



EKSELANS BY ITS

ACCES POINT SYSTEMS INDOOR/OUTDOOR

Manual Specifications



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- Presentation
- Hardware
- User Interface
- Access to serial equipment
- Home
- Setup Wizard. Mode Settingss
- WiFi
- Network
- Security
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- Thecnical specifications



Presentation

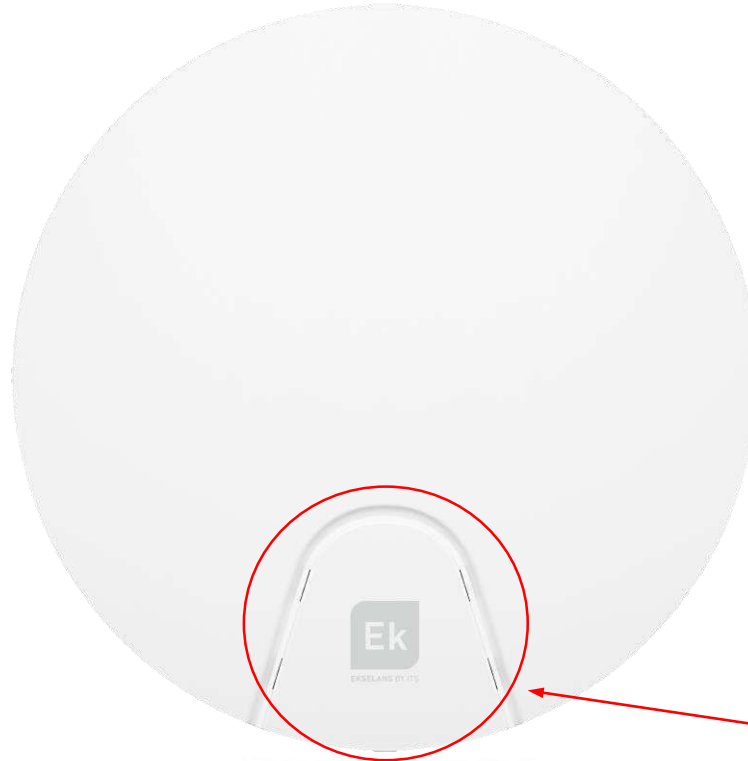
- AP 300 LP, AP750NG, AP1200W2 are indoor access points. The CPE300-24LP, CPE300, CPE-1200-OLP and CPE-1200-0 are outdoors. All Ek equipment is compact and high-function ideal for providing WiFi connectivity to individuals and offices
- The operation of the equipment depends on the mode selected:
 - **Access Point (AP) and Repeater** modes allow you to create a new WiFi network or extend an existing WiFi network, functioning as an ethernet **bridge**.
 - **Gateway and WISP** modes allow you to configure your **AP** as an internet access **router** via wired (Gateway mode) or wireless access (WISP mode))
- The **AP 300 LP** only has a 2'4GHz WiFi radio. The other equipment has two widely configurable radios (2'4GHz and 5GHz).
- All interior APs can be wall or ceiling mounted and supports power by source or PoE. The exteriors the fixation is for mast.



Hardware

AP300LP

Superior View



Activity Traffic LED's

WAN Port (PoE)

Anchors for support

Reset

Front View



Hardware

AP750NG/AP1200W

Superior View



Activity Traffic LED's

LAN Port

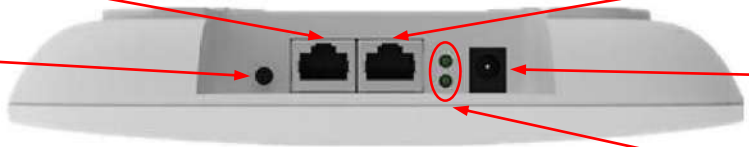
Reset

WAN Port (PoE)

Power

Ethernet LED

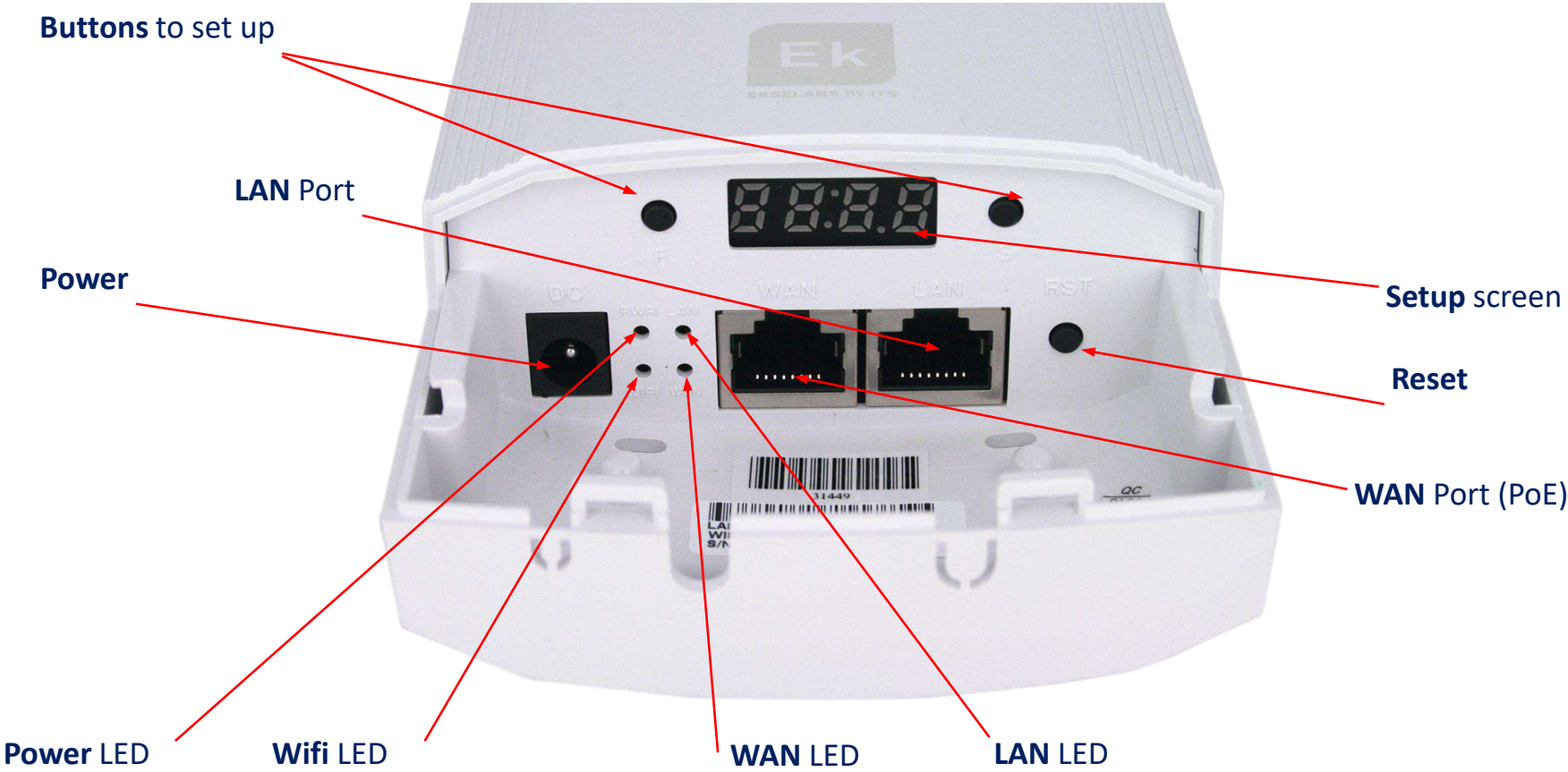
Front View



Hardware

CPE300-24LP

Front View



Hardware

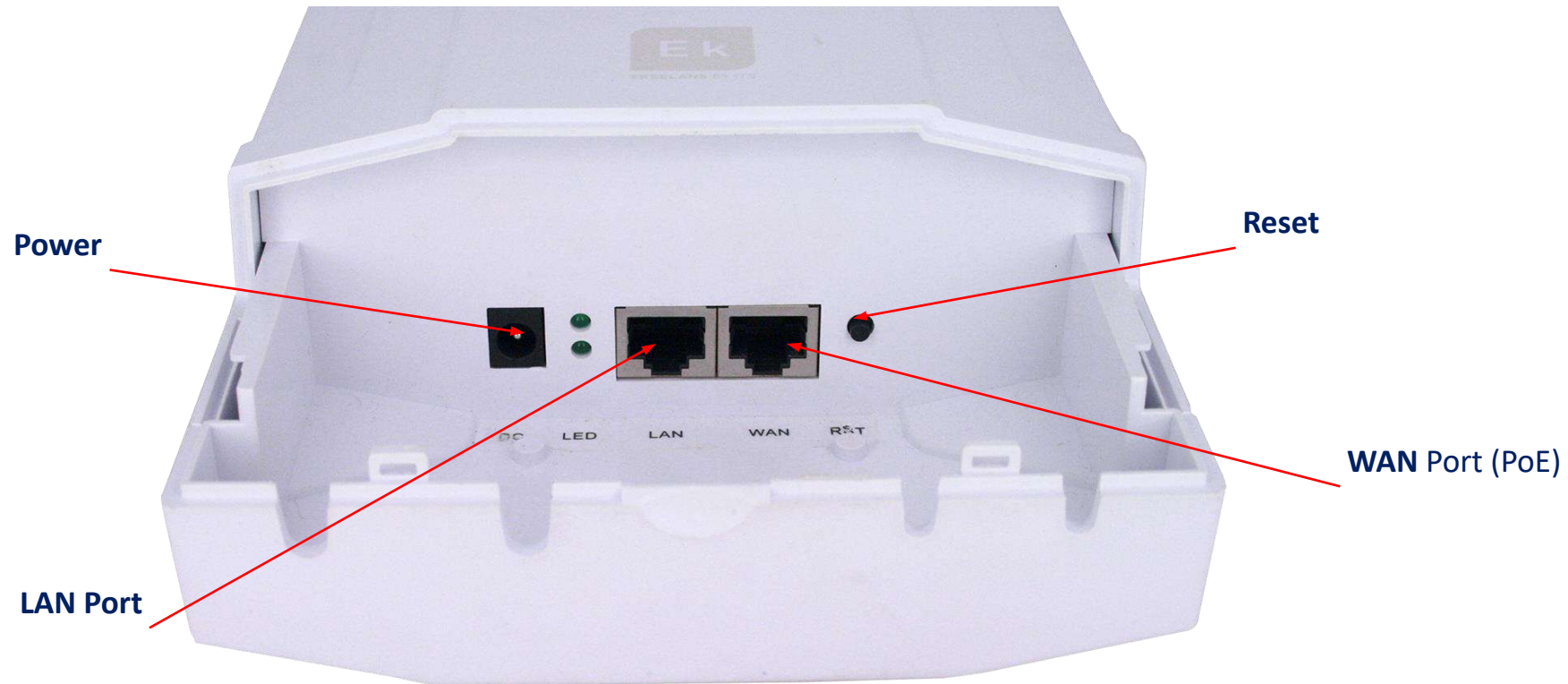
CPE300

Front View



Hardware

CPE 1200-OLP

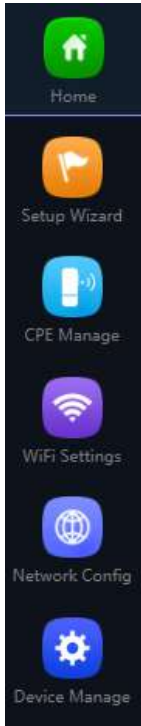


Hardware

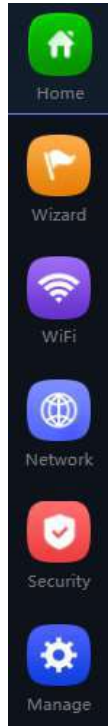
CPE 1200-O



User Interface... Sections



CPE 300-24LP
SUPER WDS



Home

Allows access to the main device status control screen.

Setup Wizard

Give style to the selection screen of one of the four basic operating modes of the device.

WiFi

To access WiFi settings screens: basic, advanced, VLAN and radio access control.

Network

Allows you to configure the IP parameters of the device and management, user address and, in router modes, the WAN configuration.

Security

Security features enable content and communications filters. Available only in **Gateway and WISP modes**.

Management

Device management enables updating, time settings, and other user management and quality-of-service features.

CPE

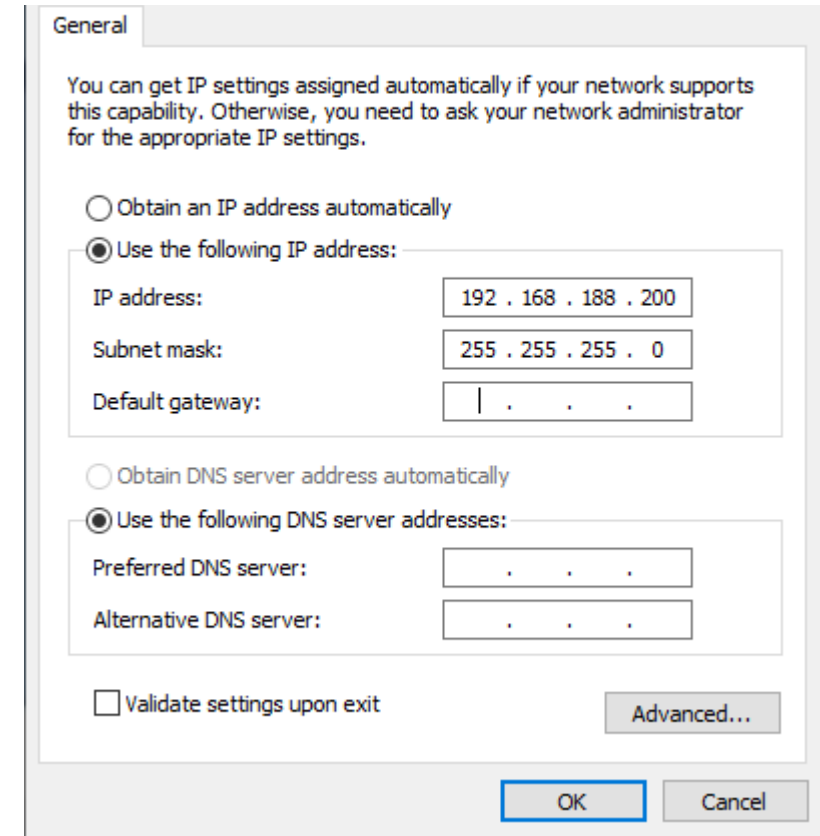
Option only available in the **CPE 300-24LP in SUPER WDS mode**. Allows you to manage **point-to-point** links connected to the AP.



Access to equipment

To access the APs, follow these steps:

1. Connect to APs with a network cable or wirelessly. Default wireless network is Ek_.... the default password is 123456789.
2. Configure the PC network adapter with a static IP as shown in the image.
3. Open a web browser and go to the URL: <http://192.168.188.253>
4. Password: admin.



The image shows a screenshot of the 'General' tab in a Windows network configuration window. The window title is 'General'. The text inside says: 'You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.'

There are two radio button options for IP address assignment:

- ☐ Obtain an IP address automatically
- ☒ Use the following IP address:

Below the second option, there are three input fields:

- IP address: 192 . 168 . 188 . 200
- Subnet mask: 255 . 255 . 255 . 0
- Default gateway: | . . .

There are two radio button options for DNS server address assignment:

- ☐ Obtain DNS server address automatically
- ☒ Use the following DNS server addresses:

Below the second option, there are two input fields:

- Preferred DNS server: . . .
- Alternative DNS server: . . .

At the bottom left, there is a checkbox labeled 'Validate settings upon exit' which is unchecked. At the bottom right, there is a button labeled 'Advanced...'. At the very bottom, there are 'OK' and 'Cancel' buttons.



Home... General Device Status

CONFIGURATION MENU

Current mode
OPERATION

TRAFFIC Flow
WIFI or WAN depending on the mode

Wifi
Selected

Home


Wizard

WiFi

Network

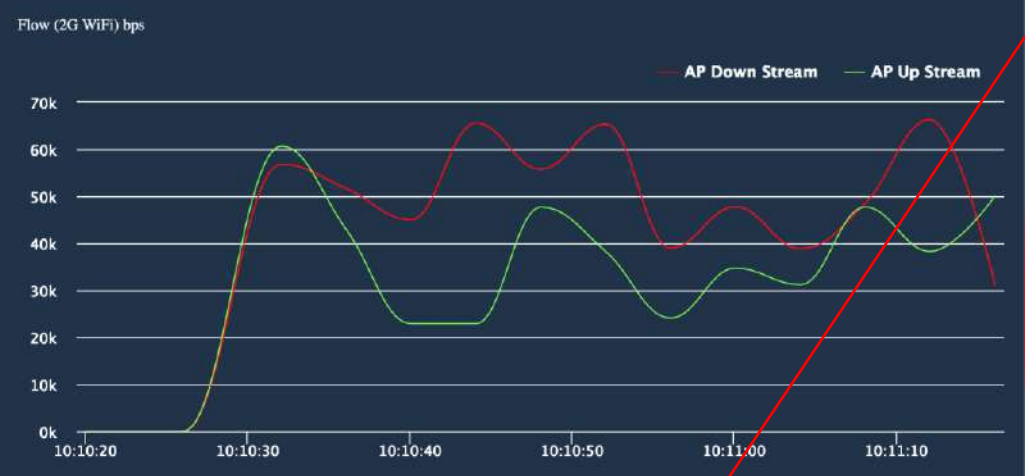
Manage

Operation Mode **AP Mode** Fat AP



Uptime 17:36:28

Flow (2G WiFi) bps



Device Information

CPU Usage 3%

Memory Usage 30%

Version: FTT-A780-AP-V5.3-Build20190228152323

Device Description


AP1200W2 - testing

Click Settings

LAN Information

IP Mode	Get IP From AC
Lan IP	192.168.188.253
Subnet	255.255.255.0
AC Address	192.168.188.1
MAC Address	44:D1:FA:39:09:50

2G WiFi

Status ON 

SSID Ek_2_4G

Channel 11

Encrypt WPA/WPA2PSK_TKIPAES

MAC Address 44:D1:FA:39:09:51

Version SW

Device STATE AND DESCRIPTION

LAN configuration

WiFi Configuration

Customers connected



Home... WDS MODE IN CPE 300-24LP

CONFIGURATION MENU

Current mode
OPERATION

TRAFFIC Flow
WiFi or WAN depending on the mode



Device STATE AND DESCRIPTION

Version SW

WDS state

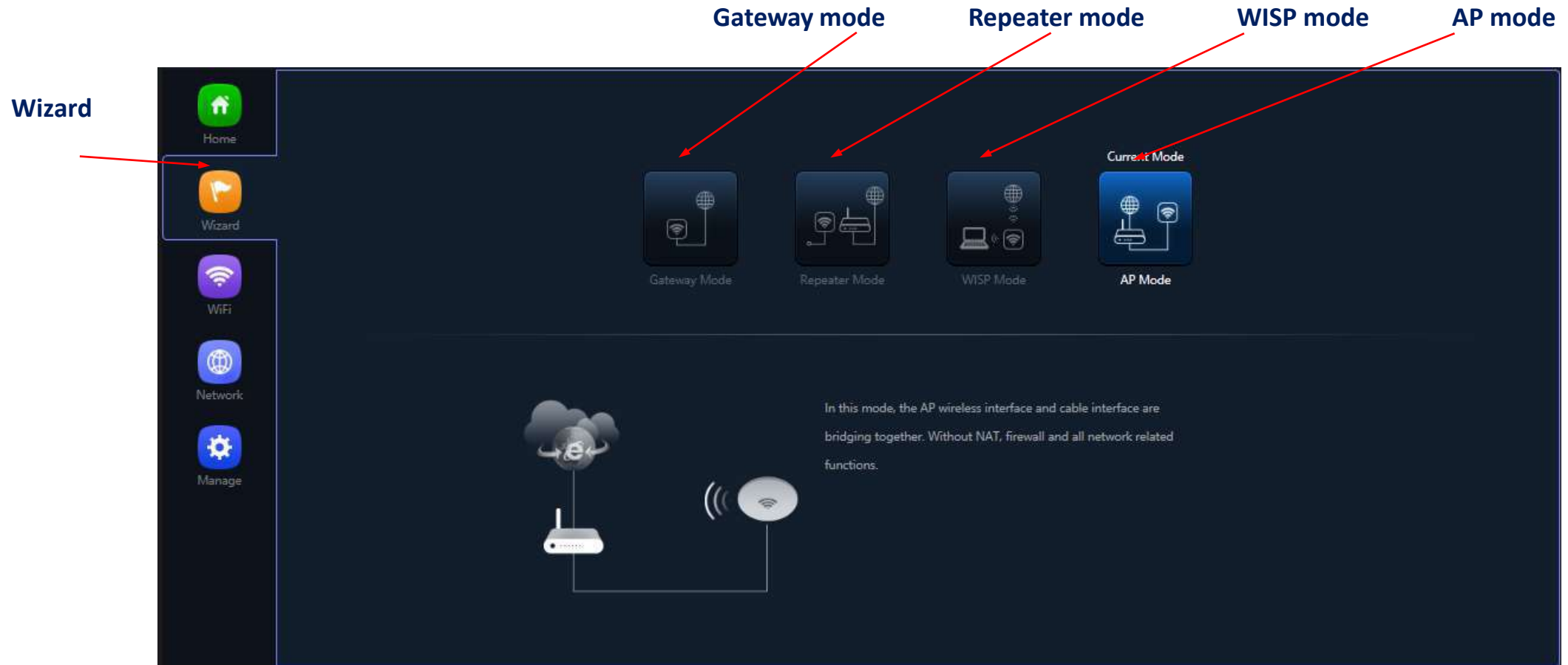
WiFi Configuration

Customers
connected

Device STATE



Operation modes... Configuration



Configuration Flow



Operation modes... Configuration IN CPE 300-24LP



Configuration Flow



Operation modes... Bridge

Bridge mode configures the device for data transmission between its ethernet ports and its WiFi radios. IP functions (routing, DHCP, security, etc.) are not active in these modes

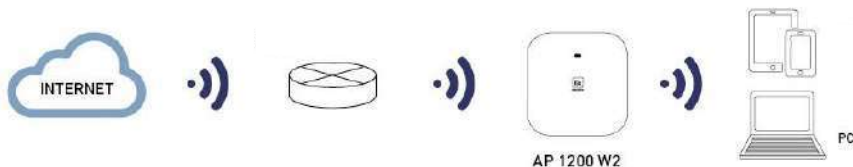
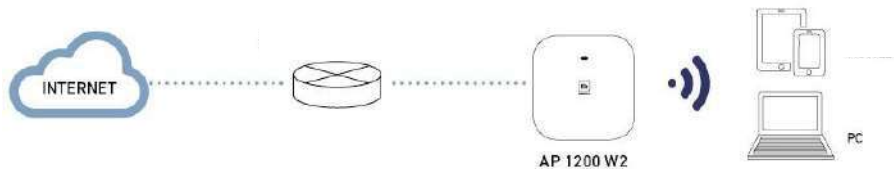
AP mode

AP (Access Point) mode provides WiFi coverage from the LAN connection, with the ability to activate up to 4 SSIDs per band (4 in 2'4GHz and another 4 in 5GHz). The **AP 300 LP** only works at 2'4GHz. In this mode, you can even configure VLANs that are associated with radiated SSIDs.

The device remains manageable through its own address, either a fixed IP configured or one obtained by DHCP.

Repeater mode

Repeater mode does the main connection as a client of an existing WiFi, either at 2'4 or 5GHz.). The **AP 300 LP** only works at 2'4GHz. This connection extends to the ethernet ports and the rest of the WiFi's that can be configured on this computer

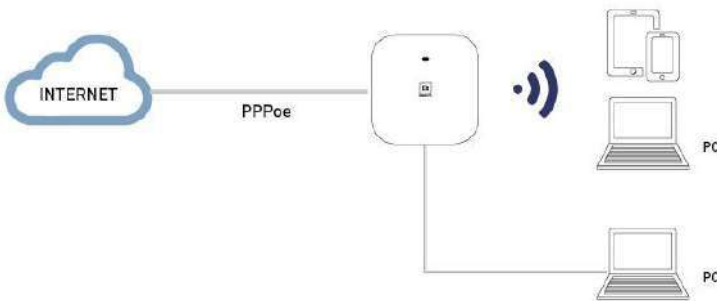


Operation modes...Router

Router-type modes isolate the inside network from the Internet, enabling **APs** to enable IP functions such as NAT, DHCP, routing, and security

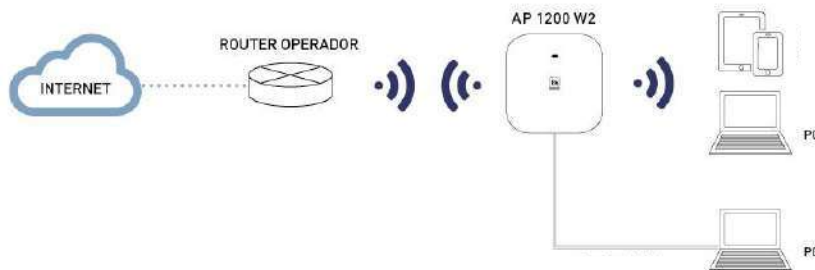
Gateway mode

Gateway mode allows Internet connection over the WAN port and has address translation (NAT), IP assignment (DHCP), and security filtering capability. WiFi networks are part of the local network configured along with the LAN port



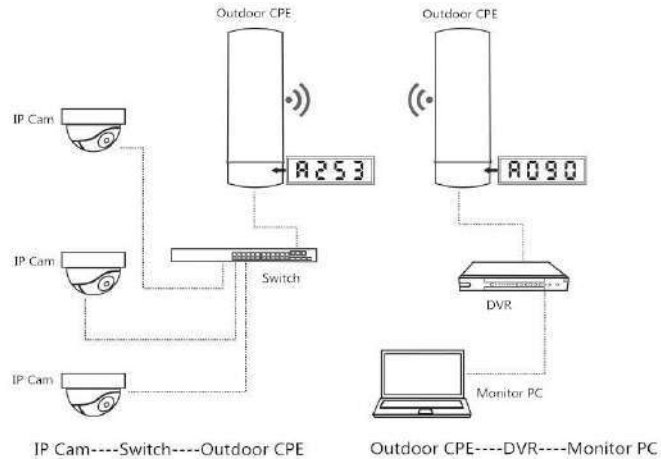
WISP mode

In WISP mode it is possible to use the **AP** as an Internet access router over an ISP WiFi network. The main connection is now established by configuring as a client one of the SSIDs on the computer, thus leaving the other interfaces (WAN, LAN and the rest of SSIDs WiFi) for the local user connection



Operation modes... Super WDS

Point to Point

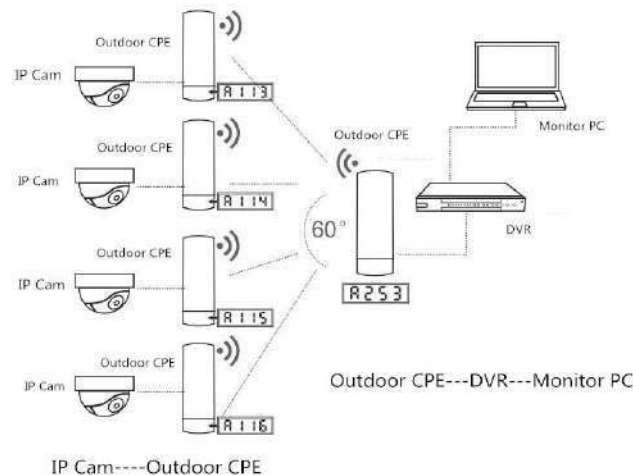


The CPE operation mode is configured by selecting the WDS option in the wizard, thus being able to configure point-to-point or multipoint connections (with a maximum of up to 4 terminals or CPEs)

P2P

The local terminal acts as host ("H", on the lower display) and the remote terminal as a client ("C"). The client is configured with the default IP (192.168.188.253), while the host is self-assigning an IP address that is not in use. Both directions are queryable through the lower display.

Point to Multi Point



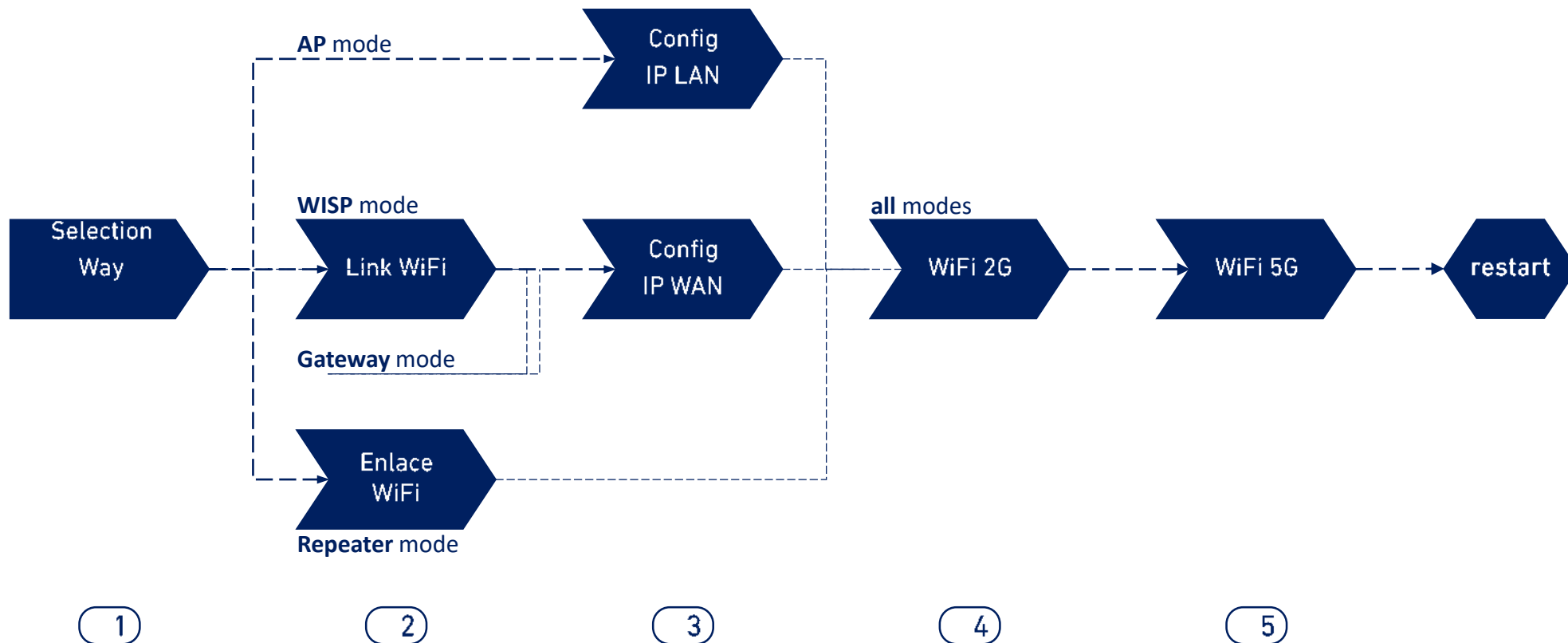
Multipoint

Up to 4 remote terminals (clients, "C") can be linked to the same host ("H"), allowing applications such as remote video surveillance, online connection of remote locations, etc.



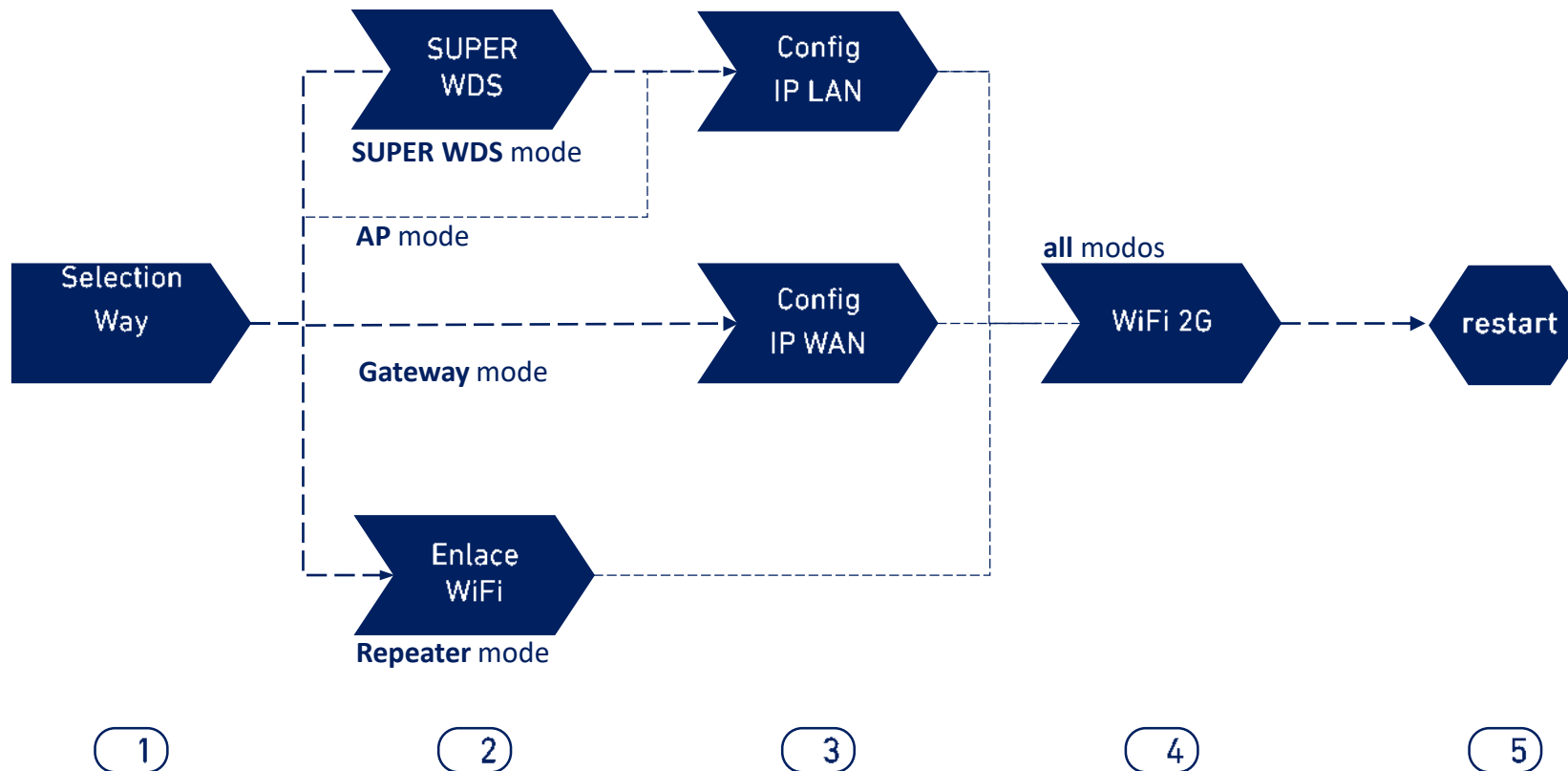
Setup Wizard ... Configuration Flow

The APs Setup Wizard allows you to select and configure modes of operation, with a simple flow that guides through their stages. The **AP300LP only works up to 2G Wifi.**



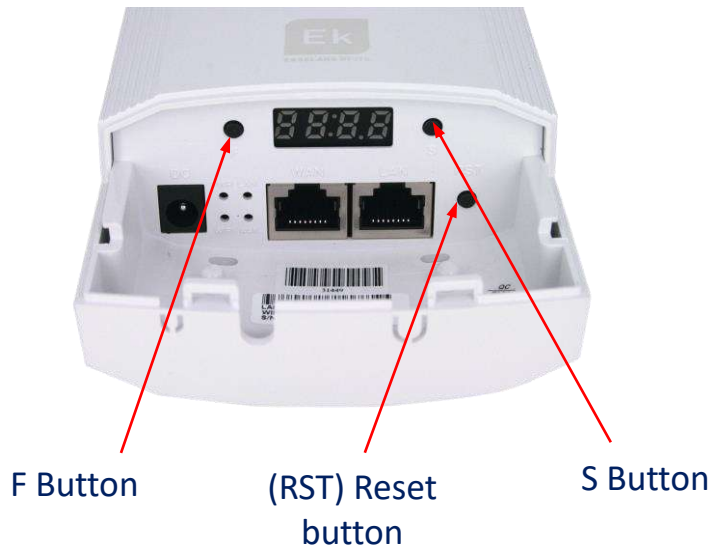
Setup Wizard ... Configuration Flow CPE 300-24LP

The APs Setup Wizard allows you to select and configure modes of operation, with a simple flow that guides through their stages. **The AP300LP only works up to 2G Wifi.**



Setup Wizard ... WDS Link Configuration by Display

By default all computers are configured in Super WDS mode. If you reset one of the computers, you must relink by following the steps below:



1. With the two teams in an **F** and **S** button controlled scenario we configured one of the two as **H** and the other as **C**. They must also be on the same channel, an example is sender **H009** and receiver **C009**.
2. We search for the **two links** at the same time with the RST button (shortly). We know that you perform the search as a **P** will be on the left side on the display.
3. They should be linked, we perform a connection test. If successful, pressing the S button should show us different values on the display:
 - C (client) or H (host) and channel, example: H009.
 - A253: This is the access IP to the equipment for management, e.g. 192.168.188.253.
 - P-04: Power on the link. Power level received in dBm.



Setup Wizard.. WDS CPE 300-24LP Configuration

2 Link WiFi



In **SUPER WDS** mode, a point-to-point connection is established with the selected emitter.

We must perform a search for the **BSSID** with which we want to establish the connection. Selecting it will automatically complete the **mark** section. If we do the configuration in this way you have to repeat the process on the two computers so **we recommend using the above method (use the displays)**.

Link **mark** you connected with



Setup Wizard ... WiFi configuration

2 WiFi link



Radio client
selection
(2'4GHz o 5GHz)

SSID service

Setting up
Security

Bandwidth
of the channel
(options of 20 and/or
40 MHz depending on the
Standard WiFi Active)

Repeater Mode

1 2 3 4

Repeater Settings

Select network: Use 2G repeater

Repeater SSID: Wireless 2.4G Scan

Lock BSSID: ☐

Encryption: WPA/WPA2PSK_TKIPAES

Password: 66666666

BandWidth: 20M

P2P: ☐

Next

In **WISP** and **Repeater** modes the Internet output is established with a WiFi connection to an existing service (service SSID). A radius of the **APs** is configured as a client and thus establishes the link to output user traffic.

In **Gateway** mode the connection is established by the WAN port, while in **AP** mode it is indistinct between LAN or WAN ports, except when using VLANs, which are only switchable by the WAN port.

Possibility of SSID selection
via **scan WiFi**

Fixed association option to a
remote radio (MAC lock, BSSID)

The P2P option is specific to the mode
Repeater and allows to propagate the
WPS configuration between terminals
(Deactivation recommended)



Setup Wizard ...IP LAN/Management configuration

3a) IP LAN configuration



IP management of the connection

(Static IP, from AC or Gateway)

Addressing IP (*)

DNS servers (*)

AP Mode

1 LAN Settings

IP Mode: Static IP (selected), Get IP From AC, Get IP From Gateway

Lan IP: 172.16.5.250

Subnet: 255.255.255.0

Gateway: 172.16.5.5

Primary DNS: 8.8.8.8

Secondary DNS: 8.8.4.4

Next

Configuring the LAN IP address of the APs in the wizard makes it easier for us to manage them after the reboot.

Three possible IP configuration modes are supported:

Static IP addresses, manually getting of IP addressing (as shown in the figure).

- **IP from AC**, is the preferred option if the installation integrates an Ek WiFi controller (CAP1 or CAP2). This option allows you to manage a specific IP address for **APs** automatically and always separate from the addresses assigned to the user terminals.
- **IP from Gateway**, uses the DHCP protocol to obtain an IP address from the access router. Therefore, the management IP address of the **APs** will be accessible to users of the LAN network.
- (*) Configuration example.



Setup Wizard... IP WAN configuration

3b) IP WAN configuration



Management of the Connection IP

(Static IP, PPPoE o DHCP)

PPPoE parameters user

PPPoE parameters server

WISP Mode

1 2 3 4 5

WAN Settings

Internet Mode: **PPPoE** (Static IP, PPPoE, DHCP)

Username: Please enter account.

Password: Please enter password.

Server Name: If not, please do not fill out.

Service Name: If not, please do not fill out.

Back Next

The WAN IP configuration of the **AP** applies to **Gateway** (WAN port) and WISP modes (a WiFi configured as a client).

The IP address management method is selected based on the network configuration that gives access to the Internet, with three possible options:

Static IP Address, for manual input of IP addressing (IP address, network mask, and gateway address) and DNS servers (primary and secondary).

PPPoE, a configurable connection option with user (name and password) and service parameters (server name and PPPoE service name). Consult your Internet provider in case of doubt.

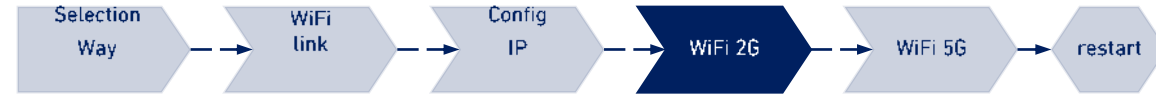
DHCP, to get the IP address of a Internet access router (or equivalent).

(*) Configuration example.



Setup Wizard ... WIFI 2'4GHz configuration

4 WiFi 2G configuration



Activation
WiFi 2'4GHz

Name SSID

Bandwidth
WiFi channel

Activating the
Encryption

PSK password
Encryption

AP Mode

1 2 3 4

2G WiFi Setting

WiFi Status ☒

SSID Ek_2.4G

Hide your SSID? ☒

Channel 20M Auto

Encrypt Encryption

WiFi Password

Back Next

The **setup wizard** allows you to configure the basic parameters of the two WiFi radios. The parameters offered as an option depend on the active advanced settings (WiFi section).

The selectable parameters are as follows:

Activation, allows to activate or not activate this radio.

SSID, allows you to set the name of the radiating signal and select its concealment.

Radio parameters, such as the bandwidth to be used (20 or 40 MHz for 2'4GHz) and the channel to use (automatic configuration or fixed channel selection). This channel configuration affects all active SSIDs over the 2'4GHz radio,

Security, allows you to leave the WiFi open or set WPA2 AES encryption (compatible with TKIP), which is the best level available now with WPA2.

Hiding the SSID



Setup Wizard ... 5GHz configuration does not apply to AP300LP

5 5G WiFi settings



Activation
WiFi 2'4GHz

Name SSID

Bandwidth
WiFi channel

Activating the
Encryption

PSK password
Encryption

AP Mode

1 2 3 4

5G WiFi Setting

WiFi Status ☒

SSID Ek_5G

Hide your SSID? ☐

Channel 40M Auto

Encrypt Encryption

WiFi Password

Timing 1Day ☒

Back Next

The configuration of the 5GHz radio is analogous to that of 2'4GHz, depending also on the active advanced configuration.

Naturally, the radio configuration allows you to select a channel width of up to 80MHz and a larger number of radio channels.

Additionally, you can enable and configure an automatic device restart option on this **last screen** of the wizard.

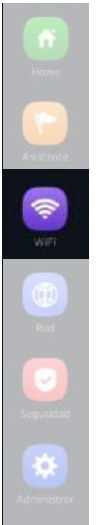
Hiding the SSID
(provides increased security)

Rebooting your device
(allows you to activate and program the periodic reboot of the device)



The WiFi Settings screen offers 5 options tabs.

- WiFi 2G... configures the 2'4GHz radio and the four SSIDs that are supported
- WiFi 5G... analog settings for 5GHz radio
- Access Control (ACL)... defines WiFi access lists
- WiFi Timing... allows you to turn off WiFi in a programmable time interval
- Advanced... gives access to the fundamental parameters of WiFi operation and which govern both radios



WiFi... WiFi 2G and WiFi 5G

The configuration of the radios at 2'4GHz and 5GHz is identical, only the selectable channels and bandwidths (specific to each frequency) change. Configure the main SSID ("Basic") and the three additional SSIDs ("VAP1 to VAP3"), which always share channel and bandwidth settings.

The "Basic" tab allows you to select the channel and streaming bandwidth

Each of the four tabs allows you to enable or disable the respective SSID, enabling if you want to encrypt traffic for it.

Enabling the SSID

SSID Name

Configuration radio

(channel and bandwidth)

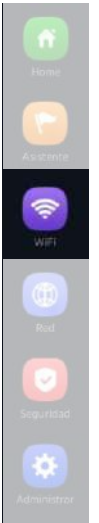
The screenshot shows the WiFi configuration interface with four tabs: Basic, VAP 1, VAP 2, and VAP 3. The 'Basic' tab is selected. The interface includes a 'WiFi Status' toggle (turned on), a 'WiFi Analyzer' button, and a 'SSID' field containing 'Ek_2.4G'. Below the SSID field is a 'Hide your SSID?' toggle (turned off). Further down are fields for 'BandWidth' (set to '20M'), 'Channel' (set to 'Auto'), 'Encrypt' (set to 'Encryption'), and 'WiFi Password'. Red arrows point from external labels to these specific settings.

SSIDs available
(are activabled separately)

Spectre Analyzer
(allows viewing existing networks in the environment)

Possible **bandwidth** and **channel** values are based on advanced settings

SSID security
(encryption and PSK)



WiFi... WDS

Selection of the Service BSSID

Setting up Security

Configuration radio
(channel and bandwidth)

Enable/Disable WDS

Enable/disable quick link

Name of BSSID

Channel Analyzer

Configuración WiFi

WDS

MAC ACL

Avanzado

WDS

Estado de WDS

Enlace rápido

AP BSSID

74:1A:E0:E2:EA:45

Marca

EKSELANS

Escanear

AP BSSID

Marca

Escanear

AP BSSID

Marca

Escanear

AP BSSID

Marca

Escanear

Contraseña de usuario

Ancho de banda

20M

Canal

9

WiFi Analyzer

Aplicar



WiFi... MAC ACL

MAC Address
subject of the restriction

Non-active restriction

Active restriction

"Apply"
(saves and executes the configuration)

Addition and Erased tickets

Selection of the list mode:
White
(allows access)
Black
(denies access)

The screenshot shows a configuration menu with tabs: 2G WiFi, 5G WiFi, MAC ACL (selected), WiFi Timer Off, and Advanced. Below the tabs is a table with columns: SN, Name, MAC Address, Mark, Status, and Config. The table contains two entries. The first entry has SN 1, Name, MAC Address aa:bb:cc:00:11:22, Mark 1, and Status with a green checkmark. The second entry has SN 2, Name, MAC Address aa:bb:cc:00:11:23, Mark 2, and Status with a red circle and slash. At the bottom of the screen are four buttons: Add, Delete, Apply, and Disable. Red arrows point from the text annotations to the corresponding elements in the interface.

SN	Name	MAC Address	Mark	Status	Config
1		aa:bb:cc:00:11:22	1	Active (Green Checkmark)	⚙️
2		aa:bb:cc:00:11:23	2	Non-active (Red Circle with Slash)	⚙️

APs allow you to control access to WiFi SSIDs defined by a single list (ACL) configurable as permission (*white*) or denial (*black*)



WiFi... Link WiFi

Selection of the
client radio
(support link)

Activating the
link function

SSID service
(gives Internet access)

Fixed partnership
(link lock
MAC address of the
remote radio)

The screenshot shows the 'Repeater Settings' page of a network management interface. The page has a dark theme with a top navigation bar containing tabs: '2G WiFi', '5G WiFi', 'Repeater Settings' (selected), 'MAC ACL', 'WiFi Timer Off', and 'Advanced'. Below the navigation bar, the 'Repeater Settings' section is visible. It includes the following fields and controls:

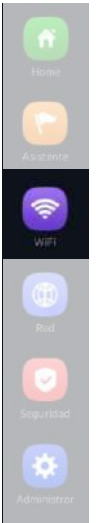
- Select network:** A dropdown menu showing 'Use 2G repeater'.
- Repeater Status:** A green toggle switch that is turned on.
- Repeater SSID:** A text field containing 'Wireless 2.4G' and a 'Scan' button to its right.
- Lock BSSID:** A text field containing a greyed-out MAC address and a toggle switch that is turned on.
- Encryption:** A dropdown menu showing 'WPA/WPA2PSK_TKIPAES'.
- Password:** A text field containing '66666666'.
- BandWidth:** A dropdown menu showing '20M'.
- P2P:** A green toggle switch that is turned on.
- Apply:** A button at the bottom right of the settings area.

Red arrows point from the following text blocks to specific elements in the interface:

- From 'Selection of the client radio (support link)' to the 'Select network' dropdown.
- From 'Activating the link function' to the 'Repeater Status' toggle.
- From 'SSID service (gives Internet access)' to the 'Repeater SSID' field.
- From 'Fixed partnership (link lock MAC address of the remote radio)' to the 'Lock BSSID' field.
- From 'Setting up security of the service network' to the 'Encryption' dropdown.
- From 'Bandwidth of the used channel for the link' to the 'BandWidth' dropdown.

Setting up
security of the service
network

Bandwidth
of the used channel
for the link



WiFi... Advanced Options

Legal Regulation

Select the correct regulatory environment, depending on the location of the installation. This option determines the available channels. For Spain (**ESP**) channels (1..13) are authorized for 2'4GHz and (3..64), (100..128) and (132..140) for 5GH.

2G mode

Determines the operation of the 2G radio between the **b/g** and **n/g** modes and, among other factors, conditions the available bandwidths when configuring the 2'4GHz radio.

- Only with **n/g** mode, 40MHz bandwidth options (40Mhz and 20/40MHz) are enabled on the 2'4GHz radio. The 40MHz option does not allow 802.11g terminal connection as these do not support this bandwidth.
- In **b/g** mode, compatibility is guaranteed even with the oldest terminals (802.11b), even at the cost of penalizing the performance of this radio when they are associated

5G mode

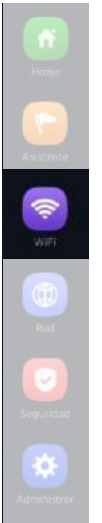
Select from three operating modes for the 5G radio: **a**, **an** and **ac**. Each allows different channel bandwidth options:

a: 20MHz **an**: 20, 40 y 20/40MHz

ac: 20, 40, 80, 20/40, 20/40/80MHz

Fast Multicast

This option is useful when there is multicast traffic (e.g. video over IP) on the LAN and you want to carry it over WiFi interfaces. To do this, simply deselect the OFF option (default) and select a multicast WiFi transmission speed, with speeds of 6, 12 and 24 Mbps being recommended, as they are basic speeds of the Device.



WiFi... Advanced Options

User Limit by AP

Allows you to limit the total number of terminals associated with a device. It is a useful option in heavy-duty deployments, to spread the usage load between different terminals, although it requires proper planning. Its default value is 32, although **APs** support more than 64 terminals with peace of mind.

WLAN partition

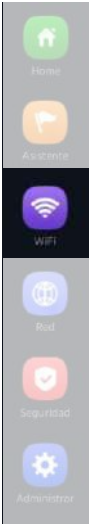
It is a security option that allows you to isolate WiFi terminals in such a way that they cannot establish direct ethernet communication within the scope of the WiFi network.

Short GI

The save interval (GI) is a parameter that regulates the time that elapses between two different symbols. It usually takes a value of 800ns, but can be reduced to 400ns. This optimization allows you to gain speed in **n** and **ac** modes, although it may not be suitable in high-interference environments.

Coverage Threshold

It is a quality parameter over the power demandable to a terminal in reception on the AP, so that those received users with lower power are automatically disassociated. The resulting effect is equivalent to limiting range in distance and, therefore, that the connected terminals have a better service.



WiFi... Advanced Options

Power Tx

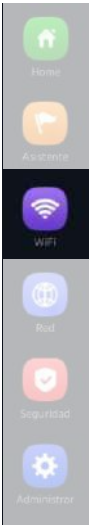
This parameter regulates the transmission power of the **AP** relative to its maximum, having five levels of regulation.

Preference 5G

With this option enabled, the **AP** can actively cause a radio change from a terminal, from the 2'4GHz band to the 5GHz band. To do this, the only condition is to have an SSID in each band that has both the same name. The algorithm obviously detects and acts only on WiFi terminals with support for both frequency bands.

DFS

The DFS function is suitable for environments with nearby radars (e.g. ports or airports) where heavy interference is generated. This function, when detecting an anomaly, analyzes the other radio channels at 5GHz and, after a scan time, identifies and migrates communications to a new channel. Except in cases of proven need, it is generally recommended to deactivate.



Network... LAN

The settings in the "Network" section vary by mode.

For Gateway and WISP modes the configuration is more complete and parameterizable

IP address

(local area network)

Spanning Tree protocol

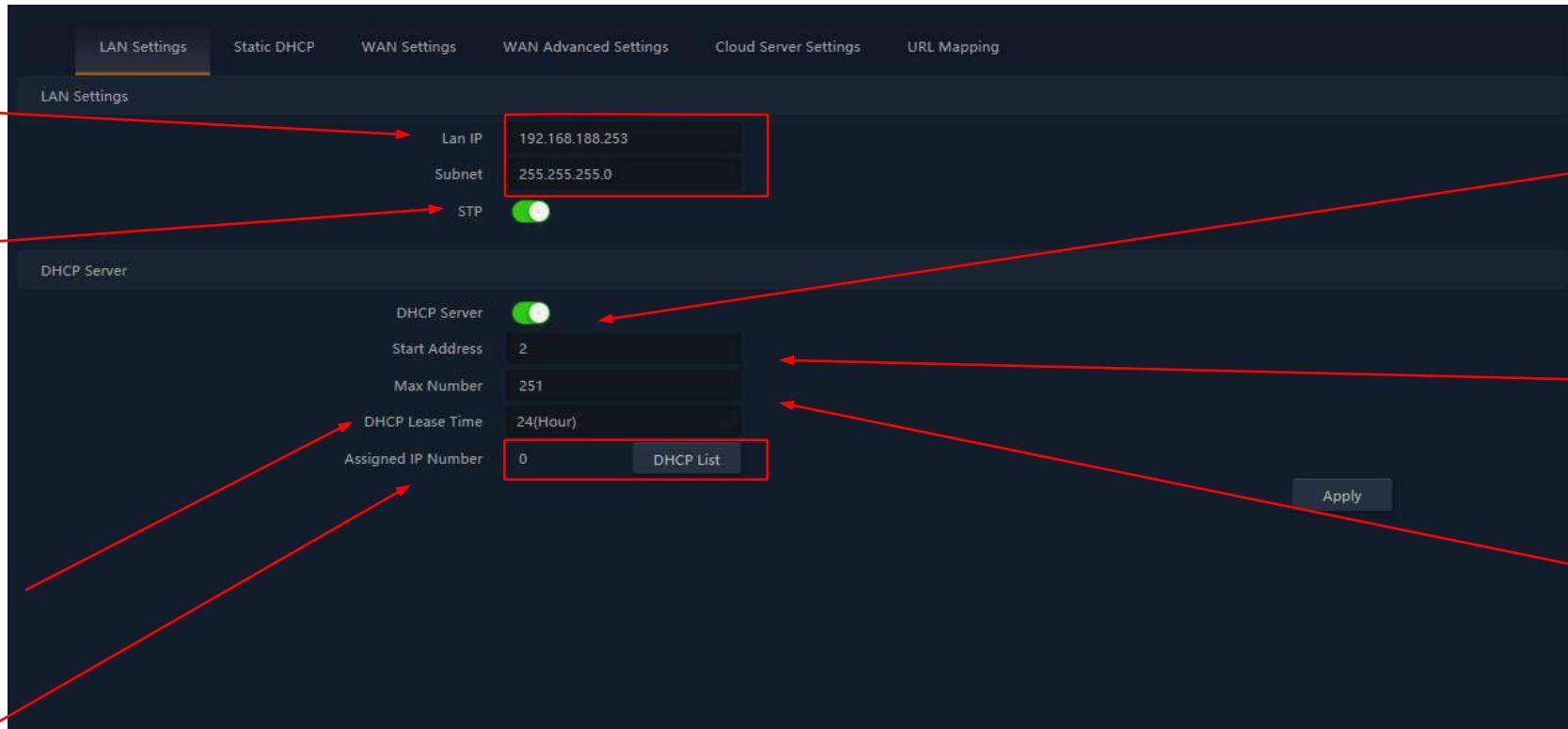
(enable in case of possible ethernet loops)

Time of Assignment

(sets the time behind which the terminal will renew the IP)

Assignments

(see list allocations
IP<>terminals)



The screenshot shows the LAN Settings interface with the following fields and annotations:

- Lan IP:** 192.168.188.253 (Annotated with "IP address (local area network)")
- Subnet:** 255.255.255.0
- STP:** Enabled (Annotated with "Spanning Tree protocol (enable in case of possible ethernet loops)")
- DHCP Server:** Enabled (Annotated with "Activating the DHCP service")
- Start Address:** 2
- Max Number:** 251
- DHCP Lease Time:** 24(Hour)
- Assigned IP Number:** 0 (Annotated with "Time of Assignment (sets the time behind which the terminal will renew the IP)")
- DHCP List:** Button (Annotated with "Assignments (see list allocations IP<>terminals)")
- Apply:** Button

Red arrows point from the text annotations to the corresponding fields in the interface.

Activating the
DHCP service

Home Address
IP pool
to serve

Pool Size
addresses
(from the
home address)



Note... note that DNS addresses are not included in the DHCP configuration.

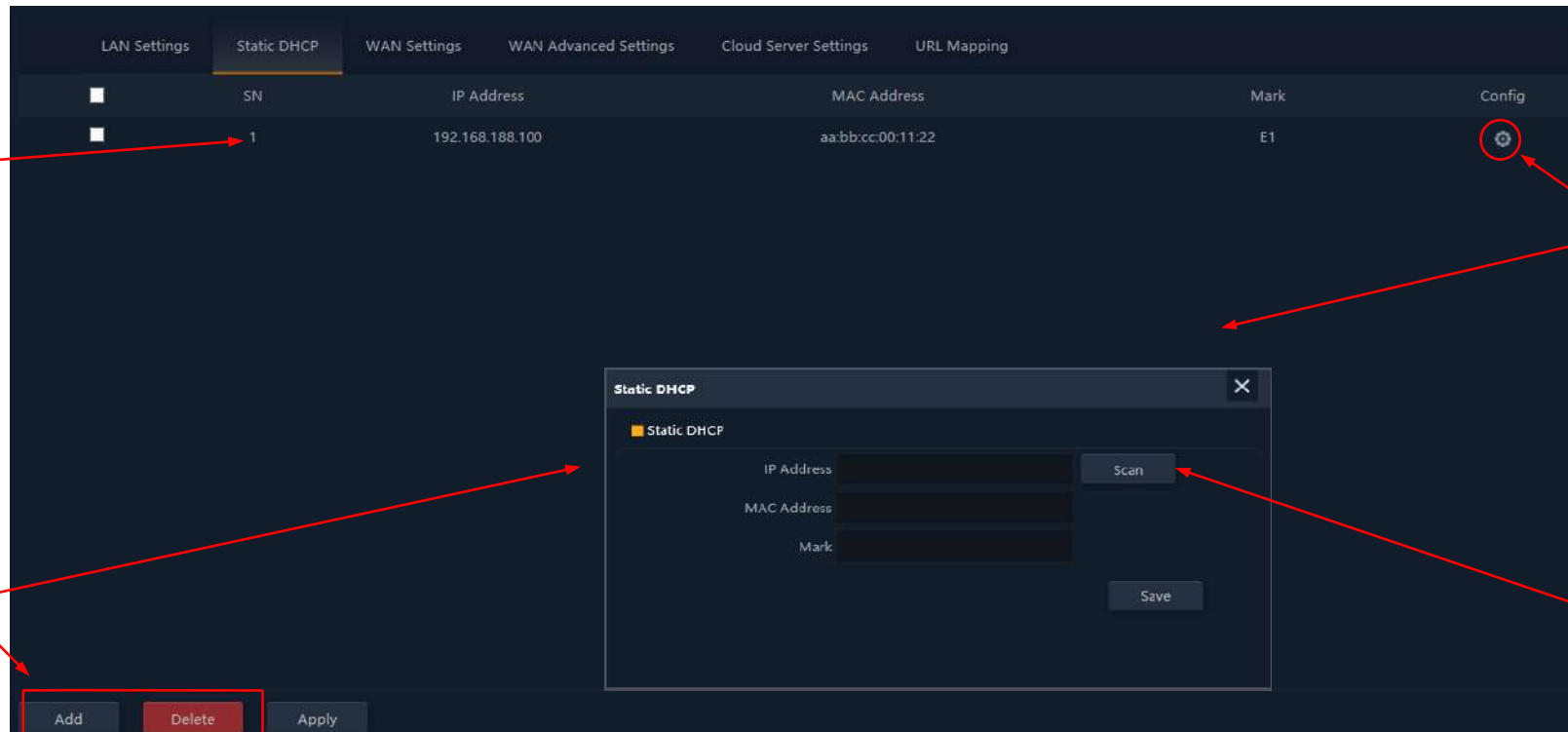
By default, the LAN IP address is served as DNS Proxy.

If there are fixed DNS addresses in the WAN configuration, then these are the ones that are served



Network... Static DHCP

The DHCP server allows you to preassign IP addresses. These addresses can be within the pool configured as outside the pool, combining the advantages of fixed addressing with the convenience of automatic DHCP assignment

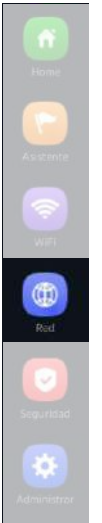


List of pre-
assigned IPs
(mac assignment)

Addition and
Erased
tickets

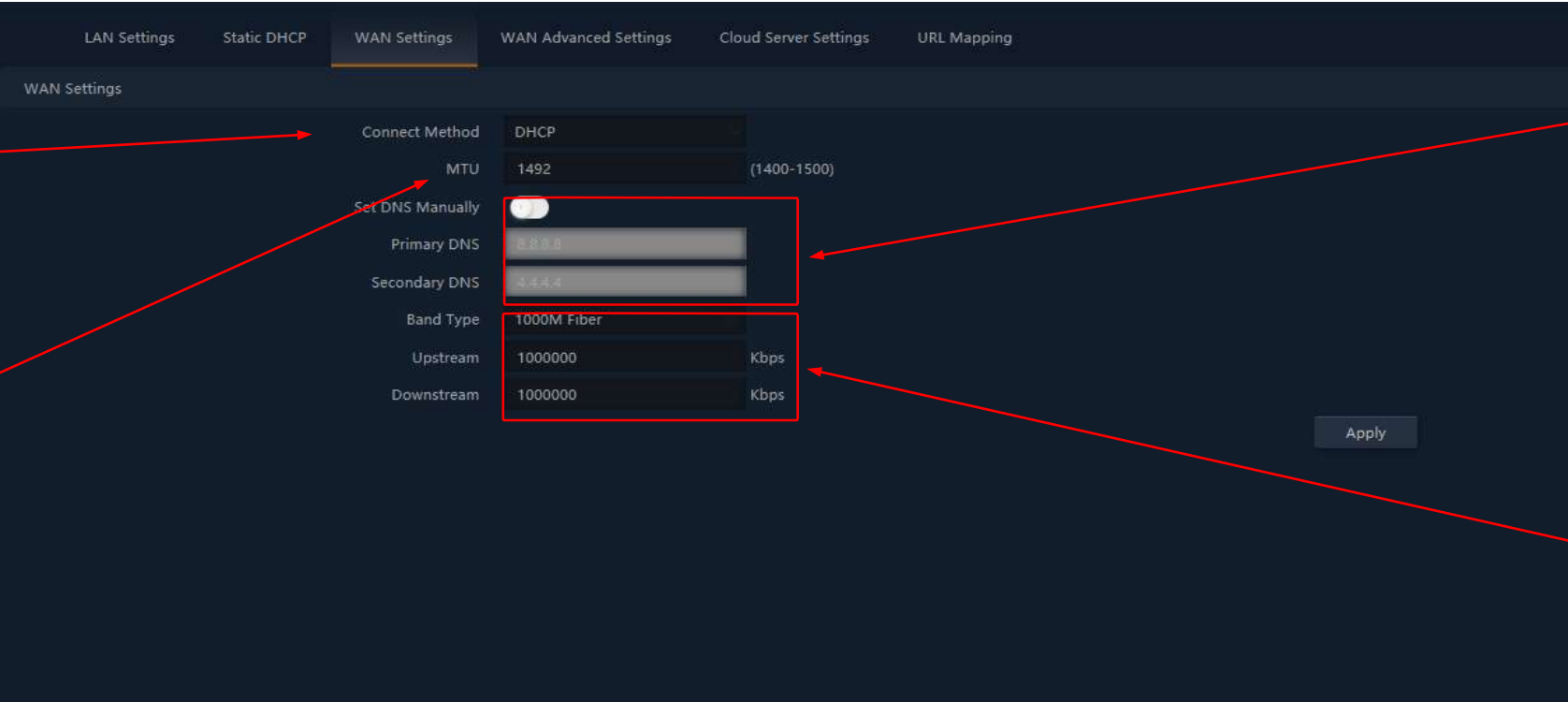
Modification
from the entrance

Scan
(identifies
terminals already
partners)



Network... WAN

Wan configuration allows you to configure Internet binding in Gateway and WISP modes. In the first case it is an ethernet connection while in the second case, the WAN interface is logically established over the selected and configured WiFi link



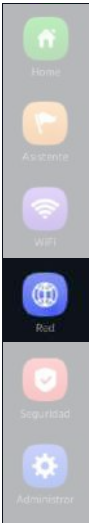
Setting	Value
Connect Method	DHCP
MTU	1492 (1400-1500)
Set DNS Manually	<input type="checkbox"/>
Primary DNS	8.8.8.8
Secondary DNS	4.4.4.4
Band Type	1000M Fiber
Upstream	1000000 Kbps
Downstream	1000000 Kbps

DNS configuration
(if activated these addresses will be served by DHCP)

WAN configuration
(permite definir la velocidad del interfaz y los caudales de subida y bajada)

Connection mode
(Static IP, PPPoE o DHCP)

MTU
(1500 for Ethernet 1492 for PPPoE)



Network... Advanced WAN

Advanced WAN configuration options have the following use:

"Enable remote web management over WAN" (port)

- It allows the device to be managed from the Internet, with the management website available at http://<external_ip>:<port>

"MAC Address Clone" (MAC)

- Useful option for those Internet access services that are authenticated based on the MAC address of the user's PC. APs can emulate such a MAC and thus provide simultaneous connection to multiple devices.

"Enable Ping Response over WAN"

A first security option is to hide all response to unsolicited connections, such as a ping over the WAN interface.

"Enable VPN IPSec/PPTP/L2TP pass through"

- Allows tunnel-type VPN connections to pass through without the need for more specific configuration.



Network... URL mapping

List of servers on LAN

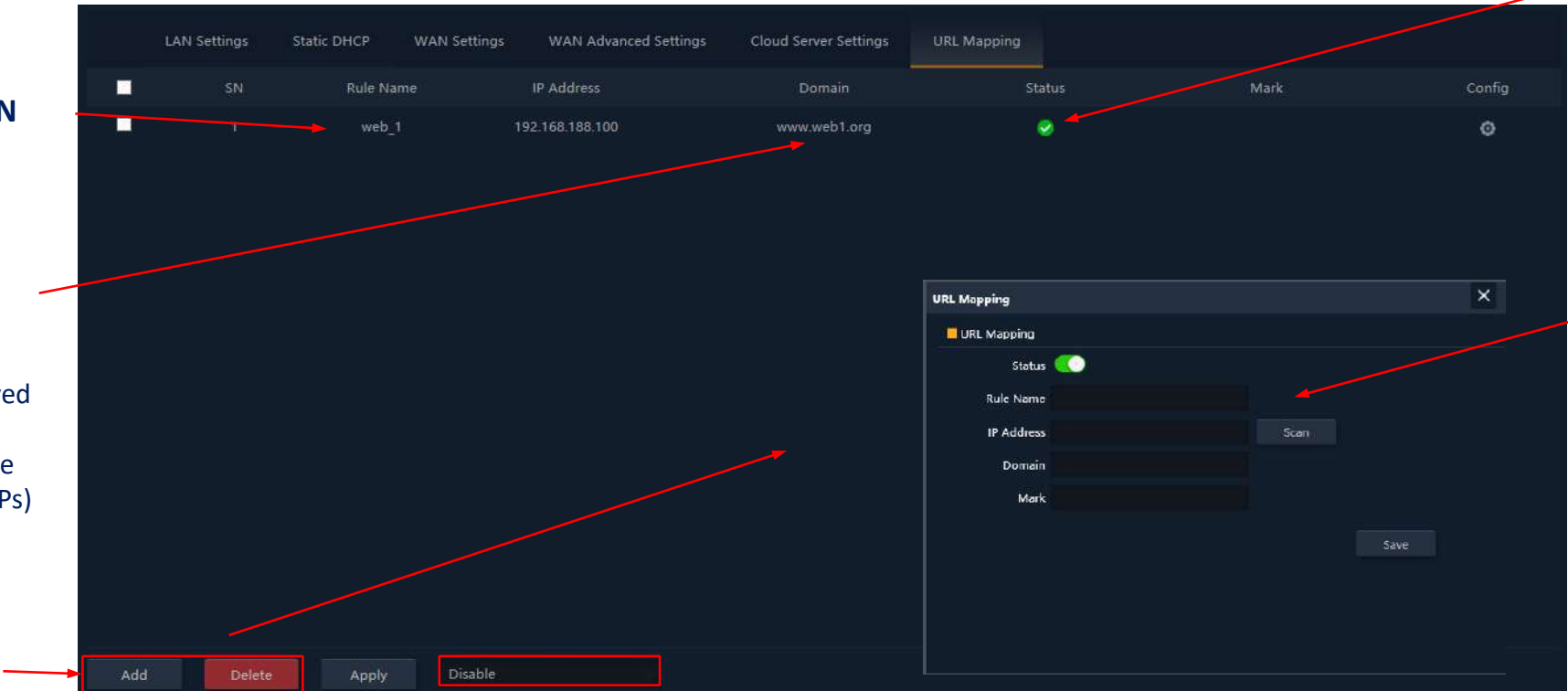
Addresses of Domain
(requests received WAN IP and forwarded to the corresponding IPs)

Addition and Erased tickets

Enabling the URL mapping function

Status of each one of the rules URL mapping

LAN IP address from the server Mapping



The screenshot shows a web-based configuration interface for a network device. The 'URL Mapping' tab is selected, displaying a table with columns: SN, Rule Name, IP Address, Domain, Status, Mark, and Config. A single rule named 'web_1' is listed with IP address '192.168.188.100' and domain 'www.web1.org'. The status is indicated by a green checkmark. At the bottom, there are buttons for 'Add', 'Delete', 'Apply', and 'Disable'. A modal window titled 'URL Mapping' is open, showing fields for 'Rule Name', 'IP Address', 'Domain', and 'Mark', along with a 'Status' toggle switch and a 'Scan' button. Red arrows point from text labels to specific elements: 'List of servers on LAN' points to the table; 'Addresses of Domain' points to the 'Domain' column; 'Addition and Erased tickets' points to the 'Add' and 'Delete' buttons; 'Enabling the URL mapping function' points to the 'Status' toggle in the modal; 'Status of each one of the rules URL mapping' points to the green checkmark; and 'LAN IP address from the server Mapping' points to the 'IP Address' field in the modal.

SN	Rule Name	IP Address	Domain	Status	Mark	Config
1	web_1	192.168.188.100	www.web1.org	✓		⚙️

URL Mapping

URL Mapping

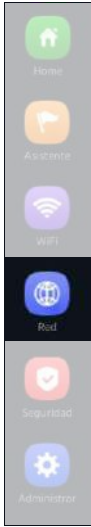
Status: ☒

Rule Name:

IP Address:

Domain:

Mark:



Network... VLANs (AP mode)

APs support a VLAN for each of the activatable SSIDs (four over each radio), and user traffic can be completely segregated. Frames are marked with VLANid identifiers according to 802.1q, understandable for a configurable switch.

Identifiers
VLANid for each
Activable SSID
(VLANid values
cannot be repeated)

Functionality
VLAN is activated
Globally

	AP	VAP 1	VAP 2	VAP 3
2G WiFi	VLAN-ID range 3-4094	VLAN-ID range 3-4094	VLAN-ID range 3-4094	VLAN-ID range 3-4094
5G WiFi	VLAN-ID range 3-4094	VLAN-ID range 3-4094	VLAN-ID range 3-4094	VLAN-ID range 3-4094

Apply ☐ ON ☒ OFF

Before you leave the screen,
Click **Apply** to save the settings



Security features are specific to Gateway and WISP modes (router modes).

URL Filter

- Permite bloquear el acceso a las direcciones de Internet configuradas

IP Filtering

- It provides a system of rules that allows you to filter traffic to the Internet. Rules can be blocking or permission, as selected (black lists or whitelists).

MAC Filter

- Enables restriction or denial of Internet access to devices based on their MAC address.

Port Mapping

- Ensures external publication of services available on the LAN, by mapping external WAN ports over LAN resources (IP address + port, internal).

DMZ

- When enabled, this feature redirects all external requests to the WAN interface (which are not already mapped) against the defined LAN IP address. With DMZ disabled, these requests are discarded.
- DMZ is a feature that can compromise the security of the internal network and its use must be taken care of.



Security... URL filter

Blocked URLs

Url Filter IP Filter MAC Filter Security DMZ

	SN	Rule Name	Time Group	URL	Status	Mark	Config
<input type="checkbox"/>	1	webfilter_1	Any	www.webfilter.com	<input checked="" type="checkbox"/>	web	

IP Filters Defined

Temporary validity
(defined in a custom way or according to predefined "temporary groups")

New filter settings

Enabling filters
(don't forget "Apply")

URL to block

State activation from the filter

Temporary settings
(predefined options are available, permanent and filter-specific)

Url Filter

☒ Url Filter

Status ☒

Rule Name

Time Group Custom Add

Time Range 00 : 00 - 00 : 00

Work Date Everyday Weekly

Mon Tue Wed Thu Fri Sat Sun

URL

Mark

Save



Security... IP filter

Port range
on which filters act

Filtered protocol

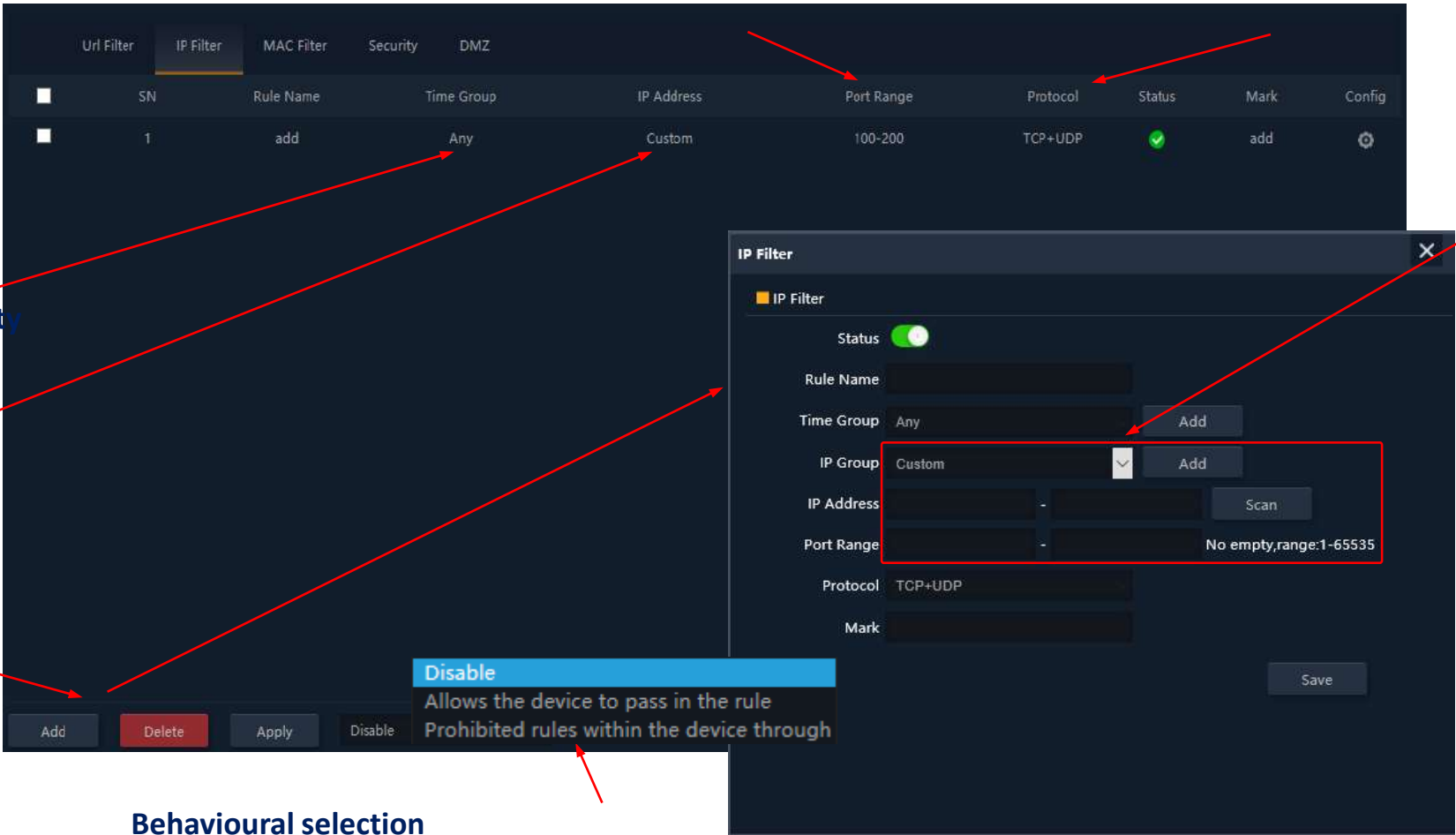
Configuration
range of
IP addresses

Temporary validity
IP filter

IP address range
from the filter

Configuración de
nuevo filtro

Behavioural selection
filters (permission or denial of way)



The screenshot displays the 'IP Filter' configuration page. At the top, there are tabs for 'Url Filter', 'IP Filter' (selected), 'MAC Filter', 'Security', and 'DMZ'. Below these is a table of existing filters. A red box highlights the configuration details of the first filter, and a red arrow points to the 'Add' button at the bottom left. A red box highlights the 'IP Group' dropdown and the 'IP Address' input field in the 'Add Filter' dialog. A red arrow points to the 'Disable' button at the bottom left. A red box highlights the 'IP Address' and 'Port Range' fields in the 'Add Filter' dialog. A red arrow points to the 'Save' button at the bottom right.

SN	Rule Name	Time Group	IP Address	Port Range	Protocol	Status	Mark	Config
1	add	Any	Custom	100-200	TCP+UDP	✓	add	⚙

IP Filter

IP Filter

Status ☒

Rule Name

Time Group

IP Group

IP Address -

Port Range - No empty, range: 1-65535

Protocol

Mark

Add

Delete

Apply

Disable

Disable

Allows the device to pass in the rule

Prohibited rules within the device through

Security...MAC filter

MAC addresses
object of filters

MAC Filters
Defined

Url FilterIP FilterMAC FilterSecurityDMZ

	SN	Rule Name	Time Group	MAC Address	Status	Mark	Config
<input type="checkbox"/>	1	rule	Any	00:11:22:33:55:66		rule	

AddDeleteApply

Disable

Allows the device to pass in the rule
Prohibited rules within the device through
Disable

Setup
And
Modification

MAC Filter

MAC Filter

Status

Rule Name

Time Group

Any

Add

MAC Address

Scan

Mark

Save



Security... Port Mapping (“Security”)

Url FilterIP FilterMAC FilterSecurityDMZ

	SN	Rule Name	Lan IP	Protocol	External Port	Internal Port	Status	Mark	Config
<input type="checkbox"/>	1	user	192.168.1.1	TCP+UDP	100-200	100-200			

AddDeleteApplyDisable

DisableEnable Port Mapping Function

Security

Security

Status

Rule ClassUser Defined

Rule Name

ProtocolTCP+UDP

Lan IP

Scan

External Port

-

No empty,range:1-65535

Internal Port

-

No empty,range:1-65535

Mark

Save

Add new
port allocation

Port correspondence
(port ranges defined by start and end)

Selection of the
Service
(predefined
or configuration
manual)

IP protocol

Internal IP
(device
Internal
destination of the
mapping)



The device management features are as follows

Configuration

- **Backup...** Saves the current device settings in the downloadable file "config.bin"
- **Restore...** Allows you to recover a previously loaded configuration. The device restarts automatically after loading the selected configuration.
- **Default settings...** Reset the factory settings and restart the device.
- **Telnet...** Enables Telnet port management of the LAN IP address of the device.
It is recommended that Telnet is disabled, as long as it is not necessary to use it, for security reasons.

Restart

- Allows you to run an immediate reboot of the device or schedule a periodic reboot of the device.



Management

Password

- Allows you to set a new password, after verification of the current one.

Update

- It makes it easy to change the version of the device software, optionally offering to restore the factory settings during the reboot.

Time

- Setting the device time is done either by synchronizing with the computer itself with which the configuration is performed, or by using the NTP protocol.
- The NTP service configuration only requires selecting one of the preloaded NTP servers. (or report another one desired) and adjust the corresponding time band. As long as your device has an IP settings for Internet access and management, you can correctly synchronize your time.

Registration

- An activity log that can be activated at will is available and can be redirected to an external server of type syslog or equivalent.



Management... Flow Control (QoS)

Rules
flow control

Scope of
the rule
(address range
temporary validity)

Addition and
Erased
tickets

Configure

Reboot

Modify Password

Upgrade

Time

Log

Flow Control

IP Group

Time Group

DDNS Settings

	SN	Address Name	Time Group	Limited Mode	Up	Down	Status	Mark	Config
<input type="checkbox"/>	1	add2	Any	Shared Limited	75000	50000			

Speed Limit

Speed Limit

Status

IP Group add2

Add

Time Group Any

Add

Limited Mode Shared Limited Bandwidth

Up 75000 Kbps

Down 50000 Kbps

Mark

Save

Add

Delete

Apply

Disable QoS

Enable QoS

Setting up
QoS limitation
(bandwidths
ascendants and
descending, and kind
limitation by
shared traffic
or dedicated)



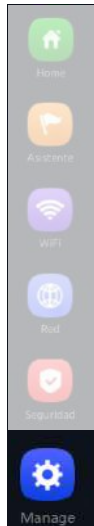
Activating the QoS feature

IP group

- These are groups of one or more LAN IP addresses over which security rules will apply (URL filters, IP filters, etc.) or traffic control rules (QoS).
- Your configuration requires few parameters: group name, start and end IP addresses of the range that defines the group (it can be a group with a single IP address) and optionally a help note within the "Mark" field.

Temporal group

- Time groups allow you to restrict the application of security rules and/or flow control to specific time slots, including not only schedules but even specific days of the week.
- Temporary groups are selectable in the IP rules configuration, URL, QoS from the form itself defining these rules and, of course, can be applied in different rules at the same time, depending on the configuration.



AP 300 LP Specifications (INDOOR)

- Dual WiFi Access Point
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - Until 4 SSIDs
 - Pot. Tx 23dBmW
 - Encryption WPA2 128bits (AES/TKIP)
- 1 ethernet
 - WAN 10/100 Mbps
- Power
 - Passive PoE 24 Vdc
 - Consumption less than 15W
- 4 Operating modes
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- Security features
 - DoS
 - Firewall
 - Traffic Filter
 - ACLs IN WiFi
- Dimensions: Ø 15.7 x 3.6 cm



AP 750 NG specifications (IND00R)

- **Dual WiFi Access Point**
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - 5 GHz... 802.11 a/g/n/ac, 450 Mbps
 - Until 8 SSIDs (4 for band)
 - Pot. Tx 27dBmW
 - Encryption WPA2 128bits (AES/TKIP)
- **2 Ethernet**
 - WAN/LAN 10/100 Mbps
- **Power**
 - 12 Vdc
 - PoE 802.3at (48 Vdc)
 - Consumption less than 30W
- **4 Operating modes**
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- **Security features**
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi
- **Dimensions: 188 x 188 x 50 mm**



AP 1200 W2 specifications (IND00R)

- **Dual WiFi Access Point**
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - 5 GHz... 802.11 a/g/n/ac, 900 Mbps
 - Until 8 SSIDs (4 for band)
 - Pot. Tx 27dBmW
 - Encryption WPA2 128bits (AES/TKIP)
- **2 Ethernet**
 - WAN/LAN 10/100/1000 Mbps
- **Power**
 - 12 Vdc
 - PoE 802.3at (48 Vdc)
 - Consumption less than 30W
- **4 Operating modes**
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- **Security features**
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi
- **Dimensions: 188 x 188 x 50 mm**



CPE 300-24LP specifications (OUTD00R)

- Dual WiFi Access Point
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - Until 4 SSIDs
 - Pot. Tx 20dBmW
 - Directivity 8dBi (H: 60°, V: 30°)
 - Encryption WPA2 128bits (AES/TKIP)
- 2 Ethernet
 - WAN/LAN 10/100 Mbps
- Power
 - 12 Vdc
 - PoE (24V)
 - Consumo menor de 30W
- CPE manager for point-to-point installations
- 4 Operating modes
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- Security features
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi
- Dimensions: 16 x 9 x 6 cm



CPE 300 specifications (OUTDOOR)

- Dual WiFi Access Point
 - 5,8 GHz... 802.11 b/g/n, 300 Mbps
 - Until 4 SSIDs
 - Pot. Tx 25dBmW
 - Encryption WPA2 128bits (AES/TKIP)
- 2 Ethernet
 - WAN/LAN 10/100 Mbps
- Power
 - 12 Vdc
 - PoE (24V)
 - Consumption less than 15W
- CPE manager for point-to-point installations
- 4 Operating modes
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- Security features
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi
- Dimensions: 25 x 9 x 3,2 cm



CPE-1200-OLP specifications (OUTDOOR)

- Dual WiFi Access Point
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - 5,8 GHz... 802.11 a/g/n/ac, 900 Mbps
 - Until 8 SSIDs (4 for band)
 - Pot. Tx 27dBmW
 - Encriptación WPA2 128bits (AES/TKIP)
- 2 puertos ethernet
 - WAN/LAN 10/100/1000 Mbps
- Power
 - 12 Vdc
 - PoE 802.3at (48 Vdc)
 - Consumption less than 20W
- 4 Operating modes
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- Security features
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi



CPE-1200-0 specifications (OUTDOOR)

- **Dual WiFi Access Point**
 - 2'4 GHz... 802.11 b/g/n, 300 Mbps
 - 5,8 GHz... 802.11 a/g/n/ac, 1200 Mbps
 - Until 8 SSIDs (4 for band)
 - Pot. Tx 29dBmW
 - Encryption WPA2 128bits (AES/TKIP)
- **1 Ethernet**
 - WAN/LAN 10/100/1000 Mbps
- **Power**
 - 12 Vdc
 - PoE 802.3at (48 Vdc)
 - Consumption less than 30W
- **4 Operating modes**
 - Gateway Mode
 - WISP Mode
 - AP Mode
 - Repeater Mode
- **Security features**
 - DoS
 - Firewall
 - Traffic filtering
 - ACLs in WiFi
- **Dimensions: 21,5 x 27,6 x 8 cm**





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