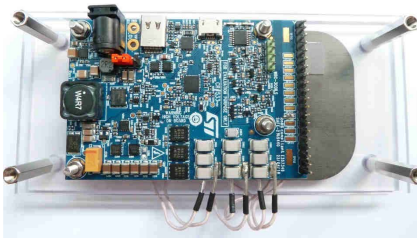


Qi 3-coil 15W wireless charger TX evaluation kit based on STWBC-MC



Features

- STWBC-MC digital controller
- MP-A8 3-coil array
- 15W output power
- Flexible input voltage: 5V to 20V from USB-C or DC jack
- 5W mode when connected to 5V USB input or DC jack
- Fixed frequency operation
- WPC Qi1.2.4 standard compliant
- Robust demodulation algorithm, with triple path (V, I, f)
- Foreign Object Detection (FOD)
- Active presence detection
- UART protocol to control and monitor the system
- Complete reference design (evaluation board, schematics, PCB layout, Firmware and tools)
- 2-layer PCB
- Low standby power consumption
- Flash memory based
- CE certified
- ROHS compliant

Table 1. summary table

Product summary	
Qi 3-coil 15W wireless charger TX evaluation kit	STEVAL-ISB047V1
USB-UART dongle	STEVAL-WBCDNGV1
Firmware for STEVAL-ISB047V1	STSW-ISB047FW

Description

The STEVAL-ISB047V1 wireless battery charger TX evaluation kit consists of the STEVAL-ISB047V1T evaluation board and STEVAL-WBCDNGV1 USB-UART dongle. The kit is designed for charging devices such as smartphones or tablets where high power levels are required.

The evaluation board supports wireless battery charging of Qi-compliant devices up to 15 W. It also supports proprietary fast charging modes up to 10 W.

The STEVAL-ISB047V1 transmitter is based on the STWBC-MC and features a cost-effective half bridge topology, offering external interface via UART.

The STEVAL-ISB047V1 evaluation kit is a full solution, complete with boards, firmware, a GUI for debugging, schematics, layout files and bill of materials.

Tools for STEVAL-ISB047V1 are available on www.st.com, and allow users to access runtime information such as power delivered, regulation error and protocol status. Parameters can also be adjusted with these tools.

1 Evaluation board and block diagram

Figure 1. STEVAL-ISB047V1T evaluation board

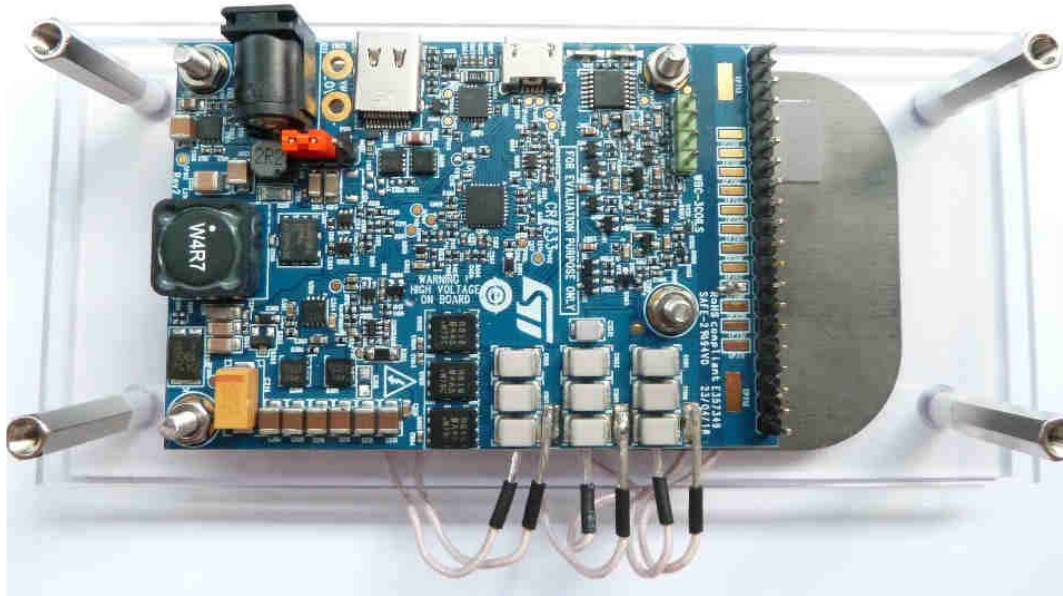
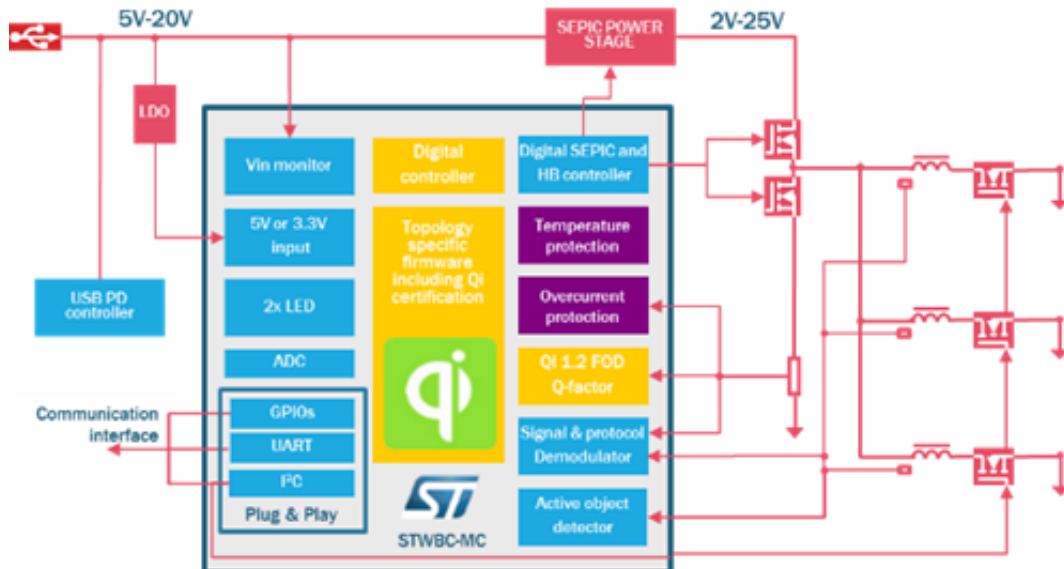


Figure 2. STEVAL-ISB047V1T block diagram



Revision history

Table 2. Document revision history

Date	Version	Changes
03-Aug-2018	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved