jjPLUS Showcasing with Efficient Power Conversion (EPC) at InnoVEX 2018
Wide Surface-Area, Multiple-device Wireless Power Solutions

Wireless power, one not to miss. jjPLUS and EPC, both members of the AirFuel Alliance, show how you can unleash the full potential of your designs by following the most advanced, AirFuel Resonant power standard. Go for a wireless charging home and office!

TAIPEI, Taiwan, June 1, 2018 — jjPLUS Corporation, a design manufacturer of advanced wireless communication and wireless power embedded solution company, will demonstrate the next-generation magnetic resonance wireless power transfer (WPT) technology at InnoVEX 2018 in Taipei with its collaborative technology partner - Efficient Power Conversion Corporation (EPC) at TWTC Hall 3, booth no. G0309a on June 6 – 8. Both jjPLUS and EPC participated in the AirFuel working committees and in the AirFuel Developers Forum in March 2018, which has quickened this new, joint solution's time to market.

Wireless Power Transfer (WPT) - From Magnetic Inductive to Magnetic Resonance

From electric toothbrushes to the latest smartphones, magnetic inductive wireless charging has created significant awareness, ascertaining that wireless power is ready to change the way we live. Magnetic resonant technology furthers such ubiquity of wireless power at an even quicker pace.

"Delivering more power, at a longer distance, as well as over a larger surface area for powering multiple electronic devices are our target wireless power transfer systems," said Jeff Shu, CEO of jjPLUS Corporation. "Clearly, magnetic resonant technology is the key for ubiquitous implementation of wireless charging by enabling large surface area transmission, spatial freedom for placement of receiving devices, and the ability to power multiple devices simultaneously".

"Wireless power has the potential to change the way we live, work and play, but first-generation technology has major limitations. That's why AirFuel members like jjPLUS and EPC are working with next-generation Resonant technology," said Sanjay Gupta, President, AirFuel Alliance. "Resonant delivers a superior consumer experience which is the key to driving wider consumer and business adoption of wireless power worldwide. We're excited about the new solutions from jjPLUS and EPC, the role our Developer Program had in shorten their time to market, and the innovation that's yet to come."

"It's not about a company's initiative. It is about smart cities powering the way we live. What do consumers want? They want convenience and freedom by ditching power cords, charging devices wherever and whenever they go. Wide adoption relies on joint efforts of manufacturers, governments and consumers. Magnetic resonant power is real "wireless" without requiring you to put a device on a specific point of charging, but anywhere on a wide surface area that users much prefer", said Alex Lidow, CEO and co-founder of Efficient Power Conversion Corporation.

jjPLUS /EPC CPT030A Wide Surface-Area Wireless Power Transmitter

Based on magnetic resonance technology, CPT030A wireless power transmitter is the PTU (Power Transmitting Unit) part of a Wireless Power Transfer system with the capability to support one transmitter to multiple-receiver configuration. CPT030A's special surface-area antenna design can support highly-resonant pairing of up to 8 PRUs (Power Receiving Unit) with different power receiving levels simultaneously.

At the core of CPT030A design is EPC's eGaN® FETs which operate at 6.78 MHz frequency, following the resonant charging standards of AirFuel Alliance, while maximizing wireless power system efficiency with unmatched reliability.

Wireless power transfer to PRUs is by the first-come-first-served method where each PRU registers its required receiving power to PTU before establishing Wireless Power Transfer. The PTU makes the decision to establish Wireless Power Transfer to an incoming PRU, to the surface-area antenna when the total remaining power (PTU's rated power for wireless power transfer minus the sum of all registered power) is equal to or greater than the incoming PRU's receiving power to be registered. CPT030A manages the incoming and outgoing PRUs registered

power status with the capability to adapt to changing wireless power network conditions with optimized wireless power transfer efficiency, power-saving and fault handling.

Advanced and Scalable Surface-Area Antenna Design

In order to provide resonant power to the surface area of the antenna without interference to the surrounding devices, the magnetic field has to be confined within about 2 inches from the antenna while spreading across its surface evenly. With precise calculation and simulations, the Interlocking Honeycomb antenna design manipulates the magnetic field precisely, providing 100% spatial freedom for multiple devices to drop-and-power without being fixed to a position.

In addition, this antenna can also be built on surfaces of many sizes and shapes - furniture, wall and floor. As the surface size is larger, more power is needed to charge the devices at the same time. This is where the importance of fast and efficient power switching circuit design comes into play in a magnetic resonance-based transmitter where the operating frequency is at typical MHz range, imposing a heavy toll on the components used.

About jjPLUS Corporation

Established in 2004, jjPLUS is a forerunner design manufacturer from Taiwan in wireless communication and wireless power technologies. With deep domain knowledge and engineering expertise, jjPLUS has always been developing and designing collaboratively with fundamental technology partners to offer OEMs and ODMs the latest and the best by integrating jjPLUS wireless solutions, gracefully, into their solutions. For more information about jjPlus, please visit www.jjplus.com

About Efficient Power Conversion Corporation

EPC is the leader in enhancement mode gallium nitride-based power management devices. EPC was the first to introduce enhancement-mode gallium-nitride-on-silicon (eGaN) FETs and integrated circuits as power MOSFET replacements in applications such as DC-DC converters, wireless power transfer, envelope tracking, RF transmission, power inverters, remote sensing technology (LiDAR), and class-D audio amplifiers with device performance many times greater than the best silicon power devices. eGaN is a registered trademark of Efficient Power Conversion Corporation, Inc. Visit www.epc-co.com.tw.

Contact:

Gary Chi
jjPlus Corporation
(gary_chi@jjplus.com)

Winnie Wong
Efficient Power Conversion Corporation
(winnie.wong@epc-co.com)