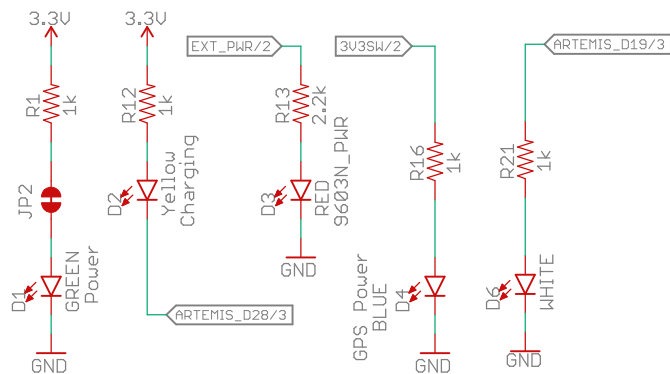
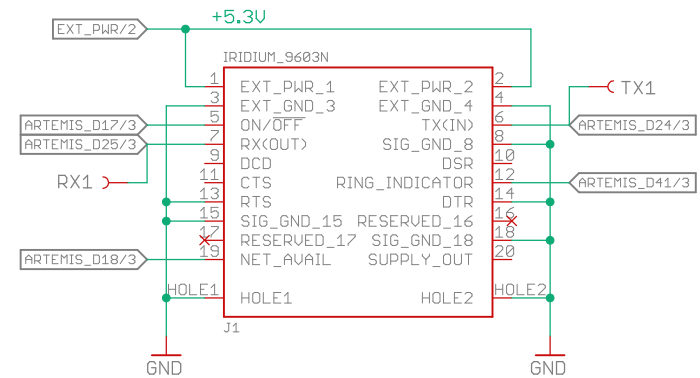


LEDs



Iridium 9603N



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TITLE: Artemis_Iridium_Tracker

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

REV:
V2

Date: 15/02/2020 17:37

Sheet: 1/4

3.3V

U_BCKP

0.5A/40V/420mV

D11

1.8V Min

0.5A/40V/420mV

D12

U_BCKP

0.5A/40V/420mV

L1

2.2uH

C11

4.7uF

GND

GNSS

C13

0.1uF

GND

UBLOX_ZOE_M8-0-10

U4

VCC Range: 2.7 - 3.6V

I2C Address: 0x42

3V3SW/1

24*2

16

27

26

4

RF_IN

GND

*18

VCC

V_BCKP

V_CORE

V_DCDC_OUT

SDA/CS

SCL/CLK

RXD/MOSI

TXD/MISO

D_SEL

RTC_0

RTC_1

PI013/EXTINT

P1014

P1015

TIMEPULSE

SAFEBOOT

LNA_EN

RESET

SQT_G

SQT_0

NC

2

32

22

21

48

18

19

43

50

36

33

34

35

20

29*4

30*2

6

ARTEMIS_D9_SDA/3

ARTEMIS_D8_SCL/3

GPS_RX

GPS_TX

X2

32.768kHz

ARTEMIS_D10/3

SAFEBOOT

ARTEMIS_RESET/3

V_{USB}
 Nexperia
 PMEG4005J
 $V_F @ 100\mu A = \sim 100mV$
 $0.5A/40V/420mV$
 $R15 =$
 $(5 - (3.1 + 0.1)) / 30E-6$
 $= \sim 60K$
 62K0HM-0603-1/10W-5%
 U_{BCKP}
 B1
 SII ML414H
 1.0mAh (3.1V-2.0V) 600Ω
 Pb-free reflowable
 Charge: Constant Current /
 Constant Voltage 3.0V, max. 30μA,
 72hr, RT
 GND

** !! 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

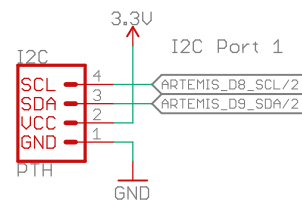
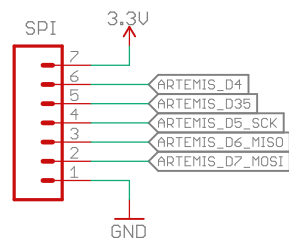
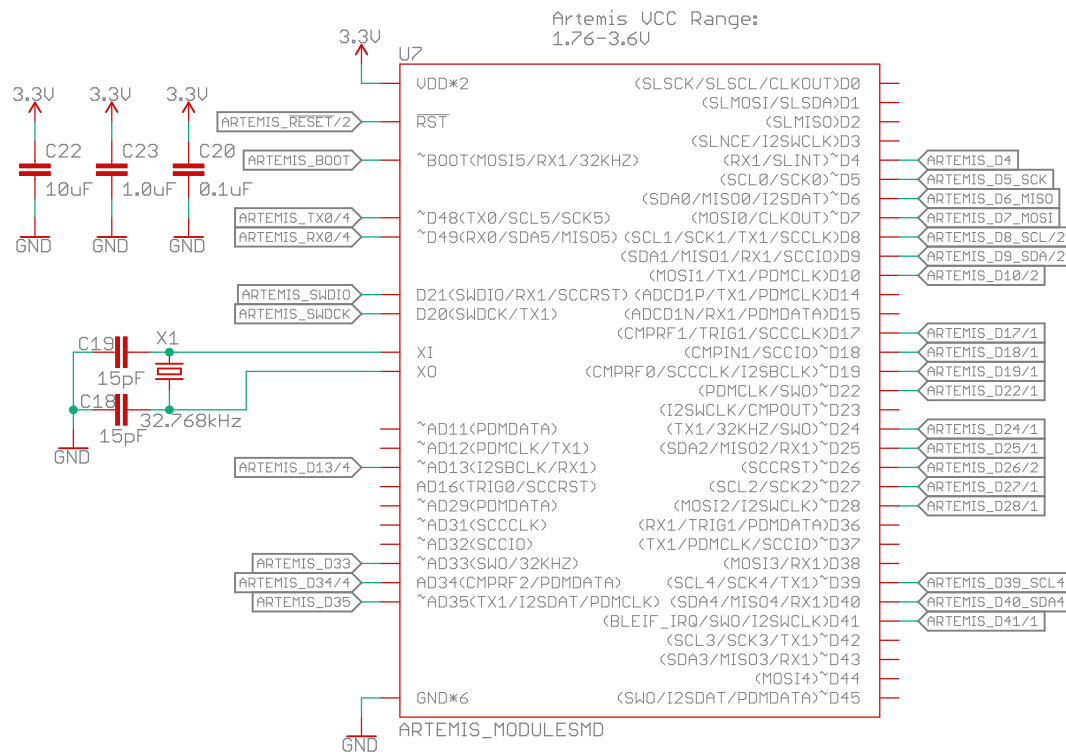
ARTEMIS_D9_SDA/3

VDD Range: 1.5 - 3.6V

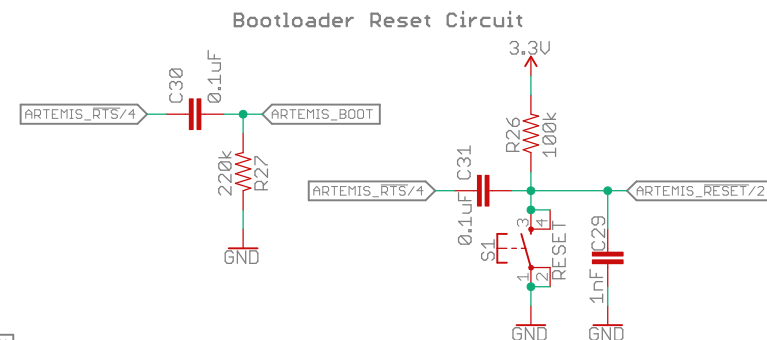
I2C Addresses:
Pressure & Temperature: 0x76
Relative Humidity: 0x40

Sheet: 2/4

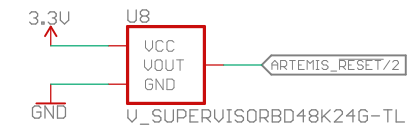
Artemis (Apollo3)



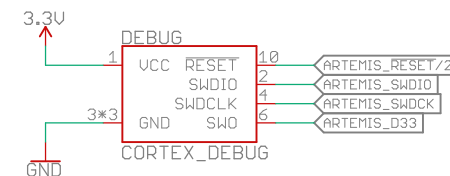
Connections



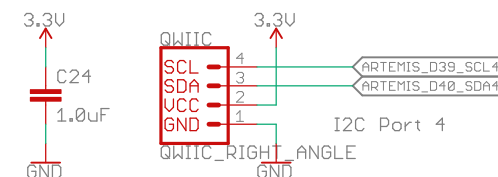
2.4V Reset Supervisor
(Ensures a clean start on solar power)



SWD Program/Debug Interface



I2C/Qwiic



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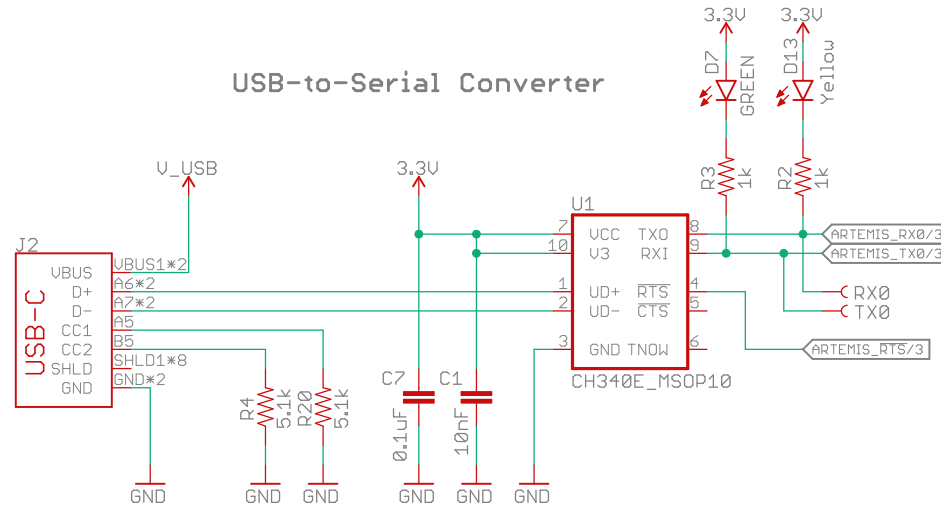
Design by:	Paul Clark Based on the SparkFun Artemis and Qwiic ZOE-M8Q
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REV:
V2

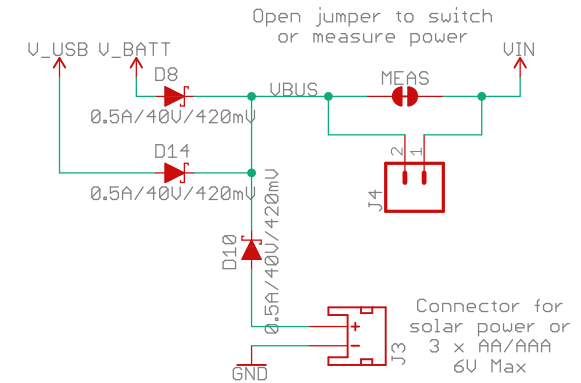
Date: 15/02/2020 17:37

Sheet: 3/4

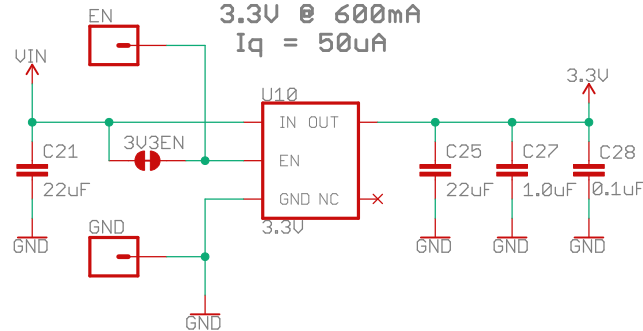
USB-to-Serial Converter



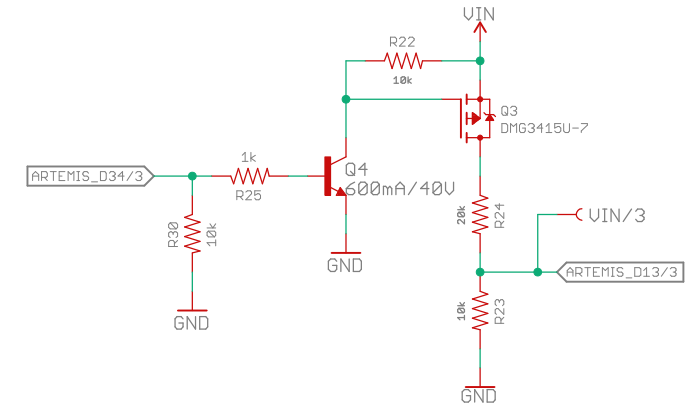
Power Source Select



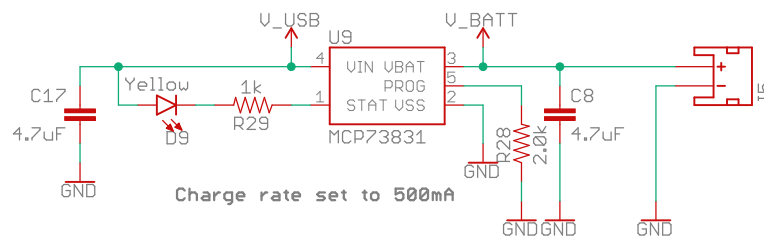
3.3V @ 600mA Iq = 50uA



Bus Voltage Measurement



USB/LiPo Charger



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Sheet: 4/4