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Curiosity Low Pin Count (LPC) Development Board Quick Start Guide

Overview

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

www.microchip.com/curiosity

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, mTouch® button and push button switches, and a variable potentiometer.

Additionally, it features a Bluetooth® module footprint and a mikroBUS™ header to accommodate a variety of plug-in Click boards™ that can be used in application development. Curiosity is fully compatible with MPLAB® Code Configurator and MPLAB X v5.20 or later.

Note:	Low-Voltage Programming (LVP) must be enabled in MPLAB X.

Board Power-Up

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

Demonstration Program

After applying power to the Curiosity Development Board via the USB connector on the left side of the board, LEDs will automatically turn on. Turn POT1 to change the brightness of the LED D4. Press the push button **S1** to turn on LED D7. LEDs D5 and D6 will be blinking every 500 to 250 milliseconds, respectively.

Board Layout

The Curiosity Development Board is shown in Figure 1. A PIC16F18446 20-pin microcontroller is populated in the center of the demo board next to the identification label U4. The Curiosity Development Board can also accommodate 14- and 8-pin, 8-bit microcontrollers in the same socket (U4). The PIC16F18446 is initially connected to the following components:

- Push Button (S1)
- Potentiometer (POT1)
- Master Clear Reset Button (RESET)
- mTouch® Button (S3)
- LEDs (D4 – D7)
- mikroBUS™ Header (J35, not populated)
- RN4020 Bluetooth® Module Footprint (U6, not populated)

The board is flexible and allows individual experiments. A power and ground header (J7), as well as isolation headers (J3, J4, J6, J13, J39 and J40) are provided to expand the flexibility of the Curiosity Development Board.

FIGURE 1: CURIOSITY DEVELOPMENT BOARD LAYOUT