

Qi MP-A15 15W wireless charger TX evaluation kit based on STWBC-EP



Features

- STWBC-EP digital controller
- MP-A15 fixed frequency topology
- 15W output power
- Flexible input voltage: 5V to 20V from USB connector
- 5W mode when connected to 5V USB input
- 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 layers PCB
- Low standby power consumption
- Flash memory based
- CE certified
- ROHS compliant

Description

The [EVALSTWBC-EP](#) is a wireless battery charger TX evaluation kit including EVALSTWBC-EP demo-board and EVALWBCDNGV1 USB-UART dongle, 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 15W. It also supports proprietary fast charging modes up to 10W.

The EVALSTWBC-EP transmitter is based on the STWBC-EP and features a cost-effective half bridge topology offering external interface via UART. The EVALSTWBC-EP solution provides a complete kit, which includes demo board, its firmware, a graphical interface for debug, the schematics, layout files and bill of materials.

Tools for EVALSTWBC-EP 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

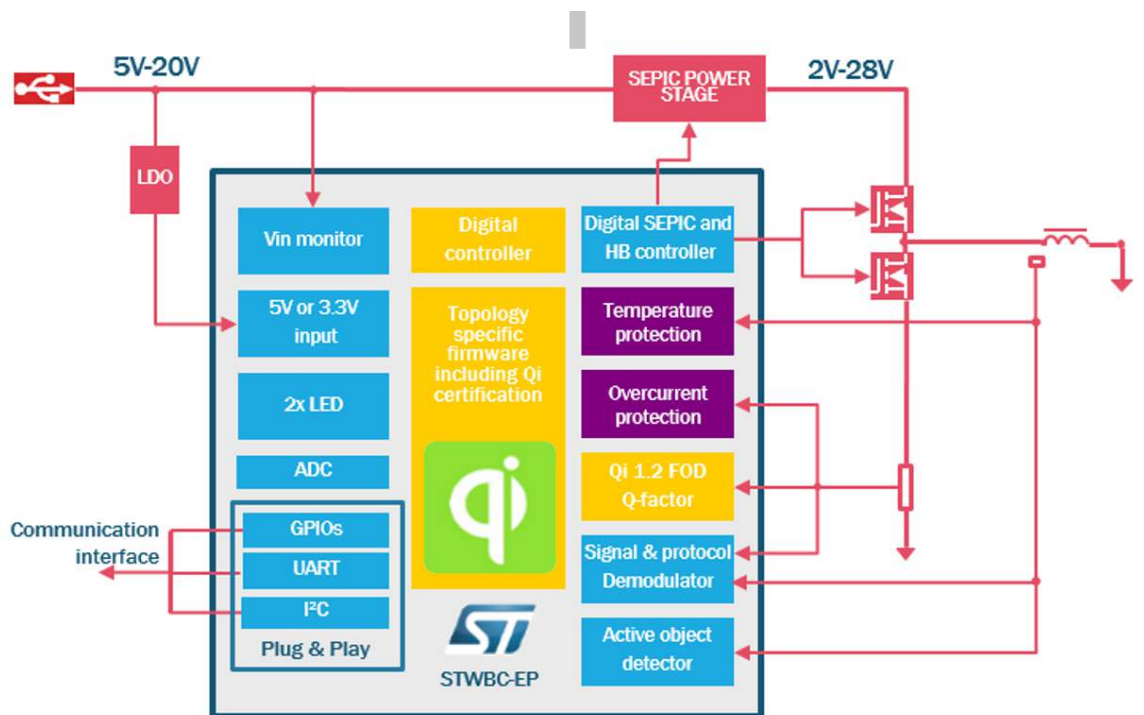
Product status link	
EVALSTWBC-EP	
Product summary	
Qi MP-A15 15W wireless charger Tx evaluation kit	EVALSTWBC-EP
USB-UART dongle	EVALWBCDNGV1
Firmware for EVALSTBC-EP	STSW-STWBC-EP
Digital controller for wireless battery charger transmitters (WBC) in 15W medium power applications	STWBC-EP

1 Evaluation board and block diagram

Figure 1. EVALSTWBC-EP evaluation board



Figure 2. EVALSTWBC-EP block diagram



Revision history

Table 1. Document revision history

Date	Version	Changes
07-May-2019	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. For additional information about ST trademarks, please refer to www.st.com/trademarks. 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.

© 2019 STMicroelectronics – All rights reserved