Energous PowerBridge PRO Transmitter
8W EIRP DIRECTIONAL

Robust IP67 Rated Transmitter with dual linear antennas offering a ±45° field of view

The PowerBridge PRO 8W EIRP Directional transmitter delivers a WPN solutions to help to meet the demand for power over distance, which is crucial for applications where asset or inventory tracking and monitoring across multiple zones is critical to operations. This includes supply chain visibility, cold chain monitoring, fleet management, and temperature and humidity monitoring.

This enterprise solution transmitter acts as data link for IoT-enabled devices, enabling them to efficiently communicate valuable data and insights back to the cloud, and allowing companies to analyze, optimize, and improve every part of their operation in real time.

The IP67-rated transmitters combine two Energous EN3210 high-efficiency power amplifiers with an Energous EN4100 System-on-Chip (SoC) RF transmitter. The proprietary antenna design enables it to transmit higher radiated power—up to 8W Effective Isotropic Radiated Power (EIRP)—with dual polarization, delivering up to 99 percent visibility of all connected devices.

The Possibilities are Endless

Energous RF-based wireless power networks offer several benefits over the current coil-based induction and resonant charging solutions in that they don't suffer the same limitations regarding charger orientation, device placement, signal interference, and other pain points. Energous offers a suite of at-contact and over-the-air RF-based wireless power transfer solutions that eliminate thermal challenges and foreign object detection issues.

Customers are provided with reliable, efficient, cost-effective technology that is always on and scalable to the needs of individual organizations. Energous receivers have a small physical footprint but have the capability to power everything from the largest piece of manufacturing equipment to the smallest hearing aid, streamlining production processes and lowering bill of material (BOM) costs.

EN-TXS-2000
Product Highlights

- 8W Effective Isotropic Radiated Power (EIRP)
- 2W Conductive Power
- Dual linear 900 MHz and 2.4 GHz antennas
- IP67 Rated Ingress Protection
- Up to +39 dBm 918MHz band energizing signal
- BLE beacon filter and repeater functionality
- Visual Feed Back thru LED Indicators
- Works with Energous IOT Sensors and Wiliot
- Capable of Over the Air (OTA) Updates
- 5V/2.4A Operation via USB-C,12VDC or POE
- Energous certified power accessory kits required.

aws

Qualified Device
AWS IoT Core

energous®
WIRELESS POWER SOLUTIONS

Function	

Supported products	• Energous
	- Iot Sensors
	• Wiliot
	   - Single-band IoT Pixels tags
	  - Dual-band IoT Pixels tags

Energizing*	• Up to +39 dBm in 918 MHz
Echo function*	• Scan for Wiliot beacons • Filter non-Wiliot BLE beacons • re-broadcast

*Programmable from Wiliot Management portal

Antenna	
Type	• Linear - Sub-1 GHz & 2.4 GHz
Typical Gain	• Sub-1 GHz: Dual 6.5 dBi Linear • 2.4 GHz: Dual 7.5 dBi Linear

Iot Connectivity	
Bluetooth	• Bluetooth 5.x (low energy)

Software	
Updates	Via OTA (Wiliot MGT Portal)

Physical Interface	
Status LED(s)	Multi-color status LED

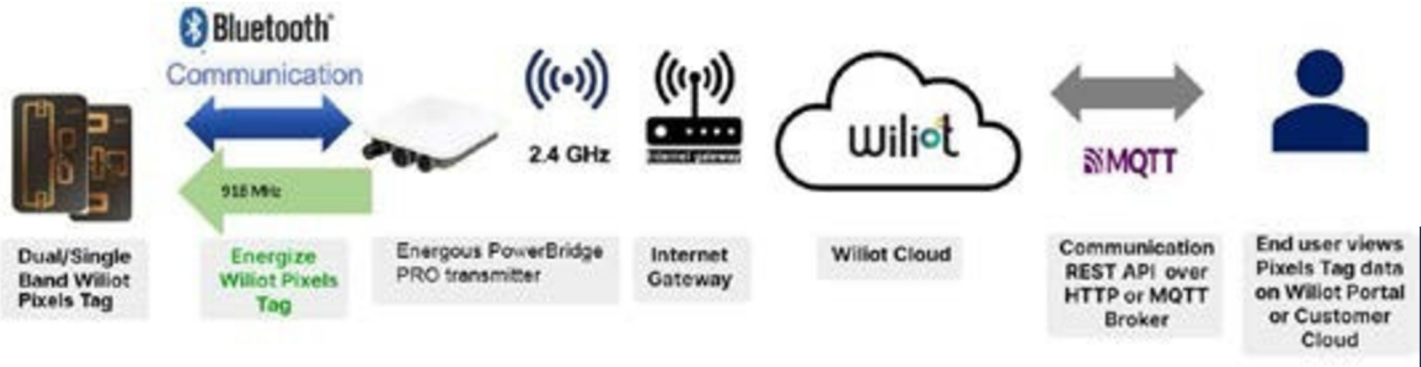| Physical Charastics	
Environment	• Indoors
Color	• White
Dimensions	• 195mm X 195mm X 54mm
Weight	• 2.4Lbs (1.09Kg)
Ingress Protection	• IP 67
Mounting Options	• Wall • Ceiling
Mounting Pattern	• Vesa 100mm X 100mm • Custom 100mm X 75mm
Operating Temp.	• -4°F (-20° C) ~ 120°F (60°C)

Power**	
USB-C	5V@ 2.4A via USB-C connector
DC	12V/1A via terminal block
POE (power only)	802.3af/802.3 (type 1 <13W)

Unit Sold bare: accessory kit needed for power type

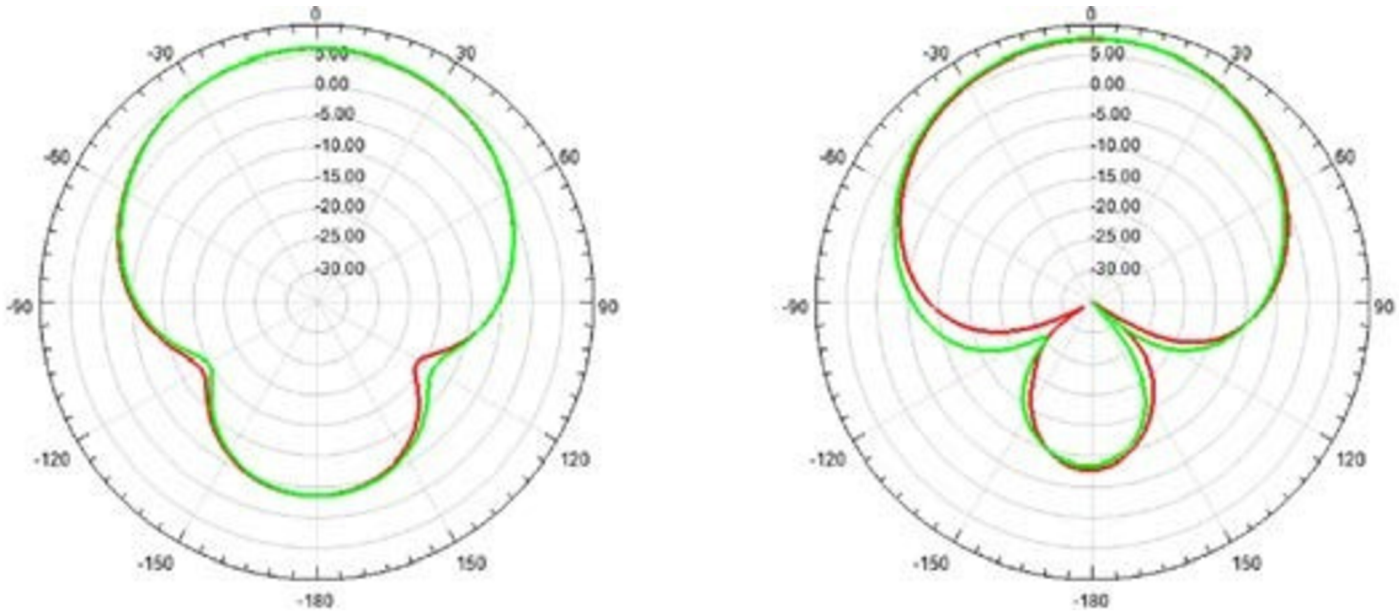| Certification and Compliance	
Electric Certs	FCC/ISED/CE

**For ingress protection, optimal performance and reliability, we recommend using Energous certified accessory kits and USB-C power adapters. Please note that we cannot guarantee proper operation or assume responsibility if non Energous certified accessory kits and USB-C power adapters are used.

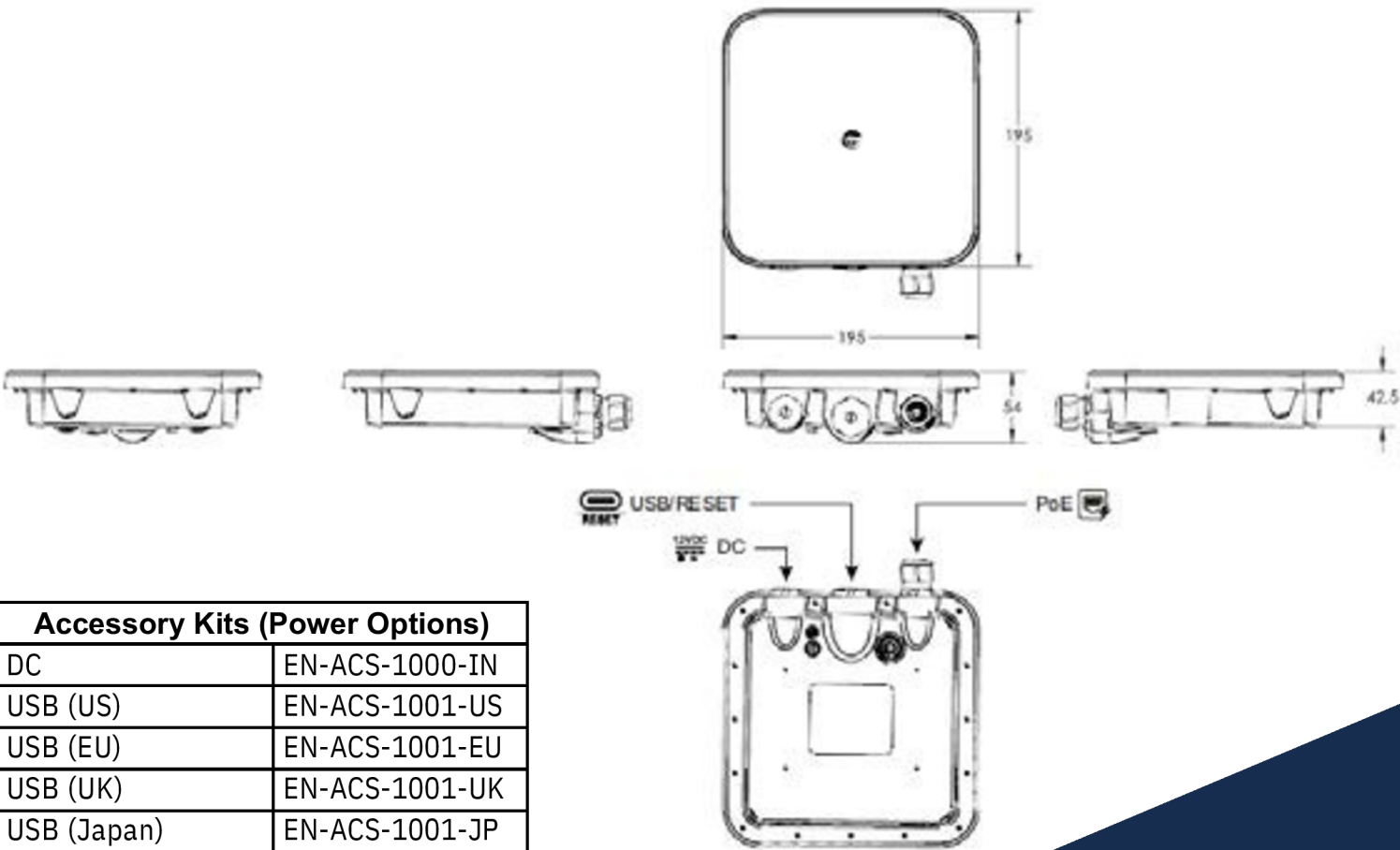## System Level Workflow Architecture Diagram

Antenna Radiation Patterns

918MHz and 2.4GHz Radiation patterns

Transmitter Diagram

Accessory Kits (Power Options)	
DC	EN-ACS-1000-IN
USB (US)	EN-ACS-1001-US
USB (EU)	EN-ACS-1001-EU
USB (UK)	EN-ACS-1001-UK
USB (Japan)	EN-ACS-1001-JP
POE	EN-ACS-1002-IN
No Power (All Plugs)	EN-ACS-1003-IN
All Options	EN-ACS-1004-IN