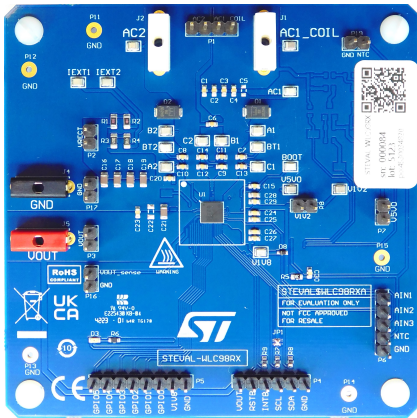


Wireless power receiver evaluation board for Qi EPP and up to 50 W applications



Features

- Qi 1.3 compliant wireless receiver
- Extended power profile (EPP) delivers up to 15 W
- ST Super Charge (STSC) protocol support deliver up to 50 W
- Integrated
 - High efficiency synchronous rectifier
 - Low voltage drop regulator with output current limit and input voltage control
- Adaptive rectifier configuration (ARC) mode for enhanced spatial freedom
- Accurate voltage/current measurement for foreign object detection (FOD)
- On-chip thermal management and protections

Description

The **STEVAL-WLC98RX** evaluation board, based on **STWLC98**, is designed for Qi 1.3 compatible wireless power receiver applications.

The solution supports the Qi EPP compliant mode up to 15 W.

ST Super Charge protocol (STSC) the device can deliver up to 50 W output power using the **STEVAL-WBC2TX50** transmitter board.

To run the STSC protocol using the GUI tool, the **STWLC98_STSC_step_sequencer.bin** file is required, which is included in the **STSW-WPSTUDIO** package.

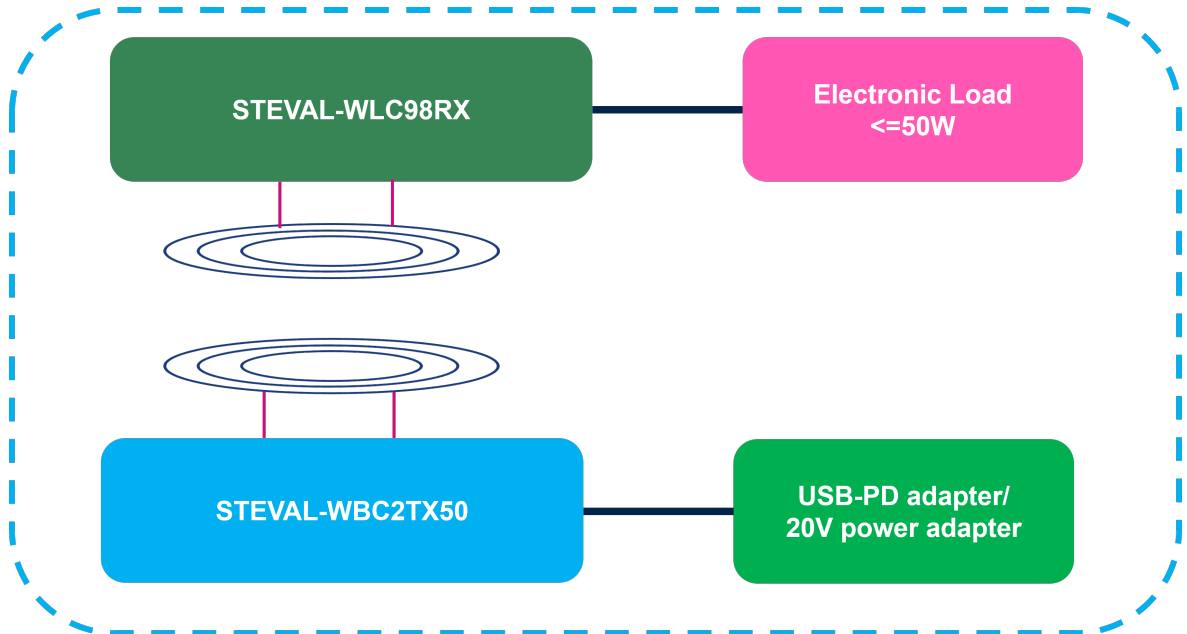
Through the I²C interface the user can access and modify different configuration parameters, tailoring the operation of the device to the needs of custom applications.

Using the **STEVAL-USB12CFT** as USB-to-I²C bridge, the user can monitor and control the **STWLC98** using the **STSW-WPSTUDIO** graphical user interface (GUI).

Product summary	
Wireless power receiver evaluation board for Qi EPP and up to 50 W applications	STEVAL-WLC98RX
Firmware for STEVAL-WLC98RX wireless receiver evaluation kit	STSW-WLC98FW
Qi-compliant inductive wireless charger power receiver for 70W applications	STWLC98JR
Graphical user interface for wireless power receiver and transmitter evaluation boards	STSW-WPSTUDIO
USB to I2C evaluation board for interfacing wireless applications with PC GUI tool	STEVAL-USB12CFT
Applications	Wireless chargers

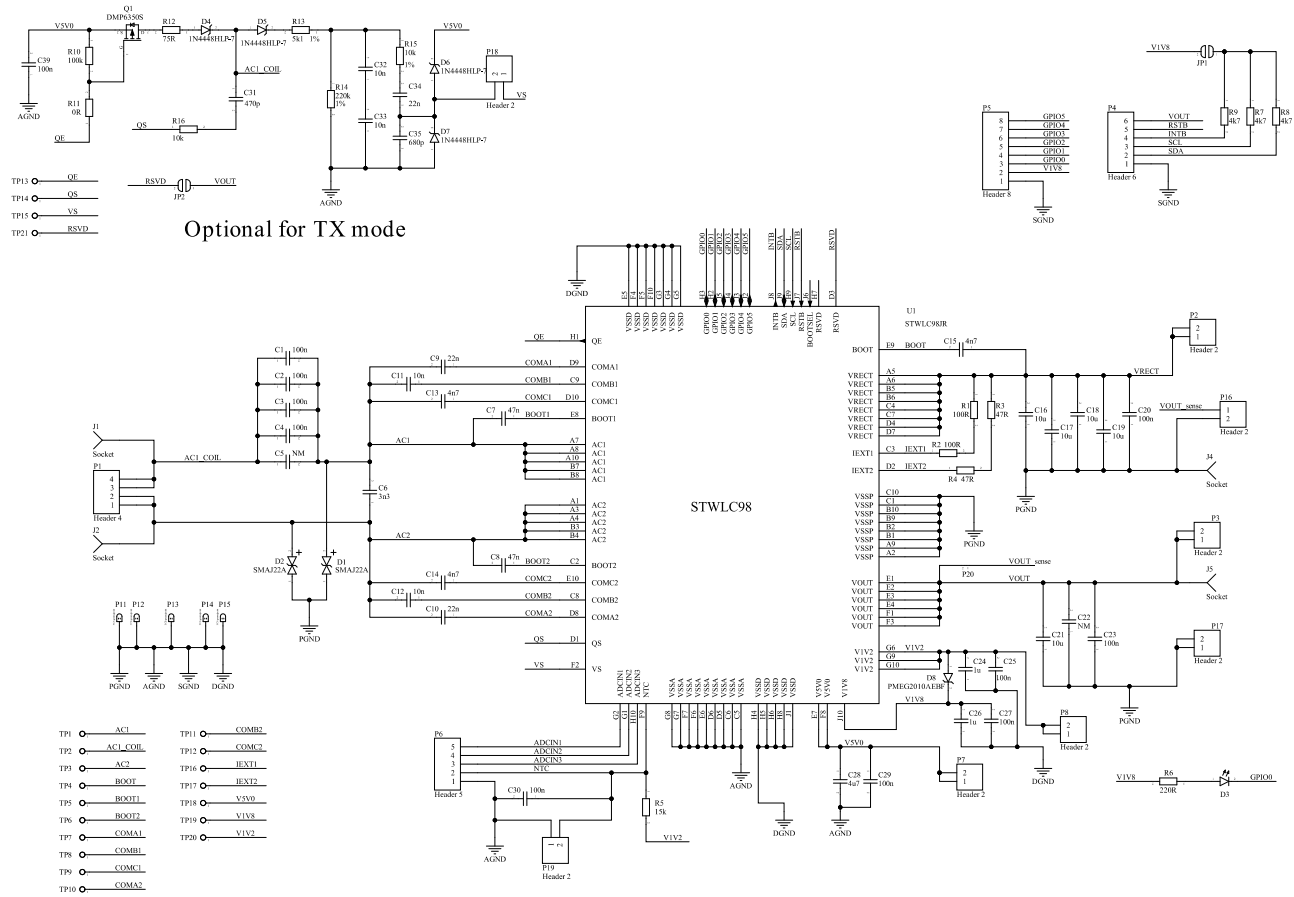
1 Hardware connections

Figure 1. Hardware connections



2 Schematic diagrams

Figure 2. STEVAL-WLC98RX circuit schematic



3 Board versions

Table 1. STEVAL-WLC98RX versions

Finished good	Schematic diagrams	Bill of materials
STEVAL\$WLC98RXA ⁽¹⁾	STEVAL\$WLC98RXA schematic diagrams	STEVAL\$WLC98RXA bill of materials

1. This code identifies the STEVAL-WLC98RX evaluation board first version.

Revision history

Table 2. Document revision history

Date	Revision	Changes
29-Jan-2024	1	Initial release.

IMPORTANT NOTICE – 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 acknowledgment.

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, 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.

© 2024 STMicroelectronics – All rights reserved