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Microchip Introduces Electric Two-Wheeler Ecosystem to Accelerate E-Mobility Innovation

Scalable and flexible solutions to design diverse models of e-scooters and e-bikes

CHANDLER, Ariz., March 17, 2025 (GLOBE NEWSWIRE) -- The electric two-wheeler market is transforming the transportation industry as consumers embrace e-scooters and e-bikes for both recreational use and daily commuting. Microchip Technology **(Nasdaq: MCHP)** today announces the launch of its **Electric Two-Wheeler (E2W) ecosystem**, a comprehensive suite of pre-validated reference designs that addresses key challenges in e-scooter and e-bike development, including power efficiency, system integration, safety and time-to-market. By offering automotive-grade, scalable solutions, Microchip enables manufacturers to streamline development and build reliable, feature-rich electric two-wheelers.

Microchip's automotive-grade components and modular reference designs provide a flexible, scalable platform that adapts to various power levels and feature requirements. Backed by comprehensive design files, schematics, Bill of Materials (BOM), and global technical support, developers can quickly bring next-generation e-scooters and e-bikes to market with optimized power, safety and intelligence.

"Manufacturers often struggle with optimizing power efficiency, ensuring seamless system integration and meeting evolving safety standards," said Joe Thomsen, corporate vice president of Microchip's dsPIC business unit. "Microchip's Electric Two-Wheeler Ecosystem directly addresses these design challenges with pre-validated, high-performance solutions that help accelerate product development and enhance vehicle reliability."

Key Solutions of Microchip's E2W Ecosystem

Optimized Power and Battery Efficiency

- Advanced Battery Management System (BMS) with intelligent power conversion and sensing maximizes energy utilization to extend battery life and vehicle range, as well as increases safety.
- 48V to 12V Power Conversion Reference Design ensures high-efficiency power distribution, improving overall system reliability.

Fast and Flexible Charging Solutions

- 7.4 kW Single-Phase AC EV Charger Reference Design offers reliable home charging with built-in protection features.

- USB-PD Dual Charging Port is designed to provide fast, flexible charging for mobile devices to enhance user convenience.

High-Performance Traction Motor Control

- 350W to 10 kW traction motor control reference designs deliver smooth acceleration, improved energy efficiency and precise control.
- Pre-integrated firmware and modular design simplify system development and reduces time-to-market.

Seamless System Integration and Smart Vehicle Control

- Vehicle Control Unit (VCU), Remote Keyless Entry (RKE), Hands-On/Off Detection and Acoustic Vehicle Alerting System (AVAS) work together to enhance the security and safety of the electric two-wheeler.
- Integrated telematics and asset tracking provide real-time monitoring, theft prevention and fleet management capabilities.

Intelligent Touch Display and Connected User Experience

- 720x720 round LCD Instrument Cluster using Microchip's SAM9X75 MPU with MIPI® DSI, dual GbE and NAND Flash offers real-time data visualization and smart connectivity.
- maXTouch® ATMXT640UD and ATMXT641TD touchscreen controllers offers accurate touch performance in extreme weather and rain with thick gloves.
- Cloud-enabled remote diagnostics and performance tracking enhance the rider experience and optimize fleet operations.

Microchip's Electric Two-Wheeler Ecosystem delivers pre-validated, high-performance solutions that help manufacturers reduce development time, optimize power efficiency and enhance safety in e-scooters and e-bikes. To learn more, visit Microchip's Electric Two-Wheeler **web page**.

Resources

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

- Application image: **www.flickr.com/photos/microchiptechnology/54328196510/sizes/l**

About Microchip Technology:
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control and processing solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company's solutions serve over 100,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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Editorial Contact:
Kim Dutton
480-792-4386
kim.dutton@microchip.com

Reader Inquiries:
1-888-624-7435

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