

LIVE Reference Design

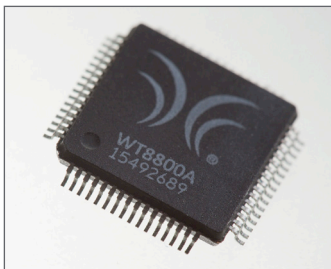
30W Wireless Power Transmitter

Highlights

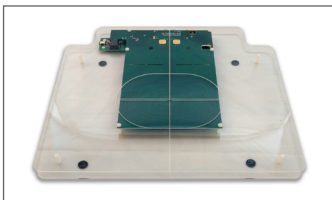
- Delivers 30W total to one or more PRUs
- AirFuel certified Class 4 PTU
- Foreign Object Detection
- Includes WiTricity AirFuel-certified resonator
- WiTricity impedance matching network (IMN)

Applications

- Laptop and 2-in-1 charging mats
- Fast charging of smartphones
- Office and home furniture installations
- Multi-device and high-power charging



WT8800 SoC - 10mm x 10mm



WT8800-RB30

Overview

The WiTricity WT8800-RB30 is an AirFuel™ certified power transmitter unit (PTU) reference design capable of delivering up to 30W total power across one or more AirFuel power receiver units (PRUs). Ideal for charging laptops, 2-in-1 computers or multiple fast charging smartphones, the WT8800-RB30 demonstrates the true versatility of magnetic resonance and its superiority to other wireless charging technologies.

The WT8800-RB30 reference design demonstrates industry-leading key performance indicators, including efficiencies up to 75%, 30W power delivery, foreign/rogue object detection, and more.

Under- or on-table configurations, with varying charge areas, can also be designed through the WT8800-RB30 modular design architecture.

WT8800 System on Chip (SoC)

At the core of the WT8800-RB30 reference design, the WT8800 SoC provides full power management control and oversees PTU functionality. Built on years of experience developing magnetic resonance systems, the WT8800 provides state-of-the-art resonant control and unparalleled performance in a single chip.

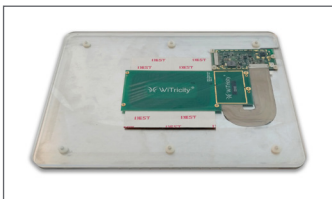
DESCRIPTION	SPECIFICATION
PTU Output	30W max total delivered to one or more PRUs
Efficiency	Up to 75% end-to-end (excluding wall adapter & utilizing WiTricity-designed PRU)
Operating Frequency	6.78 MHz
Spatial Freedom	+ / - 30mm x and y (customizable)
Operating Height	3mm certified; 3mm - 12mm working range
Resonator Charge Area	150mm x 100mm
Reference Design	223mm x 184mm x 11mm height (electronics)
Communications	BlueTooth Smart
Cooling	None
Certifications	AirFuel: Class 4
Input Power	24V DC Input

Highlights

- Provides up to 30W of power to the load
- Highly-efficient (95%+) electronics design for low thermal losses
- AirFuel certified Category 5 PRU
- Flexible output voltage for easy integration to a wide range of battery charger ICs
- Two-board design for easy integration
- 100mm x 100mm module for fast prototyping and design integration

Applications

- Notebooks
- Ultrabooks
- 2-in-1 Laptops
- Tablets
- Smartphones



RB30-RX

30W Wireless Power Receiver

Overview

The RB30-RX is an AirFuel™ certified power receive unit (PRU) reference design based on WiTricity's patented Magnetic Resonance technology. The kit provides designers with an easy-to-use, high performance platform capable of delivering up to 30W of power when used in conjunction with the WiTricity WT8800-RB30 wireless power transmitter unit (PTU). Together, these two reference designs provide a turnkey wireless power solution that can deliver over 8 times the power of typical inductive-based solutions with much greater spatial freedom in all three axes (x, y and z).

The high-power delivery capabilities of the RB30-RX enable the freedom of wireless charging over a range of new devices, from notebooks to 2-in-1 computers to tablets. Even with the high power delivery capabilities, the design of the RB30-RX has been optimized to reduce thermal losses, ensuring ease of integration into any end-user platform. When paired with the WT8800-RB30, the system can achieve up to 75% end-to-end efficiency, putting the solution in a class of its own. With AirFuel certification, the RB30-RX is ensured to work with all AirFuel-approved PTUs for both on-pad and under-surface charging applications.

DESCRIPTION	SPECIFICATION
PRU Output Power	30W max delivered to load, in conjunction with WT8800-RB30 PTU
Efficiency	Greater than 95% electronics design with low thermal losses
Operating Frequency	6.78 MHz
Resonator Board	121mm x 65mm
Electronics Board	74mm x 35mm
Communications	Bluetooth Smart
Output Voltage	High: 18.5V (+/- 1V); Low: 13.1V (+/- 1V) DC
Certifications	AirFuel: Category 5