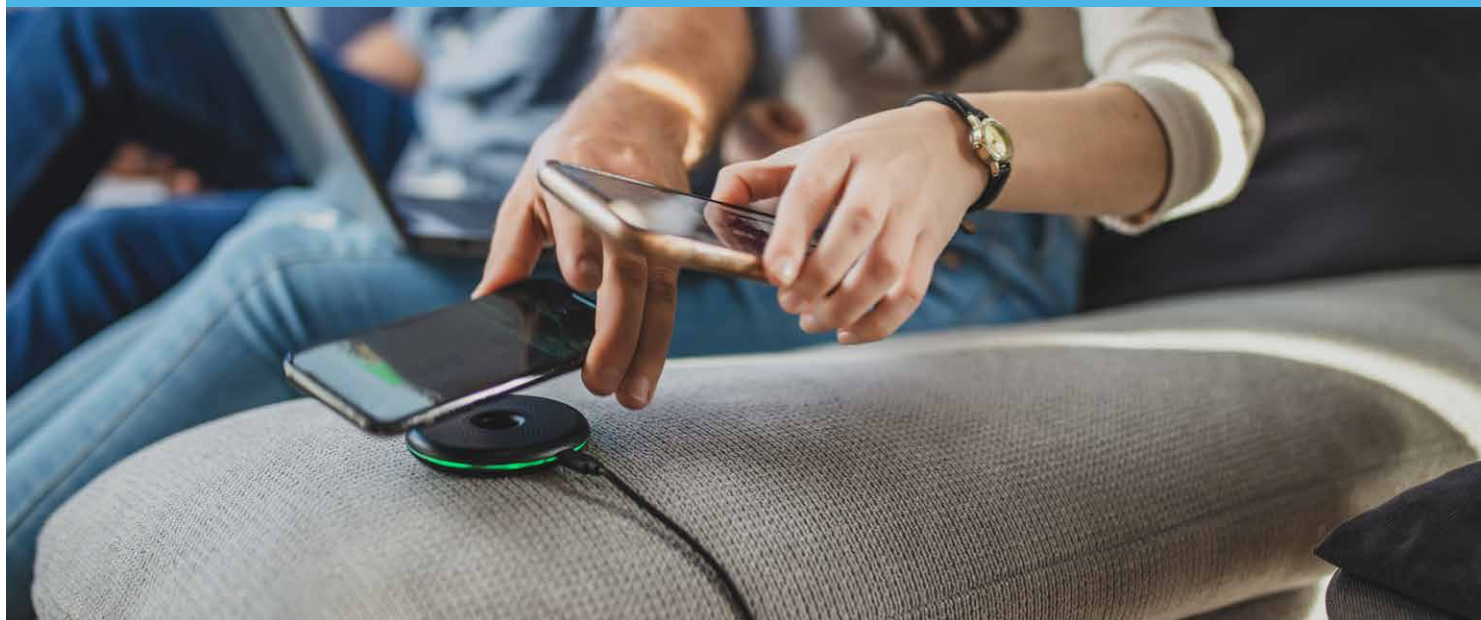




# STWBC86

## Wireless power transmitter for up to 5 W applications



### Better interoperability with Qi compatible, high efficiency wireless power transmitter for low power applications

The STWBC86 is a highly integrated monolithic wireless power transmitter that is Qi compatible for up to 5 W applications.

It integrates a high-efficiency, low impedance full-bridge inverter and drivers, which ensures low power dissipation and low BOM. The STWBC86 with embedded nonvolatile memory (NVM) enables designers to host advanced features and allows protocol evolution.

#### KEY FEATURES

- Power transfer up to 5 W
- Wide input voltage range: 4.75 to 20 V
- WPC Qi 1.2.4 compatible power class 0 BPP
- Power Tx reference design based on A11a topology
- Embedded 32-bit, 64 MHz ARM® Cortex® M0+
- 8 KB SRAM, 8 KB FTP
- Supports I<sup>2</sup>C interface
- Fully configurable GPIOs
- Foreign object detection (FOD)
- On-chip thermal management and protections
- WLCSP72 package (3.26 x 3.67 mm)

#### KEY BENEFITS

Optimized for small form factor charging solutions:

- Smartphones
- Medical electronics
- Smart wearables
- Hearables



## Your competitive edge with STWBC86

### Qi wireless charging

The STWBC86 transmitter IC supports the Qi 1.2.4 5 W baseline power profile (BPP). It can also be configured to deliver up to 15 W depending on the coil and the input supply.

### Monolithic design

The STWBC86 simplifies wireless charging transmitter development with its highly integrated monolithic design and low external BOM count.

### Compact solution

STWBC86 is housed in a compact wafer level chip scale package making it suitable for space saving solutions.

### High efficiency

STWBC86 is capable of reaching excellent efficiency levels (>80%) with built-on power management capability and enhanced spatial freedom.

### Flexibility

Embedded few-time programmable (FTP) nonvolatile memory (NVM) provides the flexibility for patching and configuring advanced features.

### Protection features

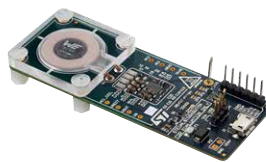
With built-in protection features, the STWBC86 has over-temperature, overvoltage, and overcurrent detection circuits as well as foreign object detection (FOD) for reliable designs.

## Main application boards and reference designs to accelerate design-in



**STEVAL-WBC86TX**

Qi-compatible wireless power transmitter evaluation board for 5 W applications based on STWBC86



**STDES-WBC86WTX**

2.5 W Qi-compatible wireless power transmitter reference design for wearable applications

## Supporting tools and software

Evaluation tool	Category	Software	Firmware
STEVAL-WBC86TX	Application Board Qi-compatible wireless power transmitter evaluation board for 5 W applications based on STWBC86	STSW-WPSTUDIO Graphical user interface for wireless power receiver and transmitter evaluation	STSW-WBC86FWBPP Firmware for STEVAL-WBC86TX wireless charger transmitter evaluation kit
STDES-WBC86WTX	Reference design 2.5 W Qi compatible wireless power transmitter reference design for wearable applications		STSW-86TWFWBPP Firmware for STDES-WBC86WTX wireless charger transmitter evaluation kit

For technical documentation, samples and online ordering, visit us at  
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