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Microchip Delivers the Smallest Automotive maXTouch® Controllers for Smart Surfaces and Multi-function Displays

New touch controller family offers multi-finger thick glove and weather-proof operation in a turn-key solution for easy integration

CHANDLER, Ariz., June 29, 2020 (GLOBE NEWSWIRE) -- To help enhance and ease today's driving experience, automotive manufacturers are implementing additional touch displays beyond the center infotainment display (CID). Supporting the application of these secondary displays with advanced features, Microchip Technology Inc. **(Nasdaq: MCHP)** today announced the extension of its market-leading maXTouch® portfolio with the new **MXT288UD touch controller family**, the industry's smallest automotive grade packaged touch screen controllers. The MXT288UD-AM and the MXT144UD-AM devices offer low power mode, weatherproof operation and glove touch detection in multi-function displays, touch pad and smart surfaces for vehicles, motorcycles, e-bikes and car-sharing services.

Secondary touch surfaces can be placed in both the interior of cars and exterior of a motor vehicle, such as handlebars, doors, electronic mirrors, control knobs, the steering wheel, between seats or in an armrest. With the MXT288UD family's small 7x7 mm automotive grade VQFN56 package, tier one suppliers can now reduce board space by 75 percent and greatly minimize the overall Bill of Materials (BoM) for these compact applications — all while exceeding the requirements for excellent and reliable touch performance in the market. The family's low power wait-for-touch mode consumes less than 50 µA, remaining responsive for the user, even if the display switches off to save power or to avoid disturbing the driver at night. The system will wake by a touch event anywhere on the touch surface.

In addition, the MXT288UD-AM and the MXT144UD-AM devices enable detection and tracking of multi-finger thick gloves through a wide variety of overlay materials and thicknesses, like leather, wood or across uneven surfaces — even in the presence of moisture. Normally the dielectric constant of these overlay materials would limit the detection of the touch, however these devices provide a unique solution to reliably detect and track multi fingers with a high signal-to-noise ratio (SNR) and through a proprietary differential mutual acquisition scheme. For example, in car sharing applications, this reliable touch functionality helps users access a car from the outside by tracking touch coordinates on an exterior display in any environment, like rain, snow or extreme heat. Motorcycles and other motorbike vehicles also benefit from such weatherproof designs. As a turnkey solution, the MXT288UD family provides proven firmware, developed according to Automotive SPICE® processes and is AEC-Q100 qualified — making it easy for today's automotive manufacturers to integrate into existing systems at a lower risk with faster time to market.

“Automotive OEMs are looking to enhance the user experience through smart surfaces and multi-function displays, while still providing a convenient and distraction free environment,” said Fanie Duvenhage, vice president of Microchip’s human machine interface and touch function group. “Addressing these needs in the market, Microchip is building on its already leading portfolio of automotive touchscreen solutions with the new MXT288UD touch controller family — bringing increased performance and cost savings to the industry’s smallest package of automotive grade touch controllers.”

Development Tools and Design Services
Both software and hardware support are available. Software tools includes maXTouch Studio and a maXTouch analyzer. For the MXT288UD, the hardware offered includes an **evaluation kit** with a printed circuit board (PCB) and a 5” capacitive touch panel, while the MXT144UD’s **evaluation kit** includes a PCB and a 2.9” capacitive touch pad. For both devices, a bridge PCB is included with a USB connection for interfacing to a computer when running maXTouch Studio.

To help with the development and tuning of touch sensors and integration into the final application, Microchip’s touch function group and field application engineers provide best-in-class, worldwide support.

Pricing and Availability
The MXT288UD touch controller family is available today in mass production. For additional information, contact a Microchip sales representative, authorized worldwide distributor, or visit Microchip’s website.

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

- Full Application image:
  https://www.flickr.com/photos/microchiptechnology/49945887177
- Door Module Display image:
  https://www.flickr.com/photos/microchiptechnology/49945590501
- Handlebar Display image:
  https://www.flickr.com/photos/microchiptechnology/49945858067
- Circular Touchpad image:
  https://www.flickr.com/photos/microchiptechnology/49945562186
- ATMXT144UD Tool image:
  https://www.flickr.com/photos/microchiptechnology/49945529666
- ATMXT288UD Tool image:
  https://www.flickr.com/photos/microchiptechnology/49945523351

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