

Application Note

Using the model LR-F2812COM-x with the F28335 eZdsp development system

Introduction

This application note provides details on using the Link Research series of serial port daughtercards with the F28335 eZdsp development system. The user should refer to the *Model LR-F2812COM Technical Reference Manual*, part number 4-903-36, for general information regarding the daughtercards, and to this application note for information specific to the F28335 eZdsp board. All documentation for this series of daughtercards is available on the Link Research website: www.link-research.com

Physical differences

The LR-F2812COM series of daughtercards was originally designed to operate with the F2812 eZdsp development system manufactured by Spectrum Digital, Incorporated. When used with the F2812 eZdsp, the LR-F2812COM daughtercard is mounted above the eZdsp board as shown in figure 1. Two long nylon standoffs are attached to the daughtercard and four shorter nylon standoffs are attached to the eZdsp board. This makes both boards sit level on a flat surface.

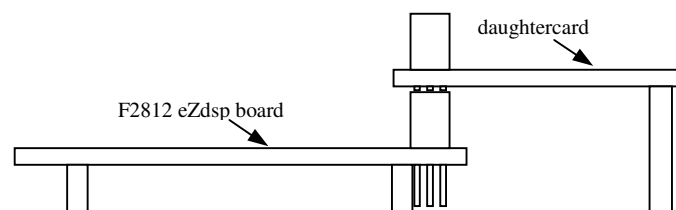


Figure 1

Because the newer F28335 eZdsp board uses a socket for the DSP integrated circuit, the serial port daughtercard cannot be mounted atop the eZdsp board because it would interfere with the socket. The solution is to mount the daughtercard beneath the eZdsp board. Since both boards have wire-wrap sockets with long pins, this can be easily done. In this configuration, two short standoffs should be attached to the daughtercard and two long standoffs should be attached to the eZdsp board. This setup is shown in figure 2.

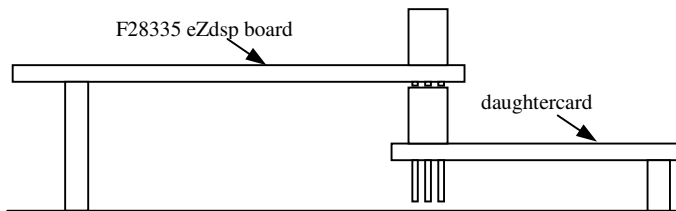


Figure 2

Electrical Differences

In the F28335 eZdsp, the SCIA signals from the DSP IC can be routed either to the on-board RS-232 interface, or to the expansion connector. This is achieved by way of a two DIP switch settings. To allow the SCIA signals to appear at the expansion connectors, and thus be available to the Link Research daughtercard, position 1 of SW2 must be in the OFF position, and position 2 of SW2 must be in the ON position. This configuration is shown in Figure 3.

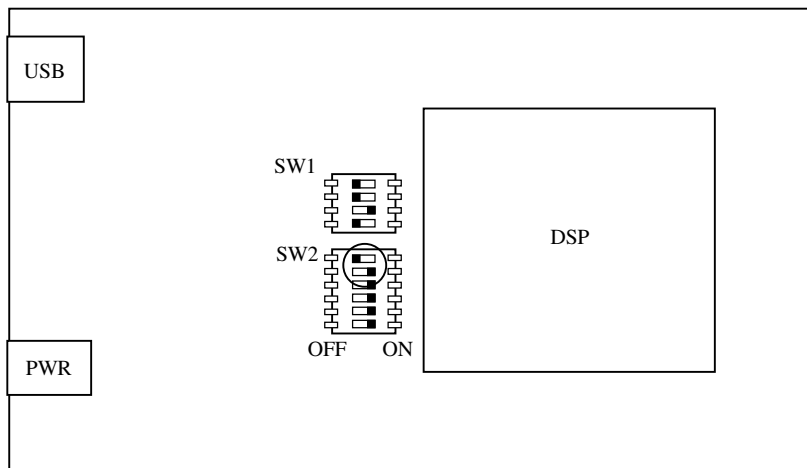


Figure 3

It is also necessary to install a jumper (or solder blob) on the back of the F28335 eZdsp board at location JR4. This allows +5V to appear at P4-pin1, P8-pin1, and P8-pin2. Figure 4

is a back side view of the eZdsp board. As shown, the jumper must be installed between pins 1 and 2 of JR4.

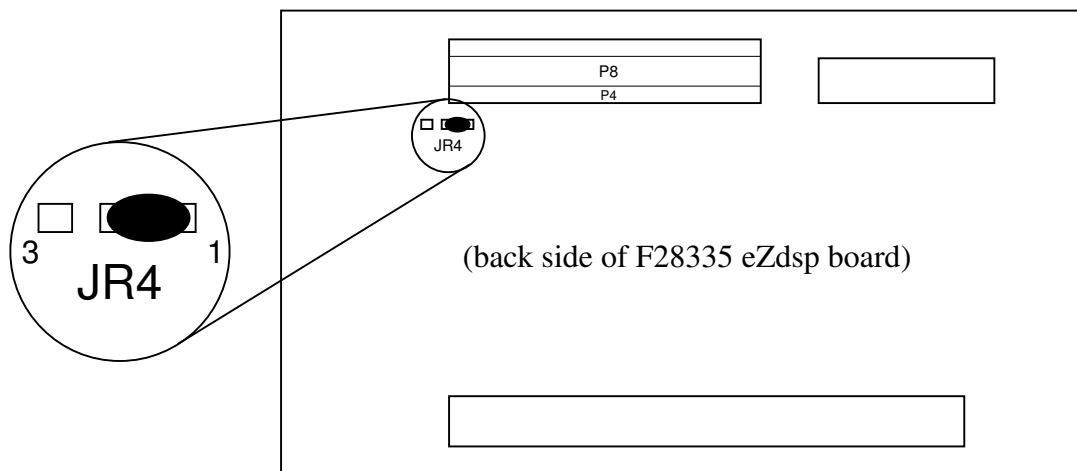


Figure 4

Software Differences

Although code written for the F2812 DSP is supposedly 100% compatible with the F28335 DSP¹, the register bit assignments used to configure the GPIO pins are in fact quite different. To ease getting the serial port daughtercards up and running quickly on the F28335 eZdsp, Link Research provides several complete Code Composer Studio projects on CD. This CD is included with the purchase of all versions of the two channel serial port daughtercard. Beginning with Revision 2.0 of this CD, CCS projects for the F2812 eZdsp as well as the F28335 eZdsp are included.

Version History

Date	Version	Description
13-Dec-2007	1.0	Original

¹ Texas Instruments, Inc. Application Report “TMS320x281x to TMS320x2833x Migration Overview”, SPRAAQ7–September 2007