

Energous PowerBridge PRO (Energous) Transmitter

8W EIRP 2W Conducted DIRECTIONAL

**Robust IP67 Rated Transmitter
with dual linear antennas
offering a $\pm 45^\circ$ 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 guaranteed 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-2012-EU-00 Product Highlights

- 8W Effective Isotropic Radiated Power (EIRP)
- 2W Conducted Power
- Dual linear 900 MHz and 2.4 GHz antennas
- Designed For IP67
- 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
- Capable of Over the Air (OTA) Updates
- 5V/2.4A Operation via USB-C or POE
- Complies with upper band requirements for
 - CE marking (EU)
 - UK/CA marking (UK)



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Function	
Supported products	- Energous - Iot Sensors
Energizing*	Up to +39 dBm in 918 MHz
Echo function*	- Scan for beacons - Filter BLE beacons - re-broadcast

*Programmable from e-Compass

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

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

Physical Characteristics	
Environment	Indoors
Color	White
Dimensions	195mm X 195mm X 54mm
Weight	2.4Lbs (1.09Kg)
Ingress Protection	Designed for 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 12W via USB-C Port
POE (power only)	802.3af/802.3 (type 1 <13W)

Unit Sold bare: accessory kit needed for power type

Certification and Compliance	
Electric Certs	CE (EU) UK/CA (UK)

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

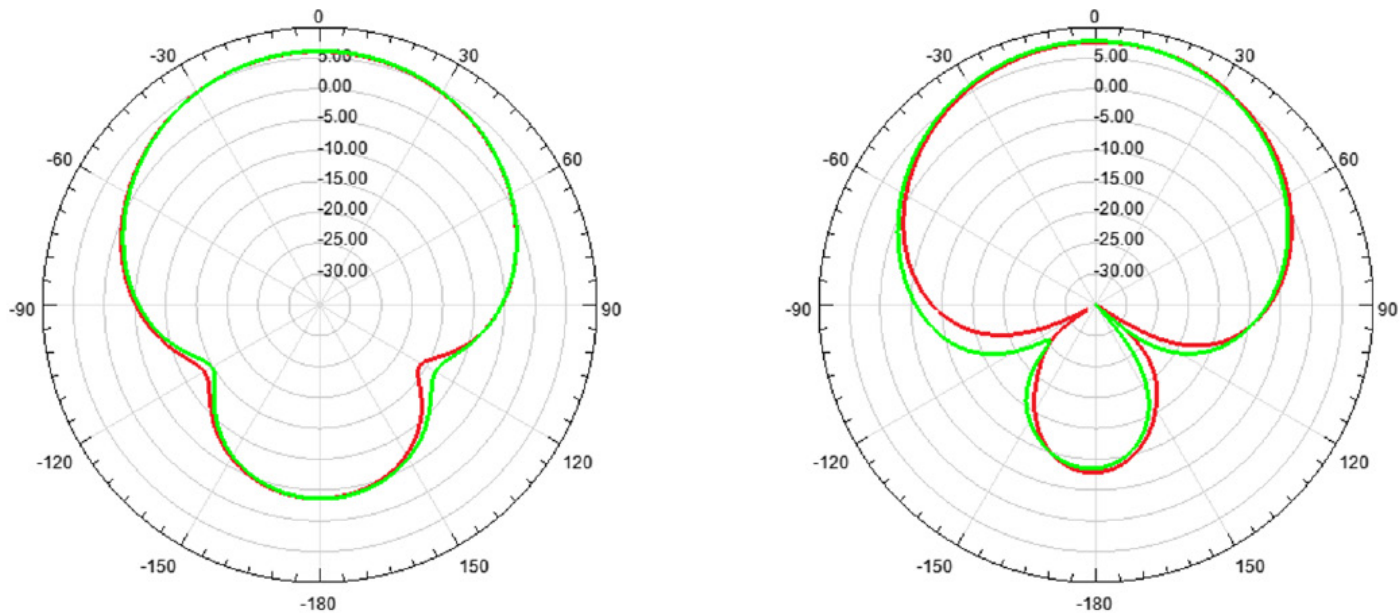
System Level Workflow Architecture Diagram



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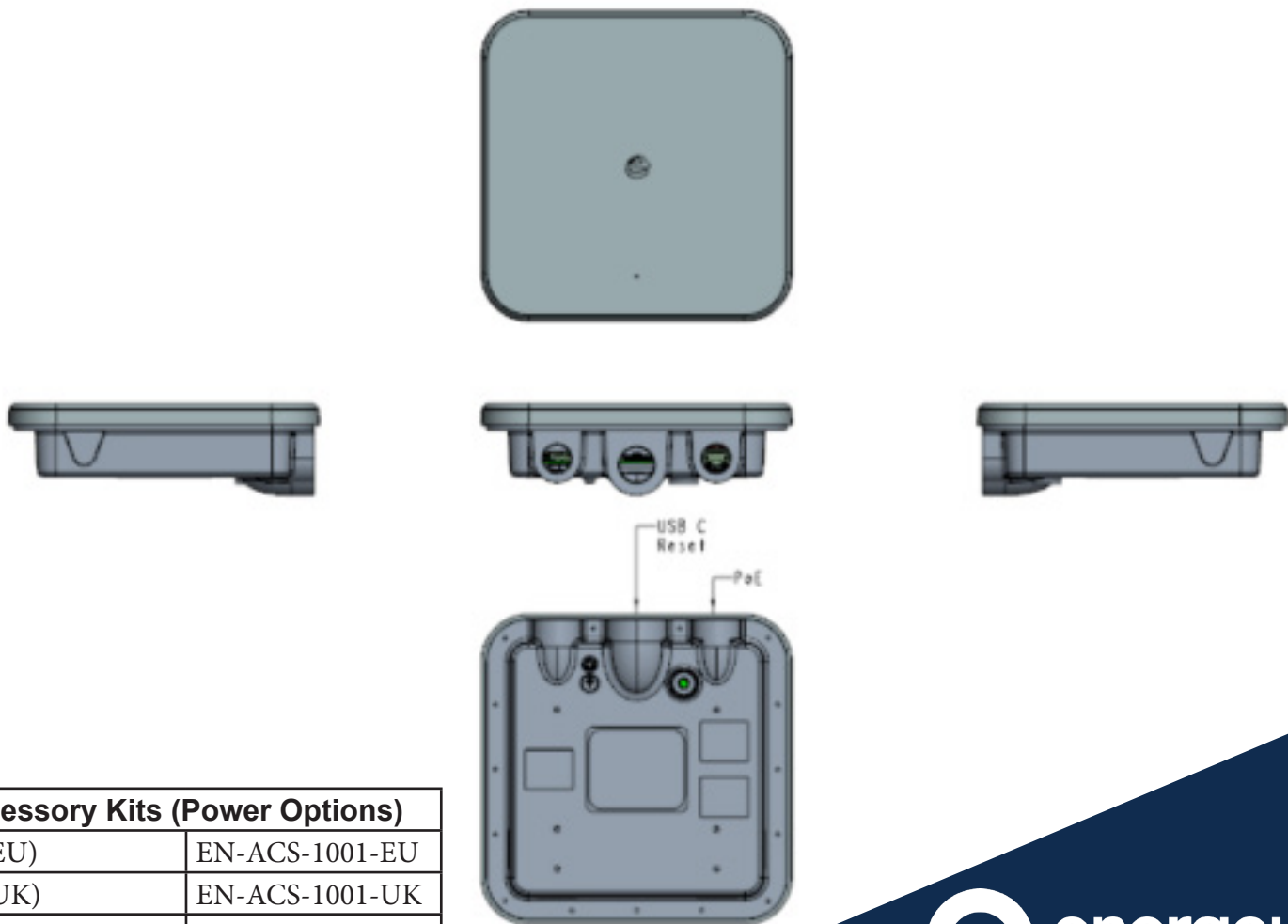
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Antenna Radiation Patterns



918MHz and 2.4GHz Radiation patterns

Transmitter Diagram



Accessory Kits (Power Options)	
USB (EU)	EN-ACS-1001-EU
USB (UK)	EN-ACS-1001-UK
POE	EN-ACS-1002-IN
No Power-plugs only	EN-ACS-1004-IN