GND

decouple2
100n

5V

GND

decouple1
100n

5V

MCU1

VCC 6
VCC 4
AVCC 18
AREF 20

analogdecouple
5V
Inductor
10mH

decouple3
100n
GND

analogdecouple2
5V
Inductor
10mH

decouple4
100n
GND

GND 3
GND 5
GND 21
GND

ATmega328P-AU

PC0 (ADC0/PCINT8) 23
PC1 (ADC1/PCINT9) 24
PC2 (ADC2/PCINT10) 25
PC3 (ADC3/PCINT11) 26
PC4 (ADC4/SDA/PCINT12) 27
PC5 (ADC5/SCL/PCINT13) 28
PC6 (RESET/PCINT14) 29

PD0 (RXD/PCINT16) 30 MCUDataOut
PD1 (TXD/PCINT17) 31 MCUDataIn
PD2 (INT0/PCINT18) 32
PD3 (PCINT19/OC2B/INT1) 1
PD4 (PCINT20/XCK/T0) 2
PD5 (PCINT21/OC0B/T1) 9
PD6 (PCINT22/OC0A/AIN0) 10
PD7 (PCINT23/AIN1) 11

PB0 (PCINT0/CLKO/ICP1) 12
PB1 (PCINT1/OC1A) 13
PB2 (PCINT2/SS/OC1B) 14
PB3 (PCINT3/OC2A/MOSI) 15 MOSI
PB4 (PCINT4/MISO) 16 MISO
PB5 (SCK/PCINT5) 17 SCK
PB6 (PCINT6/XTAL1/TOSC1) 7
PB7 (PCINT7/XTAL2/TOSC2) 8

ADC6 19
ADC7 22

photodiodeR
Res3
10K
GND

Photodiode
BPW21R
5V

dht-pull-up 5V
Res3
10K

Thermal&Humiditysensor1
VDD 1
DATA 2
NULL 3
GND 4
DHT22
5V
GND

resetswitch
reset
SW-PB
GND

5V reset
Res3
10K

crystal1
Cap Semi
22uF
GND

Crystal
TSX-3225 16.0000MF18X-AC3
GND GND
GND

crystal2
Cap Semi
22uF
GND

ds18pull-up 5V
Res3
4.7K
GND

Thermalsnesor1
DS18B20+
DQ 2
GND 1
VDD 3
5V

5V jack
3
2
1 5V
MNT 1 4
MNT 2 5
PJ-047A
GND

power
5V current-limit5v
Res3
330
LED2
GND

3.3v supply
GND 1 VOUT_2 4
VOUT_1 2
VIN 3
AMS1117-3.3
3.3V
GND

3.3v-47uf
Cap Semi
47uC

3.3v-10uf
Cap Semi
10uF
5V
GND

power33
3.3V current-limit33
Res3
330
LED2
GND

3.3V

XBee
VCC 1 DIO0/AD0 20
DOUT 2 DIO1/AD1/SPI_ATTN 19
DIN/CONFIG 3 DIO2/AD2/SPI_CLK 18
SPI_MISO 4 DIO3/AD3/SPI_SSEL 17
RESET 5 DIO6/RTS 16
PWM0/RSSI/PWM 6 DIO5/ASSOC 15
PWM1 7 VREF 14
[RESERVED] 8 ON/SLEEP 13
DI8/SLEEP_RQ/DTR 9 DIO7/CTS 12
GND 10 DIO4/SPI_MOSI 11
XB24CZ7PIT-004
MCUDataIn
MCUDataOut
GND

MISO
SCK
reset

Programming VTG
1 2
3 4
5 6
Header 3X2
MOSI
GND

NetLabel40

Title

Size A4
Number
Revision
Date: 11/16/2020
File: C:\Users\..\HW1.SchDoc
Sheet of
Drawn By:

Part List

Bill of Materials for Project [HW1.PrjPcb] (No PCB Document Selected)

Source Data From: HW1.PrjPcb

Project: HW1.PrjPcb

Variant: None

Report Date: 2020/11/16 　下午 10:22

Print Date: 16-Nov-20 　10:24:09 PM

Designator	Comment	LibRef	Footprint	Description
3.3v-10uf, 3.3v-47uf, crystal1, crystal2	Cap Semi	Cap Semi	C1210	Capacitor (Semiconductor SIM Model)
3.3v supply	AMS1117-3.3	AMS1117-3.3	SOT229P700X180-4N	Integrated Circuit
5V jack	PJ-047A	CMP-14830-000005-1	FP-PJ-047A-MFG	CONN PWR JACK 2X5.5MM SOLDER
analogdecouple, analogdecouple2	Inductor	Inductor	INDC3216	Inductor
Crystal	TSX-3225 16.0000MF18X-AC3	CMP-2000-07332-1	EPSON-TSX-3225_V	MHz Range Crystal Unit, 16 MHz, -40 to 85 degC, 4-Pin SMD, RoHS, Tape and Reel
current-limit5v, current-limit33, dht-pull-up, ds18pull-up, photodiodeR, reset	Res3	Res3	12Z-2010	Resistor
decouple1, decouple2, decouple3, decouple4		Cap Semi	C1210	Capacitor (Semiconductor SIM Model)
MCU1	ATmega328P-AU	CMP-0095-00269-2	32A_N	8-bit AVR Microcontroller, 32KB Flash, 1KB EEPROM, 2KB SRAM, 32-pin TQFP, Industrial Grade (-40°C to 85°C)
Photodiode	BPW21R	CMP-2000-05428-1	VISH-BPW21R-2	Silicon Photodiode, 565 nm, -40 to 125 degC, 2-Pin TO-5, RoHS, Bulk
power, power33	LED2	LED2	3.2X1.6X1.1	Typical RED, GREEN, YELLOW, AMBER GaAs LED
Programming	Header 3X2	Header 3X2	HDR2X3	Header, 3-Pin, Dual row
resetswitch	SW-PB	SW-PB	SPST-2	Switch
Thermal&Humiditysensor1	DHT22	DHT22	DHT22	Integrated Circuit
Thermalsnesor1	DS18B20+	CMP-0253-00003-1	Q3+1	Programmable Resolution Digital Thermometer, 1-Wire Interface, ±0.5°C Accuracy, 3-Pin TO92, -55°C to +125°C, Pb-Free
XBee	XB24CZ7PIT-004	XB24CZ7PIT-004	XB24CAPIT-001	Integrated Circuit