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

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Curiosity High Pin Count 28/40 (HPC) Development Board Quick Start Guide

Overview

The Curiosity HPC Development Board layout and schematic can be found on the Microchip website:

www.microchip.com/curiosityhpc

This board provides flexibility for experimentation through an application header with ground (GND) and supply voltage (V_{DD}) connections. It also includes a set of indication LEDs, push button switches, and a variable potentiometer.

Additionally, it features two mikroBUS™ headers to accommodate a variety of plug-in Click™ Boards that can be used in application development. All connections to the mikroBUS headers, LEDs, switches and potentiometer are labeled with the microcontroller port name for ease of programming. Curiosity HPC is fully compatible with MPLAB® Code Configurator and MPLAB® X v3.05 or later.

Board Power-Up

Power is supplied by the Micro-USB connector on the left of the board.

Demonstration Program

After applying power to the Curiosity HPC Development Board via the USB connector on the left side of the board, LEDs will automatically turn on. Turn POT1 clockwise to increase the brightness of the LED D5 and counterclockwise to decrease its brightness. Press the push button **S1** to turn on LED D4, and push button **S2** to turn on LED D3.

Board Layout

The Curiosity HPC Development Board is shown in Figure 1. A PIC16F18875 40-pin microcontroller is populated in the center of the demo board next to the target device label. The Curiosity HPC Development Board accommodates 40- and 28-pin 8-bit microcontrollers. The PIC16F18875 is initially connected to the following components:

- Push Button (S1)
- Push Button (S2)
- Potentiometer
- Reset Button
- LEDs (D2 – D5)
- mikroBUS™ Header 1
- mikroBUS™ Header 2

The board is flexible and allows individual experiments. Power and ground (GND) connections are available, as well as isolation by unsoldering of the solder jumpers. The full pin breakout of the microcontroller is provided to expand the flexibility of the Curiosity HPC Development Board.

FIGURE 1: CURIOSITY HPC DEVELOPMENT BOARD LAYOUT