IL2206 Lab2 Tutorial

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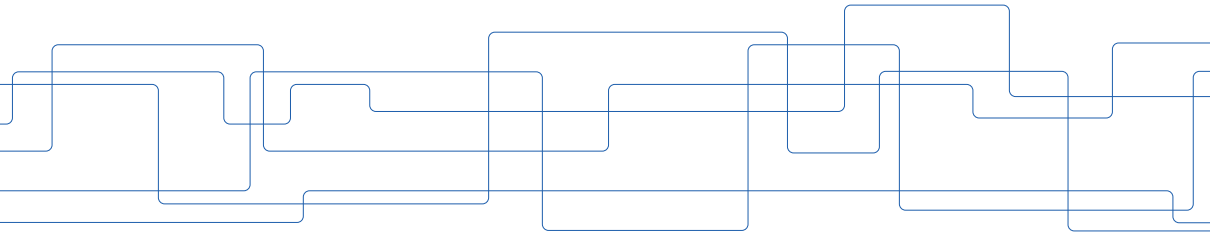
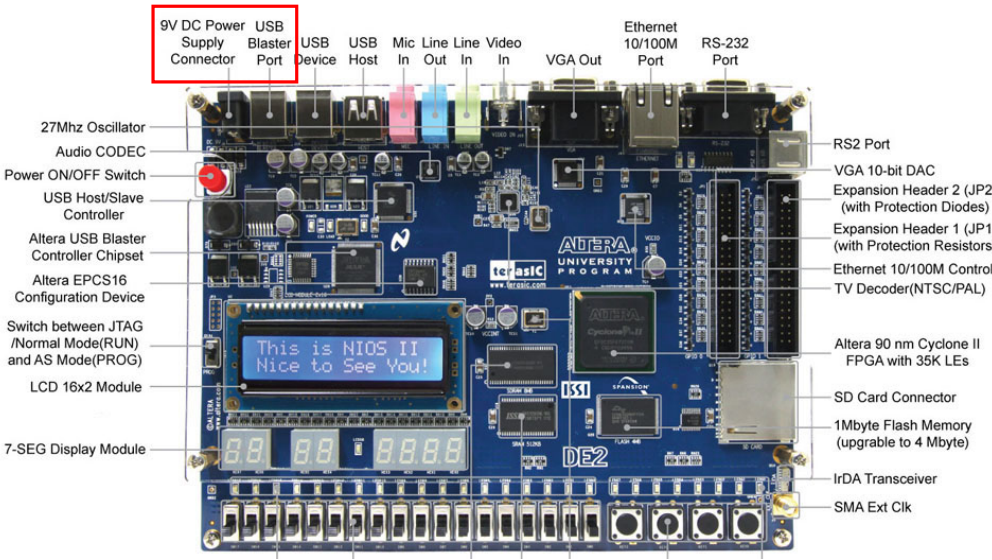
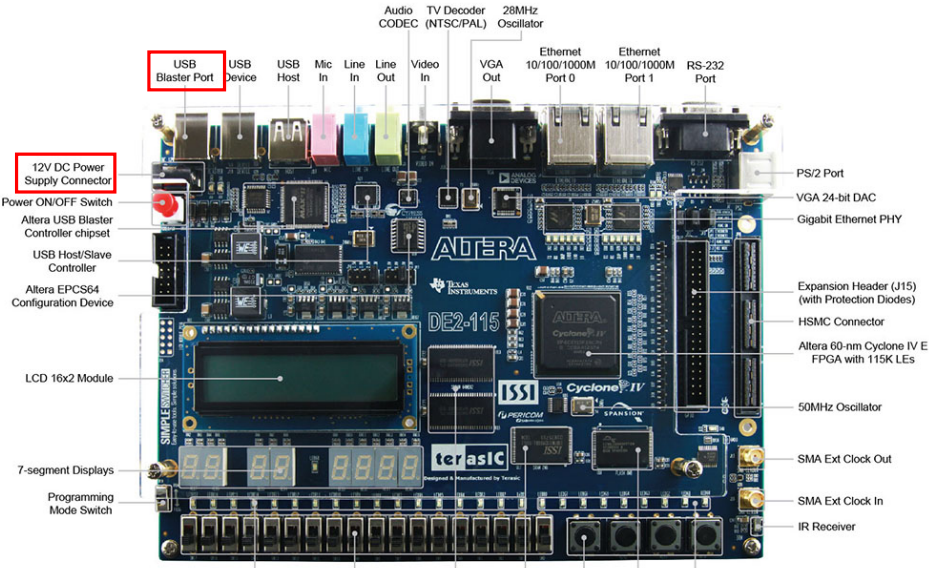


Introduction: DE2 Board

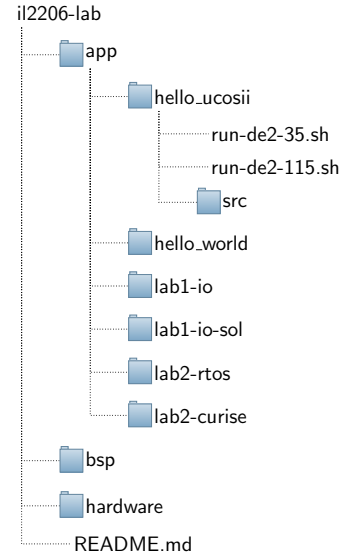


Introduction: DE2-115 Board



Introduction: Folder Structure

- For Lab2, skeletons are in folders lab2-rtos and leb2-curise.
- The folder hello_ucosii contains the minimum example.
- Copy the script file run-de2-*board type*.sh to your application folder.
- The script file run-de2-*board type*.sh will finish the compilation and uploading job.



Introduction: Declaration of Peripherals

```
/*
 * DE2_PIO_REDLED18 configuration
 *
 */

#define ALT_MODULE_CLASS_DE2_PIO_REDLED18 altera_avalon_pio
#define DE2_PIO_REDLED18_BASE 0x9120
#define DE2_PIO_REDLED18_BIT_CLEARING_EDGE_REGISTER 0
#define DE2_PIO_REDLED18_BIT_MODIFYING_OUTPUT_REGISTER 1
#define DE2_PIO_REDLED18_CAPTURE 0
#define DE2_PIO_REDLED18_DATA_WIDTH 18
#define DE2_PIO_REDLED18_DO_TEST_BENCH_WIRING 0
#define DE2_PIO_REDLED18_DRIVEN_SIM_VALUE 0
```

Declaration of peripherals is in the header file your-app-folder/bsp/system.h, which will be generated after you run the script. By including corresponding header file, e.g. `#include "altera_avalon_pio_regs.h"`, Peripherals can be accessed by functions like `IORD_ALTERA_AVALON_PIO_DATA()`. (A complete example is shown by the application in *app/lab1-io-sol/lab1_IO*).

Demostration