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TITLE: Artemis_Iridium_Tracker		
Design by: Paul Clark Based on the SparkFun Artemis and Qwiic ZOE-M8Q		REV: U1
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3.3V

V_BCKP
1.8V Min

3A/10U/280mV

D11

D12

3A/10U/280mV

U_BCKP

L1
2.2uH

C11
4.7uF

GNSS

C13
0.1uF

GND

3V3SW/3

24*2

16

27

26

4

RF_IN

4

18

19

43

50

36

33

34

35

20

29*4

30*2

6*2

GND

UBLOX_ZOE_M8-0-10

U4

VCC Range: 2.7 - 3.6V

I2C Address: 0x42

SDA/CS

SCL/CLK

RXD/MOSI

TXD/MISO

D_SEL

ARTEMIS_D9_SDA/3

ARTEMIS_D8_SCL/3

GPS_RX

GPS_TX

Y1 82.768kHz

ARTEMIS_D10/3

SAFEBOOT

ARTEMIS_RESET/3

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

U5
 AS179-92LF

Iridium
 GNSS

C14
 100pF

C15
 100pF

C16
 100pF

J3
 J2
 J1
 J4

U2
 GND
 V1

3V3SW/3
 EXT_PWR/3

ANTENNA

ANTENNA

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

J9
 ANTENNA

J8
 Iridium

GND

uFL

GND

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

U_USB

JP4

D5

Nxpertia
PNEG4005EJ
U_F @ 100uA = ~100mV

0.5A/40W/420mV

R15

R15 =
(5 - (3.1 + 0.1)) / 30E-6
= ~60K

62KOHM-0603-1/10W-5%

U_BCKP

B1

SII ML414H
1.0mAh (3.1V-2.0V) 600mAh
Pb-free reflowable
Charger Constant Current /
Constant Voltage 3.1V, max.30uA,
72hr, RT

GND

U6
MS8607-02BA01

3V3SW/1

0.22uF

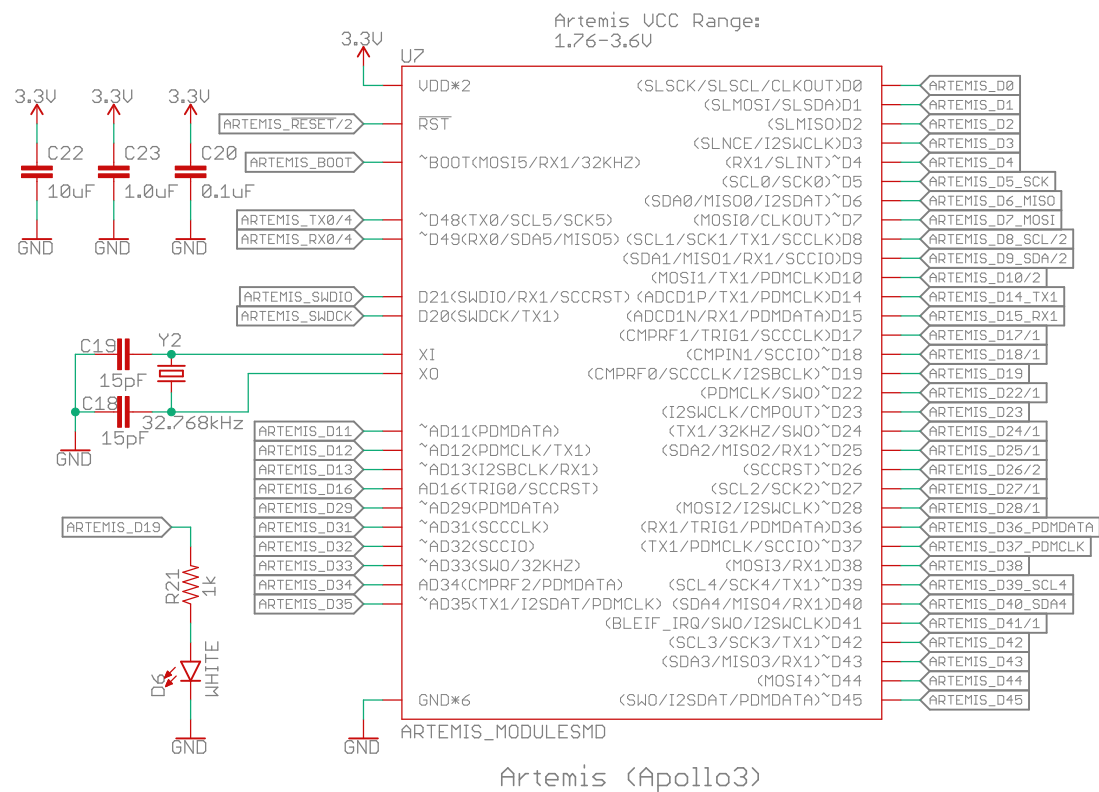
GND

VDD SCL
NC_1 SDA
GND NC_4
NC_2 NC_3

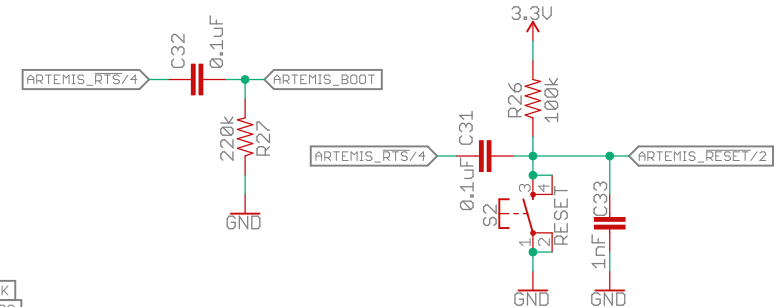
ARTEMIS_D8_SCL/SDA
ARTEMIS_D9_SDA/SDA

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

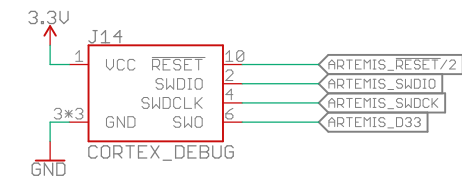
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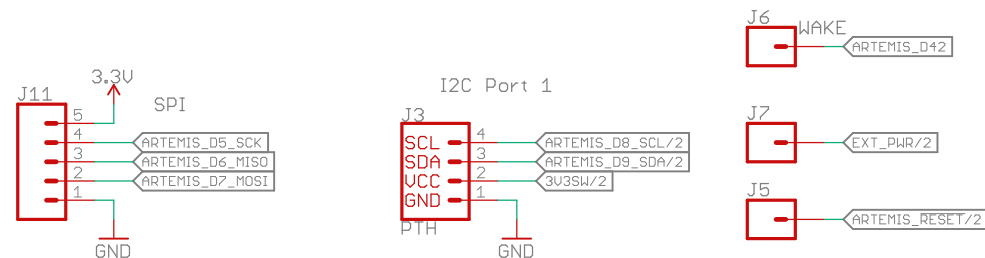
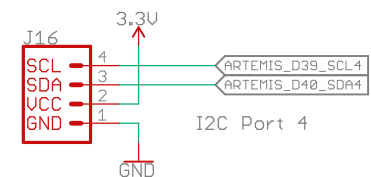
Bootloader Reset Circuit



SWD Program/Debug Interface



I2C/Qwiic



Connections

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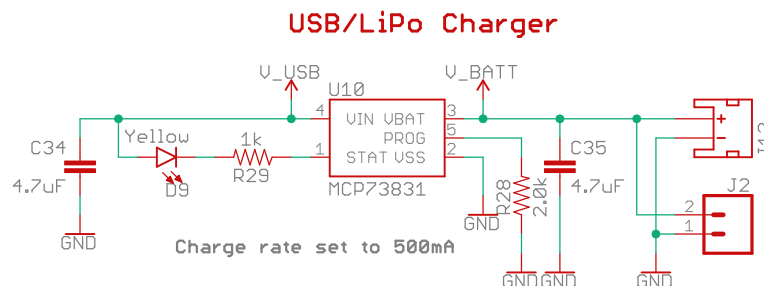
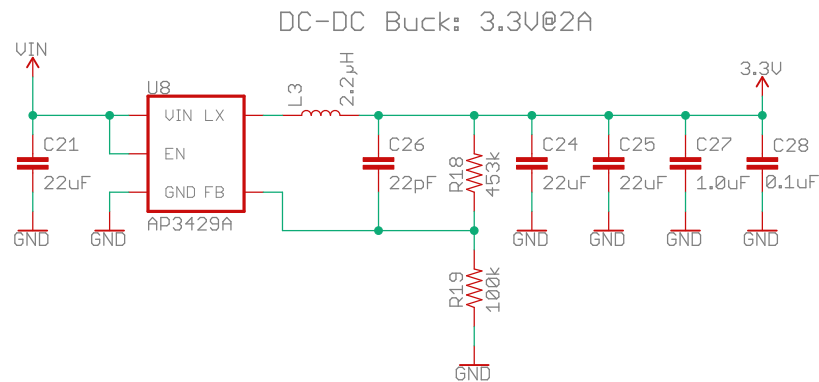
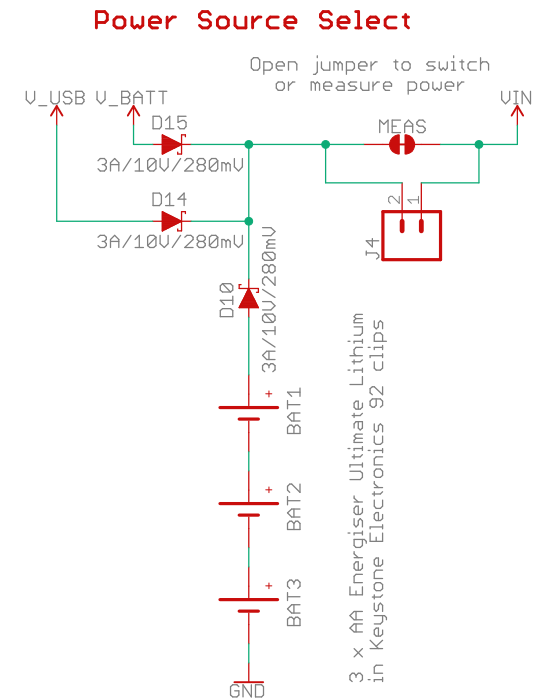
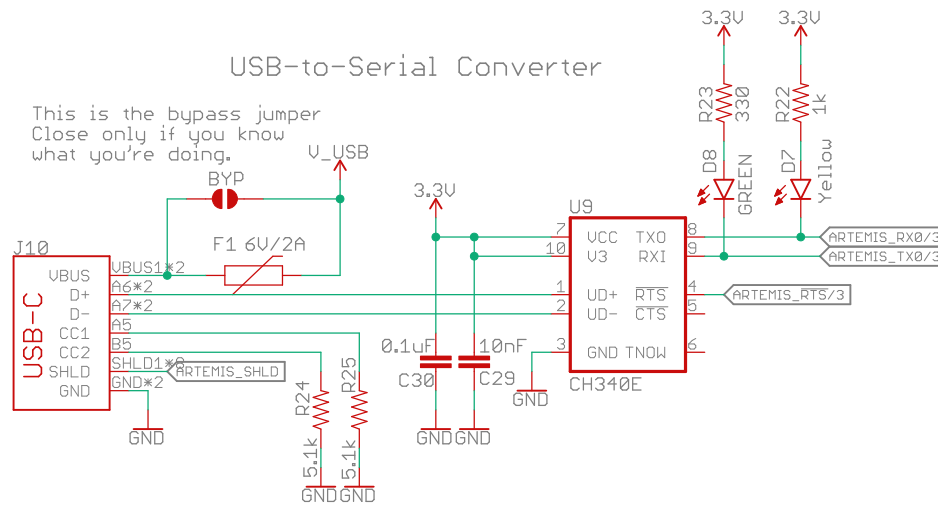
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