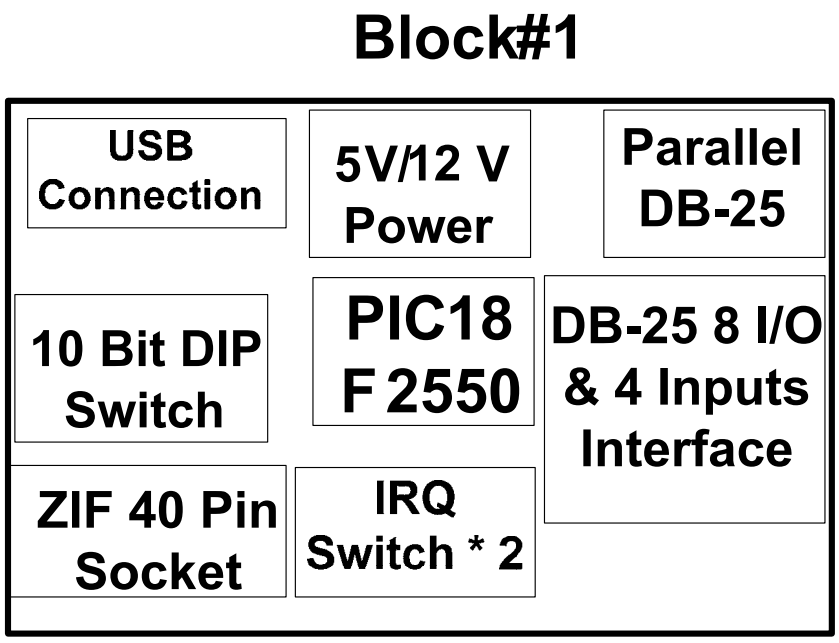
NSF CCLI Project: Collaborative Development of a Microcontroller Training System for Two and Four Year Distance Learning Engineering Students

PIC Training System Hardware Designs

Block #1: The core of the Training System that can do programming and normal operation of a target PIC MCU: most of the PIC16F family and some of the PIC18F members.

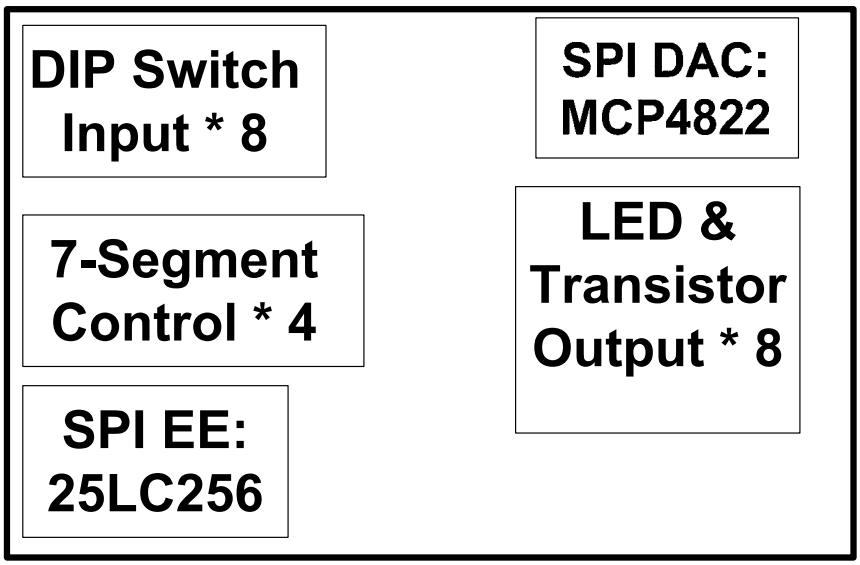
The Design Block:



Block #2: This block provides difference lab exercises on basic 8 bits digital inputs and outputs, 4 7-segments for numerical display and SPI serial interface bus for DAC and EEPROM

The Design Block:

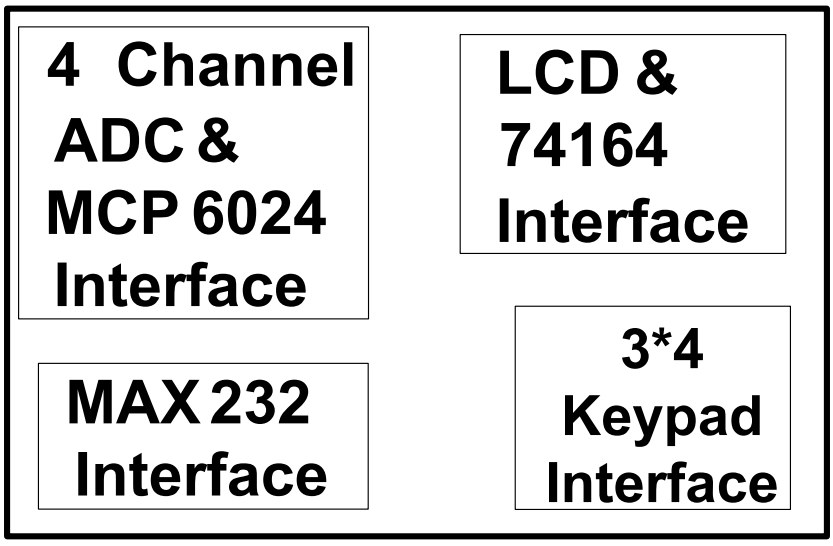
Block#2



Block #3: **This block enable experimentations on LCD parallel interface, 3*4 keypad scanning, debouncing, and decoding exercises, and RS232-TTL serial interfacing, and signal conditional circuit designs involving OPAmp**

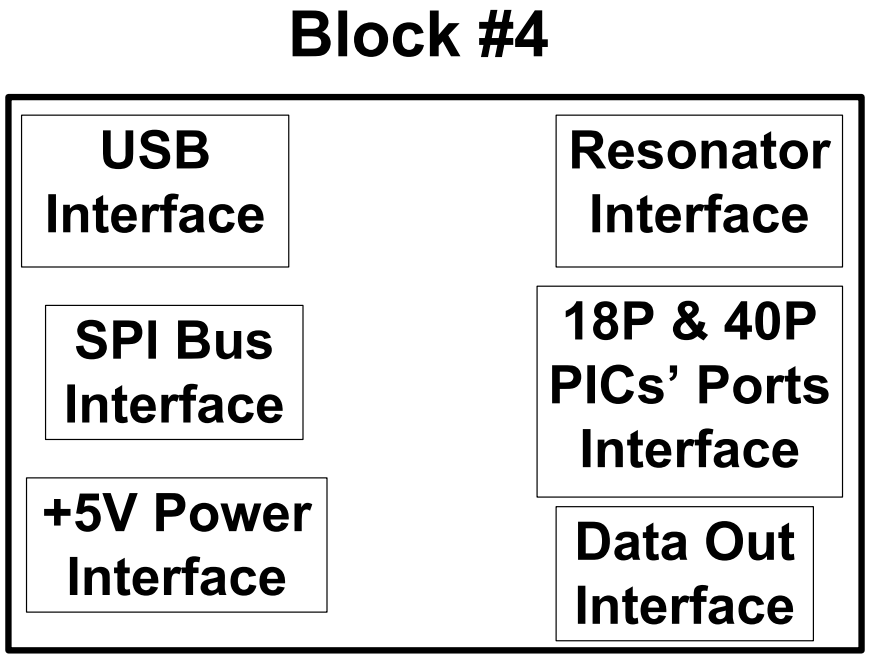
The Design Block:

Block#3



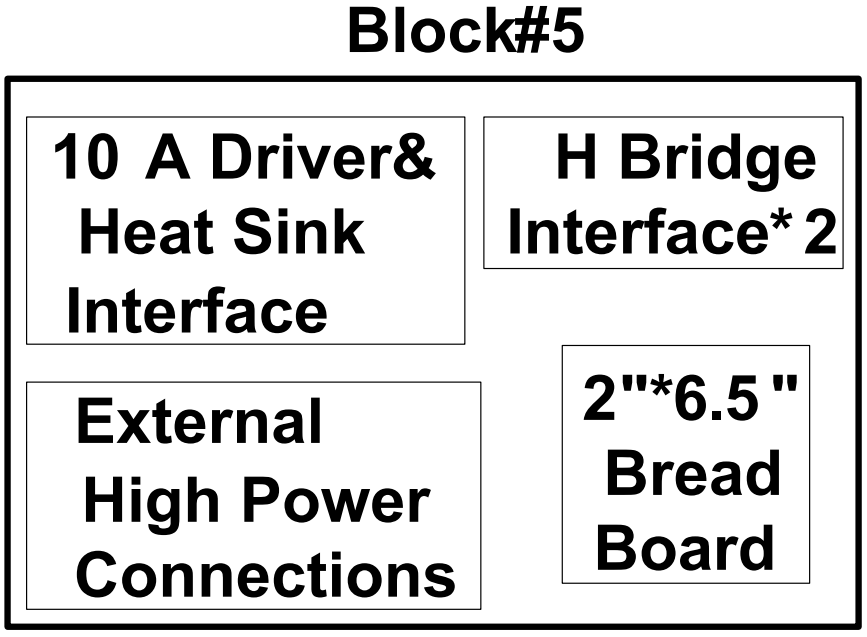
Block #4: **This block consists (+5V), signal interface connectors, USB, SPI interfaces**

The Design Block:



Block #5: This block is all about DC high power driver, interface, connectors, and experimental interface bread board.

The Design Block:



Block #6: This is intended for standard TTL/CMOS digital interface experimentation uses and future expansion.

The Design Block: