**Components Block Diagram**

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| --- | --- | --- | --- |
| Port | Port Name | DDR Name | DRAGON12-Plus use |
| Port J | PJ | DDRJ | LED enable |
| Port A | PA | DDRA | Keypad |
| Port B | PB | DDRB | LEDs |
| Port K | PK | DDRK | LCD |

* The hex keypad is connected to Port K. pins PA0-PA3 are configured as outputs while pins PA4-PA7 are configured as inputs.
* The LEDs are connected to Port B and Port J. Both data direction ports are set to outputs when LEDs are enabled.
* The LCD is connect to Port K. Pin PK1 is connected to the enable signal E while the register select signal RS is connected to PK0. PK7 is for the read/write line and is connect through the J5 header which will allow write-only operation of the LCD.

