Touch and 3D Gesture Control
Welcome to the powerhouse of touch. Microchip offers a compelling solution for every touch use case – from single buttons to touch pads and touch screens to proximity detection and 3D gesture control for the consumer, industrial and automotive market.

Microchip’s touch solutions excel based on our deep knowledge and experience. Regardless if you choose a touch turnkey product or a touch library for a microcontroller – you always benefit from decades of touch experience. Microchip’s touch product line covers all use cases in touch - incl. functional safety relevant applications in automotive.

All technologies behind our touch solutions are developed in house.

**Technologies**
- Adaptive noise avoidance
- Water-tolerant touch buttons, sliders and wheels
- Water-tolerant touch pads and screens
- Hardware touch engines (CIPs) on microcontrollers
- Driven shield
- Feeding line length compensation
- Low-power wake up on touch
- Mutual capacitive sensing
- Self capacitive sensing
- Autonomous touch sensing
- Parallel acquisition
- Auto calibration

**Use Cases**
- Buttons
- Sliders
- Wheels
- Proximity
- Hands-on detection
- Lowest power touch pads
- Touch screens
- Touch pads with surface-gesture detection
- Car door handle
- Appliance safety touch
- Automotive functional safety touch
- 3D gesture sensing
Why Capacitive Touch?
From your customers perspective, the user interface is the product.
Innovative, modern and attractive. In short, high-selling products all have one thing in common—they all have a user-friendly touch interface.

Adding touch to your product adds value to your product. Interfaces with mechanical push buttons have several moving parts, significantly decreasing reliability. Mechanical buttons also require complex design and assembly as well as a major investment in tools.

Why Touch Now?
You're ready for touch on a global scale. Touch has matured to include water-tolerant, noise-robust and low-power solutions. Next generations will see touch as a requirement. The time is now don’t miss the touch train.

Why Touch With Microchip?
With over a decade of experience in automotive touch, Microchip is the leading provider of robust touch solutions. Furthermore, we focus on our touch tool chain to ensure your touch journey is as short as possible, minimizing your time to production. Microchip is also aware that you operate globally. We will provide native language support at your design locations and at your or your CM’s production facilities. Local support on global scale—your risk-mitigating benefit.

Turnkey Touch Products
Turnkey touch controllers provide the fastest and easiest way to go from mechanical buttons to modern touch buttons or displays with touch. Our turnkey touch products include ready to use controllers for touch buttons, sliders and wheels as well as controllers for touch pads, touch screens and proximity solutions for consumer, industrial and automotive applications. No programming experience is needed, just connect the sensor and turn on power. All controllers communicate to the host via standard serial interfaces, such as I2C, SPI or USB as well as GPIO.

Microcontroller With Touch Integration
Microchip offers a wide range of 8-, 16- and 32-bit devices with our PIC®, AVR® and SAM MCU and MPU series. All of these platforms enhance touch with dedicated on-chip touch Core Independent Peripherals (CIPs).

Microchip’s touch library is supported by all of Microchip’s code configurators, enabling you to easily access Microchip’s decades of experience in capacitive-touch design. To save code space, enhance usability and speed up the development of your touch project, Microchip provides the touch library individually tailored to your use case via MPLAB® Code Configurator and Atmel START.

Implementing touch on an MCU has never been easier!
Microchip’s Performance Advantage
Regardless if you chose a turnkey touch product or a touch library to integrate with your code—you will benefit from Microchip’s performance in touch.

Noise Robustness
Noise, also known as conducted noise, is a common challenge for touch implementations. Microchip provides state-of-the-art software and hardware filters to overcome noise - meaning to enable touch buttons to work through the noise. Noise-avoidance technologies, such as frequency hopping are used.
• High Signal-to-Noise Ratio (SNR)
• IEC61000, EFT and BCI tested, 15V+ Rms

Water-Tolerant Touch
Water-tolerant touch is a key feature that Microchip integrated into turnkey and MCU-based touch solutions. Users expect their touch interfaces to work in a range of conditions (including wet surfaces) without the need to clean their hands or wipe them dry every time they use their devices.

Touch on Metal – Waterproof Touch
Microchip offers Metal-over-Capacitive (MoC) technology enabling:
• Metal surfaces, stainless steel or aluminum
• Sense through any thickness of glove
• Waterproof designs
• Braille-enabled interfaces
Metal-over-capacitive technology is compatible with all turnkey and MCU-based touch products.

Low(est) Power
Requirements for low power are not limited to wearable devices—it’s a recurring requirement in all markets including automotive. Dedicated hardware on PIC, AVR and SAM devices enable the lowest power touch with multiple capacitive sensing below 5 μA.

High Button Count Support – Mutual Touch Sensing
Microchip has refined and enhanced the method to scan a large number of buttons as a matrix. Mutual touch enables costs savings in many aspects:
• Reduced amount of feeding lines to slim connecting (flexPCB) tails
• Reduces pin count required for touch to enable cost-efficient small-footprint parts
• Dramatically reduced development time by Microchip’s unique inherent feeding line length compensation

Safety-Certified Touch Sensing
Functional safety, Failure Modes and Effects Analysis (FMEA) is a market driver for touch. For the market of appliances, Microchip offers products (turnkey and libraries) certified according to IEC/UL 60730 Safety Class-B standards. Certificates are published on Microchip’s website at www.microchip.com/touch.

Automotive Touch
Microchip is the leading provider for automotive touch - screens, buttons, touch pads, kick sensor - inside and outside the car. Our solutions are tailored to meet the noise robustness and emission requirements. Our experience in functional safety applications combined with automotive grade hardware ensures to enable your designs.

Buttons, Sliders Wheels and Proximity
Turnkey Touch Products

Our turnkey touch products pave a straight path for you to implement touch to your user interface. The MTCH products enable you to replace mechanical buttons without any further changes at your product - touch, plug and play. With a streamlined and touch-focused functionality, as well as simple GUI-based configuration, turnkey touch products offer the shortest time to market - ideal for you first touch design. Starting with a single button, to sliders, wheels and up to 64 buttons—Microchip offers fast and reliable turnkey touch solutions.

MTCH10x
- 1 to 8 sensing channels
- Digital output
- Water-tolerant touch
- Simple tuning process
- Direct button replacement

CAP1xx
- 3 to 14 sensing channels
- I²C interface
- Water-tolerant touch
- LED driver—high resolution PWM

AT42QTxxxx
- 1 to 64 sensing channels
- UART/SPI/I²C interface
- EN/IEC 60730 certification on AT42QT1481 and others

Touch on Microcontrollers – Microchip’s Touch Libraries

Microchip offers complete touch libraries and industry leading tools to enable touch sensing on all PIC, AVR and SAM devices. All platforms support touch by hardware through Core Independent Peripherals (CIPs). These touch enabled microcontrollers ensure a smooth integration with any other task as well as low power and water tolerance for your touch designs.

Benefits of MCUs With Touch

Our MCUs feature dedicated CIPs to offload touch functionality from the MCU core.
- Hardware Capacitive Voltage Divider (HCVD)
- ADC with Computation (ADCC)
- Peripheral Touch Controller (PTC)

These touch modules support self-and mutual-capacitance measurements, providing you with great flexibility. Due to the autonomous operation, CPU resources and power consumption are minimized, even for high key count designs. With built-in automatic tuning and calibration, Microchip provides the highest quality of touch even under harsh environments.
- 8-16-32-bit platform
- Smallest packages include WLCP
- Cost in production minimized with SOIC/SSOP
- From 6-pin to 144-pin devices, up to 1 MB Flash memory
- On-chip integration options include USB, CAN, LIN, IrDA®, wireless protocol stack, segmented LCD and graphics
- Automotive certified MCU’s in 8/16/32-bit.

Touch Development Tools

Microchip supports touch configuration right from the Integrated Development Environment (IDE). You can configure your touch design easily and the IDE generates ready-to-use code - tailored to your design.
- MPLAB X IDE features MPLAB Code Configurator (MCC)
- Atmel Studio 7 features Atmel START

Our development environments are also available in the cloud, giving you the fastest access to the broadest MCU portfolio with touch.
- mplabxpress.microchip.com
- www.microchip.com/start

Creating the reliable touch code is one side of the coin - providing tools for touch debugging, data logging etc. another. Also that is covered out of the box - one click and the touch configurators provide the code to speak to our data visualizer - saving your valuable time.
2D Touch Sensing – Touch Pads and Touch Screens

Microchip, as the leading provider in touch technology, offers a wide range of solutions for 2D touch pads and touch screens for the consumer, industrial and automotive markets.

Our touch libraries focus on lowest-power 2D touch pads, high level of microcontroller integration and on-chip surface gesture detection (swipes, taps, pinch/zoom)—features needed in wireless headphones, remote controls or small touch pads on steering wheels.

2D Touch Libraries – Touch Pads on Microcontroller

2D Touch on microcontroller is a solution for smaller touch pads and touch screens. The key element is the cost efficient integration of the user interface into the main controller of your device. Instead of a dedicated touch controller your main MCU with the 2D touch library from Microchip integrates that function.

Our 2D touch surface libraries are available for 8-bit PIC and AVR microcontroller and 32-bit SAM microcontroller. Three low-power and cost-efficient platforms.

2D Touch for Embedded Devices

Customers these days expect a “phone like” user interface on many products including wearable/IoT devices, remote controls, audio devices, in their cars and more. These expectations are paired with requirements like low-power consumption, small footprint and feature integration to enable new form factors:

- Headphones
- Remote controls
- VR/AR head sets
- IoT – home automation (connected light switches, thermostats)
- Smart speakers (home assistants)
- Touch pads on steering wheels

Features

The 2D Touch Surface Libray provides you with single- or dual-finger XY coordinates, just like regular touch controllers. Our 2D Touch Surface Libraries support water-tolerant touch pads as well as dual-finger gestures such as pinch/zoom. Microchip provides all you need to elevate the user experience of your embedded product. In addition, we provide on-chip surface gesture recognition—enabling truly intuitive user interfaces.

Use a swipe on your thermostat to change a setting or enjoy the beloved pinch/zoom. The 2D Touch Surface Library brings phone-like UI elements to embedded devices.

Tracking

- Single and dual finger tracking
- Water tolerant touch
- 100 Hz+ report rate

Surface Gestures

- Double tap, triple (single and dual finger)
- Long press (single and dual finger)
- Swipe and swipe and hold (single and dual finger)
- Rotations
- Pinch/zoom

We deliver the 2D Touch Surface Library to your project, tailored to your needs through our code configurator. Touch pad support is built into MCC and START.
2D maXTouch® Controller Family

**Turnkey Solution for Multi-Finger Robust and Reliable Touch Pads and Screens**

The maXTouch controller family provides a leading projected capacitive technology for touchscreens and touch pads. It supports single-finger, multi-fingers and gloved-finger operation. Regardless of the operating environment—hot or cold, dry or wet, noisy power supply or strong radiating surrounding devices—maXTouch controllers are designed for robust and reliable operation without compromising touch performance.

The maXTouch portfolio covers solutions for all touch surfaces and touch screens up to 24” diagonal size. Additionally, I2C, SPI, and USB communication interfaces are available. maXTouch controllers embed best-in-class and proven touch algorithms which ease the touch system development and significantly reduce time to market.

**Exceptional Touch Performance**

maXTouch technology combines the best of mutual and self-capacitance sensing method to ensure optimal touch performances.

**Moisture Tolerance**
- No false touch in the presence of water
- Reliable finger tracking through water droplets

**Accuracy and Speed**
- Up to 16 concurrent touch tracking
- Up to 250 Hz reporting rate with active noise filtering
- Below 1 mm linearity and accuracy
- Best edge performance

**Support for Various Industrial Designs**
- Thick front panel of glass or plastics
- Non-rectangular shape

**Glove Support**
- Multi-gloved finger tracking
- Up to 5 mm glove thickness

**Embedded Touch Gestures**
- Single-finger gesture such as tap, double-tap or flick
- Dual-finger gesture such as pinch and rotate

**Outstanding Noise Immunity**

maXTouch technology has superior Signal-to-Noise Ratio (SNR), which enables you to successfully combat various sources of electromagnetic interferences such as:
- Injected current noise
- Display radiated noise
- Backlight and motor radiated noise
- Fast transient current

maXTouch devices are built on a highly parallel sensing architecture and carry multiple hard-wired analog and digital filters. Combined with a high-performance and low-power CPU core, maXTouch devices are capable of maintaining a fast reporting rate and excellent touch performances in the presence of severe electromagnetic noise sources. Additionally, all maXTouch devices are designed to meet high Electrostatic Discharge (ESD) requirements.

maXTouch devices have an unmatched track record for touch panels in the automotive, home appliances, medical and industrial markets that have successfully passed the industry-related EMC standards.
### Commercial and Industrial Devices

<table>
<thead>
<tr>
<th>Typical Screen Size</th>
<th>Device</th>
<th>Package</th>
<th>Interface</th>
<th>HID (Windows®)</th>
<th>Passive Stylus</th>
<th>Gestures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–4&quot;</td>
<td>MXT144U-MAU</td>
<td>38-pin QFN</td>
<td></td>
<td>No</td>
<td>No</td>
<td>Single- and dual-finger</td>
</tr>
<tr>
<td></td>
<td>MXT144U-UU</td>
<td>36-pin WLCSP</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3–7&quot;</td>
<td>MXT336U-MAU</td>
<td>56-pin QFN</td>
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</tr>
<tr>
<td>5–10&quot;</td>
<td>MXT640U-CCU</td>
<td>88-lead UFBGA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9–12&quot;</td>
<td>MXT1066T2-C2U</td>
<td>144-lead UFBGA (HDI)</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>MXT1066T2-NHU</td>
<td>117-lead UFBGA (non-HDI)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–16&quot;</td>
<td>MXT1664T3-C2U</td>
<td>162-lead UFBGA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MXT1664T3-CCU</td>
<td>136-lead UFBGA</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>14–24&quot;</td>
<td>MXT2952T2-C2U</td>
<td>162-lead UFBGA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Automotive-Grade Devices

Dedicated members of the maXTouch device family are specifically designed for automotive applications. These devices are AEC-Q100 compliant and fully automotive qualified. They are available as Grade 3 (−40 to +85°C) or Grade 2 (−40 to +105°C) variants.

Microchip's maXTouch automotive controllers are the first touch controllers to carry the Automotive SPICE Level 3 certification. All automotive maXTouch devices are available in QFP packages.

<table>
<thead>
<tr>
<th>Typical Screen Size</th>
<th>Device</th>
<th>Package</th>
<th>Interfaces</th>
<th>AEC-Q100</th>
<th>Gestures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–3&quot;</td>
<td>ATMXT225TD-A</td>
<td>100-pin TQFP</td>
<td></td>
<td>Grade 3 (−40 to +85°C)</td>
<td>Single- and dual-finger gestures</td>
</tr>
<tr>
<td>4–5&quot;</td>
<td>ATMXT449TD-A</td>
<td>100-pin TQFP</td>
<td>I²C and SPI</td>
<td>Grade 2 (−40 to +105°C)</td>
<td></td>
</tr>
<tr>
<td>6–7&quot;</td>
<td>ATMXT641TD-A</td>
<td>100-pin TQFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8–9&quot;</td>
<td>ATMXT799T-A</td>
<td>144-pin LQFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9–11&quot;</td>
<td>ATMXT1189T-A</td>
<td>144-pin LQFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10–12&quot;</td>
<td>ATMXT1665T-A</td>
<td>144-pin LQFP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13–17&quot;</td>
<td>ATMXT3432S-A</td>
<td>Chipset</td>
<td>I²C and USB</td>
<td>Grade 3</td>
<td></td>
</tr>
</tbody>
</table>
MGC3030/3031 and MGC3140 Gesture Controllers with GestIC® Technology

The MGC3030/3130 are single-chip solutions to enable 3D gesture control in almost any product, such as wireless speakers, radios, light switches and remote controls. The MGC3030/3130 are optimized for embedded usage, require no host intelligence or resources and come with a complete gesture portfolio. The MGC3140 is the first gesture controller, qualified for Automotive AEC-Q100.

The Benefits of GestIC Technology

Similar to capacitive touch sensing, GestIC Technology uses E-field sensing to detect gestures. Electrodes remain invisible behind the device housing, allowing an aesthetically pleasing industrial design without the need for holes or other cut-outs typically required for cameras or infrared-based systems. Further benefits include:

- Full surface coverage, no blind spots
- Lighting independent
- Build in adaptive noise filtering
- Only gesture solution with built-in auto wake/sleep
  - <100 μA sleep current
- Low system complexity and low costs

The MGC3030/3130 output direct and immediately usable results—everything is detected on-chip including gestures, approach, touch events and x/y/z 3D positions. The MGC3030/3130 controllers are true single-chip solutions for the next generation of user interface, enabling gesture-based UI applications for embedded products.

On-Board Gesture Recognition

Gesture recognition is performed on chip to eliminate the complexity and need for additional processing, a unique feature to GestIC technology shortening your time-to-market. The gesture suite gives the MGC3030/3130 controllers the ability to recognize gestures while the rest of the system is powered down or in a power savings mode. It is field-upgradable to ensure your system can accommodate and use additional gesture algorithms as they become available.

Like speech and language, everybody's hand gestures have a unique quality that differs in timing, amplitude and other metrics. The integrated GestIC Technology Colibri Suite makes use of a Hidden Markov Model for high recognition rates of various gestures. This detects the subtle difference between deliberate gestures and general hand movement to limit response to unintended gestures.

Gestures

Approach Wake-up is primarily used to wake up the MGC3130 (and the rest of the system) when a hand approaches the sensing area.

Flick Gestures are available as swipes or edge flicks in four directions, and typically used for commands such as next, previous, on/off or up/down.

The Airwheel Gesture is an intuitive input for up/down adjustments to levels and values. The rotations are also detected on chip.

Sensor Touch detects touch, tap or double tap at any of the five receive electrodes. This is typically used for selection and confirmation commands.

The Wave Gesture registers small finger movements and differentiates in the x- and y-direction. Applications include shuffle play control in an audio device.

The Hold Gesture detects a steady hand to trigger events, best envisioned as the touchless enter key. Timing is configurable.

The Presence Gesture enables intelligent back lighting and in the simplest manner.

Position Tracking is available on the MGC3130.
Touch Development Tools

To accelerate your development, Microchip offers easy-to-use touch development tools. For more information and full list of touch development tools, please visit www.microchip.com/touch.

Turnkey Touch Development Kits

MTCH10X Evaluation Board (DM160229)

The MTCH10X Evaluation Board provides an out-of-the-box experience for performance and the robustness of Microchip touch solutions.

CAP1xxx Evaluation Board (DM160222/23)

These kits provide an easy platform for evaluating and developing a variety of capacitive touch sense applications using the CAP11xx (DM160222) and the CAP12xx (DM160223) family. Both boards function as bridges for all other CAP1xxx devices as well.

AT42QT1010 Evaluation Kit (AT42QT1010)

The AT42QT1010 evaluation kit provides an easy way to evaluate and develop a variety of capacitive touch sense application using the AT42QT1010 turnkey touch device.

Microcontroller with Touch Development Kits

Standalone Touch Evaluation Kits

Microchip offers a series of standalone touch evaluation kits which allows you to start exploring great touch performance out of the box without any programming needed. This includes kits like the Water Tolerant Touch Surface Development kit and ATtiny817 Water Tolerance Demo kit.

Platform Evaluation Kits

Microchip also offers an extensive collection of platform evaluation kits, like the Low Cost mTouch® Evaluation Kit, SAM L10 Xplained Pro and QT7 Xplained Pro. These kits are a great way to develop your touch application and allows you to include other functionalities like Wi-Fi®, LIN or OLED screen into your touch design. Microchip offers these platform evaluation kits for most of our microcontrollers.

MicroElektronika Click boards™

Mikroelektronika Click boards are an easy way to add sensors, human interface (touch) control, or wireless communications-interfaces to your design. Based around the mikroBUS™ interface standard, click boards add incredible capability to any system with ease. mikroBUS is supported by all MCU evaluation platforms from Microchip (such as the Curiosity or MPLAB Xpress series).

Please find the latest at www.mikroe.com as the portfolio is growing.
Development Tools

maXTouch Evaluation Kits
All of our evaluation kits include a dedicated sensor with the flex connector and the electronic control board. Some evaluation kits include also converter board from either SPI or I2C to a USB interface to enable easy connectivity to the host, like your PC. All evaluation kits include the host software as well as the maXTouch Studio Light Development Tool.

<table>
<thead>
<tr>
<th>Evaluation Kit</th>
<th>Supported ICs</th>
<th>Sense Nodes</th>
<th>Sensor Matrix</th>
<th>Sensor Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEVK-MXT225TAT</td>
<td>MXT225TD-A</td>
<td>224</td>
<td>19X x 11Y</td>
<td>3.5 inches Touchpad, PCB with 2 mm plastic lens</td>
</tr>
<tr>
<td>ATEVK-MXT641TAT</td>
<td>MXT449TD-A, MXT641TD</td>
<td>640</td>
<td>30X x 19Y</td>
<td>8 inches (16:9), ITO G2, 1.1 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT799TAT</td>
<td>MXT799T-A</td>
<td>798</td>
<td>17X x 45Y</td>
<td>9 inches (8:3), ITO G2, 1.1 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT1189TAT</td>
<td>MXT1189T-A</td>
<td>1189</td>
<td>25X x 45Y</td>
<td>10 inches (16:9), ITO G2, 1.1 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT1665TAT</td>
<td>MXT1665T-A</td>
<td>1665</td>
<td>30X x 52Y</td>
<td>12 inches (8:3), ITO G2, 1.1 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT144U</td>
<td>MXT144U-M</td>
<td>–</td>
<td>–</td>
<td>2.2 inches Touchpad, PCB sensor</td>
</tr>
<tr>
<td>ATEVK-MXT336U</td>
<td>MXT336U-C</td>
<td>336</td>
<td>–</td>
<td>4.5 inches (xx), ITO G2, 0.55 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT640U</td>
<td>MXT640U-C</td>
<td>640</td>
<td>–</td>
<td>5.9 inches (xx), ITO G2, 0.55 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT1664T</td>
<td>MXT1066T MXT1664T</td>
<td>1066</td>
<td>–</td>
<td>8.3 inches (16:9), ITO G2, 0.55 mm glass cover lens</td>
</tr>
<tr>
<td>ATEVK-MXT2952T2</td>
<td>MXT2952T2</td>
<td>2952</td>
<td>–</td>
<td>13.3 inches (16:9), ITO G2, 0.55 mm glass cover lens</td>
</tr>
</tbody>
</table>

maXTouch Studio Development System
maXTouch Studio is the Integrated Development Platform (IDP) for developing and debugging with Microchip’s maXTouch products. This development tool supports the whole product portfolio of our industrial and automotive touchscreen controllers and is used in combination with the above evaluation kits and/or with your touch system.

Key Features of maXTouch Studio
- Communication to all devices for read, write and debug functions
- Different levels of access to tools
- Ability for you to create and update tools
- Remotely share of projects/files between users
- Device firmware upgrade capability
- Automatic links for device and datasheet/protocol guide
- Android utility support

GestIC Technology—3D Gesture Evaluations Kits
GestIC Technology Evaluation Kits enable to experience the benefits of gesture based user interaction out of the box while at the same the the modular design allows implementation into your product designs. All Kits support our Aurea Visualization Software Suite.

Please find all details at www.microchip.com/gestic.
Support
Microchip is committed to supporting its customers in developing products faster and more efficiently. We maintain a worldwide network of field applications engineers and technical support ready to provide product and system assistance. For more information, please visit www.microchip.com:

- Technical Support: www.microchip.com/support
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- Knowledge base and peer help: www.microchip.com/forums
- Sales and Global Distribution: www.microchip.com/sales

Training
If additional training interests you, Microchip offers several resources including in-depth technical training and reference material, self-paced tutorials and significant online resources.

- Overview of Technical Training Resources: www.microchip.com/training
- MASTERS Conferences: www.microchip.com/masters
- Developer Help Website: www.microchip.com/developerhelp
- Technical Training Centers: www.microchip.com/seminars

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