

**ELSYS**

# **AMPLIMAX ULTRA**

Outdoor  
5G CPE for  
FWA

**Datasheet**



**EPRL 30 - US Version**

**AMPLIMAX ULTRA** is an outdoor 5G CPE for FWA. 100% developed and manufactured by the Elsys team, it ensures the best performance and signal capture, offering more range, more speed and more connection stability.



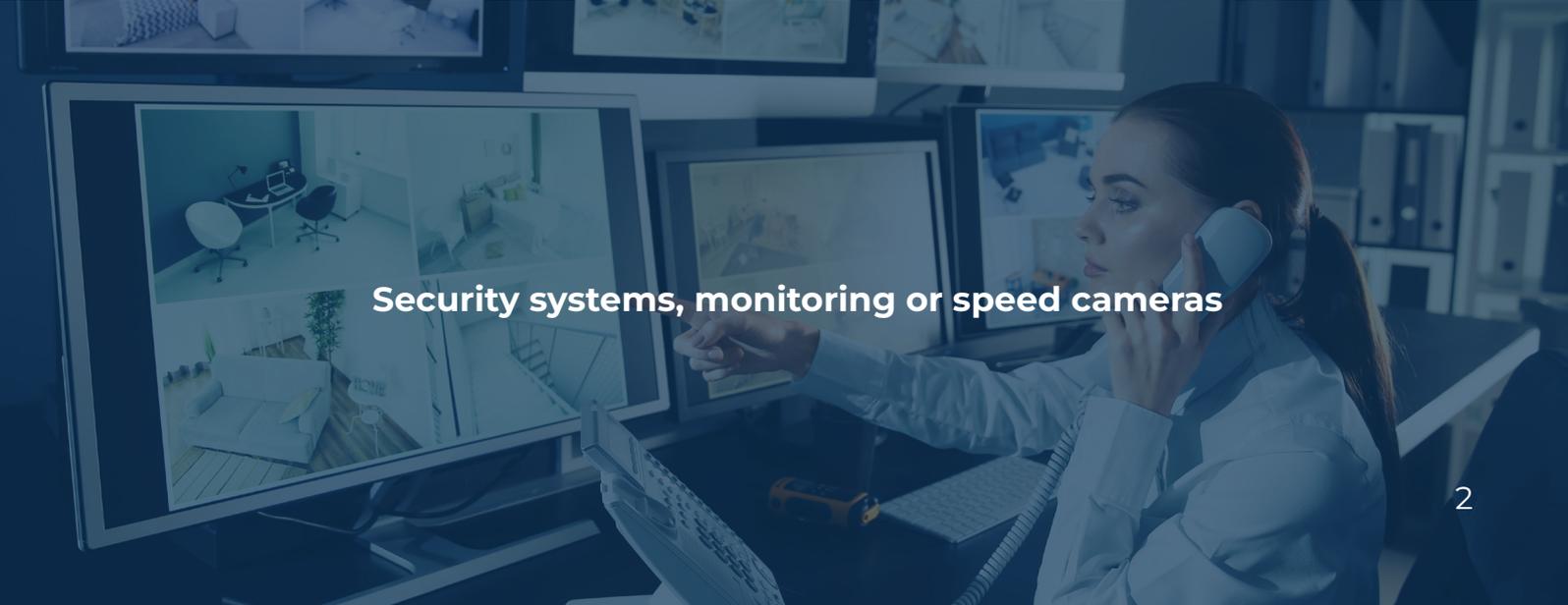
## USE CASES



**Fixed internet access via mobile network (FWA), even in outlying or shadow zones with very weak signal**



**Internet failover for critical systems**



**Security systems, monitoring or speed cameras**

## OVERVIEW

<b>Description</b>	CPE for FWA (Fixed Wireless Access) used for Internet access, using the technologies 4G and 5G
<b>Mounting</b>	Pole or wall
<b>Display</b>	Smart front display
<b>APN</b>	Auto APN
<b>Downlink</b>	MIMO 4x4

## SIM CARDS

<b>SIM Card</b>	2 inputs for nano SIM card (4FF)
<b>eSIM</b>	1 internal eSIM

## EASY INSTALL

<b>Blind Search</b>	Shows the RF strength of each carrier in your place even without any SIM card - Figure 1
<b>Pointer</b>	Shows the RF strength on the display in order to find the best sport to place the device and to point it in the direction of the cellular tower. Buzzer gives the same information, through audio - Figure 2

Figure 1

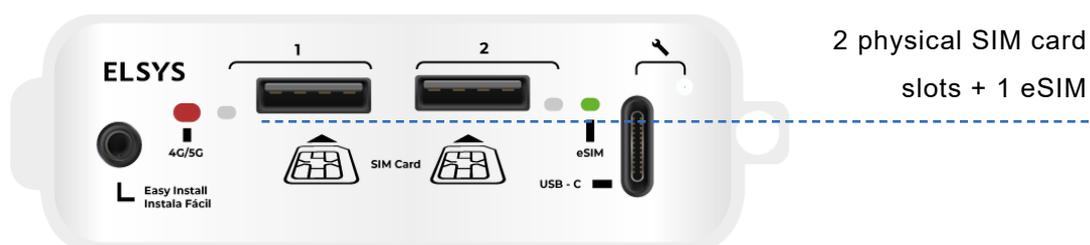
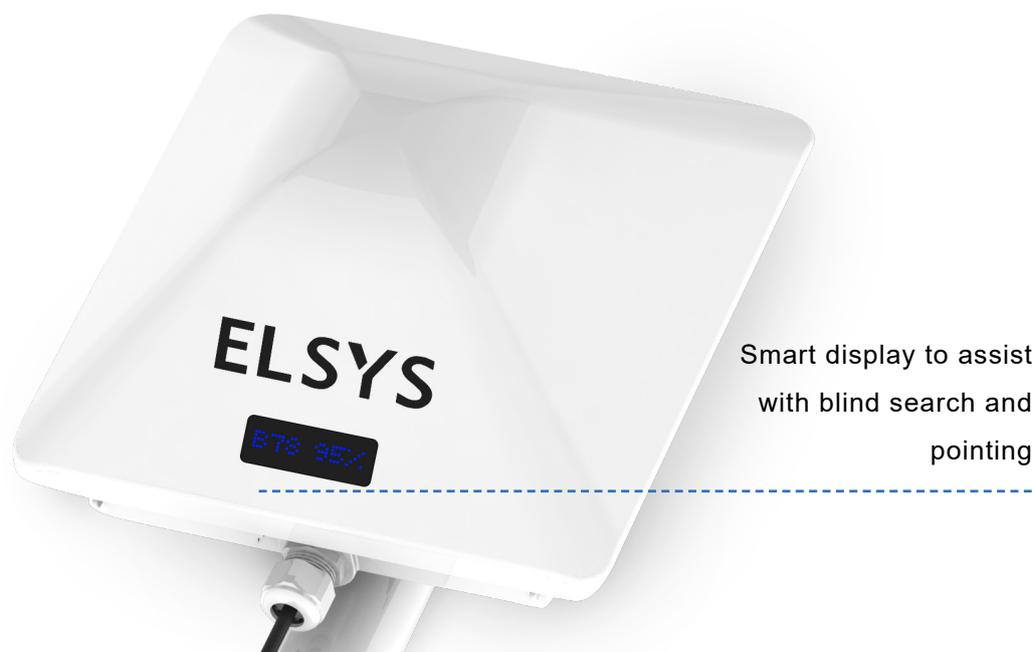


Figure 2



## FREQUENCY BANDS

<b>5G SA</b>	n2 [1900MHz] n30 [2300MHz] n66 [1700MHz]	n5 [850MHz] n38 [2600MHz] n77 [3700MHz]	n14 [700MHz] n48 [3600MHz] n78 [3500 MHz]
	DL 4x4 MIMO NR (bands n2/n5/n14/n30/n48/n77) UL 2x2 MIMO (bands n38/n77)		
<b>5G nSA</b>	n2 [1900MHz] n30 [2300MHz] n71 [600MHz]	n5 [850MHz] n41 [2600MHz] n77 [3700MHz]	n25 [1900MHz] n66 [1700MHz] n78 [3500 MHz]
	DL 4x4 MIMO NR (bands n2/n5/n30/n41/n71/n77) UL 2x2 MIMO (bands n41/n77)		
<b>4G LTE FDD</b>	B2 [1900MHz] B12 [700MHz] B25 [1900MHz] B66 [1700MHz]	B4 [1700MHz] B13 [700MHz] B26 [850MHz] B71 [600MHz]	B5 [850MHz] B17 [700MHz] B30 [2300MHz]
	Bands: 1.4/3/5/10/15/20MHz DL 4x4 MIMO (bands B2/4/5/12/13/17/25/26/30/66/71)		
<b>4G LTE TDD</b>	B41 [2600MHz]	B48 [3500MHz]	
	Bands: 1.4/3/5/10/15/20MHz DL 4x4 MIMO (bands B41/B48)		

## DATA RATES

<b>5G SA</b>	Downlink: 2.47 Gbps Uplink: 900 Mbps
<b>5G nSA</b>	Downlink: 3.47 Gbps Uplink: 660 Mbps
<b>4G LTE FDD</b>	Downlink: 1.6 Gbps (CAT19) Uplink: 211 Mbps (CAT18)
<b>4G LTE TDD</b>	Downlink: 1.6 Gbps (CAT19) Uplink: 211 Mbps (CAT18)

## MAXIMUM TX POWER

<b>5G</b>	5G nR Bands: +23 dBm 5G nR HPUE Bands n41/n77: +26 dBm
<b>4G</b>	LTE Bands: +23 dBm LTE HPUE Band B41: +26 dBm

## MOBILE

<b>5G NR</b>	3GPP Rel-16 NSA/SA operation, Sub-6 GHz
<b>LTE category</b>	DL Cat 19/ UL Cat 18

## HARDWARE

<b>Chipset</b>	Qualcomm SDx62 (release 16 do 5G) (Snapdragon)
<b>Modules</b>	RG520N-NA (Manufacturer Quectel, technologies 5G and 4G) ESP32-MINI-1-N4 (Manufacturer Espressif, technologies: WiFi and Bluetooth; Certified on: CE/FCC/IC/SRRC)

## PHYSICAL INTERFACES (PORTS, LEDS AND BUTTONS)

<b>LAN Port</b>	Ethernet 2.5Gbps / 1.0 Gb / 100Mb / 10 Mb
<b>USB</b>	USB-C
<b>Status LEDs</b>	4G/5G; SIM 1; SIM 2; eSIM; USB-C
<b>Buttons</b>	Easy Install

## OTA (OVER-THE-AIR)

<b>OTA</b>	Remote software update over cellular network (5G, 4G or 3G)
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## POWER

<b>PoE</b>	POE (Power Over Ethernet) – passive POE (IEEE 802.3af/at 2.5 Gb, mode B)
<b>Voltage</b>	from 12 up to 24 VDC
<b>Power adapter</b>	24V / 1 Ampère (100 up to 240 Vac)
<b>Battery</b>	Product allows feeding though batteries (not included)
<b>Power consumption</b>	Peak: 18 Watts Average: 3 Watts

## MAIN INTERNAL ANTENNA 2x2

<b>Use</b>	Either for transmission (TX) as reception (RX)
<b>Polarization</b>	+/- 45°
<b>Type</b>	Directional antenna
<b>Gain</b>	617 to 960 MHz: 7.0 dBi 1710 to 1910 MHz: 7.9 dBi 1920 to 2700 MHz: 10.0 dBi (1920 MHz); 10.0 dBi (2310 MHz) e 8.0 dBi (2700 MHz) 3300 to 4200 MHz: 9.0 dBi

## SECONDARY INTERNAL ANTENNA 2x2

<b>Use</b>	Used only for reception (RX)
<b>Polarization</b>	Vertical
<b>Type</b>	2 omnidirectional antennas with spacial diversity
<b>Peak gain:</b>	600 to 960 MHz: 0.5 dBi 1710 to 1910 MHz: 3.1 dBi 1920 to 2700 MHz: 4.0 dBi 3300 to 4000 MHz: 4.2 dBi

## ENVIROMENTAL

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**Temperature** -22 up to 140 °F

**Protection** IP-65

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## INTERNAL WIFI

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**Use** Used for monitoring and configuring the product

**Hidden network** SSID: EASY\_INSTALL  
Password: (15 digit IMEI number; 35449225xxxxxxx)

**Standards** IEEE 802.11b/g/n

**Channel central frequency** 2412 ~ 2484 MHz

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## PACKAGE CONTENTS



1 Amplimax Ultra



1 POE (Power Over Ethernet)



1 24 VDC/1A power supply (POE)



1 ethernet cable 4.5 ft long



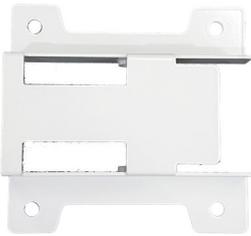
1 ethernet cable 49.2 ft long



2 metal clamps ( pole fixing)



2 plastic clamps (aid in fixing to the pole and fixing the cable to the pole)



1 wall support (optional use)

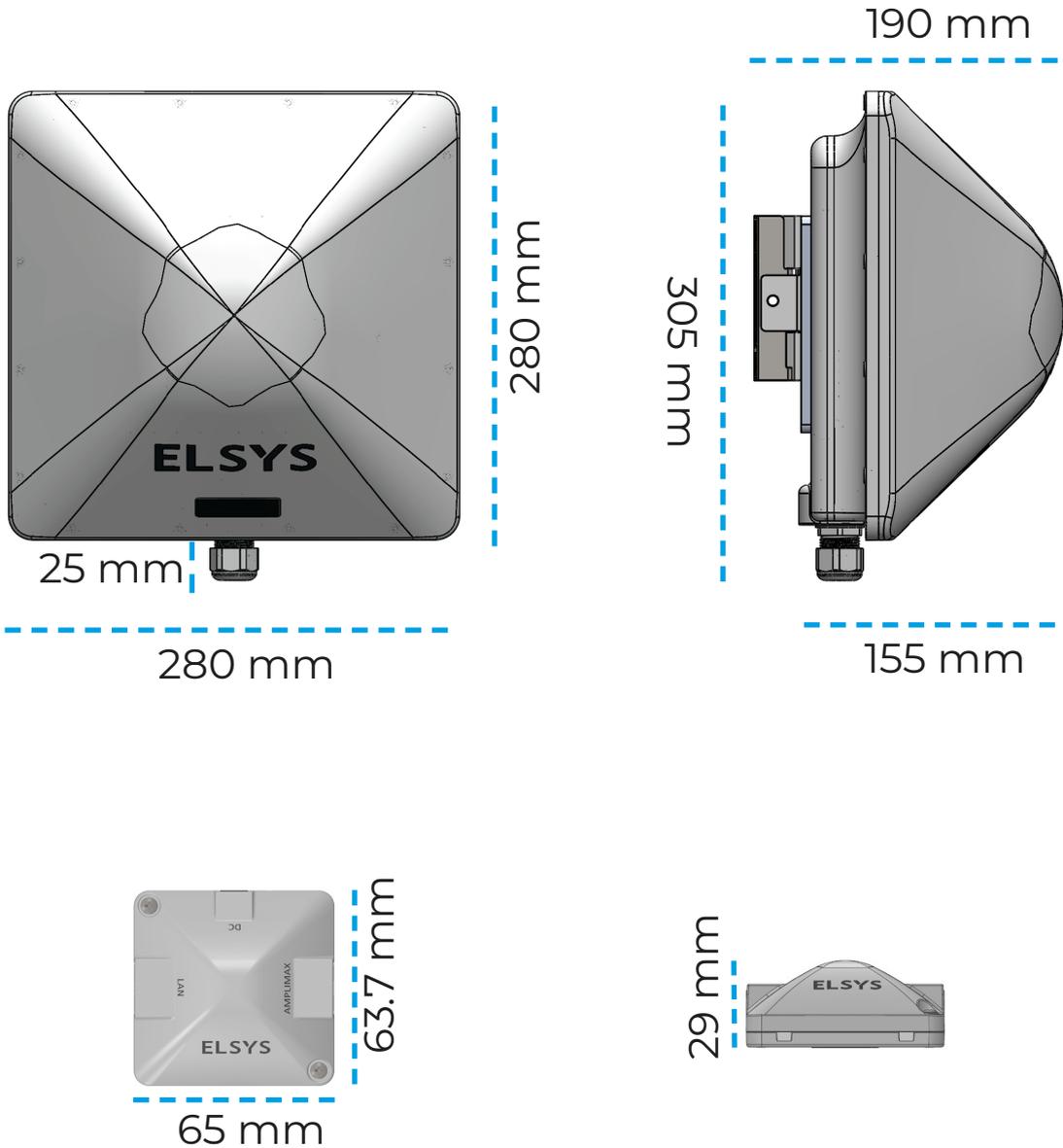
## DIMENSIONS AND WEIGHT

### Dimensions

AMPLIMAX: 280 x 280 x 190 mm (height x width x depth)  
POE: 29 x 65 x 63.7 mm (height x width x depth)  
PACKAGE: 292 x 390 x 257 mm (height x width x depth)

### Weight

AMPLIMAX: 4.18 lb  
POE: 0.10 lb  
PACKAGE: 9.96 lb

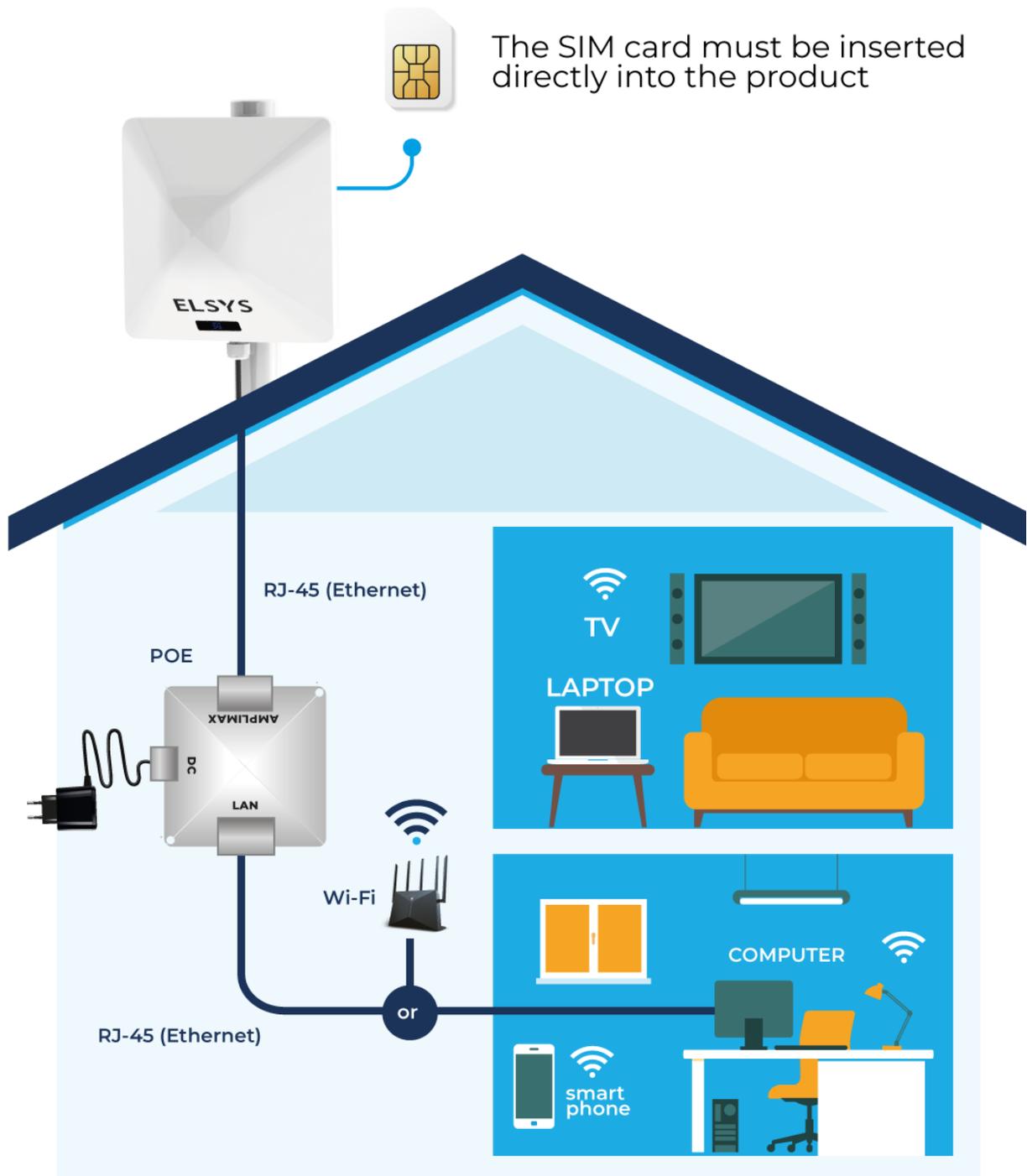


## DIMENSIONS AND WEIGHT



# AMPLIMAX ULTRA

## TYPICAL USAGE MAP



# AMPLIMAX ULTRA

EPRL30



**Product Model:** EPRL30

**Product Description:** Amplimax  
Ultra

**Manufactured by:**

Elsys Equipamentos Eletrônicos Ltda.  
Avenida Torquato Tapajós, 4780  
Colônia Santo Antônio - Manaus – AM  
CEP: 69093-018  
Industria Brasileira

Version 01.0623

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