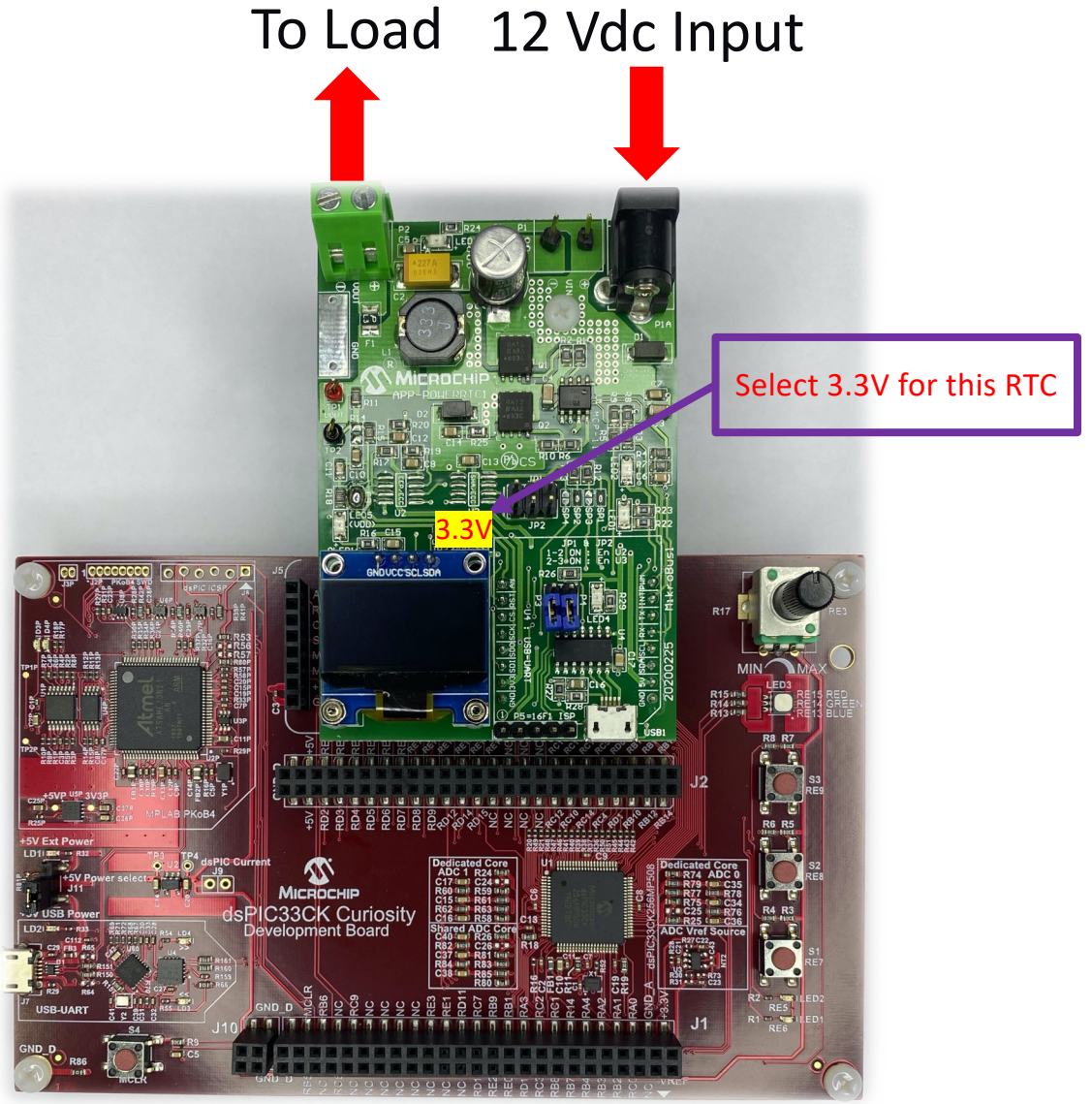
Hardware Setup

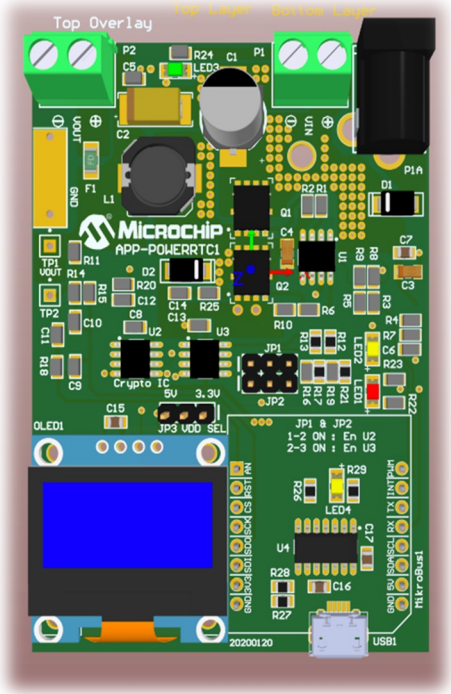
Pre-work

SR Buck Converter Board for Hand-ON

- SR Buck Converter Board：
  - Vin = 8~18V
  - Vout = 3.3V
  - Iout = 1A
  - L = 33 µH
  - C = 220 µF ESR = 120 mΩ
  - f_{SW} = 250 kHz (Deadtime=150 ns)



Function Blocks Of SR Buck Converter Board



Input Power Indicator

Vdd Selection:
3.3V for dsPIC® & PIC16
5V for PIC16
Select 3.3V for this RTC

Sync Buck

Type-3 RC Network
For Hybrid Power

I²C Pin Selections

ECCx08A & EEPROM

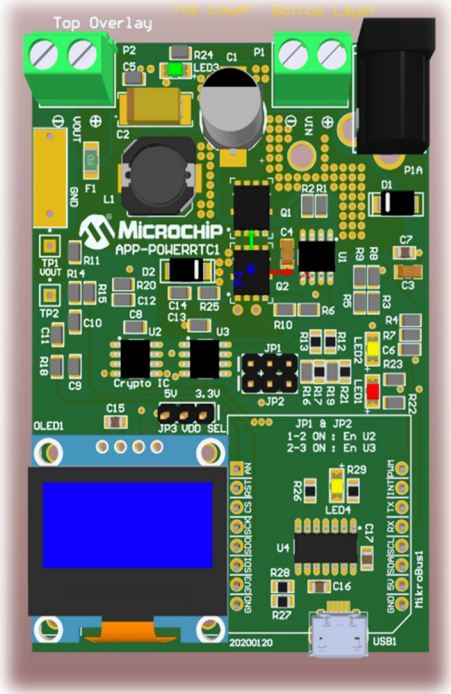
0.96” OLED with I²C
(Main Chip: SSD1306)
128*64

USB/UART Bridge

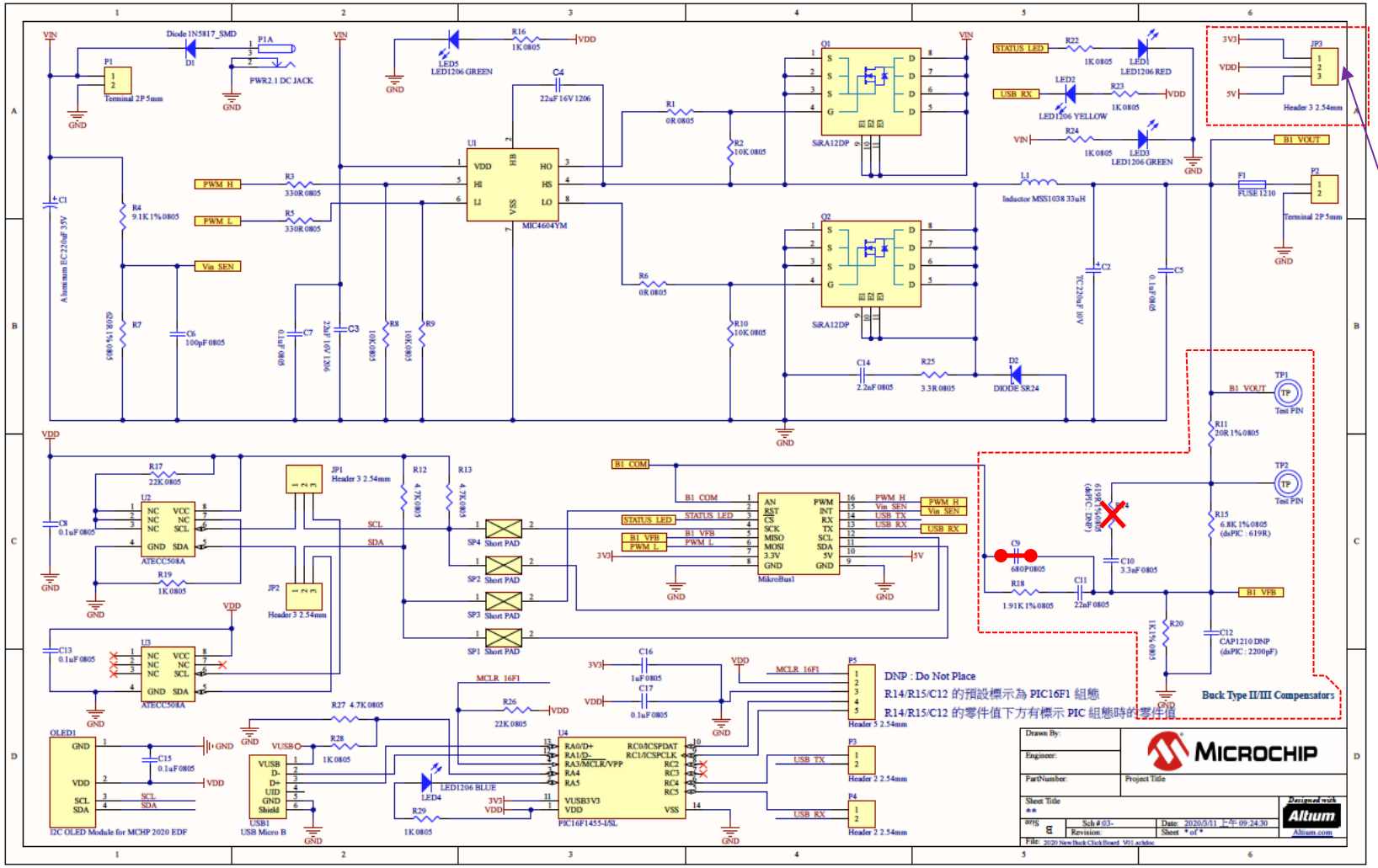
MikroBus

https://www.microchip.com/mplab/microchip-libraries-for-applications

Hardware Modification



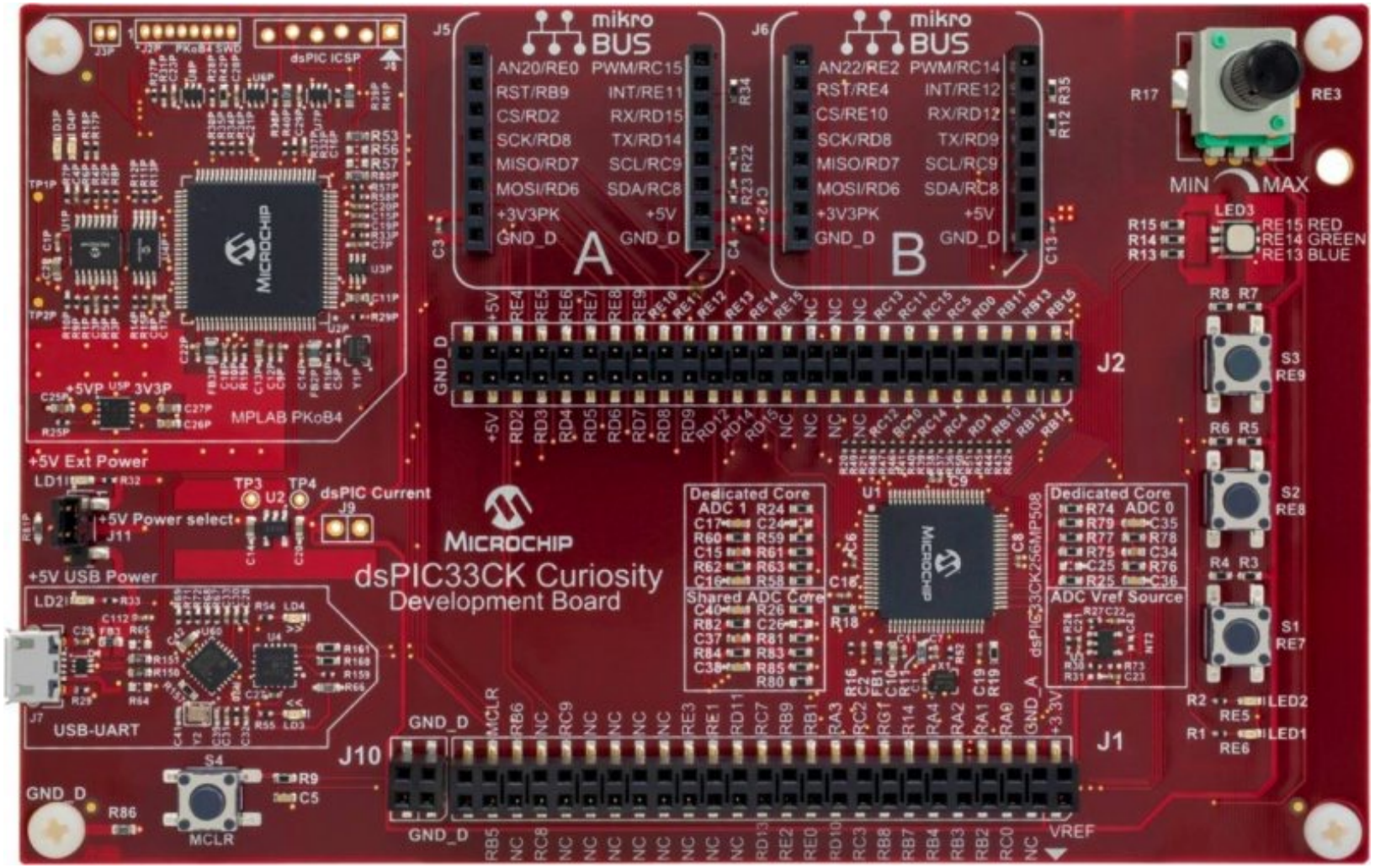
R15 = 619R
C12 = 2200 pF
R14 = Open
C9 = Short



Vdd Selection:
3.3V for dsPIC® & PIC16
5V for PIC16
Select 3.3V for this RTC

Curiosity-DM330030 with dsPIC33CK256MP508

https://www.microchip.com/en-us/development-tool/DM330030



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May The *Power* Be With You