FROST5000 RTM V1.0 - Schematic
Box Synergy

UART Socket

J_UART
UART
3V3
3V3
Tx — LED4/U0TXD
Rx — LED5/U0RXD
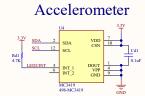GND
855-M50-3530442
GND

INA219BIDCNR
(SOT-23-8)
Current Monitor of USBout

ERJ-6BWFR010V
0805 Shunt
5V
ReS
667-ERJ-6BWFR010V
ERJ-6BWFR010V

U3
VS   SDA — SDA
VIN+
VIN-
A0
A1
SCL — SCL
GND
INA219BIDCNR
595-INA219BIDCNR
GND

Rp2
10K
3.3V

USB out
CQ-USB-AFFS90
USB-A

J_USB_A
USB A
VBUS — 5Vout
DATA- — DCP-
DATA+ — DCP+
GND
GND
CQ-USB-AFFS90
GND

Cu1 10uF 10V
Cu2 10uF 10V
Rp1 10K
3.3V
GND

Rs
Ru
0 Ohms

USB in
CQ-MUB-FS8772
MicroUSB

J_MICROUSB
MICRO USB
VBUS — 5Vin
DATA-
DATA+
ID
GND
CQ-MUB-FS8772

Rf_in1
0 Ohms

MC3419
Accelerometer

U4
SDA   VDD
SCL   CSN
INT_1   DOUT
INT_2   VPP
          GND
MC3419
498-MC3419
3.3V
3.3V
Rd1 4.7K
LED2/INT
Cd1 0.1uF
GND

ESP-07 with Antenna
Ai-Thinker -- ESP8266 Module

U1
VCC   GPIO16 — LED1
RST   GPIO14 — SCL
CH_PD   GPIO12 — SDA
GPIO2   GPIO13 — STAT_BAT
GPIO4   GPIO1/TX0 — LED4/U0TXD
GPIO5   GPIO3/RX0 — LED5/U0RXD
          GPIO0 — JUMPER
GPIO15
GND   ADC — ADCin
ESP-07

Ca1 100nF
Ca2 10uF
Ra1 5.6K
LED2/INT
LED3
Ra3 5.6K
Ra2 5.6K
3.3V
GND
GND

JUMPER
J_Jumper
Jumper
855-M50-3530442
GND

EEPROM 128K
U2
SDA — SDA   VCC
SCL — SCL   GND
EEPROM 128K
579-24CW1280T-I/OT
3.3V
GND

LEDs
LCB TTSD-T2V1-2J8L-Z
(PLCC-2)
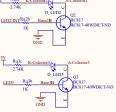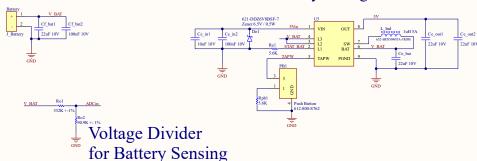
BC817 (SOT23)
NPN Transistors

5V
Rq1c 2.74K   K-Colector1   A-Colector1
D_LED1   Q1   BC817   BC817-40WDICT-ND
LED1   Rq1a 1K   Base1B

5V
Rq2c 2.74K   K-Colector2   A-Colector2
D_LED2   Q2   BC817   BC817-40WDICT-ND
LED2/INT   Rq2b 1K   Base2B

5V
Rq3c 2.74K   K-Colector3   A-Colector3
D_LED3   Q3   BC817   BC817-40WDICT-ND
LED3   Rq3b 1K   Base3B
GND

BC807 (SOT23)
PNP Transistors

5V
Rq4c 2.74K   K-Colector4   A-Colector4
D_LED4   Q4   BC807   BC807-40FCT-ND
LED4/U0TXD   Rq4b 1K   Base4B
GND

5V
Rq5c 2.74K   K-Colector5   A-Colector5
D_LED5   Q5   BC807   BC807-40FCT-ND
LED5/U0RXD   Rq5b 1K   Base5B
GND

BATTERY

Battery
+ -
J_Battery

Cf_bat1 22uF 10V
Cf_bat2 100nF 10V
V_BAT
GND

V_BAT   Ro1 332K +-1%   ADCin
Ro2 90.9K +- 1%
GND

Voltage Divider
for Battery Sensing

FM5324G
Battery Managment

621-DDZ6V8BSF-7
Zener 6.5V / 0.5W
De1

Ce_in1 10uF 10V
Ce_in2 100nF 10V

U5
VIN   OUT
L3
L2   SW
L1   BAT
TAPW   PGND

5Vin
V_BAT
STAT_BAT
Re1 5.6K
TAPW
PB1
Push Button
612-800-S762
Rpb1 5.6K
GND

L_Ind 1uH 5A
652-SRN5040TA-1R0M
V_BAT
Ce_out1 22uF 10V
Ce_out2 22uF 10V
Ce_bat 22uF 10V
5V
GND
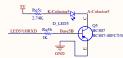
LM1117-3.3
(WSON-8)
3.3V Linear Regulator

U6
IN   OUT
IN   OUT
IN   OUT
          AD3/GND
926-LM1117LD33NOPB

5V
Cf1 22uF 10V
Cf2 22uF
3.3V
GND
GND

Altium