ELSYS

AMPLIMAX U ULTRA
EPRL30

QUICK INSTALLATION GUIDE

KNOW YOUR EQUIPMENT BETTER

Amplimax Ultra is an innovative equipment developed and manufactured in Brazil by Elsys, allowing internet access even in hard-to-reach places. It integrates a 5G modem and a high gain directional antenna with dual polarization, and it also has two additional omnidirectional antennas, resulting in four integrated antennas. This configuration allows long- range and high communication rates. Purchase a cellular data plan, insert the nano SIM card into the device, and connect it to a WiFi router to start web browsing.

To enjoy maximum range and avoid signal losses caused by walls, the Amplimax Ultra should be installed outdoors. The Easy Install embedded function indicates the strongest signal and helps you to choose between the available service providers on your region even before you buy the SIM Card. It also allows you to identify the best location for installation.
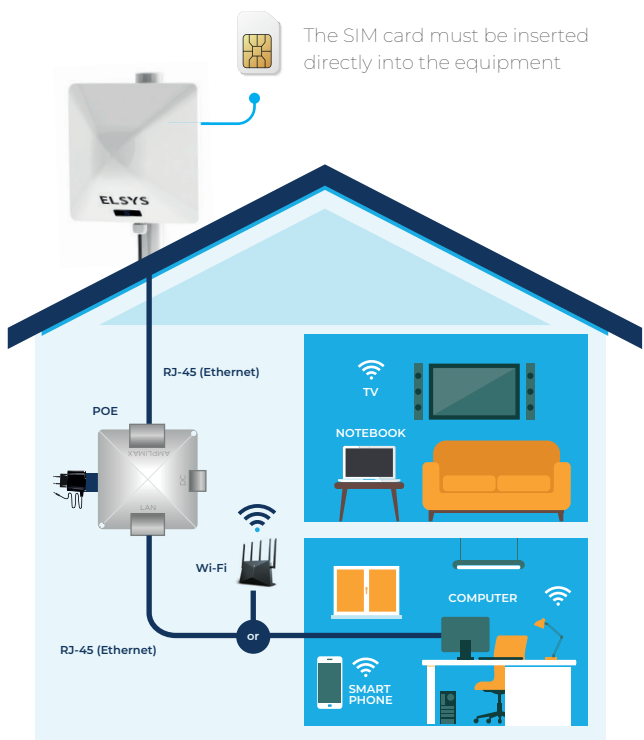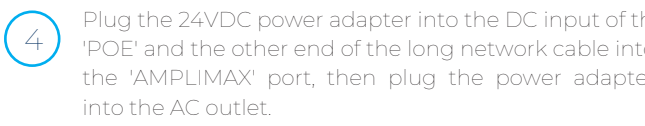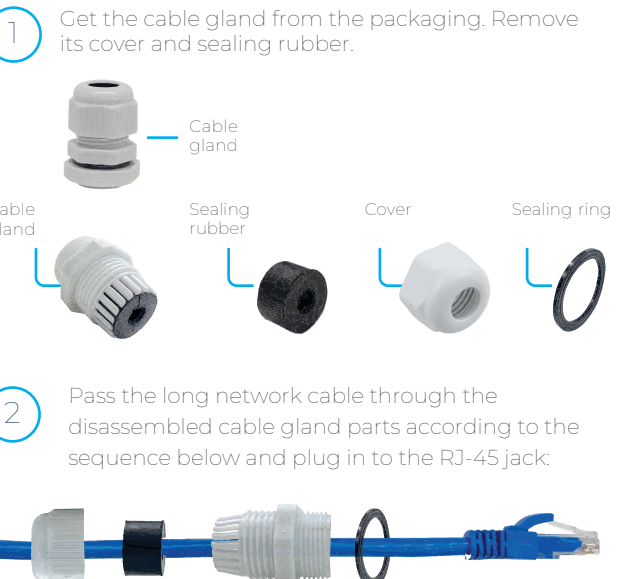
PACKAGE CONTENTS

Make sure that all items have been received:
- 1 Amplimax Ultra
- 1 power adapter - 24 VDC/1A
- 1 POE (Power Over Ethernet) injector
- 1 long (49.2 feet) network cable
- 1 short (4.6 feet) network cable
- 2 metal clamps
- 2 plastic clamps
- 1 wall mounting bracket (optional use)
- 1 cable gland

CHECK THE CONNECTIONS MAP

The SIM card must be inserted directly into the equipment

CONNECTIONS

Use only certified and tested network cables, especially the long cable. If you do not use the 49.2 ft cable that comes with the Amplimax Ultra, use a minimum specification CAT6 cable with a maximum length of 328 feet. The procedure described below ensures the proper functioning and sealing of the equipment. Device warranty will be voided if the following procedures are not followed.

1. Get the cable gland from the packaging. Remove its cover and sealing rubber.

Cable gland | Cable gland | Sealing rubber | Cover | Sealing ring

2. Pass the long network cable through the disassembled cable gland parts according to the sequence below and plug in to the RJ-45 jack.

3. Screw the cable gland into the cabinet, fix and insert the sealing rubber inside the cable gland connector and screw on the cover.

cable gland cover

4. Plug the 24VDC power adapter into the DC input of the 'POE' and the other end of the long network cable into the 'AMPLIMAX' port, then plug the power adapter into the AC outlet.

24V power adapter

POE

AMPLIMAX

Long network cable

AC outlet

STEP 1 — BLIND SEARCH

If you have already chosen your carrier, you can skip step 1 and go directly to step 2.

Make sure that your Amplimax Ultra has no SIM card inserted. The display should show "Insert SIM".

Then Press the Easy Install button. This will start the Blind Search process and the Amplimax Ultra will scan all frequency bands. After approximately 1 minute, the names of the identified carriers and their respective received signal levels will be shown on the display. This information is organized for each of the technologies "<5G>" and "<4G>".

You can try the Blind Search at various locations where equipment installation is possible and test pointing it in different directions.

STEP 2 — INSERTING THE SIM CARD

Insert the SIM card. If the equipment identifies a cellular network, it will display its name, followed by the frequency band, signal level, and technology (5G or 4G). See the list of possible messages:

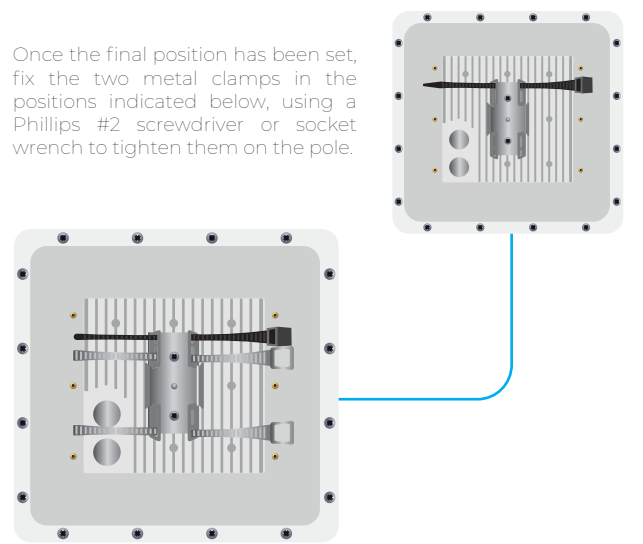| Message	Meaning
Insert SIM	No SIM card inserted.
Active	SIM card 1 is active.
SIM2	SIM card 2 is active.
ROM	Electronic SIM's and eSIM still active
No Registration	No registration on any cellular network
Scanning	Searching for cellular network
ATT 1 Mod, Verizon	Carrier in which the equipment is registered.
RFN	Level received from the RAN.
T00, 2600, 3500...	Band (MHz) in which the equipment is operating.
5C, 5A	5G Standalone Technology
5C, NSA	5G Non Standalone Technology
4G	LTE Technology
Insert PIN	SIM card requires PIN (to be unlocked)
SIM V	Supply voltage entering the equipment
SIM xx	Unknown carrier
Unplugged Restart and register	Equipment disabled. Cannot browse the internet. Restart the Equipment and then register it so that it can access the internet.
Connected	Equipment connected to the internet
Disconnected	Equipment registered, enabled, but no internet access.

STEP 3 — ADJUSTING THE ANTENNA DIRECTION

To adjust your equipment antenna direction, please ensure the SIM card is inserted, and the cellular network information is displayed. Press the "Easy Install" button. The Amplimax Ultra will show the received signal level in the display in real-time. In addition, it will emit a beep sound, which will beep faster the stronger the network connection is. To finish this process, press the "Easy Install" button again.

Easy Install

When finish using the monitoring and configuration panel, close its rubber cover carefully for effective protection.

Amplimax Ultra has two SIM cards slots. You can choose between them manually or automatically through the settings page. The "AUTO" option can switch the selection of the slot by identifying which one has a SIM Card inserted. If both slots have SIM Card inserted, the slot 1 has priority.

STEP 4 — INSTALLING THE EQUIPMENT

WALL

If you want to fix it on the wall, drill 4 holes for 3/8" wide and 19/16" long dowels, using the bracket supplied with the equipment (illustrated on the side) as a template.
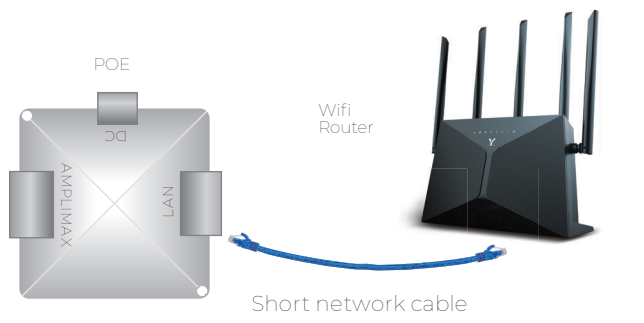
POLE

Pole mounting is made using two metal clamps. To facilitate installation, first use one of the plastic clamps to make a preliminary fixing. Insert it in the indicated position and fix it on the mast without tightening too much so that you can determine the pointing and height more accurately.

screw hole

Fix the bracket to the wall using four screws (5/16"). Then, attach the equipment to this bracket.

Once the final position has been set, fix the two metal clamps in the positions indicated below, using a Phillips #2 screwdriver or socket wrench to tighten them on the pole.

STEP 5 — CONNECTING TO THE ROUTER OR PC

Now that the equipment is installed, it can be used in one of the following ways:

1. CONNECT TO WI-FI ROUTER

Plug one end of the short network cable into the LAN port of your POE and the other end into the WAN port of your WiFi router, which should be set to DHCP Client mode (typically the factory default). This will allow you to share the internet with all your devices.

2. CONNECT TO THE COMPUTER

Plug one end of the short network cable directly into the network port of your computer, which should be set to DHCP Client mode (typically the factory default). This way, you will only use the Internet through this one device.
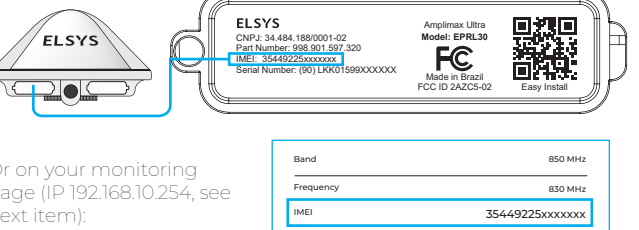
NOTE: To enjoy the full speed of Amplimax Ultra, it is suggested that you use a router with a minimum specification of the AX1800.

POE

AMPLIMAX

Wifi Router

Short network cable

NOTE: To enjoy the full speed of Amplimax Ultra, it is recommended to use a computer with a network port of at least 1 Gbps.

STEP 6 — REGISTER YOUR EQUIPMENT

At this stage, your Amplimax Ultra must have access to the internet. Elsys recommends registering the equipment on our website. Thereby, you will be informed about equipment updates, new features, releases, use cases and tips for installation and maintenance.

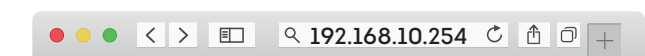**elsys.com/en/amplimax-ultra-en**

Follow the procedure indicated on the registration page. The first information requested will be the IMEI (a unique identification code for any device with cellular technology). It has 15 numeric digits (cc) and can be found on the equipment label!

ELSYS
Amplimax Ultra
IMEI: 3544922Sxxxxxxx
Model: EPRL30

Or on your monitoring page (IP 192.168.10.254, see next item):

Band	850 MHz
Frequency	850 MHz
IMEI	3544922Sxxxxxxx

If you encounter any difficulties with registration, please contact us at hello@elsys.com. Our team will be ready to assist you. Elsys may collect some technical data to improve the user experience.

For more information and configuration possibilities, access the Amplimax Ultra through any of the devices connected by cable or Wi-Fi, according to step 5. Open the browser of your choice (Edge, Google Chrome, Safari, etc.) and enter the IP 192.168.10.254, as shown in the figure below:

192.168.10.254

For more information about Amplimax Ultra, please visit the page: https://elsys.com/en/amplimax-ultra-en/

SAFETY NOTICE

- Use only the original AC/DC adapter and other accessories. Incompatible accessories will jeopardize the equipment's operation, safety, and warranty.
- The Amplimax Ultra's power adapter should operate at 100~240VAC. Check the local voltage before connecting the device.
- If you want to clean, turn off the power and use only a damp cloth. Do not use cleaning products, removers, or aerosols.
- To ensure its best performance, do not install Amplimax Ultra in locations with obstructions in the alignment sight with the chosen tower.
- Amplimax Ultra is compatible with 12VDC power adapter from batteries and solar panels (respect the technical specifications in this manual). In this case the maxim allowed cable length is 50 feet and the power adapter should provide at least 2 A.
- Avoid shocks or impact. Improper handling may damage the external structure as well as the internal circuitry of the device.
- During intense storms, it is advisable to disconnect the main cable from the Amplimax Ultra and the power adapter cable at the POE.
- Do not plug multiple power cords into a single outlet.

- Do not touch the plug with wet hands. Always grasp and pull the plug and never the cord.
- Do not place heavy objects on the power cord or bend it excessively.
- Do not attempt to repair the appliance if it is not working. Any repair must be carried out by qualified personnel.
- The power adapter must be installed in a properly ventilated, dry place away from objects with high temperatures, places with direct exposure to the sun, water sources, fire or flammable/explosive materials.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Compliance:
The equipment complies with RF radiation exposure limits set forth for an uncontrolled environment. The equipment should be installed and operated with a minimum distance of 20 in between the radiator and your body.

ELSYS

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Brazilian industry. Made in Brazil.

www.elsys.com/en

/Elsys.USA

PRODUZIDO NO PÓLO INDUSTRIAL DE MANAUS
CONHEÇA A AMAZÔNIA

FC

ELSYS

hello@elsys.com

Papel: couche brilho 90g
Cor do papel: Branco
Cor de impressão: 4x4
Finalização: 7 dobras
Medidas:
Aberto: 750 x 132,5mm
Fechado: 93,75 x 132,5 mm

1. 750mm / 132,5mm / CAPA / 93,75mm
2. CAPA
3. CAPA
4. CAPA