

dsPIC33EP128GS808 Development Board Info Sheet

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Overview

The dsPIC33EP128GS808 Development Board is designed to aid in the evaluation and development of firmware for the dsPIC33EP GS family of Digital Signal Controllers (DSC). It can be used as a stand-alone platform or it can have the CAN/LIN/J2602 PICtail™ Plus Daughter Board plugged into it for evaluation of the interfaces on the DSC for CAN or LIN communication, without the need for an Explorer 16 development system.

This development board contains single order RC filters to emulate power supply functionality in Open or Closed-Loop mode and simulate power supply transient behavior. It can be powered with a standard 9V adapter or through the mini-USB. The board can be programmed with standard Microchip programming tools via an RJ11 connector and contains LEDs, a switch, configurable connectors and potentiometers for quick development.

Installing MPLAB® IDE and C Compilers

The MPLAB Integrated Development Environment (IDE) should be installed prior to using the dsPIC33EP128GS808 Development Board. While MPLAB IDE provides the assembler tools for development, most of the code examples are written in C language and require a C compiler to be installed. Microchip's MPLAB XC Compiler seamlessly integrates into MPLAB IDE. Both the MPLAB IDE and MPLAB XC Compiler are free (see note below), and are available for download at www.microchip.com/MPLAB and www.microchip.com/compilers, respectively.

Code Examples and More Information

For code examples and more information, please visit the Switch Mode Power Supply (SMPS) page at <http://www.microchip.com/designcenters/intelligent-power>. From the Development Tools menu, click and select the code for the **dsPIC33EP128GS808 Development Board**.

Running and Debug Applications

The dsPIC33EP128GS808 Development Board is preprogrammed, fully functional and ready for use after connecting the 9V power supply to the J1 connector. However, if you want to modify the development board software, download the code example and install the development tools as described in “Code Examples and More Information”, and then use the following procedure to build and run your software:

1. Using the J1 connector, connect the 9V power supply to the dsPIC33EP128GS808 Development Board. Alternatively, a USB cable can be connected to the J2 connector with the other end connected to a development computer for powering the board.
2. Connect one end of the programmer, such as MPLAB® REAL ICE™ or MPLAB ICD 3 to connector J3 on the board. The other end of the programmer should be connected to a development computer using a USB cable.
3. Extract the dsPIC33EP128GS808 Development Board software from the archive file and load the software project into the development environment.
4. If using MPLAB IDE, do the following:
 - a) Select *Run>Set Project Configuration>Customize*.
 - b) Select the required tool under Hardware Tools and then click **Apply**, followed by **OK**.
 - c) Select *Run>Run Main Project* to download the code to the target device.
5. After the code has been downloaded to the device, the J3 connection can be removed. In Release mode, only the power supply connection is needed. In Debug mode, both the power supply connection and the J3 connection must be used.
6. By pressing the SW1 button, the program will toggle between Steady-State mode and Transient mode, and is indicated by LED2. There are several connectors on the board, configurable by jumpers, to provide multiple input/output combinations.

FIGURE 2: dsPIC33EP128GS808 DEVELOPMENT BOARD SCHEMATICS REV. 1.0 (PAGE 2 OF 2)



