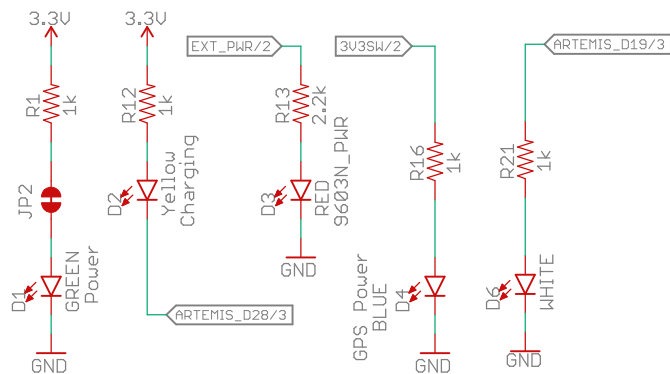
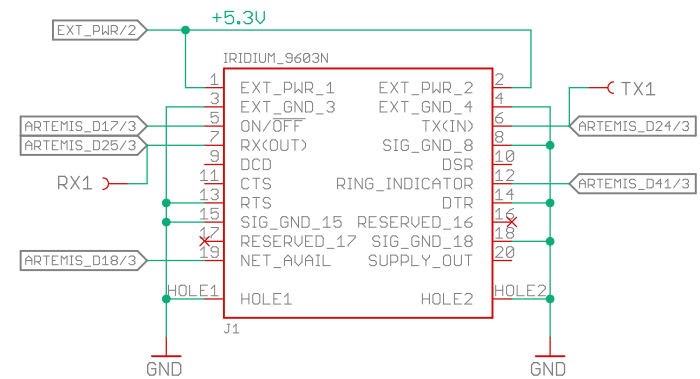


LEDs



Iridium 9603N



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TITLE: Artemis_Global_Tracker

Design by: Paul Clark
 Based on the SparkFun Artemis and Qwiic ZOE-M8Q

REV:
 V2

Date: 18/02/2020 16:24

Sheet: 1/4

3.3V

0.5A/40V/420mV

D11

V_BCKP

1.8V Min

0.5A/40V/420mV

D12

3V3SW/1

24*2

16

27

26

VCC

V_BCKP

V_CORE

V_DCDC_OUT

SDA/CS

SCL/CLK

RXD/MOSI

TXD/MISO

D_SEL

2

32

22

21

48

GPS_RX

GPS_TX

18

19

43

50

36

33

34

35

20

29*4

30*2

6*2

ARTEMIS_D9_SDA/3

ARTEMIS_D8_SCL/3

GNSS

4

RF_IN

PI013/EXTINT

P1014

P1015

TIMEPULSE

SAFEBOOT

LNA_EN

RESET

SQT_0

SQT_0

NC

C11

4.7uF

GND

L1

2.2uH

C13

0.1uF

GND

UBLOX_ZOE_M8-0-10

U4

32.768kHz

X2

SAFEBOOT

ARTEMIS_RESET/3

Nxpperia
 PMEG4005J
 $V_F @ 100\mu A \approx 100mV$
 $0.5A / 40V / 420mV$
 $R_{15} =$
 $(5 - (3.1 + 0.1)) / 30E-6$
 $\approx 60K$
 62K0HM-0603-1/10W-5%
 V_{BCKP}
 B1
 SII ML414H
 1.0mAh (3.1V-2.0V) 600Ω
 Pb-free reflowable
 Charge: Constant Current /
 Constant Voltage 3.1V, max.30μA,
 72hr, RT

** !! Make sure 3V3SW and EXT_PWR are not enabled simultaneously !! **

U5
 AS179-92LF

For a 1.55mm PCB, 50 Ohm antenna traces should be 32 mil with 4 mil gap

A good choice for the antenna is the Maxtena M1600HCT-P-SMA which is tuned for Iridium, GPS and GLONASS

U6
MS8607-02BA01

3.3V

0.22µF

GND

1 3 8 7

VDD SCL

GND SDA

ARTEMIS_D8_SCL/3

ARTEMIS_D9_SDA/3

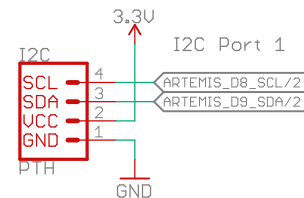
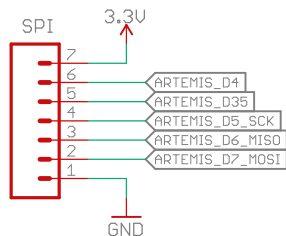
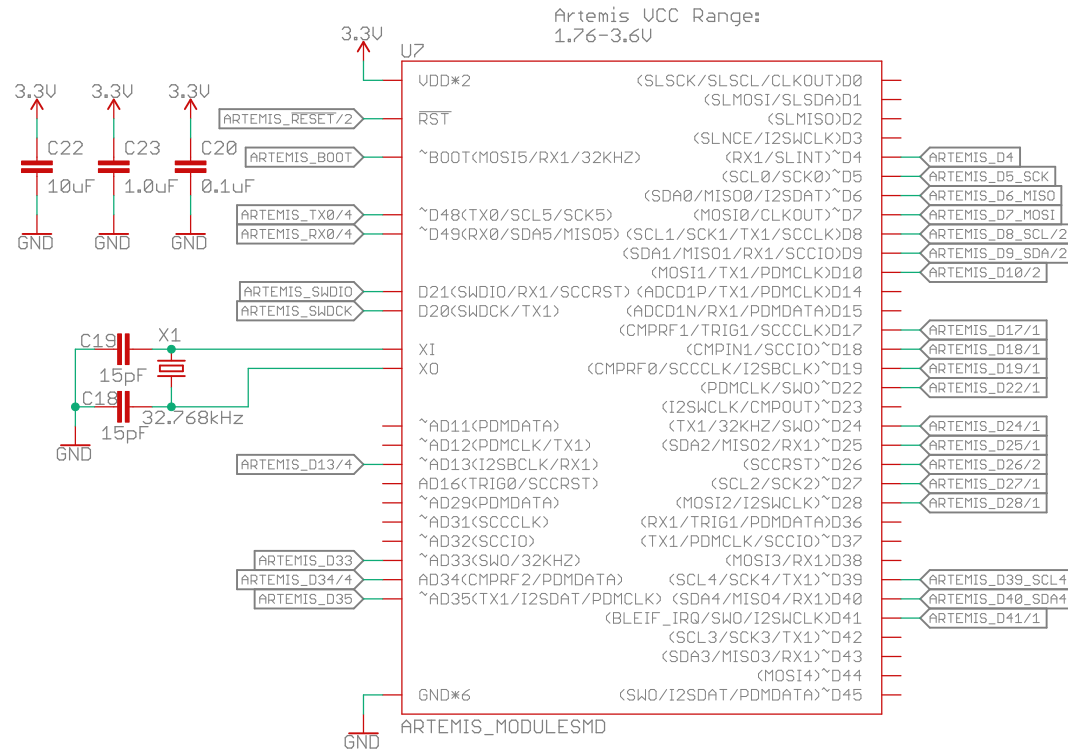
VDD Range: 1.5 - 3.6V

I2C Addresses:
Pressure & Temperature: 0x76
Relative Humidity: 0x40

REV:
V2

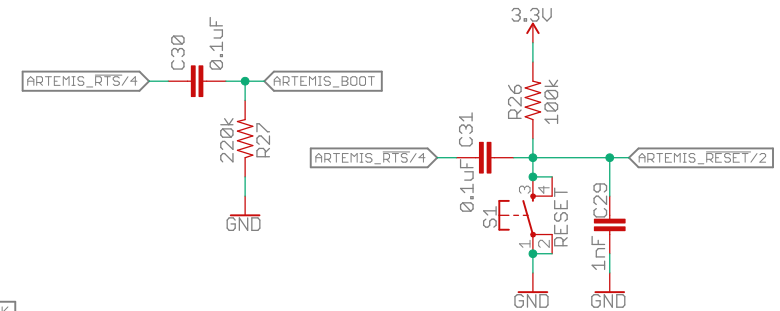
Sheet: 2/4

Artemis (Apollo3)

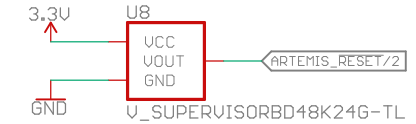


Connections

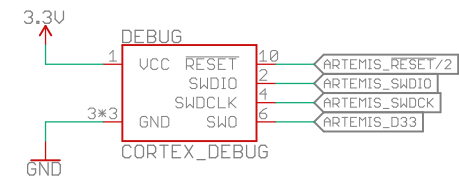
Bootloader Reset Circuit



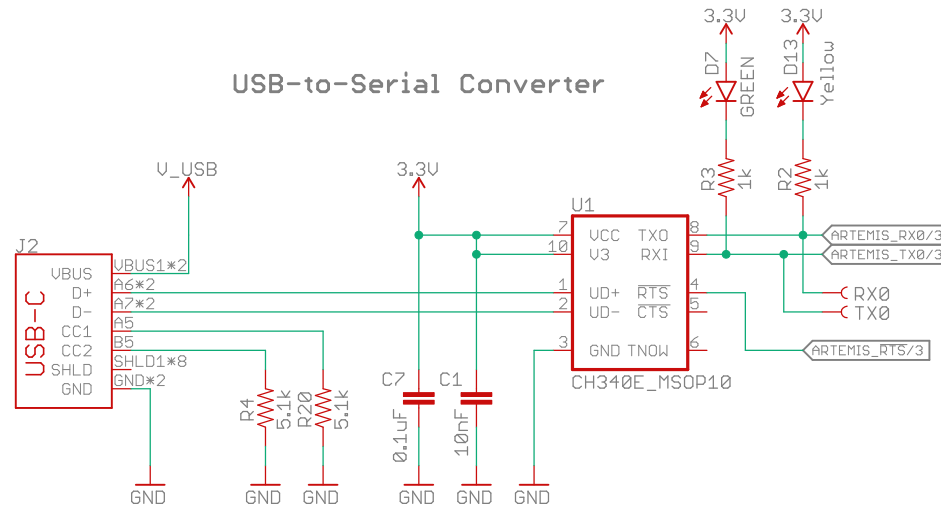
2.4V Reset Supervisor (Ensures a clean start on solar power)



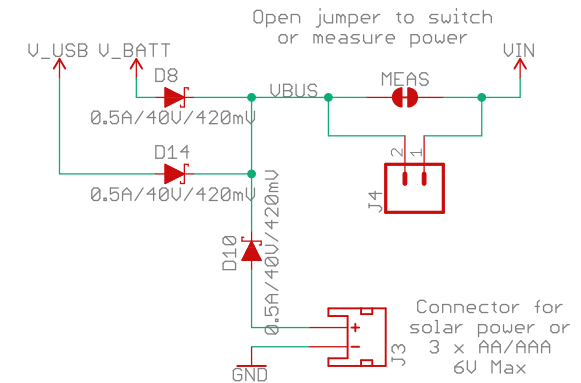
SWD Program/Debug Interface



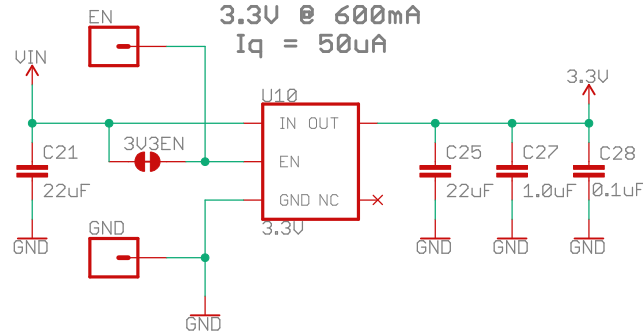
USB-to-Serial Converter



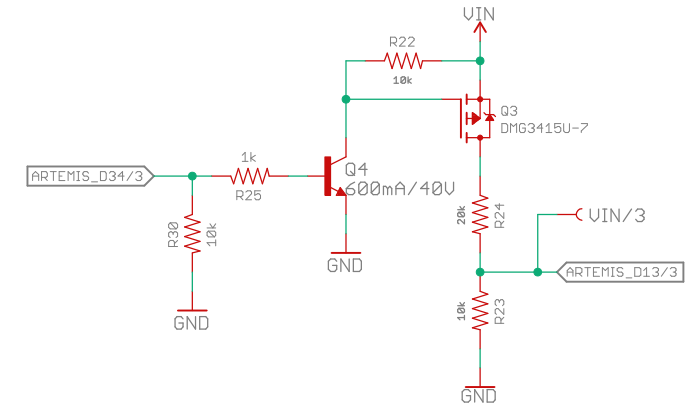
Power Source Select



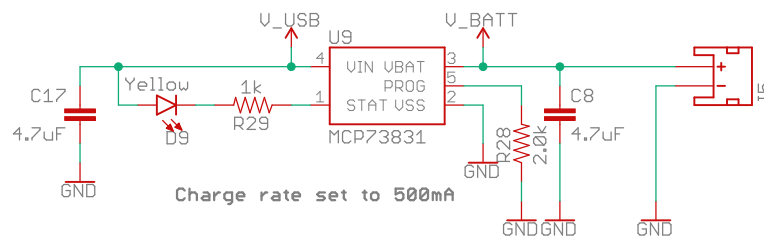
3.3V @ 600mA Iq = 50uA



Bus Voltage Measurement



USB/LiPo Charger



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