WattUp®
Near Field
Developer Kit

Enabling Faster Integration of Energous' WattUp Wireless Charging Technology Into Customer Product Designs
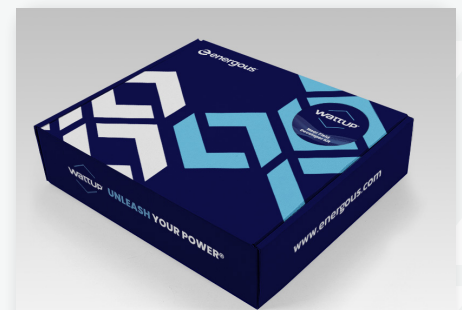
The WattUp developer kit for IoT and Trackers provides manufacturers with a robust set of tools and resources to enable faster integration of Energous' WattUp technology into future product designs.

The IoT/Trackers reference design transmitter incorporates the DA4100, DA3210 and DA14682 ICs. The DA4100 is a highly integrated System-on-Chip (SoC) RF transmitter IC, while the DA3210 is a high-power, high-efficiency power amplifier (PA) and the DA14682 is a Bluetooth low energy 5.0 System-on-Chip (SoC) with enhanced security and integrated FLASH memory.

On the receiver side, the DA2210 RF-to-DC receiver can be connected to up to four antennas and the DA14585 is a size-optimized, ultra-low power Bluetooth low energy SoC ideal for small form factor product designs. The complete chipset is available from Energous' manufacturing partner, Dialog Semiconductor.
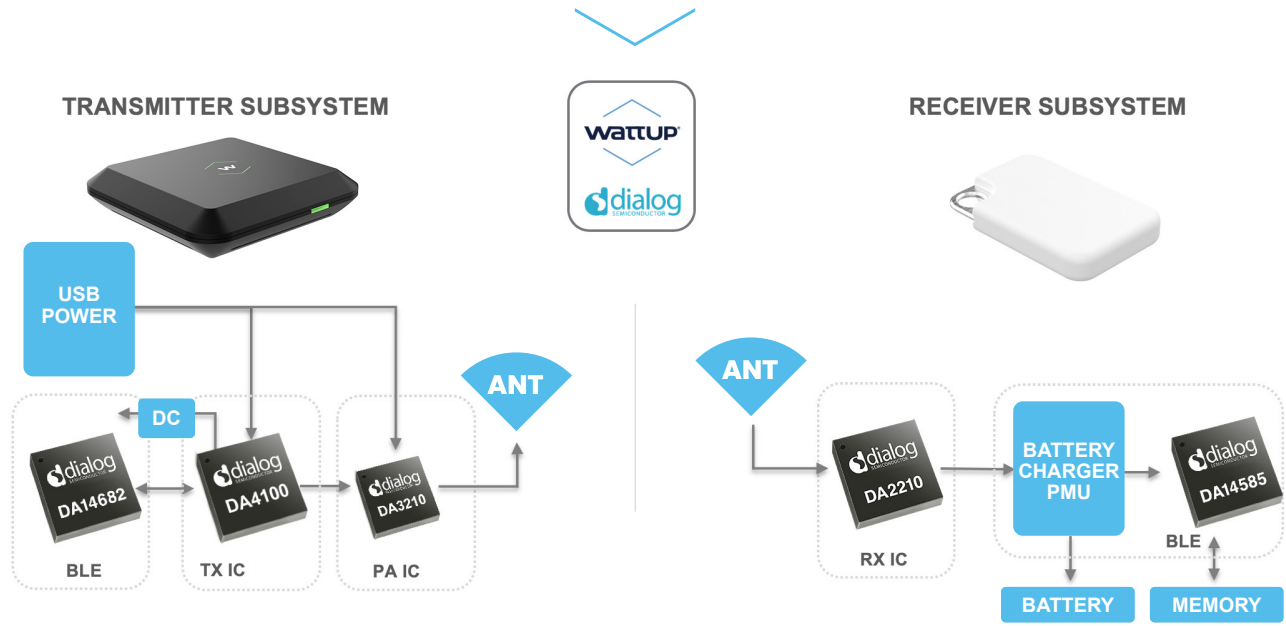

Kit Contents

- Reference Design Transmitter Hardware
- Reference Design Receiver Hardware
- Mobile App to monitor and control
- TX/RX
- TX/RX Schematics and Layout files
- TX/RX Antenna Design files
- TX/RX Mechanical files
- Firmware SDK

Advantages

- Faster product integration
- Easier manufacturing of wirelessly charged products
- Small footprint to accommodate devices with various form factors, including those with curved edges and non-flat surfaces
- WattUp receiver detection
- Transmitter is available through authorized ODM partner

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3590 N 1st Street, Suite 210 | San Jose, CA 95134 | (408) 963-0200

WattUp NF-230 Wireless Charging Developer Kit Block Diagram

TRANSMITTER SUBSYSTEM

RECEIVER SUBSYSTEM

USB POWER

DC

ANT

dialog DA14682 — BLE

dialog DA4100 — TX IC

dialog DA3210 — PA IC

ANT

dialog DA2210 — RX IC

BATTERY CHARGER PMU

dialog DA14585 — BLE

BATTERY

MEMORY

Receiver Board

- Optimized for 40mA battery at 0.5C (20mA), higher-power charging available per use case

- DA2210 RX IC, DA14585 BLE and supporting circuitry

- Miniature rectifier circuit board design

- Multiple antenna system support

- App-based power measurement and control

Transmitter

- DA3210 Power Amplifier and DA4100 TX Controller

- Switched feeds for multiple antennas

- DA14682 BLE communication

- Debug Port on micro-USB connector

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

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