

## **Excellent Integrated System Limited**

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Microchip Technology](#)  
[AC162049-2](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# Universal Programming Module

## AC162049 Instruction Sheet



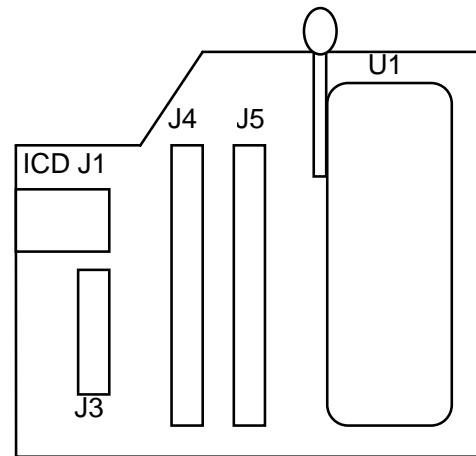
The Universal Programming Module (UPM) is a handy, low-cost board that supports the programming of devices using the MPLAB® ICD 2 in-circuit debugger. The UPM can also be used with the MPLAB PM3 to IC2 Adapter (AC164111) for in-circuit programming with the MPLAB PM3. The ZIF (Zero Insertion Force) in the UPM supports the programming of devices in the DIP package type up to 40 pins with these development tools.

### \*\*\*\*\*NOTICE\*\*\*\*\*

dsPIC® DSC DEVICES CANNOT BE PROGRAMMED USING A UPM SETUP.

#### **Configuration of the Jumpers:** Configuration of the Jumpers:

ICD input at J1 is mapped to J3. There are seven jumpers (flying leads located at J3) that must be connected to pins marked 1 through 40 on the two 20-pin headers (J4 and J5). These connect the program mode, power supply, ground, clock and data lines needed for programming from the development tool to the device in socket U1. Configuration for these lines is specific to the device being programmed. Please consult the Datasheet for the proper jumper configuration for the device being used. Further, the Release Notes for the tool in use may also offer other detailed information about programming the device. Release Notes can be found under the Help option in the MPLAB IDE.



### \*\*\*\*\*NOTICE\*\*\*\*\*

THE UPM DOES NOT HAVE A JUMPER FOR LOW-VOLTAGE PROGRAMMING.

The UPM does not have a separate power source. Power is supplied to the UPM by the development tool in use. MPLAB ICD 2 uses a 9V DC power supply (AC162039). The MPLAB PM3 uses a 3V/5V DC power supply (ACICE0401).

**Loading/Programming a Device:** The ZIF socket (U1) will support up to 40-pin DIP packaged devices. Be sure power is removed prior to inserting the device into the ZIF socket. Also, the handle for the ZIF socket should be in the down position. The device should drop in with zero force. Insert the device so that the top is aligned with the top of the ZIF socket (i.e., pin 1 to pin 1). Once the device is inserted, raise the handle on the socket 90 degrees to the full locked position.

### \*\*\*\*\*NOTICE\*\*\*\*\*

ZIF SOCKET HANDLE MUST BE IN THE UP (LOCKED) POSITION PRIOR TO PROGRAMMING THE DEVICE OR IT WILL NOT PROGRAM PROPERLY.

**LED 1** - Led 1 will illuminate whenever programming activity occurs.

**Removing a Programmed Device:** After MPLAB IDE or the MPLAB PM3 in Stand-Alone mode acknowledges that communication is complete, lower the arm (unlock) on the ZIF socket. The device should lift out without any resistance.