==============================Cypress PSoC==============================

- PSoC (programmable system on a chip)

# 0.Schematics

## 0.0.MCU

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Filters | CPU | Family | Serial | Max Frequency(MHz) | Timer/Counter/PWM | ADC | DAC | Opamp | Flash( KB) | SRAM(KB) | IO |
| CY8C4245AXI – 473 | CortextM0 | PSoC 4 | PSoC 4200 | 48 | 4 | 1x12-bit SAR | 2 | 2 | 32 | 4 | 36 |
| CY8C4245AXI – 483 | CortextM0 | PSoC 4 | PSoC 4200 | 48 | 4 | 1x12-bit SAR | 2 | 2 | 32 | 4 | 36 |

## 0.1.Led on kit

- Led connect power 🡪 set 0 will glow( light )

## 0.2.Peripheral

### 0.2.1.uart – max232

### 0.2.2.led 7 seg - URL2803APG

### 0.2.3.eeprom – ATMEL 24C08B

### 0.2.4.rtc-DS1307

### 0.2.5.led matrix 8x8

### 0.2.6.bridge h - L298N

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# 1.keyword-search-in-library-function-----drag and drop

pin

digital output

digital input

resistor

led

power - Vcc

switch

ground - Vss

interrupt

logic

basic 🡪 counter event

tcpwm 🡪 timer counter, pwm

clock

# 100.Topic API

## 100.1.Sortware Output Pins

led\_blue\_Write(1);

led\_blue\_Read();

### 100.2. Sortware input Pins

## 100.3.Interrupt

## 100.4.Hardware Pins

## 100.5.Toggle Flip-Flop

## 100.6.Basic Counter

## 100.7.Counter

## 100.8.PWM

## 100.9.Timer

## 100.10.I2C Receive

## 100.11.I2C Transmit

## 100.12.UART

## 100.13.CapSense

## 100.14.Status Register

## 100.15.Control Register

## 100.16.Sleep

## 100.17.Deep Sleep

## 100.18.PSoC Resources

## 100.19.PSoC Creator File Structure

## 100.20.PSoC 4200 Low Power Modes

====================== Need looking for more information ============

flip flop ???