

OMAP-L132/L138, TMS320C6742/6/8 Pin Multiplexing Utility

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ABSTRACT

The OMAP-L132/L138 and C6742/6/8 devices use a great deal of internal pin multiplexing to allow the most functionality in the smallest and lowest cost package. This software allows the pin multiplexing registers of the device to be calculated with ease, as well as showing what peripherals can be used together and what devices support the peripherals that are selected. This software is useful to anyone creating a system with OMAP-L132/L138 and C6742/6/8 devices.

Project collateral and source code discussed in this application report can be downloaded from the following URL: <http://www.ti.com/lit/zip/SPRAB63>.

1 Using the OMAP-L132/L138 and C6742/6/8 Pin Multiplexing Utility

This utility is a stand-alone executable; there is no installation process required. After you have extracted the utility, run the executable (PinSetup.exe) located in the bin directory. Once the utility is opened, there is a user interface with various sections covering the multiplexed peripherals of the OMAP-L132/L138 and C6742/6/8 devices. Note that this utility only contains peripheral selection boxes where a group of pins are needed for the peripheral to operate. Some peripheral selection boxes are not listed here (e.g., JTAG, USB, RTC, TIMER, etc.). Simply select the device and peripherals necessary to your application.

In addition, the utility allows pin-by-pin control. Double-click on a cell to enable or disable the pin. This feature allows you to enable pins of the peripherals that do not have a selection box or to disable pin functionalities not required in your peripheral usage. With this utility, you can determine how many different combinations of peripherals are possible on the OMAP-L132/L138 and C6742/6/8 devices. As the peripherals are selected, the utility dynamically updates the appropriate PINMUX register values.

Once the selections have been entered, the PINMUX register values are used in the application code to properly configure the device; all the peripherals that were selected are enabled. You can save a header file with the appropriate PINMUX register values by going to File → Save → Header File. To save your device and peripheral selection for future use, choose File → Save → Pin Selections.

2 References

- *TMS320C6742 Fixed/Floating-Point DSP Data Manual* ([SPRS587](#))
- *TMS320C6746 Fixed/Floating-Point DSP Data Manual* ([SPRS591](#))
- *TMS320C6748 Fixed/Floating-Point DSP Data Manual* ([SPRS590](#))
- *OMAP-L138 Low-Power Applications Processor Data Manual* ([SPRS586](#))
- *OMAP-L132 C6-Integra™ DSP+ARM® Processor Data Manual* ([SPRS762](#))

Appendix A Revision History

Table 1. SPRAB63B Revision

Location	Additions, Deletes, and Edits
Abstract	Re-releasing the software package/associated zip file with added licensing terms and conditions.

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