Version 0.0.1

SOLAR BATTERY

U1 PAD_SMD2X2MM
SMD Pad
Vs

GND PAD_SMD2X2MM
SMD Pad

GND1 PAD_SMD2X2MM
SMD Pad
GND

change to 5v next time

Vs
1N5819W D5
C9 10u
GND
10uH L1
Vaab
C10 10u
GND

U3 XT1861B362MR-G
GND
LX
VOUT

WS2812 LED

U7 HE9073A33M5R
VBUS
VIN
GND
CE
VOUT
NC
Vext
C4 1uF
GND
GPIO1
R25 100K
GND

LED1 WS2812B-4020
WS2812 Vext
DIN
VDD
DOUT
VSS
GND

R1 0
WS2812 — GPIO4

POWER

U15 TP4054_C668215
CHRG
GND
BAT
PROG
VCC
BAT
CHG1 XL-1608UBC-04
GND
R26 2k
R27 100K
10u C3
GND

5V+
1N5819W D10
D7 1N5819W
Vaab
U16 XC6206P332MR_C5148692
VIN
VSS
VOUT
3V3
C19 10u
C20 1uF
GND

BAT
1N5819W D9
BAT 1.25T-2PWT
D6 AU0561M1
GND
VBUS

Type-C USB

USB1 KH-TYPE-C-16P
GND
VBUS
CC1
DP
DN
SUB1
VBUS
GND
VBUS
SUB2
DN2
DP2
CC2
VBUS
GND

CC1
R20 5.1K
GND

F2 CF06V5TR50
VBUS
5V+

R21 5.1K
CC2

U12 CH340K
DP
DN
DTR
UD+
UD-
GND
DTR#
CTS#
V3
RXD
TXD
VCC
RTS#
LORA_TXD
LORA_RXD
5V+
RTS
C2 0.1u
GND

LORA CT62

U2 HT-CT62
EN
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
LoRa.ANT
TXD
RXD
GPIO19
GPIO18
GPIO8
GPIO9
GPIO10
2.4G_ANT
VDD
LORA_TXD
LORA_RXD
GPIO19
GPIO18
GPIO8
GPIO9_USER_KEY
GPIO10
3V3
C17 10uF
GND

BAT
R24 510K
GPIO2
R23 220K
GND

ANT1 PCB_ANTENNA
Z5 1.8pF
3.3nH Z6
Z4 1.8pF
GND

AUTO-Boot

RST1 TS-1088R-02026
3V3
R19 10k
EN
U4.1 2N7002BKS_C5224258
RTS
EN
GND
C7 2.2u
C5 0.1u
3V3
DTR
USR1 TS-1088R-02026
R18 10k
RTS
U4.2 2N7002BKS_C5224258
DTR
GPIO9_USER_KEY
GND

Header

H4 HDR-F-2.54_1x10
EN
GPIO9_USER_KEY
LORA_RXD
LORA_TXD
3V3
GPIO7
GPIO6
GPIO10
GPIO3
GND

H5 HDR-F-2.54_1x10
GPIO0
GPIO1
GPIO2
GPIO8
GPIO5
GPIO4
GPIO19
GPIO18
Vext
GND

FPC1 1.25-4PWB
GPIO19
GPIO18
Vext
GND

HELTEC AUTOMATION
ARDUINO

Physical Pin
Power
GND
GPIO
ADC/DAC
Serial SPI I2C
Connected
Other
Pull Up/Down

ADC1_CH0 / 32K_XP / GPIO0 — 11 EN
ADC1_CH1 / 32K_XN / GPIO1 — 10 GPIO0
ADC1_CH2 / FSPIQ / GPIO2 — 9 GPIO1
ADC1_CH3 / LoRa_DIO1 / GPIO3 — 8 GPIO2
ADC1_CH4 / LoRa BUSY / MTMS / FSPIHD — 7 GPIO3
ADC2_CH0 / LoRa_RST / MTDI / FSPIWP — 6 GPIO4
LoRa_MISO / MTCK / FSPICLK — 5 GPIO5
LoRa_MOSI / MTDO / FSPID — 4 GPIO6
GND — 3 GPIO7
2.4G_ANT — 2
— 1

22 LoRa ANT
21 GND
20 TXD / GPIO21
19 RXD / GPIO20
18 GPIO19 / USB D+
17 GPIO18 / USB D-
16 GPIO8 / LoRa_NSS
15 GPIO9
14 GPIO10 / FSPICS0 / LoRa_SCK
13 GND
12 VDD

ESP32C3 + SX1262
EU868

HT-CT62