_▼ Diagnostics			



#### Language

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

						Sys Ver: r 18332	Model:RSlave-AC
Settings						System	
	Administration	Backup / Flash Firmware	Reboot	Diagnostics	Language		
Language Settings							
	Language	Auto	•				
			Apply	Cancel			

# **Installation Examples**

#### Installation 1: Router Mode



 $^{\star}$  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	o° <b>C∼</b> 50° <b>C</b>			
Storage temperature	-40° <b>C∼</b> 85° <b>C</b>			
Humidity	10%~90% non-condensing			
Storage humidity	10%~90% non-condensing			