

PIC32 mTouch™ Capacitive Touch Evaluation Board Information Sheet

The PIC32 mTouch™ Capacitive Touch Evaluation Board is designed to facilitate the development of capacitive touch-based applications using PIC32-series microcontrollers. This evaluation board includes an on-board PICKit™ serial interface, an ICSP™ header, a USB connector (for power only) and a 16-bit LED display. The board also includes a 24-pin header that can be used to interface the 2-channel and 4-channel slider plug-in boards, the 12-matrix key plug-in board and the 8-direct key plug-in board. The plug-in boards are included in the mTouch™ Capacitive Touch Evaluation Kit (purchased separately, PN: DM183026-2).

Getting Started

Everything you need to get started can be found at <http://www.microchip.com/mtouch>. From the *Related Pages* menu, click **Buttons, Keys & Sliders** and click the **Getting Started** tab. From the resulting page, click **Featured mTouch™ Evaluation Kit**.

Installing MPLAB® IDE and C Compilers

MPLAB® Integrated Development Environment (IDE) should be installed prior to using the PIC32 mTouch™ Capacitive Touch Evaluation Board. While MPLAB provides the assembler tools for development, most of the code examples are written in C language and require a C compiler to be installed. Microchip's MPLAB C compiler seamlessly integrates into MPLAB IDE. Both the MPLAB IDE and C Compiler are free (see the note below) and are available for download at <http://www.microchip.com/MPLAB> and <http://www.microchip.com/compilers>, respectively.

Note: Standard Evaluation (Free) – All optimization levels are enabled for 60 days, but then revert to optimization level 1 only.

Code Examples and More Information

For code examples and more information, please visit the Enhanced mTouch Capacitive Touch Evaluation Kit page at: <http://www.microchip.com/mtouch>. From the *Related Pages* menu, click **Buttons, Keys & Sliders** and click the **Getting Started** tab. From the resulting page, click **Featured mTouch™ Evaluation Kit**. In the downloads section, select **PIC32 Capacitive Touch Evaluation Kit Software**.

Running and Debugging Applications

After downloading the code example and installing the development tools, please use the following procedure to build, run, and debug your software:

1. Load the desired code example into MPLAB by double-clicking the *.mcp project file.
2. Connect the appropriate plug-in board to the 24-pin connector of the evaluation board. Make sure that the pin numbers of the plug-in board are aligned with the pin numbers on the evaluation board.
3. Connect the evaluation board ICSP header to a MPLAB In-Circuit Debugger/Emulator. Alternatively, a PICKit™ 3 may be connected to the PICKit serial port on the evaluation board. An adapter (PN: AC164110), will be required to interface the ICSP header on the evaluation board with a MPLAB In-Circuit Debugger/Emulator. This adapter can be purchased from microchipDIRECT at: www.microchipdirect.com.
4. Connect the USB port on the evaluation board to a USB port on the development computer using a USB cable.
5. Choose the appropriate debugger/emulator tool in MPLAB IDE by selecting *Debugger > Select Tool*.
6. Build the project by selecting *Project > Build All*.
7. Download your code into the evaluation board microcontroller by selecting *Debugger > Program*.
8. Run the application previously downloaded by selecting *Debugger > Run*.
9. Touching the appropriate keys on the plug-in board will cause the LEDs on the evaluation board to respond as previously programmed.

Americas

Atlanta - 678-957-9614
Boston - 774-760-0087
Chicago - 630-285-0071
Cleveland - 216-447-0464
Dallas - 972-818-7423
Detroit - 248-538-2250
Kokomo - 765-864-8360
Los Angeles - 949-462-9523
Phoenix - 480-792-7200
Santa Clara - 408-961-6444
Toronto - 905-673-0699

Asia/Pacific

Australia - Sydney - 61-2-9868-6733
China - Beijing - 86-10-8528-2100
China - Chengdu - 86-28-8665-5511
China - Chongqing - 86-23-8980-9588
China - Hong Kong SAR - 852-2401-1200
China - Nanjing - 86-25-8473-2460
China - Qingdao - 86-532-8502-7355
China - Shanghai - 86-21-5407-5533
China - Shenyang - 86-24-2334-2829
China - Shenzhen - 86-755-8203-2660
China - Wuhan - 86-27-5980-5300
China - Xiamen - 86-592-2388138
China - Xian - 86-29-8833-7252
China - Zhuhai - 86-756-3210040
India - Bangalore - 91-80-3090-4444
India - New Delhi - 91-11-4160-8631
India - Pune - 91-20-2566-1512
Japan - Yokohama - 81-45-471-6166
Korea - Daegu - 82-53-744-4301
Korea - Seoul - 82-2-554-7200
Malaysia - Kuala Lumpur - 60-3-6201-9857
Malaysia - Penang - 60-4-227-8870
Philippines - Manila - 63-2-634-9065
Singapore - 65-6334-8870
Taiwan - Hsin Chu - 886-3-6578-300
Taiwan - Kaohsiung - 886-7-213-7830
Taiwan - Taipei - 886-2-2500-6610
Thailand - Bangkok - 66-2-694-1351

Europe

Austria - Weis - 43-7242-2244-39
Denmark - Copenhagen - 45-4450-2828
France - Paris - 33-1-69-53-63-20
Germany - Munich - 49-89-627-144-0
Italy - Milan - 39-0331-742611
Netherlands - Drunen - 31-416-690399
Spain - Madrid - 34-91-708-08-90
UK - Wokingham - 44-118-921-5869

08/02/11



Microchip Technology Inc. • 2355 West Chandler Blvd. • Chandler, AZ 85224-6199

www.microchip.com

The Microchip name and logo, the Microchip logo, and MPLAB are registered trademarks of Microchip Technology Incorporated in the U.S.A. and other countries. All other trademarks mentioned herein are property of their respective companies.

© 2011, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 08/11

DS51988A