Revision	Date	Author	Description
1.7	2020-09-10	J.Chiu	Initial version, based on Notecarrier AL V13 from FAE
1.7-v5	2020-09-14	J.Chiu	3.3V switching supply changes; feather connector changes; new versioning scheme.
1.7-v6	2020-09-29	J.Chiu	Enable PowerSave on 3.3V switching supply. Change EN pullup to 470K. Part parameter cleanups to help with BOM generation, additional BOM update; PCB manufacturability changes; Longer Feather module.
1.7-v7	2020-10-16	J.Chiu	Add missing 50 ohm rule for GPS feed line. Stackup adjustments to support proto build with calculations that seem to bettre estimte 50 ohms. Add filter cap on GPS feedline.

FID1 FID2

CS1
CS V13 4L 35um

OBJ1
9774025151R

1
GND

ASS1
KNOB M2.5x4-INOX

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Data: *	Rev.: 13	Rev. changes: See Revision Page — Sheet: 1 / 4

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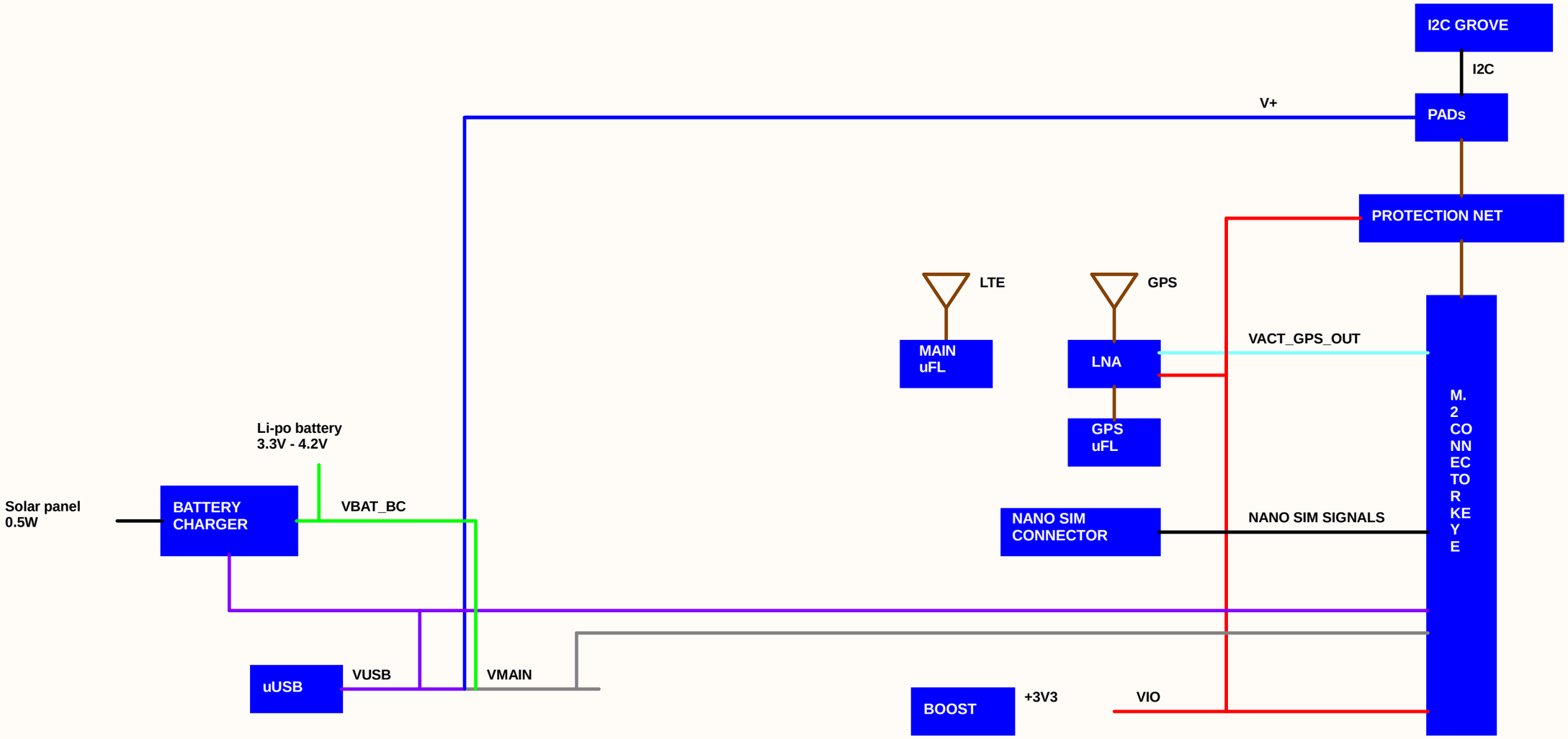

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+3V3
+1V8
VMAIN
V+
VBAT
VUSB
VSOLAR

VBUS+SOLAR
BATPOS

Width Constraint [Pref Width = 0.4mm Min Width = 0.15mm Max Width = 2mm]
ClassName: Power

J9
CON_13X1
AUX1
AUX2
AUX3
AUX4
AUX_RX
AUX_TX
AUX_EN
ATTN
VUSB
VBAT
3V3
V+
GND

DS2
FSV1045V

DS3
FSV1045V

DS6
FSV1045V

DS5
STPS3H100U

Solar panel
connector

J3
B2B-PH-SM4-TBT(LF)(SN)

C12
10n/25V-X5R

U3
BQ24210DQCT
VBUS
ISET
VSS
VTSB
TS
EXP
BAT
VDPM
CHG
EN
PG
BAT-CHG

R6
NU

R8
10k

R9
470R

R10
10k

AUX5

Riset = Kiset / Iiset
where Kiset is 395 typically.
With 470R --> 800mA

LiPo must be equal to or greater than 800mAh

C13
1u/16V-X5R

S1
JS202011JCQN

Li-po battery
3.3V - 4.2V

J4
B2B-PH-SM4-TBT(LF)(SN)

L200
PA4341.152NLT
1.5 uH

U200
TPS63021DSJR
L1
L2
VIN
VOUT
VINA
PG
EN
FB
PS/SYNC
GND
PGND

R201
10M

C200
10uF

C201
10uF

C202
0.1uF

C207
0.1uF

R200
470K

C203
0.1uF

F_EN

C208
22uF

C204
22uF

C205
22uF

C206
0.1uF

TODO: -0001LF

J2
10118192-0002LF
VCC
D-
D+
ID
GND

DS4
STPS3H100U

USB_DM
USB_DP

TVS1
SM6T6V8A

C10
0.1uF

C11
10n/1kV

R5
1M

USB_SHIELD

PAD1
PAD2

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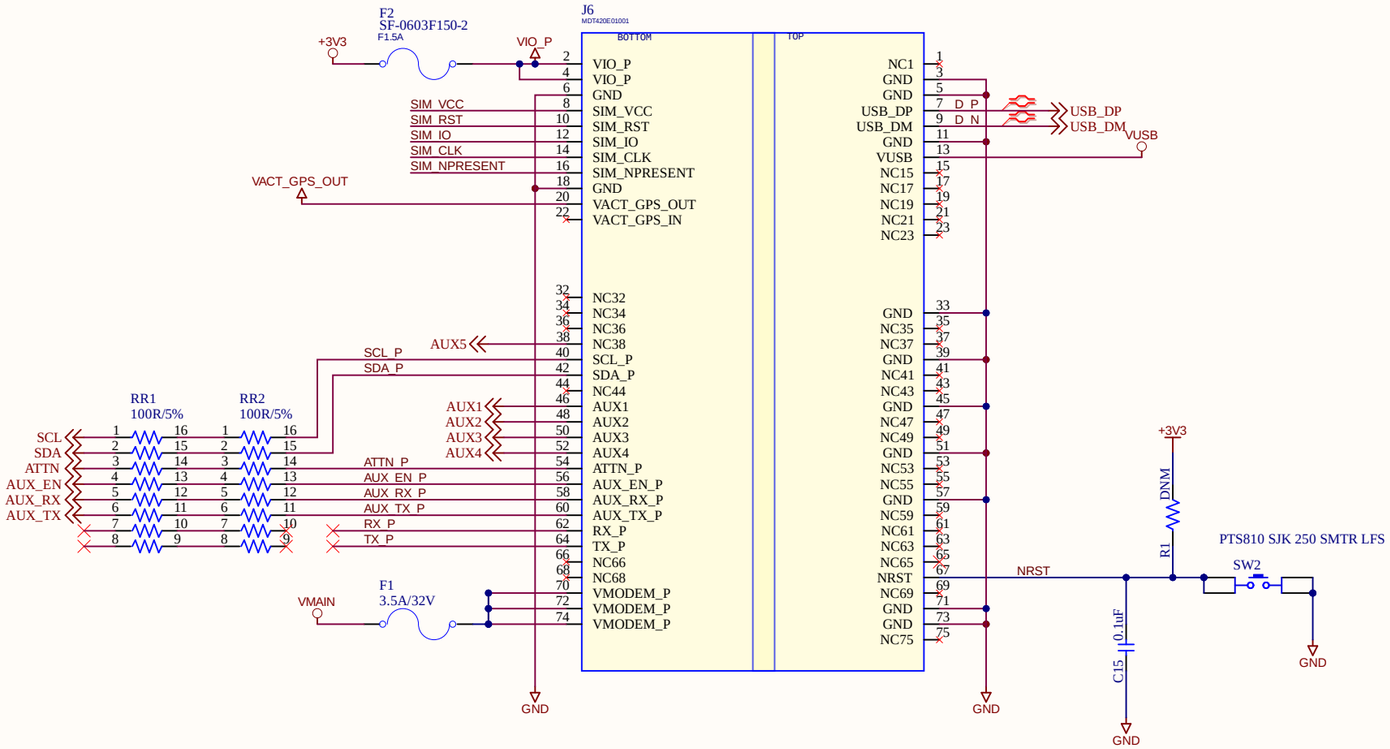

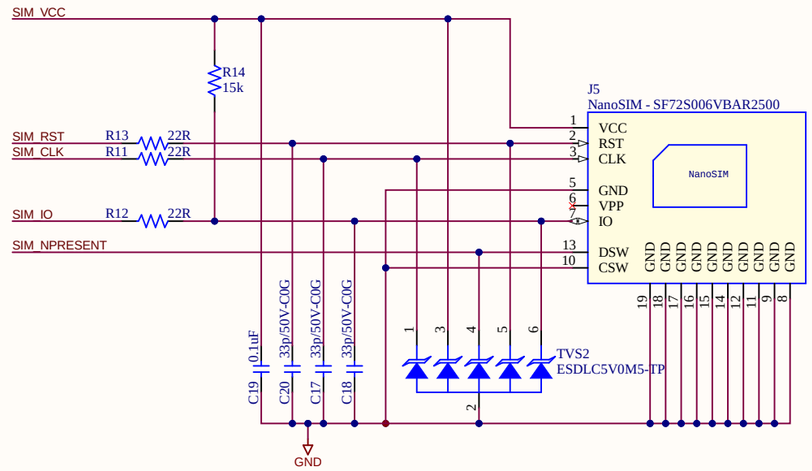

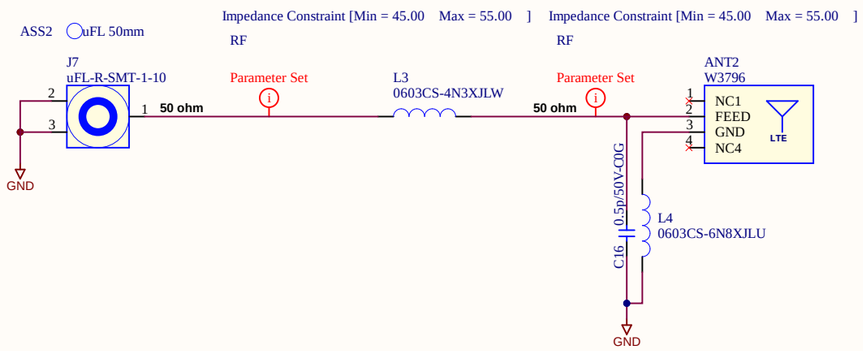

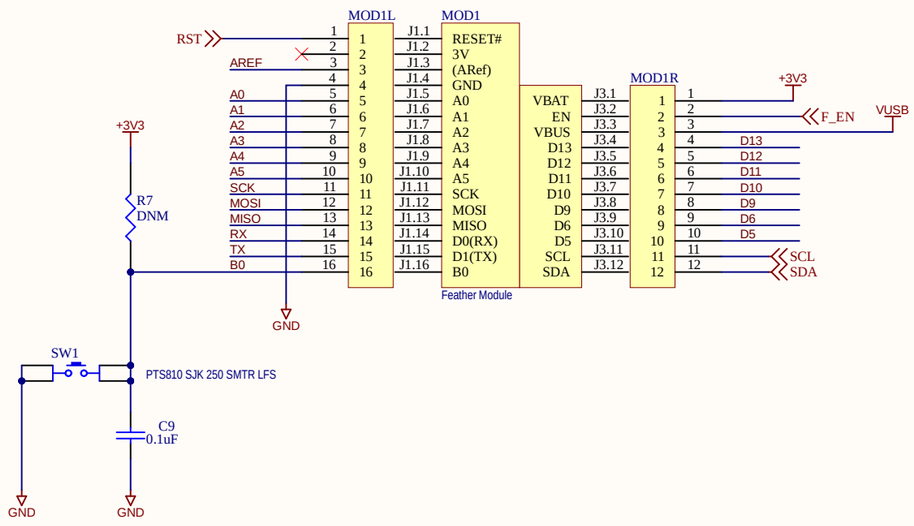

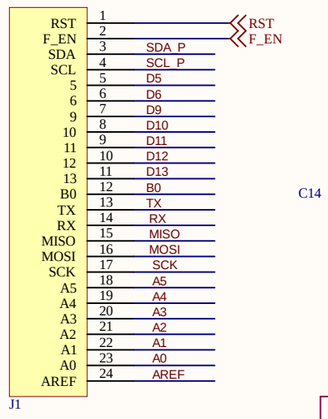

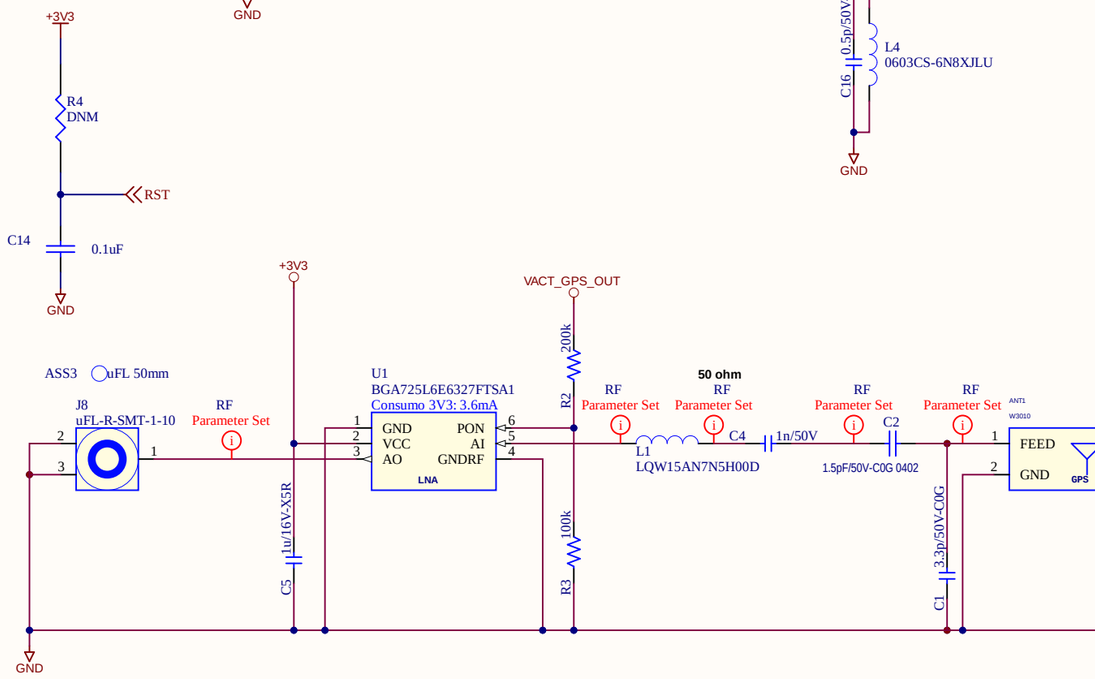

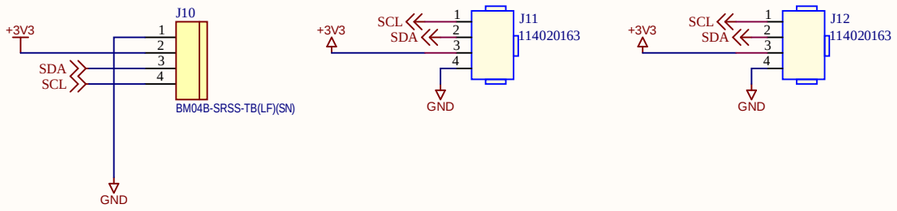

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