#### 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 Phoenix - 480-792-7200 Santa Clara - 408-961-6444 Toronto - 905-673-0699

Australia - Sydney - 61-2-9868-6733 China - Beijing - 86-10-8528-2100 China - Chengdu - 86-28-8665-5511 China - Chongging - 86-23-8980-9588 China - Hong Kong SAR - 852-2401-1200 Italy - Milan - 39-0331-742611 China - Naniing- 86-25-8473-2460 China - Qingdao - 86-532-8502-7355 Los Angeles - 949-462-9523 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 Malavsia - 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 - 886-7-536-4818 Taiwan - Taipei - 886-2-2500-6610 Thailand - Bangkok - 66-2-694-1351



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. © 2010, Microchip Technology Incorporated, Printed in the U.S.A. All Rights Reserved. 04/10

DS51897B

### Overview

The Microstick for dsPIC33F and PIC24H devices is designed to provide an easy to use, economical development environment for 16-bit digital signal controllers and microcontrollers. The board includes an integrated debugger/programmer, a socket for the device under test and pins that facilitate insertion into a prototyping board for extremely flexible development.

Please check http://www.microchip.com/microstick for the list of supported devices.

### Getting Started

Everything you need to get started can be found at http://www.microchip.com/ microstick.

## Installing MPLAB<sup>®</sup> IDE and C Compilers

MPLAB Integrated Development Environment (IDE) should be installed prior to using Microstick for dsPIC33F and PIC24H Devices. This board is designed to run with MPLAB IDE version 8.50 or later. While MPLAB IDE provides assembler tools for development, most of the code examples provided for Microchip devices 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<sup>(1)</sup> and available for download at: http://www.microchip.com/ MPLAB.

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

### Code Examples and More Information

For code examples and more information, please visit the Microstick for dsPIC33F and PIC24H Devices product page at: http://www.microchip.com/microstick

## **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 code example into MPLAB IDE by double clicking the \*.mcw project file.
- 2. Inform MPLAB IDE what device is plugged in to the Microstick Board by selecting the appropriate device from the Configure>Select Device>Device menu.
- Build the project by selecting Project>Build All. 3.
- 4. Connect the Microstick Board to the development computer via a USB cable.
- Enable the MPLAB IDE debugger by selecting Debugger>Select 5. Tool>Starter Kits.
- Download your code into a device on the Microstick Board by selecting 6. Debugger>Program.
- 7. Run the application previously downloaded by selecting *Debugger>Run*.
- 8. For more information on building, running and debugging your application,

Asia/Pacific

Europe

Austria - Weis - 43-7242-2244-39

France - Paris - 33-1-69-53-63-20

Spain - Madrid - 34-91-708-08-90

UK - Wokingham - 44-118-921-5869

Germany - Munich - 49-89-627-144-0

Netherlands - Drunen - 31-416-690399

01/05/10

Denmark - Copenhagen - 45-4450-2828

# Microstick for dsPIC33F and PIC24H Devices

**Board Schematic** 

