

5.5W WattUp® PowerBridge Developer Kit

WATTUP®

This energy harvesting developer kit combines Energoous' radio frequency (RF) solution with e-peas' power management IC technology to support at-a-distance wireless charging applications for smart buildings, industrial IoT sensors, retail electronic displays and more.

The 5.5W WattUp® PowerBridge transmitter incorporates the EN4100, EN3921 and EN3913M devices. The EN4100 is a highly integrated system-on-chip (SoC) Wireless Power Transfer (WPT) transmitter IC, the EN3913M is a highly efficient GaN power amplifier (PA) controlled by the EN3921. A lower power option is available with the EN3210 CMOS power amplifier.

On the receiver side, there are 3 input paths available to choose from based on use case, including discrete diode and EN2223 RF-to-DC implementations, which connect to the AEM30940 ambient energy manager chip.

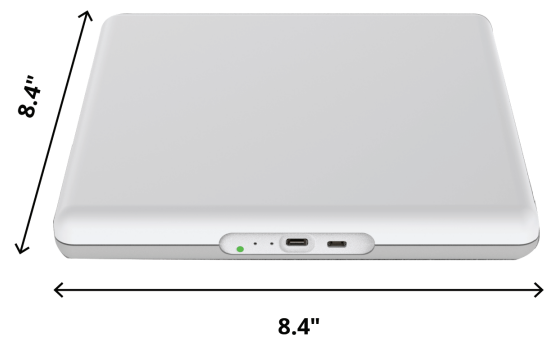


Kit Contents

- 5.5W WattUp PowerBridge Transmitter
- Reference Design Receiver Hardware
- Mobile App to monitor and control TX/RX
- TX/RX Schematics and Layout files
- TX/RX Mechanical files

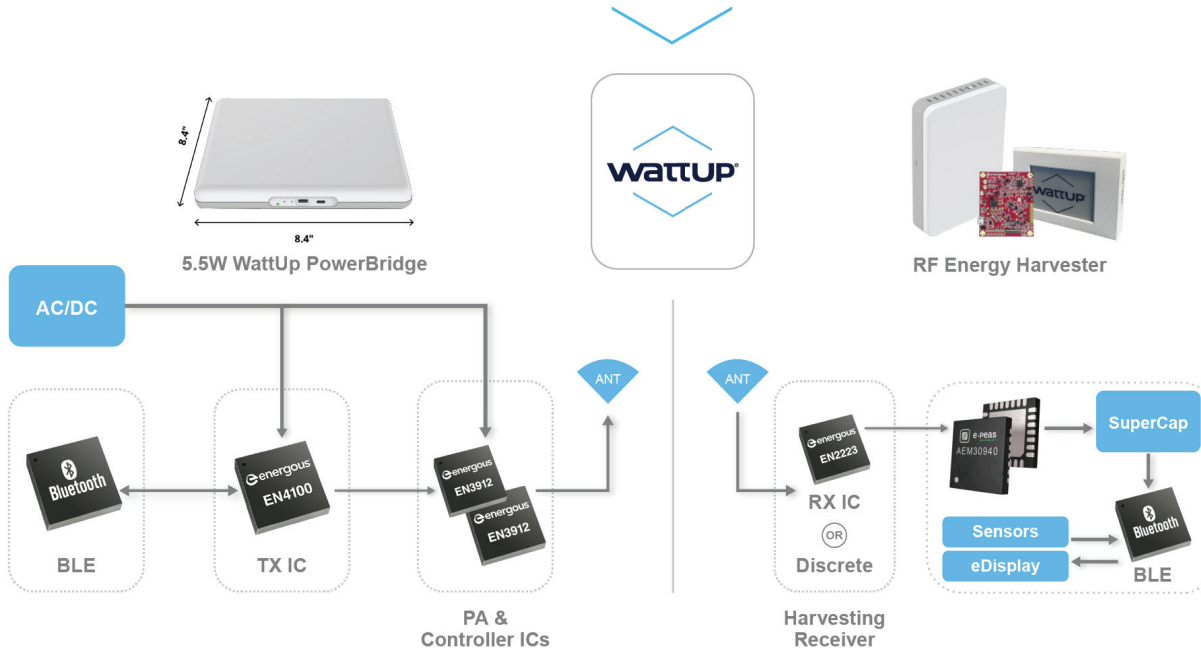
Applications

- Smart Buildings
 - Temperature/humidity occupancy sensors
 - Window/door sensors
- Industrial IoT
 - ESL for warehouse operations
 - Air quality/CO2 monitor
 - Cold storage chain monitoring
- Retail Electronic Displays
 - ESL for retail shelving
 - ESL for cold storage
 - Smart shopping carts





5.5W WattUp PowerBridge Wireless Charging Developer Kit Block Diagram



Receiver Board

- E-Peas AEM30940 Harvesting PMIC with Supercap or rechargeable Lithium battery support
- Low Voltage Operation from 50mV to 5V
- Cold Start from 380mV input voltage
- BLE sensor hub with example sensors (Ambient light and Temperature/humidity)
- Optional E-ink ultra-low-power Display
- On-board or external BLE antenna

Transmitter

- EN3210 Power Amplifier
- EN4100 TX-IC
- BLE communication

Receiver Options

- IoT sensor with 10mF super capacitor that reports Temp/ Humidity and Light intensity
- Electronic Shelf Label (ESL) with 77mF super capacitor that can update the Eink Display

For more information or to order,
please contact: sales@energous.com

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