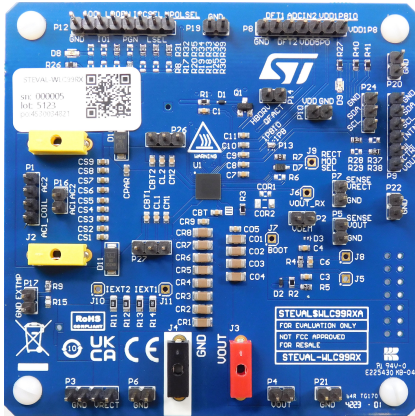


Wireless power receiver evaluation board for Qi BPP and up to 70 W applications



Features

- Qi 1.3 compliant wireless receiver
- Baseband Power Profile (BPP) delivering up to 5 W
- ST Super Charge (STSC) protocol support delivering up to 70 W
- 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-WLC99RX](#) evaluation board, based on [STWLC99](#), is designed for Qi 1.3 compatible wireless power receiver applications. The solution supports the Qi BPP compliant mode up to 5 W.

The ST Super Charge protocol (STSC) allows the device to deliver up to 70 W output power using the [STEVAL-WBC2TX70](#) transmitter board. To run the STSC protocol using the GUI tool, the [STWLC99_STSC_step_sequencer.bin](#) file is required, which is included in the [STSW-WPSTUDIO](#) package.

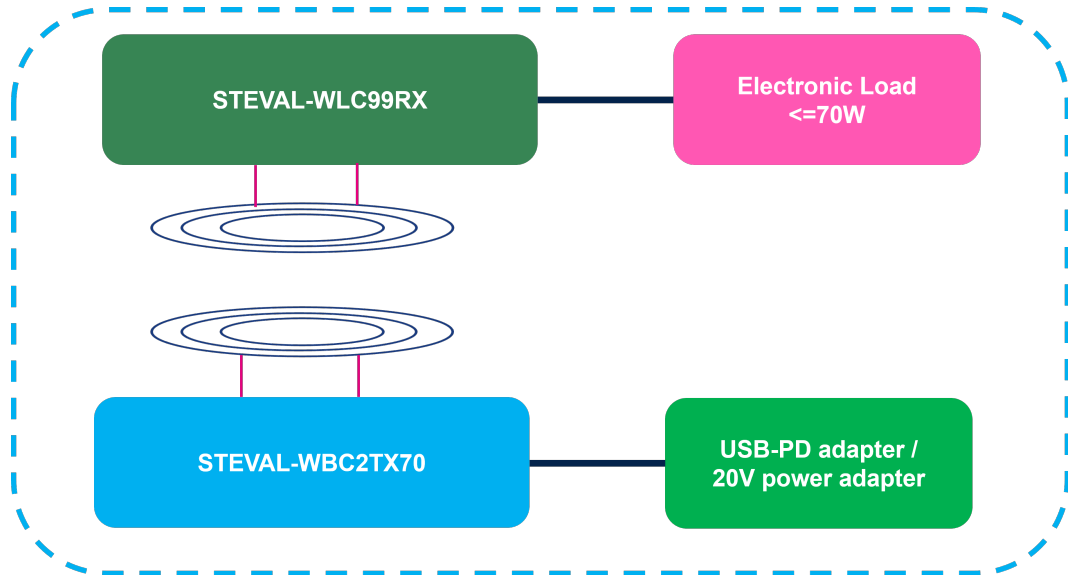
Through the I²C interface, the user can access and modify different configuration parameters to tailor the operation of the device to custom application requirements.

Using [STEVAL-USB2CFT](#) as a USB-to-I²C bridge, the user can monitor and control the [STWLC99JR](#) using the [STSW-WPSTUDIO](#) GUI.

Product summary	
Wireless power receiver evaluation board for Qi BPP and up to 70 W applications	STEVAL-WLC99RX
Firmware for STEVAL-WLC99RX wireless receiver evaluation kit	STSW-WLC99FW
Qi-compliant inductive wireless charger power receiver for 100W applications	STWLC99JR
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-USB2CFT
Applications	Wireless chargers

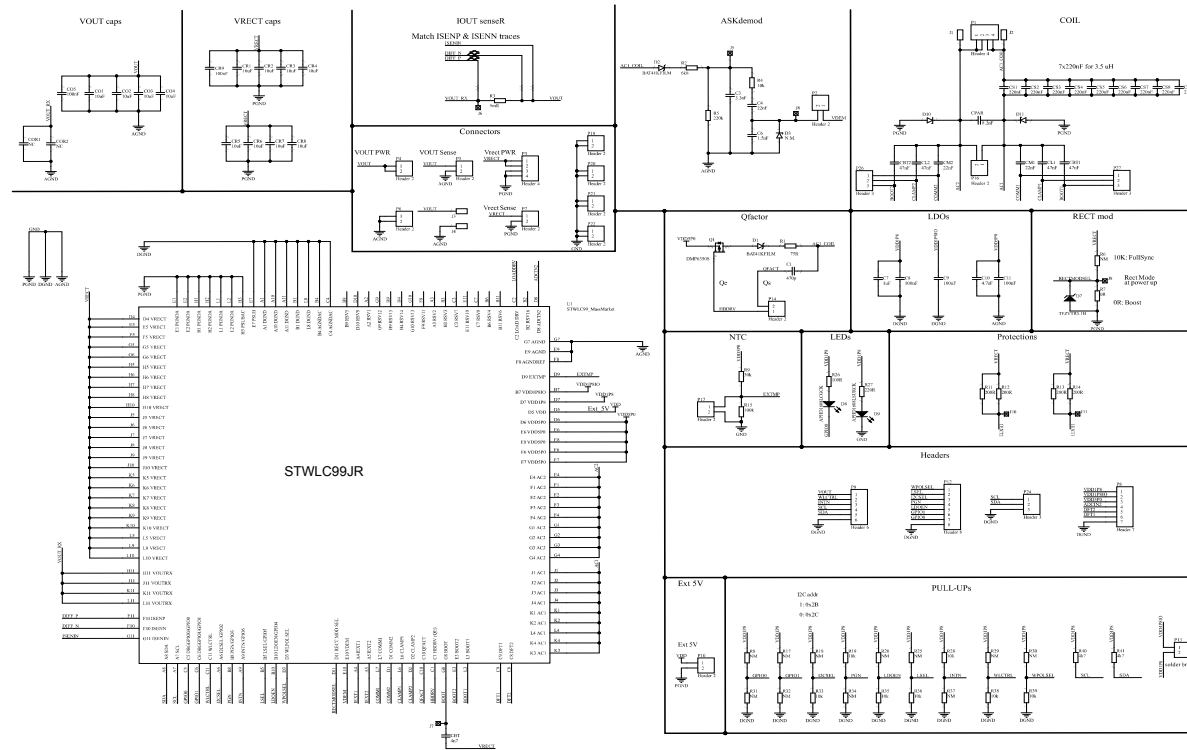
1 Hardware connections

Figure 1. Block diagram of hardware connections



2 Schematics

Figure 2. STEVAL-WLC99RX schematic diagram



3 Board versions

Table 1. STEVAL-WLC99RX versions

Finished good	Schematic diagrams	Bill of materials
STEVAL\$WLC99RXA ⁽¹⁾	STEVAL\$WLC99RXA schematic diagrams	STEVAL\$WLC99RXA bill of materials

1. This code identifies the STEVAL-WLC99RX evaluation board first version.

Revision history

Table 2. Document revision history

Date	Version	Changes
08-Feb-2024	1	Initial release.

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