June 30, 2022

New maXTouch® Knob on Display™ (KoD™) Touch Controller Family Disrupts Traditional Touchscreen Designs

maXTouch KoD controller enables innovative Human Machine Interface (HMI) solutions by combining mechanical knobs with existing multi-touch displays

CHANDLER, Ariz., June 30, 2022 (GLOBE NEWSWIRE) -- Many automotive and industrial touch HMI designers are looking to merge the benefits of a mechanical rotary encoder input with the flexibility of modern multi-touch displays. Microchip Technology Inc. **(Nasdaq: MCHP)** today announces the **maXTouch® Knob on Display™ (KoD™) controller** as the first automotive-grade touchscreen controller family to natively support the detection and reporting of capacitive rotary encoders, as well as mechanical switches on top of a touch panel. Unlike traditional mechanical rotary encoders, this new technology enables the mounting of the knob directly onto the display without an opening in the panel or any customization of the touch pattern, increasing design flexibility and system cost savings.

The KoD technology eliminates the need for custom touch sensor patterns, providing designers the ability to easily implement a different knob count, shape and position to accommodate a variety of end-user products. The customized configurations are adjustable without changing the embedded firmware of the maXTouch KoD touch controller, leading to a faster and more flexible development cycle. The maXTouch KoD controller allows designers to keep the comfort of a rotary encoder input device but combine it with a modern and innovative interior design using smart surfaces and multi-touch displays.

An added benefit designers can expect to experience is the ease of building a sealed Human Machine Interface (HMI) module, which is increasingly popular for in-home appliance and industrial applications. Using a knob on a display will also increase safety for the end user, for example, they won't need to look at the display while driving to adjust their sound or air conditioning.

"Modern user interfaces commonly use multi-touch displays, removing mechanical keys for cutting-edge designs. Yet, functions like temperature or audio volume remain best controlled though a rotary encoder," said Clayton Pillion, vice president of the Human Machine Interface business unit at Microchip Technology. "The new maXTouch KoD technology offers the benefits of both worlds by providing the support of a capacitive rotary encoder with a turn-key touch controller family and a comprehensive suite of dedicated tools for a fast implementation."

With the release of the maXTouch KoD family, Microchip offers two variants to allow customers the design freedom and flexibility to choose how they will implement the capacitive rotary encoder. The KD variant enables customers to choose their knob design

partner and create their own solution using a reference design jointly developed with BNL Bearings—offering the option to fully customize the design for specific applications.

The additional MK variant supports the Magic Knob™ developed by Panasonic Industry Co., Ltd. While keeping the flexibility to be mounted on standard touch sensor patterns, the Microchip Panasonic Magic Knob (MPMK) solution provides a high level of customization for rotation and push haptic feedback, as well as for the top cover material selection.

Development Tools
Microchip provides a comprehensive suite of both hardware and software development tools to shorten the development cycle with a capacitive rotary knob.

- Hardware:
  - **ATEVK-MXT2912TDAT-A: 15.6”** / **ATEVK-MXT2113TDAT-A: 13.3”** OGS touch panel kit including development board with USB bridge
  - Capacitive rotary encoder knob reference design with 30 detents and push functionality
- Software:
  - maXTouch® Studio (IDE - development tool) with dedicated KoD family plug-ins for knob design and parameter settings

Availability
The **maXTouch Knob on Display (KoD) controller** is currently available for purchase. To purchase, contact a Microchip sales representative.

maXTouch KoD Family Overview:

- ATMXT2912TD-A KD variant; up to 112 touch channels; LQFP 176
- ATMXT2113TD-A KD variant; up to 97 touch channels; LQFP 144
- ATMXT2912TD-A MK variant; up to 112 touch channels; LQFP 176
- ATMXT2113TD-A MK variant; up to 97 touch channels; LQFP 144

Resources
High-res images available through Flickr (feel free to publish):

- Application image:
  www.flickr.com/photos/microchiptechnology/52115358955/sizes/l

About Microchip Technology
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control 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 more than 120,000 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**.

Note: The Microchip name and logo, the Microchip logo and maXTouch are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. Knob on Display and KoD are trademarks of Microchip Technology in the U.S.A. and other countries. All other trademarks mentioned herein are the property of their respective companies.

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

Reader Inquiries:
1-888-624-7435

Source: Microchip Technology Inc.