Energous PowerBridge LITE Transmitter 1W DIRECTIONAL

Compact Indoor Transmitter with a linear polarized antenna offering a ±35° directional field of view.

The PowerBridge LITE 1W Directional transmitter offers a range of cost- efficient WPN solutions that works with a variety of energy harvesting Bluetooth Low Energy (BLE) sensors.

The transmitters can be easily mounted on a wall or vehicle, making them ideal for applications requiring efficient power delivery in a focused, targeted area, including zoned asset monitoring, fleet management, and/or temperature and humidity monitoring.

The transmitters combine a high-efficiency power amplifier with a System-on-Chip (SoC) RF transmitter to create a wireless charging infrastructure that enables continuous data streams from mobile IoT devices into business-critical applications.

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.



Product Highlights

- 1W Effective Isotropic Radiated Power (EIRP)
- 1W Conductive Power
- Dual linear 900 MHz and 2.4 GHz antennas
- Works with Energous IOT Sensors and Wiliot
- Up to +30 dBm 900 MHz band energizing signal
- Up to +20 dBm 2.4 GHz band energizing signal
- BLE beacon filter and repeater functionality
- Visual Feed Back thru LED Indicators
- Capable of Over the Air (OTA) Updates
- 5V/1A Operation via USB-C
- FCC Part 15 Certified
- ISED (Canada)
- Certificate from EU, IK, CN, KR, JP





Energous PowerBridge LITE Transmitter 1W DIRECTIONAL

Function	
Supported products	 Energous Iot Sensors Wiliot Single-band IoT Pixels tags Dual-band IoT Pixels tags
Energizing*	• Up to +30 dBm in 900 MHz • Up to +20 dBm in 2.4 GHz •
Echo function*	Scan for Wiliot beacons • Filter non-Wiliot BLE beacons • re-broadcast
*Programmable from	Wiliot Management portal

Antenna	
Туре	• Dual linear - Sub-1 GHz & 2.4 GHz
Typical Gain	• Sub-1 GHz: Dual 2 dBi linear • 2.4 GHz: Dual 2.5 dBi linear
Antenna 3 dB -beam width	• Sub-1 GHz: ±35° • 2.4 GHz: ±35°

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 Characteristics	
Environment	• Indoors
Color	• White
Dimensions	• 15.4 cm diameter
	• 2.6 cm thick
Weight	0.3 lbs
Mounting Options	• Wall
	• Ceiling
Operating Temp.	• 32.2°F (0° C) ~ 122°F (50° C)

Power	
Power Supply	5V@ 1A
Connector	USB-C

Certification and Compliance	
Electric Certs	FCC/ISED/CE

The following countries are covered by 900 MHz band versions regulatory certification:

USA European Union China Canada Japan Australia **United Kingdom** Korea New Zealand

System Level Workflow Architecture Diagram

















Dual/Single Band Energize Wiliot Wiliot Pixels Tag Pixels Tag

Energous PowerBridge LITE Transmitter

Internet Gateway

Williot Cloud Communication or MQTT Broker

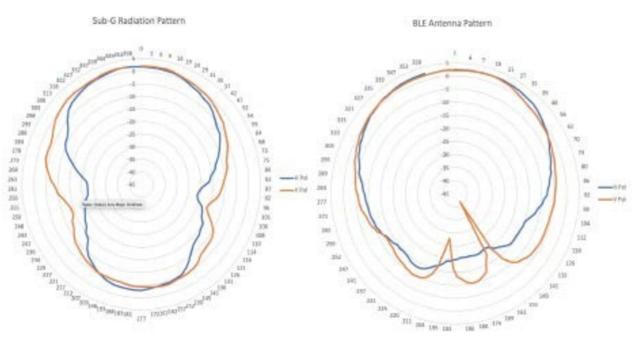
End user views REST API over HTTP Pixels tag data on Willot Portal or

Energous PowerBridge LITE Transmitter within the Wiliot Ecosystem



Energous PowerBridge LITE Transmitter 1W DIRECTIONAL

Antenna Radiation Patterns



900 MHz and 2.4 GHz Radiation Pattern

Transmitter Diagram

