

## MPLAB® REAL ICE™ IN-CIRCUIT EMULATOR POWER MONITOR INSTRUCTION SHEET

The Power Monitor (AC244008) provides current and voltage monitoring of a target board or target device via the MPLAB REAL ICE In-Circuit Emulator.

The kit contains a Power Monitor board, a power supply, and this instruction sheet.

### Monitor and Debug Features

- Monitor current (approximately 1uA-1A with selectable ranges) and voltage (1.25V-5.0V)
- Power the target (up to 1A)
- Graph current, voltage and time vs. code execution (PC)
- Additional features planned

### Power Monitor Support

- The Power Monitor is supported on MPLAB X IDE 1.80 and above.
- The Power Monitor supports all Microchip devices.
- Only basic debugging features are available when using the Power Monitor: Run, Halt, and Single Step. No advanced features are available, e.g., Data Capture, Runtime Watches, Application In/Out, RTDM, Instrumented Trace.

### Hardware Setup

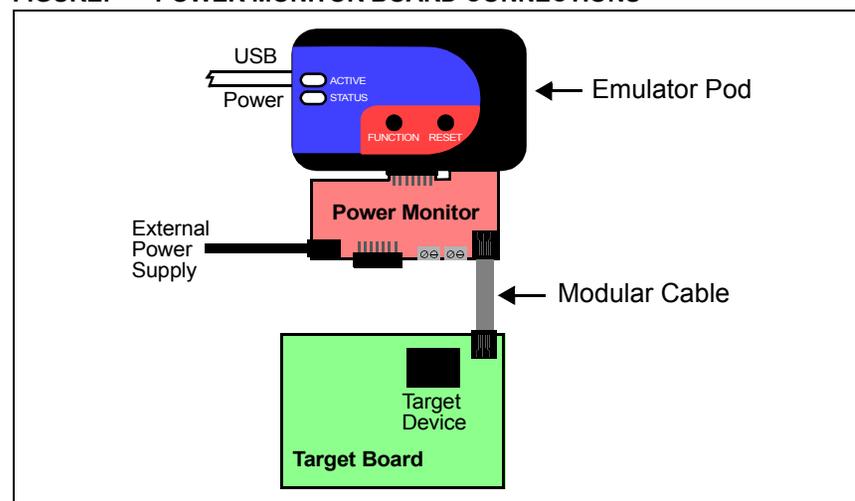
1. Power down the target board and disconnect the USB cable from the emulator.
2. Unplug a plugged-in driver board from the driver board slot and remove any logic probes in the logic probe connector.
3. Plug the Power Monitor board into the emulator driver board slot and logic probe connector simultaneously.
4. Reconnect the USB cable to the emulator.
5. Plug the three-pronged end of the Power Monitor power adapter into a power supply and then plug the single-pronged end into the Power Monitor board.
6. Connect to the target board via a modular cable. See the emulator user's guide (under "**Documentation**") for other connections or configurations.

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### Software Setup

1. Install the Power Monitor plugin. Select *Tools>Plugins*, click the **Available Plugins** tab, check "Power Monitor" and click **Install**. For more information on plugins, see MPLAB X IDE documentation.
2. Select *File>Project Properties*. Click the down arrow on the "Supported Plugin Board" drop-down box and select "Power Monitor Board".
3. Click the "Real ICE" category. Under the "Power" option, check "Power target circuit from REAL ICE", and specify the voltage under "Voltage Level".
4. Under the "Trace and Profiling" option category, select "Power Module (Target Power Sampling)" from "Data Collection Selection". Select "Power Data Only" from "Target Power Sampling Selection". See "**Documentation**" for other options. Click **OK** when complete.
5. Select *Tools>Embedded>Power Monitor* to open the Power Monitor window. View current and voltage values by time and PC.

**FIGURE: POWER MONITOR BOARD CONNECTIONS**



### Documentation

This information will be incorporated into the "Emulator Accessories" chapter of the "MPLAB REAL ICE In-Circuit Emulator User's Guide for MPLAB X IDE" (DS52085). In the interim, see emulator topics in the MPLAB X IDE help file.