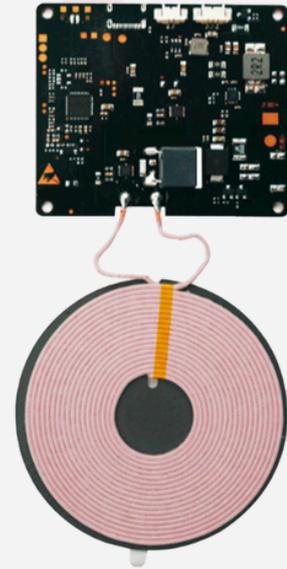


# Wireless Charging Module

## WCM-1001



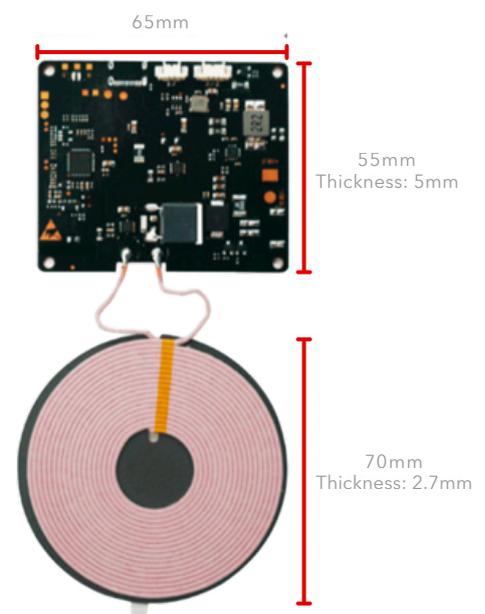
The SUZOHAPP Wireless Charging Module WCM-1001 enables powering or charging of any Wireless Power Consortium (WPC) Qi certified products. It has a transmission efficiency up to  $80\% \pm 5\%$  and can provide up to 15W transmission capacity to achieve fast charging function on mobile phones.

The WCM-1001 uses an intelligent identification system using UART-encrypted transmission control signals stipulated by WPC. The module will process the corresponding power adjustment based on the encoding of the receiving unit. The module meets the WPC Qi standard requirements

### Design Requirements

According to the WPC Qi standard, please note the following:

1. The distance between the Tx\_Coil with PCB and other metal components is minimum 4.5mm
2. The distance between the surface of the Tx\_Coil and the surface of product (Working Face) is  $5.0 + 0.5 - 0.2$ mm, which means the thickness of the Working Face plastic is not more than 4.25mm
3. The surface distance between Tx\_Coil and Rx\_Coil is 5.0~6.5mm
4. This means the minimum distance between the Tx\_Coil and the phone's Rx\_Coil is 5.0 mm. For example 3mm non-conductive glass/plexiglass plus 2mm assumed for the thickness of the phone's case and a possible case cover. The maximum distance between the Tx\_Coil and the phone's Rx\_Coil is 15.0 mm if a thicker case is used. This will charge the whole range of iPhone's and Android models including the iPhone 15





## Technical Specifications

<b>Input Voltage</b>	Min. 12.0Vdc, Max. 24.0Vdc
<b>Charging Mode</b>	Qi 5W; Qi 10W; Qi 15W; Samsung Fast Charger; iPhone Fast Charger
<b>Frequency</b>	110~205KHZ
<b>TX Input Voltage</b>	12.0Vdc: Qi 5W; Qi 10W; Qi 15W; Apple 7.5W; Samsung 10W
<b>Input Current</b>	1.80A max. @12.0Vdc - Full load
<b>Inrush Current (Cold)</b>	2.0A max. @12.0Vdc - Full load & Ambient temperature 25 °C
<b>Energy Consumption</b>	At 11.50Vdc or 12.50Vdc, Energy Consumption $\leq$ 0.03~0.04A
<b>Static Output</b>	Output Power 15W: Min. Load 0.10A; Max. Load 1.25A; Peak Load 1.50A; Output Range 12V $\pm$ 5%
<b>Sensing Distance (Max.)</b>	iPhone, Huawei, Xiaomi, Samsung 15mm; iPhone 12/13/14 12mm
<b>Line &amp; Load Regulation</b>	Output Power 15W: Min. Load 0.10A; Max. Load 1.25A; Line Regulation $\pm$ 5%; Load Regulation $\pm$ 5%;
<b>Tx_Coil</b>	Coil + Shielding: 70 ( $\pm$ 0.5) * 3.0mm (Max.) Coil Lead length: 35mm
<b>Operating Temperature and Relative Humidity</b>	0°C to 40°C 20%RH to 80%RH, altitude should be below 10000 feet
<b>Storage Temperature and Relative Humidity</b>	-20°C to +60°C 10%RH to 90%RH (non-condensing), altitude should be below 30000 feet

## Operational State

<b>LED</b>	Standby	Standby	Standby	Standby	Standby
<b>LED1: Red</b>	On	Off	Off	Off	Flashing
<b>LED2: Green</b>	Off	On	On	Off	Off