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INTRODUCTION TO THE TI C6713DSK AND CODE COMPOSER STUDIO

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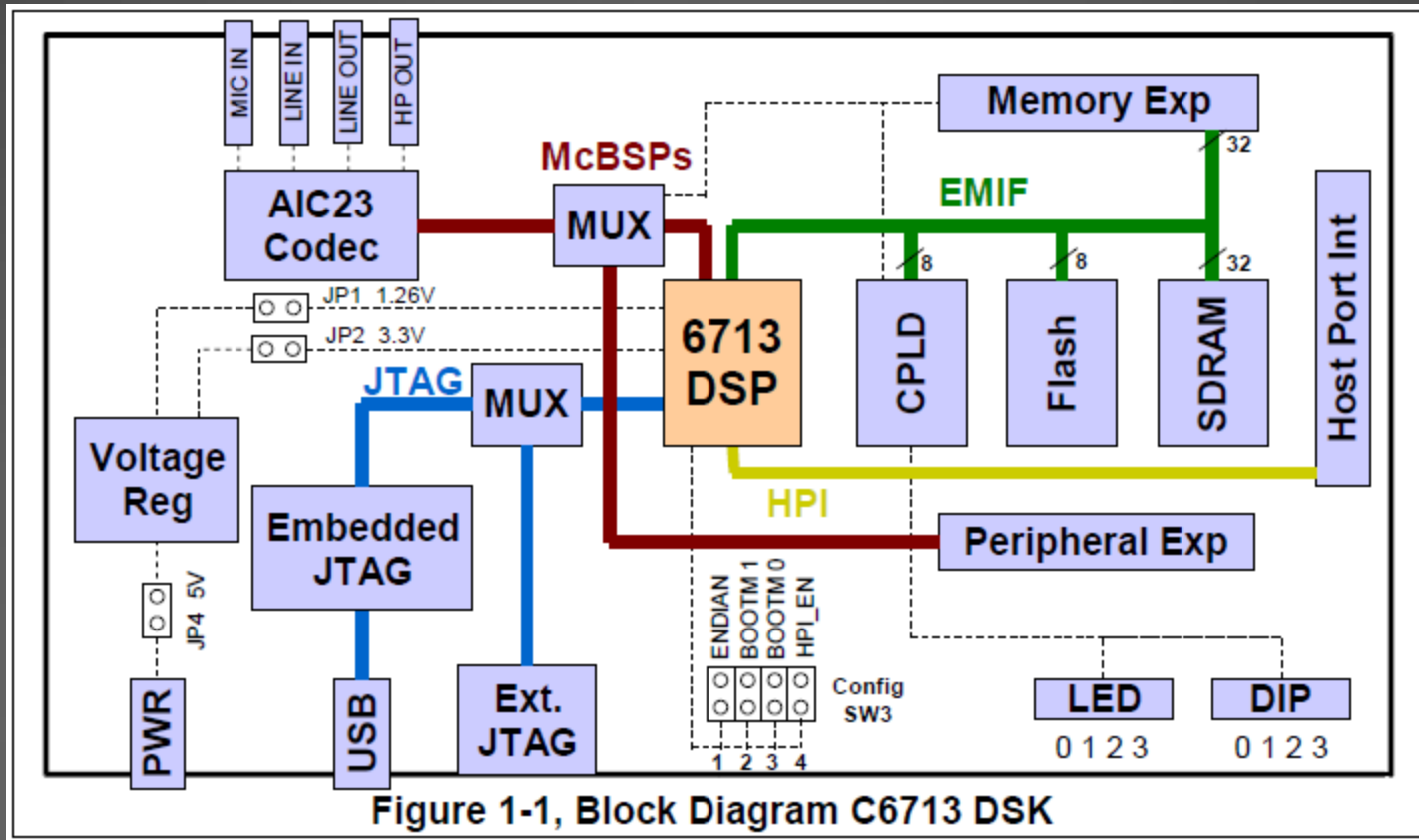
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C6713 DSK OVERVIEW

- ▶ DSK = DSP Starter Kit
- ▶ 225 MHz TMS320C6713 floating point DSP
- ▶ AIC23 stereo ADC and DAC (i.e., codec)
 - ▶ 8-96kHz sample rates
 - ▶ 16-bit precision
- ▶ Memory
 - ▶ 16 MB dynamic RAM
 - ▶ 512 kB FLASH memory (non-volatile)
- ▶ USB interface



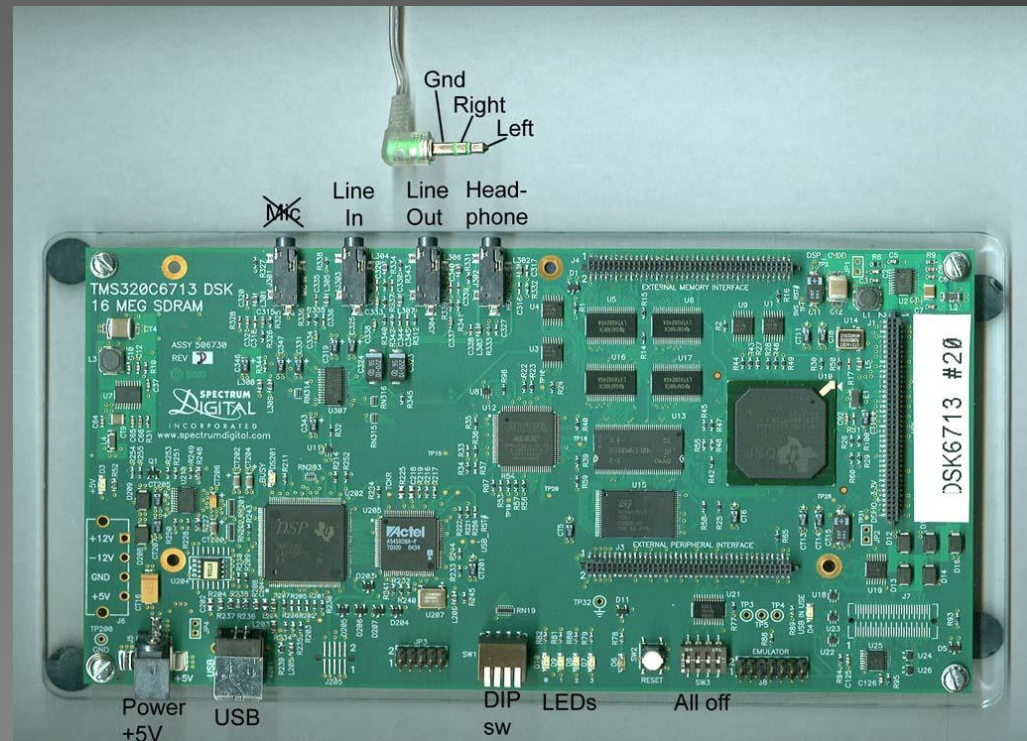
DSK BLOCK DIAGRAM



From *TMS320C6713 DSK Technical Reference*, 2003
Courtesy of Texas Instruments

C6713 DSK LAYOUT

- ▶ Onboard peripherals:
 - ▶ 4 DIP switches (input)
 - ▶ 4 LEDs (output)
- ▶ Signal I/O
 - ▶ Microphone (not used)
 - ▶ Line In
 - ▶ Line Out
 - ▶ Headphone



USING THE C6713DSK: IMPORTANT!!!

- ▶ If using HEADPHONES to monitor output signals:
 - ▶ **NEVER** download software to the DSK while headphones are affixed to your ears
 - ▶ The onboard headphone amplifier has high gain and could damage your hearing
 - ▶ When testing software, slowly lift headphones to your ears
- ▶ If applying signals to the LINE IN port
 - ▶ **ALWAYS** check signals on the oscilloscope prior to connecting to the DSK
 - ▶ **ALWAYS** monitor signals on the oscilloscope while connected to the DSK
 - ▶ Input signals should never exceed **1.0V peak-to-peak**.
 - ▶ Large voltages can damage the DSK. Replacement cost is ~\$500.

CODE COMPOSER STUDIO IDE

- ▶ An Integrated Development Environment (IDE)
 - ▶ Write and compile software
 - ▶ Debug and simulate
 - ▶ Load executable (object code) into DSK
- ▶ Current version: CCS v4.0
 - ▶ Based on Eclipse open development platform (www.eclipse.org)
- ▶ Software development done in C
- ▶ Extensive libraries available
 - ▶ CSL: Chip Support Library (for the DSP chip)
 - ▶ BSL: Board Support Library (for the DSK unit and peripherals)