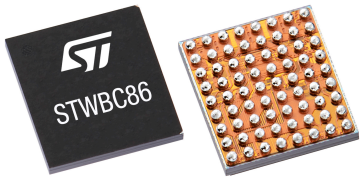
# STWBC86

Data brief

## Qi-compatible inductive wireless power transmitter for up to 5W applications




| Product status link |
|---|
| STWBC86 |

| Product summary | |
|---|---|
| **Order code** | STWBC86JR |
| **Package** | WLCSP72 |
| **Packing** | Tape and reel |

## Features

- WPC Qi 1.2.4 compatible Power Class 0 BPP
- Power Tx reference design based on A11a topology
- Up to 5W output power transfer on the receiver side
- Wide input voltage range 4.75V to 20V
- Monolithic solution with integrated Half-bridge/Full-bridge inverter and drivers for high efficiency and low BOM
- 32-bit, 64MHz ARM Cortex micro controller with 8KB SRAM
- FTP (Few Times Programmable) for Firmware patching and advanced features
- On-chip current sense
- 10-bit A/D converter
- $I^2C$ interface
- Fully Configurable GPIOs
- Accurate voltage/current measurements for FOD
- Current limit and Thermal protection
- Robust ASK,FSK communication
- Flip chip 72 bumps (3.26mm x 3.67mm)

## Application

- Smartphone charging
- Medical electronics
- Smart Wearable, Hearable Charging

## Description

The STWBC86 is a highly integrated monolithic wireless power transmitter solution suitable for applications up to 5W.

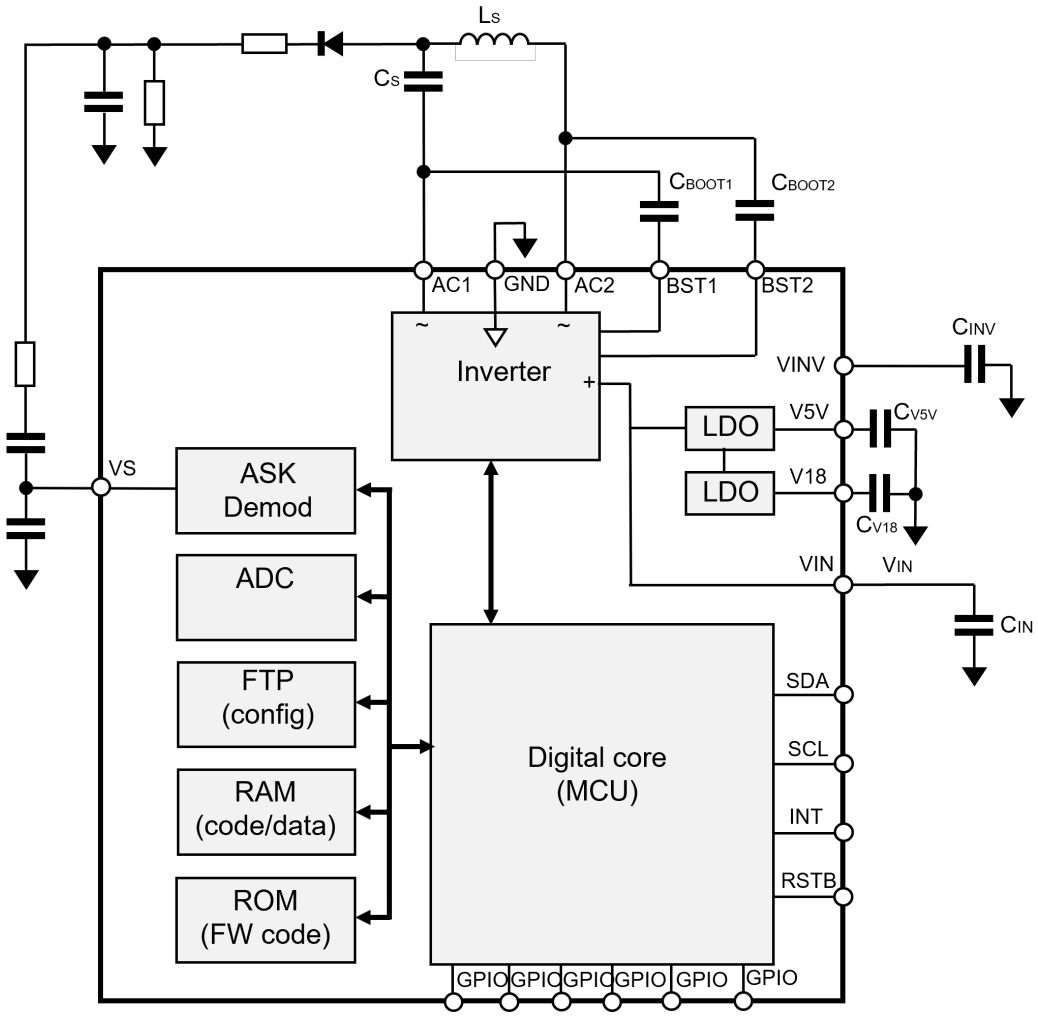
This solution requires low external BOM count. Because of the integrated low impedance Full/Half bridge inverter, STWBC86 achieves high efficiency and low power dissipation.

$I^2C$ interface allows firmware and platform parameters to be customized and the device can be configured using the embedded FTP.

Additional firmware patching also improves application flexibility of STWBC86.

The Flip Chip package and low BOM count make the device suitable for very compact applications.

# 1 Typical Application Diagram



## Revision history

Table 1. **Document revision history**

| Date | Version | Changes |
|---|---|---|
| 24-Nov-2021 | 1 | Initial release. |
| 16-Jun-2022 | 2 | Updated features. |