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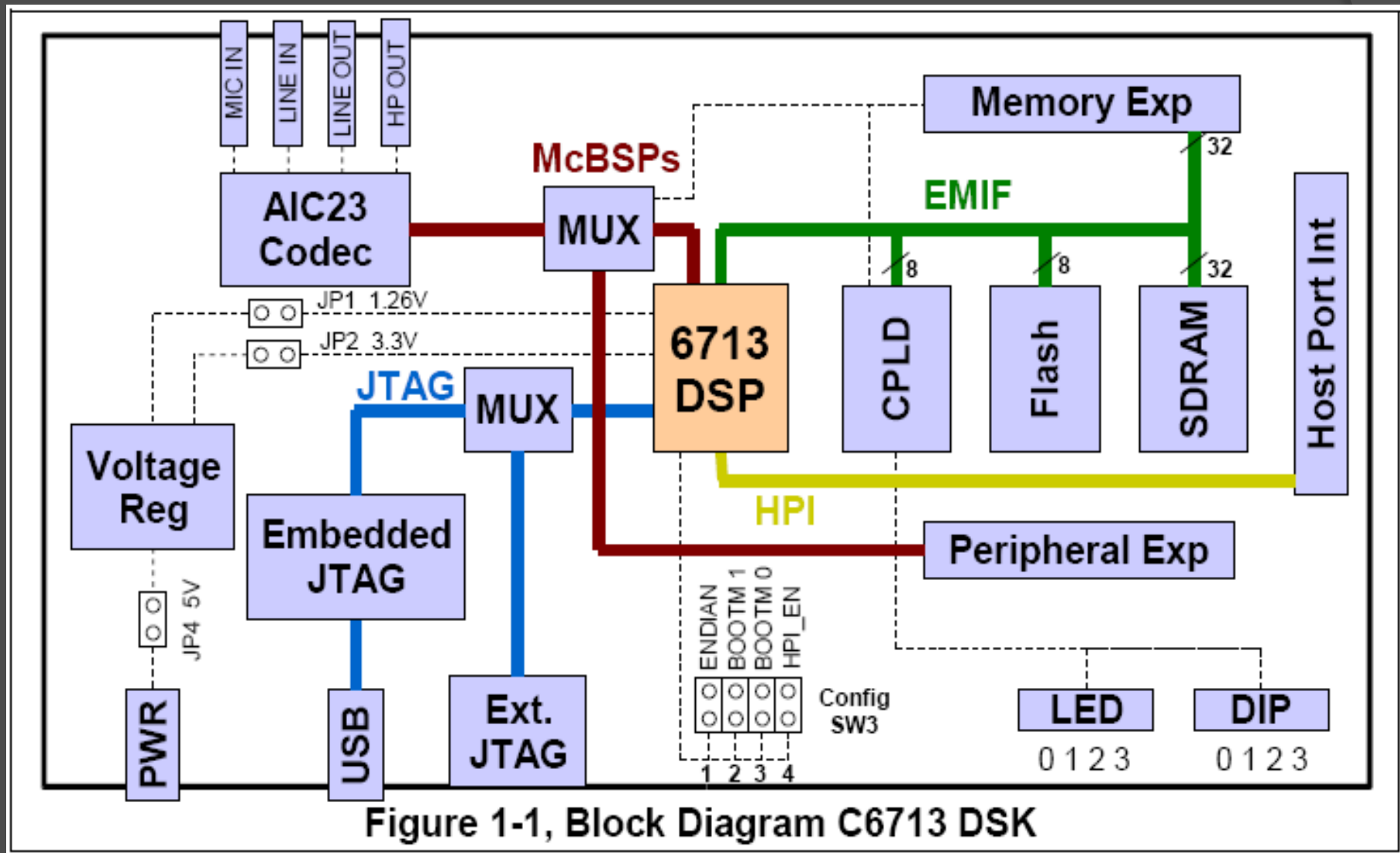
ECE4703 REAL-TIME DSP LAB HARDWARE INTRODUCTION



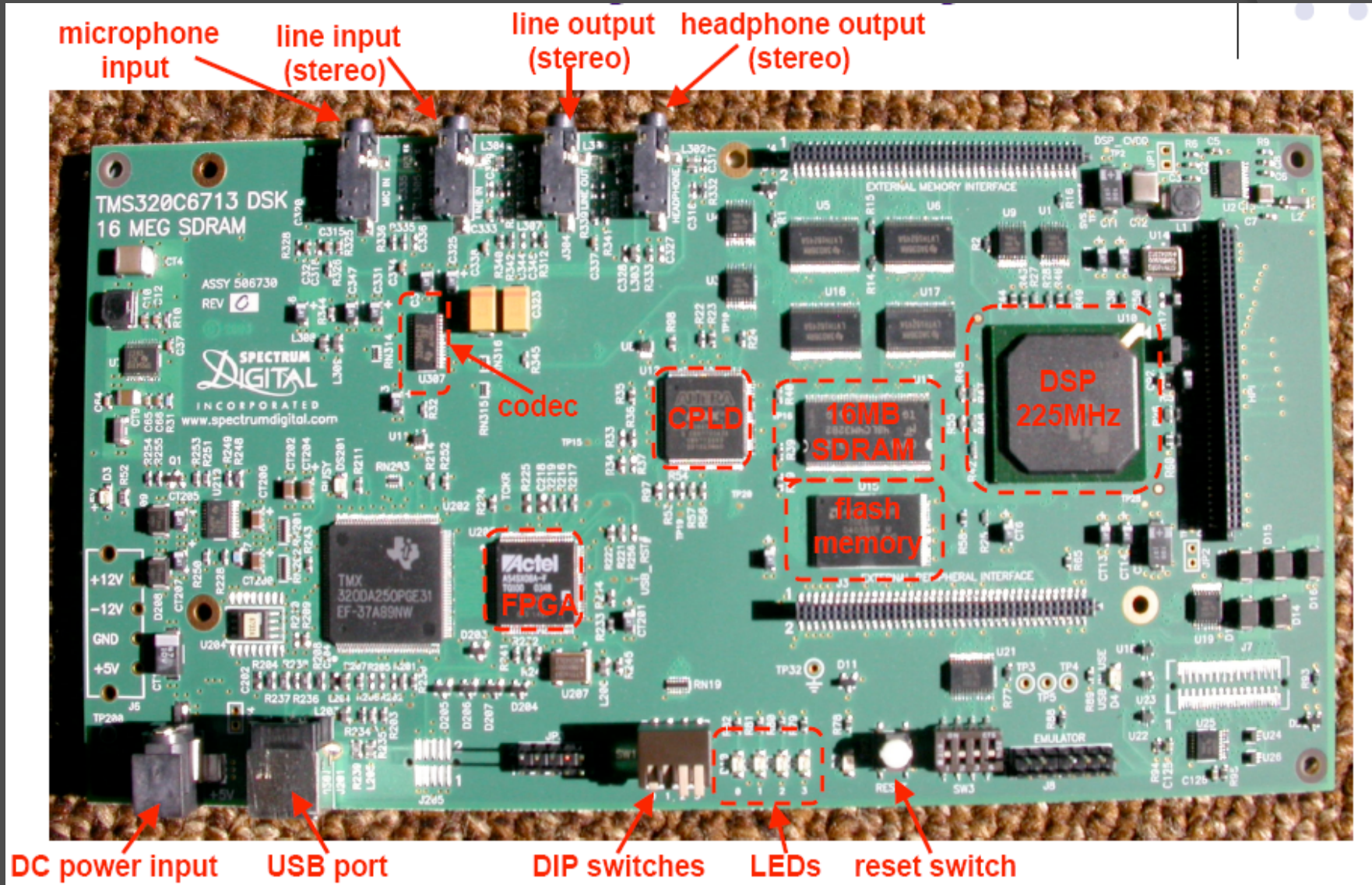
C6713 DSK Overview

- ⦿ Texas Instruments TMS320C6713 *floating point* DSP running at 225 MHz
- ⦿ AIC23 stereo codec (ADC and DAC)
 - Ideal for audio applications
 - 8-96 kHz sample rates
 - Line in/out (we use these most of the time)
 - Microphone in
 - Headphone out
- ⦿ Memory
 - 16 MB dynamic RAM
 - 512 kB nonvolatile FLASH memory
- ⦿ General purpose I/O
 - 4 LEDs
 - 4 DIP switches
- ⦿ USB interface to PC

C6713 DSK Functional Block Diagram



C6713 DSK Physical Layout



Is my DSK working?

DSK Power On Self Test

- Power up DSK and watch LEDs
- Power On Self Test (POST) program stored in FLASH memory automatically executes
- POST takes 10-15 seconds to complete
- All DSK subsystems are automatically tested
- During POST, a 1 kHz sinusoid is output from the AIC23 codec for 1 second
 - Listen with headphones or watch on oscilloscope
- If POST is successful, all four LEDs blink 3 times and then remain on

For More Information

- See the TMS320C6713 Technical Reference
http://spinlab.wpi.edu/courses/ece4703_2011/tms320c6713dsk_technical_reference.pdf
- See the AIC23 codec datasheet
http://spinlab.wpi.edu/courses/ece4703_2011/aic23_datasheet.pdf
- See other useful links on course website.