

# Powermat PMT 300 Wireless Power Solution

## 300W Mid to High Range

### DC Power

#### Powermat PMT 300 Wireless Power Solution

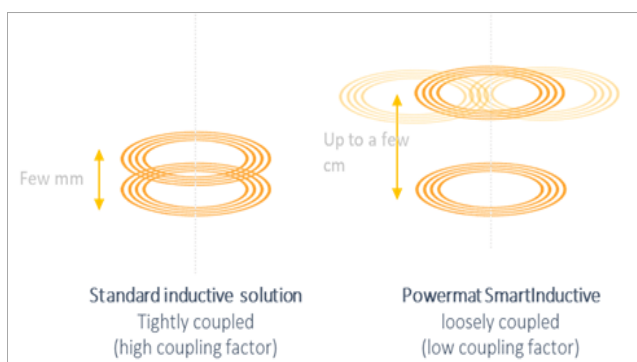
**Powermat PMT 300** is a medium to high wireless power solution up to 300W and can be tailored to fit specific product requirements based on Powermat SmartInductive™ Technology. The Powermat solutions supply the power, magnetics, and interface to meet customer product requirements. Powermat solutions deliver pinnacle flexibility, safety, and cost-efficiency for a 100% wireless life.

#### Key Features

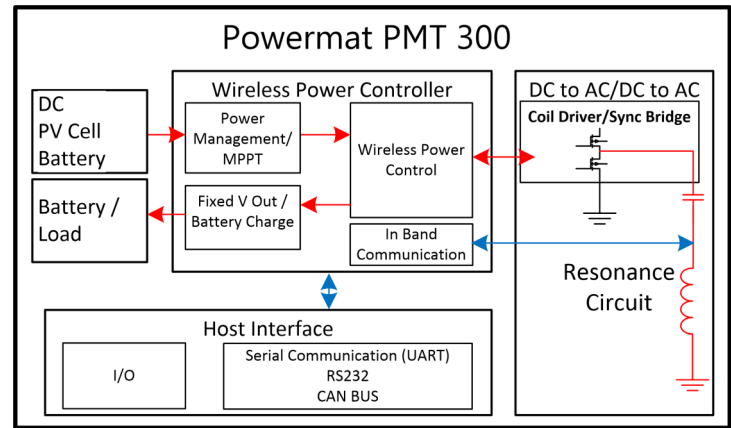
- Up to 300W wireless power transfer
- Up to 200mm coil to coil distance
- Up to 70mm lateral misalignment
- Advanced battery charging algorithm
- Optimizing power transfer efficiency in low power mode
- Software-based DC to DC functionality
- In-band communication (WPT management and proprietary host system communication)
- Enhanced Foreign Object Detection (FOD)
- Operation frequency 100-300KHz
- Cost-effective: Software-based wireless power transfer (WPT) and communication algorithms

#### Target Applications

- Industrial and commercial robotics
- High power domestic robotics
- Large drones
- High power telecom edge technology (CPE)
- Handheld devices and power tools
- E-bikes
- E-carts
- Large batteries



## Block Diagram



## Specifications

Feature	Specification	Note
<b>Wireless Power Transfer (WPT)</b>		
Coil size (Symmetric Rx, Tx coil)	70mm/130mm/200mm	Optional customization
Max charge power	300W	Battery charging/fixed voltage
Coil to coil distance*	200mm (200mm coil)	Powermat SmartInductive™
	50mm (130mm coil)	Technology mid-range coupling
	35mm (70mm coil)	
Coil lateral misalignment (X/Y)*	70mm (200mm coil)	Powermat SmartInductive™
	50mm (130mm coil)	Technology mid-range coupling
	30mm (70mm coil)	
Efficiency	>90%	Peak end-to-end
Operation frequency	100Khz-300KHz	
<b>Interface (optional)</b>		
Host interface	IO/UART (RS232/LVTTL)/CAN	Digital I/O with customizable functionality
<b>Battery Management</b>		
Battery charging	CCCV	3-9 li-Ion cells 3-10 LiFePO <sub>4</sub> cells 12V/24V/36V lead-acid battery
Battery voltage	Up to 50V on Rx module	Software controlled DCDC over the inductive link
Maximum charge current	10A	
Fuel gauging		Software algorithm
Battery protection	OV, OC, OT, UT	Software algorithm
<b>PCB Dimensions</b>		
PCB Dimensions	55mm x 55mm	Can be customized
<b>Environmental</b>		
Operating	0°C ~ 70°C	
Storage	-40°C ~ 85°C	

\* Coil distance and lateral misalignment are coil size dependent

Powermat is leading the way to a 100% wireless future, working with industry leaders to create true wireless freedom through seamless access to power and connectivity. Global market leaders including Foxconn Interconnect Technologies, Samsung, General Motors, Flex, Harman International, Pivotal Commware, and Kyocera have adopted Powermat Technologies, and its solutions can be found in over 800 million smartphones, 40 million embedded accessories, and 8 million cars worldwide. **Learn more @ [www.powermat.com](http://www.powermat.com)**