PIC32 mTouch™ Capacitive Touch Evaluation Board Information Sheet

The PIC32 mTouch™ Capacitive Touch Evaluation Board (PN: AC323026) is designed to facilitate the development of capacitive touch-based applications using PIC32-series micro-controllers. 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. These 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 plug-in board pins numbers are aligned with the pin numbers on the evaluation board.
3. Connect the evaluation board ICSP header to a MPLAB In-Circuit Debugger/Emula-tor. Alternatively, a PICkit™ 3 may be connected to the PICkit serial port on the eval-uation 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 programmed previously.

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