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## STMicroelectronics Unveils World's Fastest 50W Qi Wireless-Charging IC

**Geneva, November 5, 2020 – STMicroelectronics (NYSE: STM)**, a global semiconductor leader serving customers across the spectrum of electronics applications, has introduced [the world's fastest Qi wireless charging IC, STWLC88](#). Delivering as much as 50W of power, the new device enables consumers to charge smartphones, tablets, laptops, and other [personal electronic devices](#) without cables as safely and nearly as quickly and efficiently as they could by plugging them in. ST's state-of-the-art 50W wireless-power IC charges smartphones two times faster than the previous-generation device.

Safe, wireless delivery of high power to charge personal electronics must address a range of challenges including efficiency, reliable communication, Foreign Object Detection (FOD), and thermal, over-voltage, and over-current protection. A long-standing member of the Wireless Power Consortium, ST has spent years crafting solutions on top of the industry-standard Qi wireless power-transfer system to address these challenges beyond the standard with patented hardware, cutting-edge signal processing algorithms, and proprietary ST SuperCharge (STSC) protocol. Together these enhancements allow ST customers to utilize the complete turnkey Tx/Rx solution consisting of the STWLC88 and the [STWBC2 digital controller](#) to achieve high power efficiently and safely, while remaining compliant with Qi specifications.

*“ST's latest STWLC88 wireless-charging IC provides the best solution for wireless-charging applications with industry-leading efficiency, highest power delivery, and maximum safety,”* said Francesco Italia, General Manager, Analog Custom Products Division, STMicroelectronics. *“With the launch of the world's fastest charger, ST has expanded the portfolio to cover a wide range of power levels to meet increasing demand for higher-power chargers in the age of 5G communications.”*

The STWLC88 incorporates multiple circuits to substantially reduce the external BoM (Bill of Materials), making it ideal for integration in a wide range of applications with restrictive PCB area requirements. Being WPC Qi 1.2.4 EPP compliant, the STWLC88 is fully compatible with all Qi EPP certified transmitters in the market. As a result, the STWLC88 offers state-of-the-art features that are critical for performance and safety and is ideal for medium- to [high-power wireless-charging applications](#).

The STWLC88 is in production and available in a 4.0mm x 4.5mm x 0.6mm WLCPS 110-bumps 0.4mm pitch package, priced from \$2.5 for orders of 10,000 pieces.

The STEVAL-ISB88RX evaluation board, containing the STWLC88 and a sophisticated GUI, is also available to simplify prototyping and significantly cut time to market with the 50W charger IC.

## **Technical Notes to Editors:**

With its fully integrated ultra-low impedance, high-voltage synchronous rectifier, and low drop-out linear regulator, the STWLC88 achieves high efficiency and low power dissipation, critical for applications that are highly sensitive to unnecessary heat buildup. The power-charger chip features dedicated hardware and advanced algorithms that were developed to address challenges in ASK and FSK communication during high power delivery. Moreover, the STWLC88 comes with highly accurate Foreign Object Detection (FOD) and an integrated accurate current-sensing system to ensure high power delivery is performed safely and in a controlled manner.

The STWLC88 can also operate in high-efficiency transmitter mode to allow high-power charge-sharing mode. This is coupled with the STWLC88's industry-first Q factor detection in a receiver device to ensure safe operation and protection to end-users.

An I2C interface allows firmware and platform developers to customize parameters in the device and the configuration can be programmed into the embedded FTP, which allows for more than 1000 times of re-programming. Additional firmware patching improves the IC's application flexibility.

For further information please go to [www.st.com/stwlc88-pr](http://www.st.com/stwlc88-pr)

### **About STMicroelectronics**

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with our 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at [www.st.com](http://www.st.com).

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