June 27, 2019

 MICROCHIP

# Accelerate EMI Qualification of Automotive Touchscreens with New Capacitive Touch Controllers

**maXTouch® TD family of touchscreen controllers significantly increases signal-to-noise ratio in nine- to 20-inch touchscreens**

CHANDLER, Ariz., June 27, 2019 (GLOBE NEWSWIRE) -- To address electromagnetic interference (EMI) and electromagnetic compatibility (EMC) challenges faced by developers of automotive touchscreens, three new **maXTouch® touchscreen controllers** and optimization services are now available from Microchip Technology Inc. **(Nasdaq: MCHP)**. The TD family of touch controllers features a new differential mutual signal acquisition method that significantly increases the Signal-to-Noise Ratio (SNR). This allows the use of very thick glass or plastic cover lenses and multi-finger thick gloved touch support up to the equivalence of 4.5 mm polymethyl methacrylate (PMMA).

The **MXT1067TD**, **MXT1189TD** and **MXT1665TD** devices add several variants that are cost optimized for nine- to 13-inch automotive touchscreens to Microchip's portfolio and are complemented by the recently-introduced MXT449TD, MXT641TD, MXT2113TD and MXT2912TD devices supporting up to 20-inch touchscreens. Each device addresses aspects of the increasing demand for functional safety features and is designed in accordance with the Automotive SPICE Level 3 capability and ISO 26262 Automotive Safety Integrity Level (ASIL) B requirements.

All devices in the TD family feature a unique waveform shaping capability to optimize the performance of the touch controller's radiated emissions through an EMI optimization tool. Working with product experts in Microchip's worldwide application design centers, this tool allows developers to enter user-defined RF limits and tune the shape of the transmitted burst waveform used for the touch sensing acquisition.

Waveform shaping is achieved through firmware parameters derived from the tool and helps designers to position the fundamental burst frequency to work together with other in-vehicle applications, such as the remote keyless entry system. The resulting parameters are then simply added to the maXTouch configuration file, which customizes the touch controller performance to the individual customer design. This process can save the designer many hours, or even weeks, of expensive EMC test chamber time by eliminating experimentation with different configuration settings to achieve the desired EMI/EMC performance.

"Our approach to automotive touchscreens greatly simplifies and reduces design times, allowing developers to use the same design environment and product features for various sizes, uses cases, different cover lens materials and thicknesses across vehicle models," said Fanie Duvenhage, vice president of Microchip's Human Machine Interface business unit. "Microchip's devices are supported by eight dedicated application and sensor design centers around the world to help customers with configurations dependent on everything

from screen size and aspect ratio to the type and provider of the display and the architecture of the complete stack-up."

Microchip provides the most comprehensive automotive touchscreen controller portfolio in the market. Target applications are center stack displays and navigation systems but are also suitable for industrial applications such as automation and manufacturing stations.

## Development Tools
An evaluation kit is available for each of the parts in the new maXTouch touchscreen controller family. Kit numbers are ATEVK-MXT1067TDAT-A (I2C), ATEVK-MXT1189TDAT-A (I2C), ATEVK-MXT1189TDAT-C (SPI), ATEVK-MXT1665TDAT-A (I2C) and ATEVK-MXT1665TDAT-C (SPI). Each kit includes a Printed Circuit Board (PCB) with the maXTouch touchscreen controller, a touch sensor on a clear glass lens, the Flat Printed Circuit (FPC) to connect to the sensor, a bridge PCB to connect the kit to the host computer via USB, as well as cables, software and documentation. All parts are also compatible with maXTouch Studio, a full software development environment to support the evaluation of maXTouch touchscreen controllers.

The maXTouch EMI optimization service will be made available as part of the system support provided by one of Microchip's worldwide application design centers.

## Pricing and Availability
The MXT1067TD, MXT1189TD and MXT1665TD devices are available now in sampling and volume quantities in TQFP128 (MXT1067TD only) and LQFP144 packages. Pricing is available upon request. For additional information, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip's website. To purchase an evaluation kit, visit our **purchasing portal** or contact a Microchip authorized distributor.

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

- Application image:
  **www.flickr.com/photos/microchiptechnology/48044604603/sizes/l**
- Chip image: **www.flickr.com/photos/microchiptechnology/48044660178/sizes/l**

## About Microchip Technology
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