Temperature / Humidity Sensor
200nA Sleep
I2C-Address: 0x44

VI2C
C2 100nF
U3 SHT31-DIS
ADDR / RESET / R / VDD / VSS / SDA / SCL / ALERT
SDA / SCL
GND

Infrared Temperature Sensor (optional)
5000nA Sleep
I2C-Address: 0x5a

VI2C
C4 100nF
U5 MLX90614
VDD / VSS / SCL / SDA
SCL / SDA
GND

EEPROM
5000nA Standby
I2C-Address: 0x50

VI2C
U4 24LC32
A0 / A1 / A2 / VCC / GND / SDA / SCL / WP
SDA / SCL
C5 100nF
GND

Reverse Polarity Protection

PWR_FLAG
U2 TPS27081A
VOUT / VOUT / VIN / R2 / R1,C1 / ON/OFF
BT1 Keystone-2468
GND

Boost Converter

VIN_SENSE
L1 4.7uH
U1 TLV61225
L / VIN / EN / GND / VOUT / FB
+3.3V
C3 10uF
C1 10uF
GND

LoRA Module
200nA Sleep

+3.3V
R3 100k
U8 RFM95W
GND / MISO / MOSI / SCK / SS / RESET / DIO5 / GND / DIO2 / DIO1 / DIO0 / VCC / DIO3 / GND / ANT
MISO / MOSI / SCK / RFM95_NSS / RFM95_NRST / RFM95_DIO5
RFM95_IRQ
+3.3V
C10 100nF
J1 CONUFL001-SMD-T
Z1 Z / Z2 Z / Z3 Z
AE1 ANT-868-CHP-T
GND

Light Sensor
10nA when disabled

PHOTO_VCC
PWR_FLAG
U6A ADG633YRU
+3.3V
330k R2
Offset: 3.3V*1/(33+1)=97mV
10k R7
C7 100nF
U7 TSV911RILT
GND
D1 BPV10
R8 1M / C11 4.7pF / R9 33k / C12 15pF
U6B ADG633YRU
U6C ADG633YRU
160Hz low pass
10k R5
PHOTO_SENSE
C9 100nF
PHOTO_SWITCH
100k R1
C6 100nF
PHOTO_ENABLE
100k R6
U6D ADG633YRU
VDD / EN / VSS / GND
C8 100nF
GND

STM32L4 MCU
245nA Standby with RTC

+3.3VA
C13 100nF
NRST
+3.3V / +3.3VA / PWR_FLAG
FB1 WE742792040
+3.3V
100 R13
VIN_SENSE
U9 STM32L412KB
NRST / VDD / VDD / VDDA
PA0 / PA1 / PA2 / PA3 / PA4 / PA5 / PA6 / PA7 / PA8 / PA9 / PA10 / PA11 / PA12 / PA13 / PA14 / PA15
PH3
PC14 / PC15
PB0 / PB1 / PB3 / PB4 / PB5 / PB6 / PB7
VSS / VSS
RFM95_DIO5 / RFM95_NRST / RFM95_NSS / SCK / MISO / MOSI
PHOTO_ENABLE / PHOTO_SWITCH / SWDIO / SWCLK
RFM95_IRQ / PHOTO_SENSE / I2C_ENABLE / SCL / SDA
+3.3V
C14 100nF / C15 100nF
C16 100nF
R14 10k
GND

SWD Connector

+3.3V
J2 SHF-105-01-L-D-TH
VTref / RESET / SWDCLK/TCK / SWDIO/TMS / SWO/TDO / NC/TDI / GNDDetect / GND
NRST / SWCLK / SWDIO
GND

I2C Bus Control

+3.3V
R10 100k
PMV250EPEA Q1
I2C_ENABLE
VI2C / PWR_FLAG
R11 4.7k / R12 4.7k
SCL / SDA

H1 MountingHole
H2 MountingHole