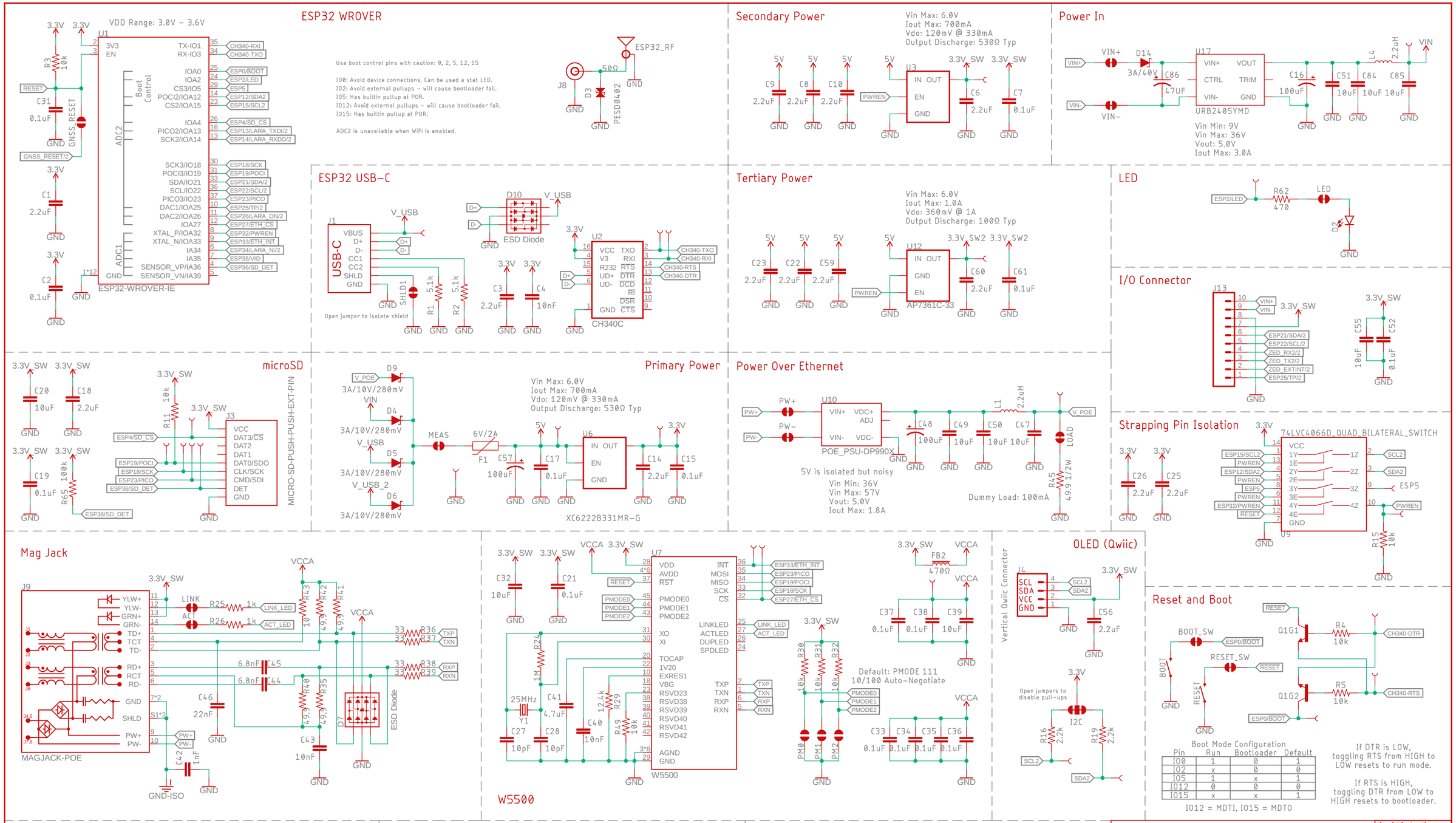
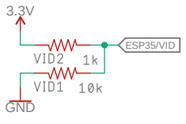


USB Track Impedance: Differential Pair
https://saturnpcb.com/saturn-pcb-toolkit/
Prepreg thickness: 0.2mm (7.87 mil). Er = 4.6
10.5 mil track with 9.5 mil gap (20 mil center to center) = 90 Ohms

RF Track Impedance: Coplanar Waveguide with Ground Calculations
Ground is on layer 2. Prepreg thickness: 0.2mm. Er = 4.6
13.74 mil track with 8 mil gap = 50 Ohms
https://saturnpcb.com/saturn-pcb-toolkit/

Product Identifier



RTK Product Voltage IDs:

Surveyor:	Pin 35 floats at 0.18V approx.
Express:	3.3 / 13.3 = 0.82V (0.74 – 0.90)
Reference Station:	10 / 30 = 1.1V (0.99 – 1.21)
Facet:	10 / 20 = 1.65V (1.49 – 1.82)
Facet L-Band:	20 / 30 = 2.2V (1.98 – 2.42)
Express Plus:	10 / 13.3 = 2.48V (2.23 – 2.73)
Everywhere:	10 / 11 = 3.00V (2.70 – 3.30)

open hardware

sparkfun

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Special Instructions

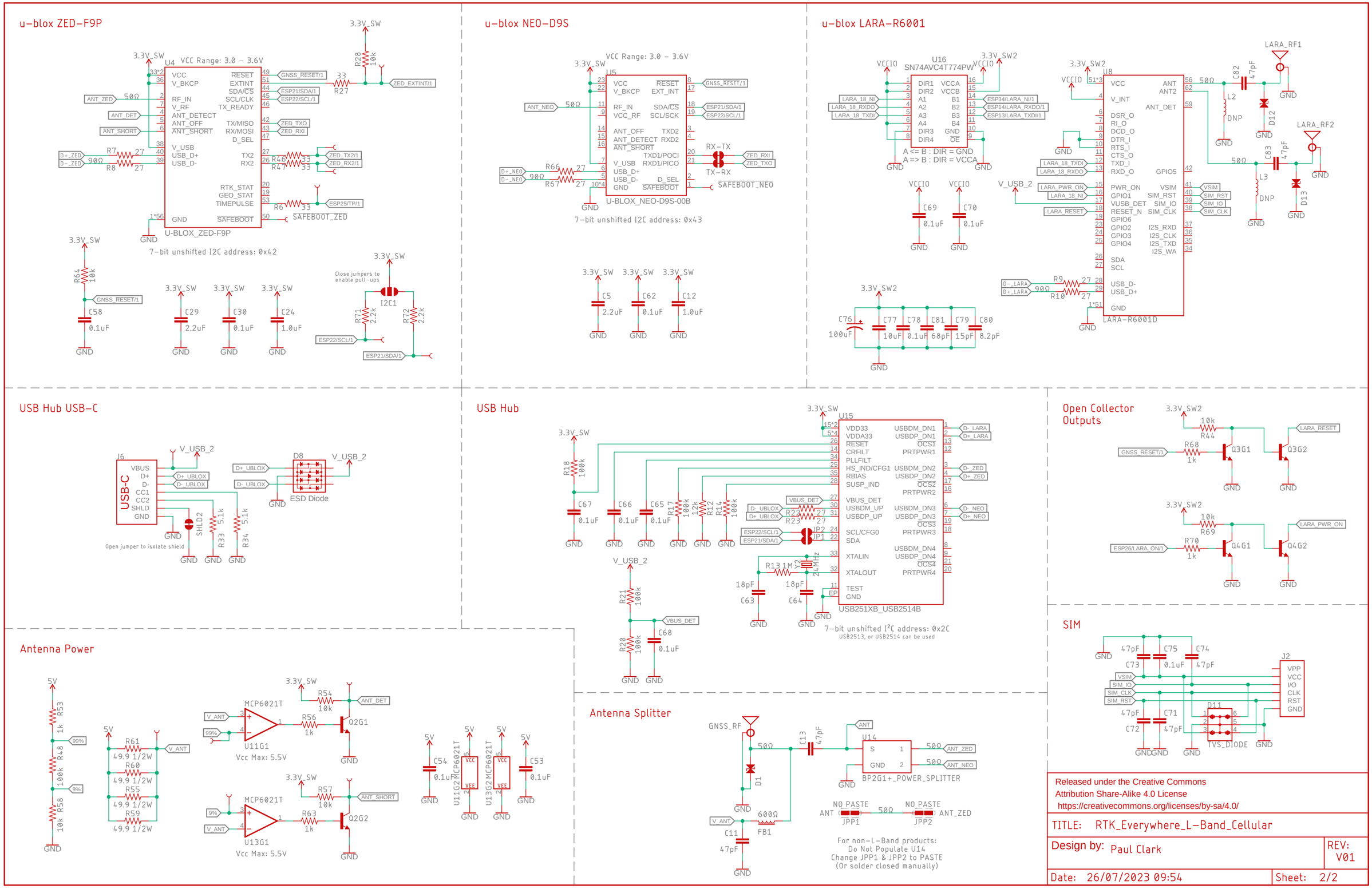
TITLE: RTK_Everywhere_L-Band_Cellular

Design by: Paul Clark

REV: v01

Date: 26/07/2023 09:54

Sheet: 1/2


u-blox ZED-F9P
U-BLOX_ZED-F9P
7-bit unshifted I2C address: 0x42
u-blox NEO-D9S
U-BLOX_NEO-D9S-00B
7-bit unshifted I2C address: 0x43
u-blox LARA-R6001
LARA-R6001D
USB Hub USB-C
USB Hub
USB251XB_USB2514B
7-bit unshifted I²C address: 0x2C
USB2513, or USB2514 can be used
Open Collector Outputs
SIM
Antenna Power
Antenna Splitter
BP2G1+_POWER_SPLITTER
For non-L-Band products:
Do Not Populate U14
Change JPP1 & JPP2 to PASTE
(Or solder closed manually)
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TITLE: RTK_Everywhere_L-Band_Cellular
Design by: Paul Clark
REV: V01
Date: 26/07/2023 09:54
Sheet: 2/2