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Pick Your Power with Microchip's New Electric Vehicle Charger Reference Designs

Flexible and scalable EV charger reference designs are designed to meet unique regional requirements

CHANDLER, Ariz., Aug. 07, 2024 (GLOBE NEWSWIRE) -- The reliability and performance of Electric Vehicle (EV) chargers are critical to drive global market adoption. EV manufacturers are focused on delivering the most robust, weather-resistant and user-friendly EV chargers. To accelerate the time to market of an EV charger, Microchip Technology **(Nasdaq: MCHP)** today announces three flexible and scalable **EV Charger Reference Designs** including a Single-Phase AC Residential, a Three-Phase AC Commercial with Open Charge Point Protocol (OCPP) and System-on-Chip (SoC) and a Three-Phase AC Commercial with OCPP and Display.

Most of the active components for the EV charger reference designs are available from Microchip, including the microcontroller (MCU), analog front-end, memory, connectivity and power conversion. This significantly streamlines the integration process, enabling manufacturers to speed time to market for new charging solutions.

"Microchip's E-Mobility team is focused on developing reference designs that our customers can directly use and benefit from," said Joe Thomsen, corporate vice president of Microchip's digital signal controller business unit. "We want to help our customers shorten design cycles by offering complete solutions such as these new EV charger references designs, while also supplying the hardware, software and technical support."

Microchip's EV charger reference designs enable manufacturers to scale depending on the target market with a range of solutions to meet the needs of residential and commercial charging applications. These reference designs offer complete hardware design files and source code with software stacks that are tested and compliant to communication protocols, including OCPP. OCPP offers manufacturers a standard protocol to communicate between the charge point or charging station and a central system. This protocol is designed to enable interoperability of the charging applications regardless of the network or vendor.

Highlights of Microchip's EV Charger Reference Designs

The **Single-Phase AC Residential EV Charger Reference Design** offers a cost-effective and convenient solution for home charging, where a single-phase supply is used. The on-board high-performance energy metering device with automatic calibration simplifies the production process. The design has integrated safety protection features including Protective Earth Neutral (PEN) fault detection and Residual Current Device (RCD) detection. The **Three-Phase AC Commercial with OCPP and Wi-Fi® SoC EV Charger Reference Design** is intended for high-end residential and commercial charging stations. It features

OCPP 1.6 stack integration for communication with charging networks and Wi-Fi SoC for remote management.

The **Three-Phase AC Commercial with OCPP and Display EV Charger Reference Design** caters to commercial and public charging stations with a focus on robust operation including a completed architecture review according to UL 2231. It is designed to support up to 22 kW with bidirectional charging capabilities and a modular architecture. The design also features a robust Graphical User Interface (GUI) with a Thin-Film Transistor (TFT) screen and touch input designed to withstand harsh environments.

Navigating the global EV charging landscape is complex and fragmented, but Microchip offers the key technologies and solutions to significantly simplify the design process through implementation. Beyond the reference designs, Microchip supplies the hardware, software and global technical support. To learn more about Microchip's EV, HEV and PHEV solutions, visit the **website**.

Development Tools

The EV Reference Designs are supported by **MPLAB® X Integrated Development Environment (IDE)** to help designers minimize development time, as well as **MPLAB Harmony v3** and **MPLAB Code Configurator**.

Resources

High-res images available through Flickr or editorial contact (feel free to publish):

- Application image: **www.flickr.com/photos/microchiptechnology/53866067280/sizes/l**

About Microchip Technology:
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