

Energous PowerBridge LITE Transmitter

1W OMNI-DIRECTIONAL

Compact Indoor Transmitter with dual linear antennas offering a 360° field of view.

The PowerBridge LITE 1W Omni-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 where the energizing field needs to be delivered across a broader area, offering more flexibility and coverage, in 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



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Function	
Supported products	<ul style="list-style-type: none"> • Energous - Iot Sensors • Wiliot <ul style="list-style-type: none"> - Single-band IoT Pixels tags - Dual-band IoT Pixels tags
Energizing*	<ul style="list-style-type: none"> • Up to +30 dBm in 900 MHz • Up to +20 dBm in 2.4 GHz
Echo function*	<ul style="list-style-type: none"> • Scan for Wiliot beacons • Filter non-Wiliot BLE beacons • re-broadcast
*Programmable from Wiliot Management portal	

Antenna	
Type	<ul style="list-style-type: none"> • Linear - Sub-1 GHz & 2.4 GHz
Typical Gain	<ul style="list-style-type: none"> • Sub-1 GHz: Dipole 2 dBi • 2.4 GHz: Dipole 5 dBi

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	<ul style="list-style-type: none"> • 15.4 cm diameter • 2.6 cm thick
Weight	0.4 lbs
Mounting Options	<ul style="list-style-type: none"> • Wall • Ceiling
Operating Temp.	• -4°F (-20° C) ~ 158°F (70°C)

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

Certification and Compliance	
Electric Certs	FCC/ISED/CE

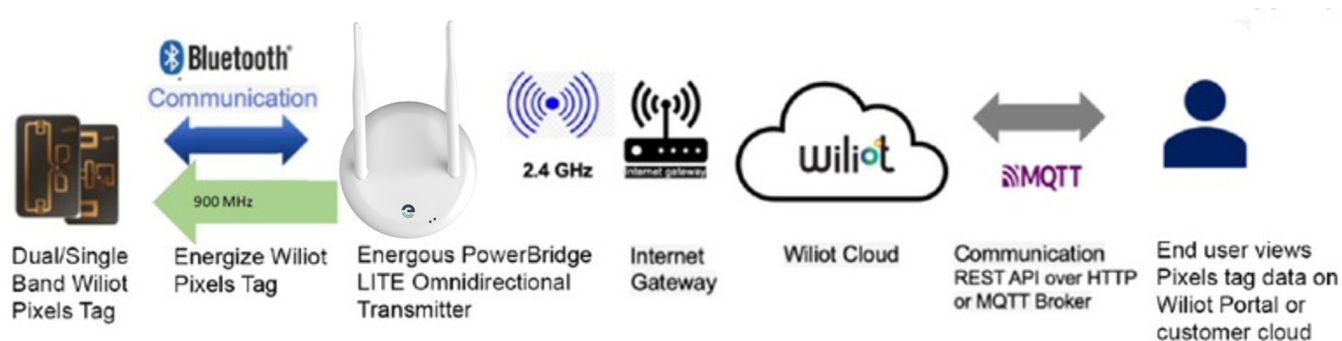
The following countries are covered by 900 MHz band versions regulatory certification:

USA
Canada
United Kingdom

European Union
Japan
Korea

China
Australia
New Zealand

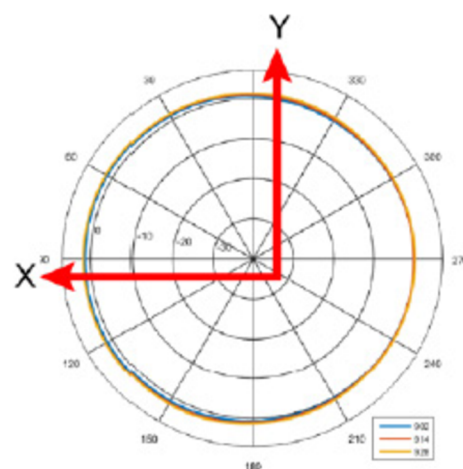
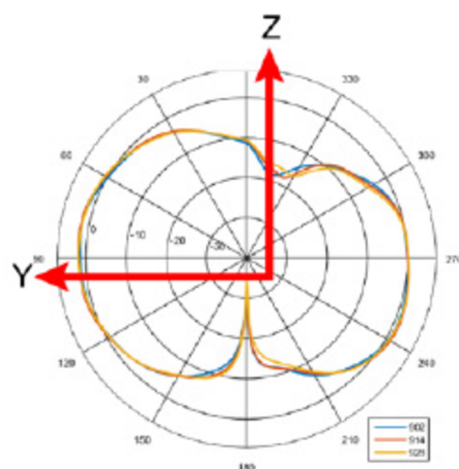
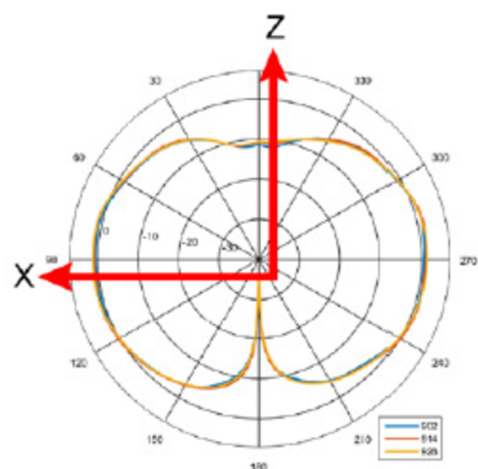
System Level Workflow Architecture Diagram



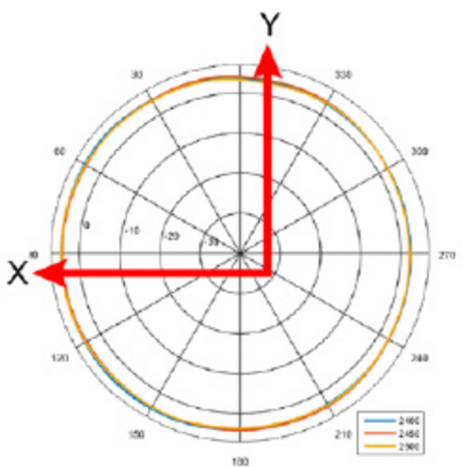
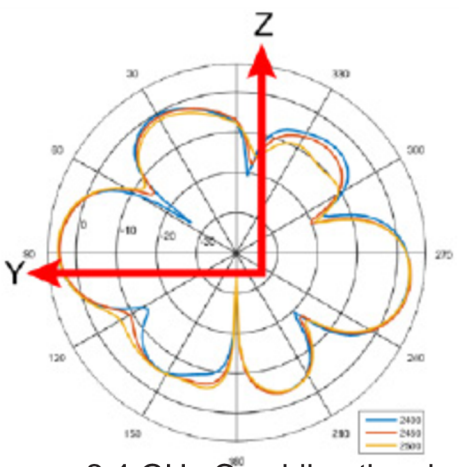
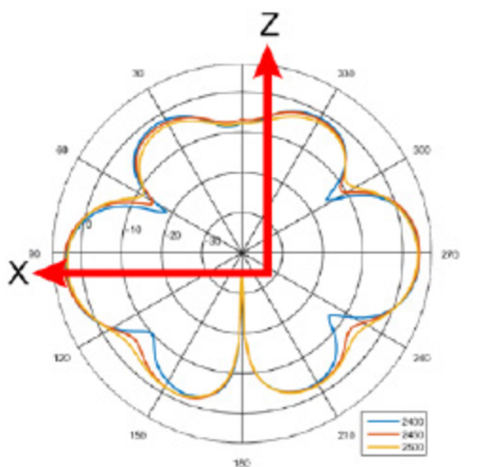
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Antenna Radiation Patterns



900 MHz Omnidirectional



2.4 GHz Omnidirectional

Transmitter Diagram

