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.

**STWBC86**

Wireless power transmitter for up to 5 W applications

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

**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 I²C 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

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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

<table>
<thead>
<tr>
<th>Evaluation tool</th>
<th>Category</th>
<th>Software</th>
<th>Firmware</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEVAL-WBC86TX</td>
<td>Application Board Qi-compatible wireless power</td>
<td>STSW-WPSTUDIO Graphical user</td>
<td>STSW-WBC86FWBPP Firmware for STEVAL-WBC86TX wireless</td>
</tr>
<tr>
<td></td>
<td>transmitter evaluation board for 5 W applications based on STWBC86</td>
<td>interface for wireless power receiver and transmitter evaluation</td>
<td>charger transmitter evaluation kit</td>
</tr>
<tr>
<td>STDES-WBC86WTX</td>
<td>Reference design 2.5 W Qi compatible wireless power transmitter reference design for wearable applications</td>
<td></td>
<td>STSW-86TFWBPP Firmware for STDES-WBC86WTX wireless charger transmitter evaluation kit</td>
</tr>
</tbody>
</table>

For technical documentation, samples and online ordering, visit us at www.st.com/wirelesspower