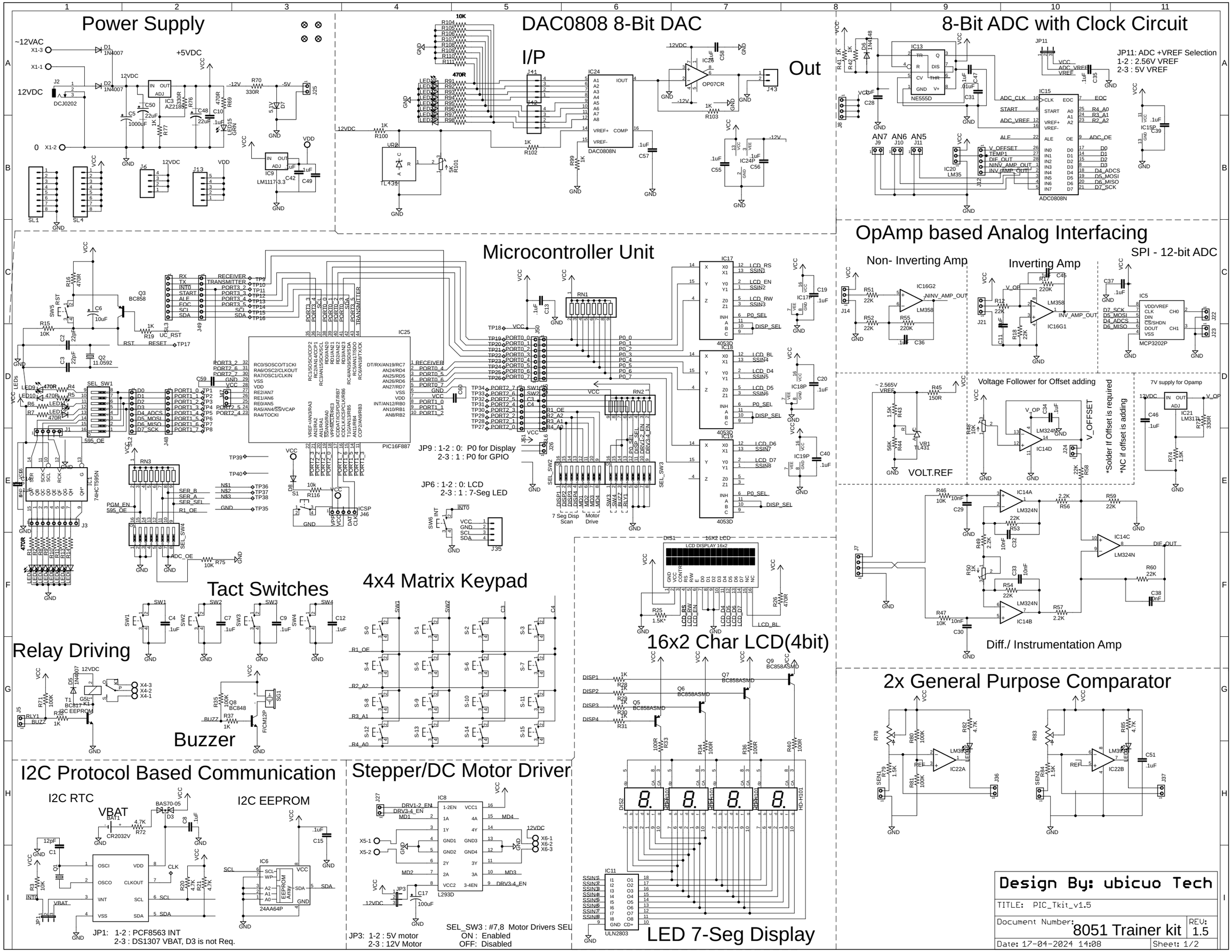
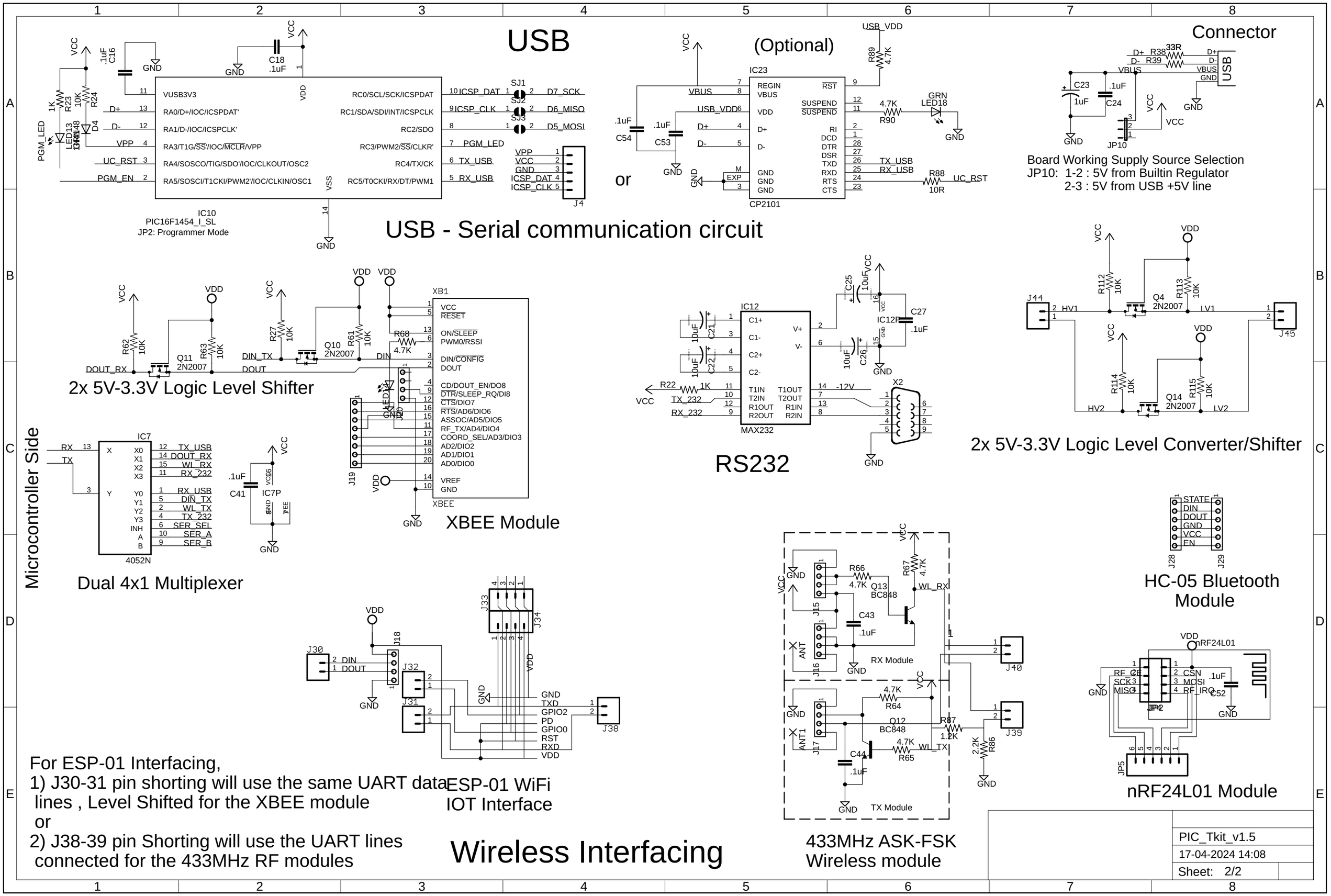

Power Supply
DAC0808 8-Bit DAC
I/P
Out
8-Bit ADC with Clock Circuit
JP11: ADC +VREF Selection
1-2 : 2.56V VREF
2-3 : 5V VREF
Microcontroller Unit
JP9 : 1-2 : 0: P0 for Display
2-3 : 1 : P0 for GPIO
JP6 : 1-2 : 0: LCD
2-3 : 1 : 7-Seg LED
OpAmp based Analog Interfacing
Non- Inverting Amp
Inverting Amp
SPI - 12-bit ADC
Voltage Follower for Offset adding
7V supply for Opamp
VOLT.REF
V_OFFSET
*Solder If Offset is required
*NC if offset is adding
Diff./ Instrumentation Amp
Tact Switches
4x4 Matrix Keypad
Relay Driving
Buzzer
16x2 Char LCD(4bit)
2x General Purpose Comparator
I2C Protocol Based Communication
I2C RTC
I2C EEPROM
JP1: 1-2 : PCF8563 INT
2-3 : DS1307 VBAT, D3 is not Req.
Stepper/DC Motor Driver
JP3: 1-2 : 5V motor
2-3 : 12V Motor
SEL_SW3 : #7,8 Motor Drivers SEL
ON : Enabled
OFF: Disabled
LED 7-Seg Display
Design By: ubicuo Tech
TITLE: PIC_Tkit_v1.5
Document Number: 8051 Trainer kit
REV: 1.5
Date: 17-04-2024 14:08
Sheet: 1/2


USB
IC10
PIC16F1454_I_SL
JP2: Programmer Mode
(Optional)
IC23
CP2101
or
Connector
Board Working Supply Source Selection
JP10: 1-2 : 5V from Builtin Regulator
2-3 : 5V from USB +5V line
USB - Serial communication circuit
2x 5V-3.3V Logic Level Shifter
RS232
MAX232
2x 5V-3.3V Logic Level Converter/Shifter
Microcontroller Side
Dual 4x1 Multiplexer
XBEE Module
HC-05 Bluetooth Module
ESP-01 WiFi IOT Interface
nRF24L01 Module
433MHz ASK-FSK Wireless module
Wireless Interfacing
For ESP-01 Interfacing,
1) J30-31 pin shorting will use the same UART data lines , Level Shifted for the XBEE module
or
2) J38-39 pin Shorting will use the UART lines connected for the 433MHz RF modules
PIC_Tkit_v1.5
17-04-2024 14:08
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