

## Physical I/O for Power



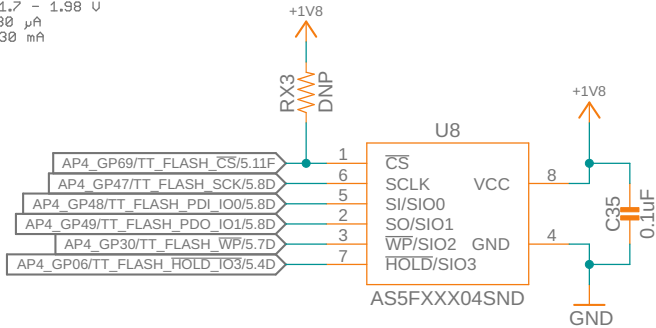
HCP643450NZC, 3.7V, 1200mah  
Bare raw cell: 6.4"34.5"50.5mm max. in T\*W\*H  
Assemble size: 6.4"34.5"52 mm max. in T\*W\*H  
Over-charge voltage: 4.28V  
Over- discharge voltage: 3.0V  
Continuous charge rate: 0.2C  
Peak charge rate:1C  
Continuous discharge rate: 0.2C  
Peak discharge rate:1C, for 2-3ms  
NTC, 10K B=3435  
Wire: UL1571-28AWG#, 100mm, from left  
Connector: MOLEX87439-3P, positive  
PCM added



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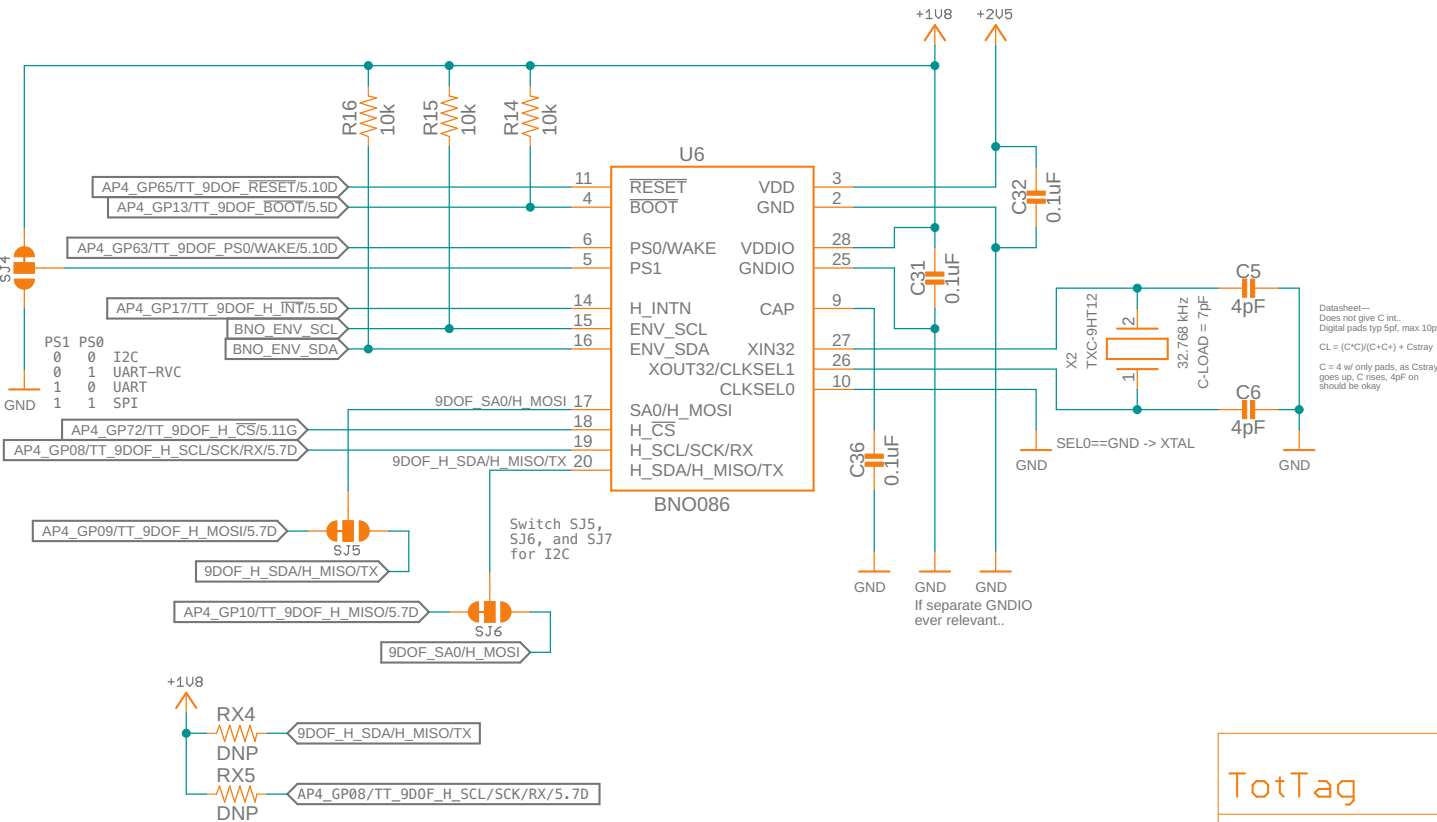
External Flash

Sup 1.7 - 1.98 V  
Qui 30 µA  
Max 30 mA



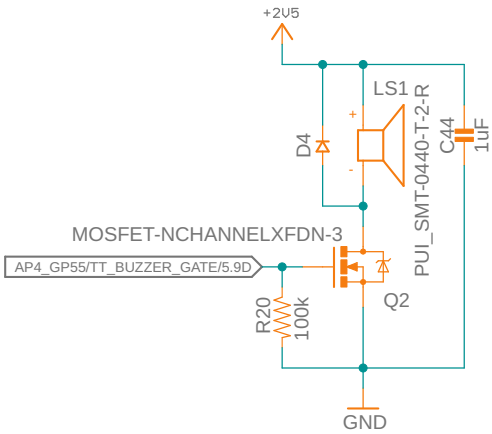
9-DOF

VDD 2.4 - 3.6 V, max 8 mA, qui 0.1 mA  
VDDIO 1.7 - 3.6 V, max 7 mA, qui 0.047 mA



Buzzer

Sup 2 - 4 V  
Nom 3 V  
Max 90 mA [50% DC]



TotTag		REV: 0
Author: Pat Pannuto		
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# Miscellany

Fiducials - Top



Fiducials - Bottom



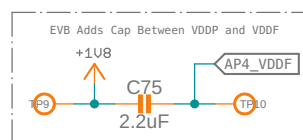
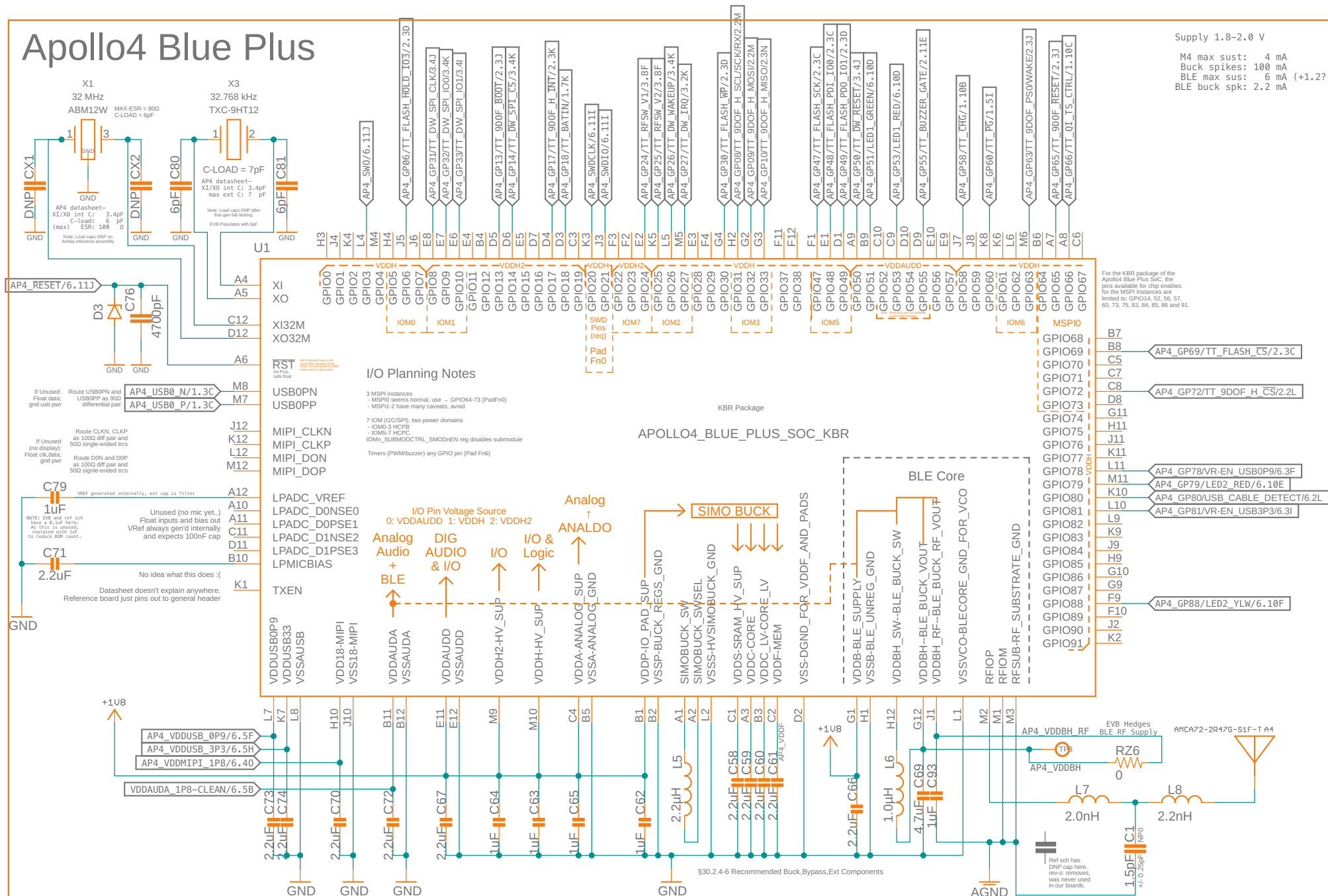
Test Points

TotTag		REV: 0
Author: Pat Pannuto		
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# Apollo4 Blue Plus

Supply 1.8-2.0 V

M4 max sust:	4 mA
Buck spikes	100 mA
BLE max sus:	6 mA (+1.2?)
BLE buck spk:	2.2 mA



TotTag

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REV: 0

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Worst-case dropout for 1.8A is 840mV (at 80MHz, likely headroom)

VR2

IN OUT

ENGND

TPST7A0218PDQNR

VDDAUDA\_1P8-CLEAN/5.3N

2+2

1uF

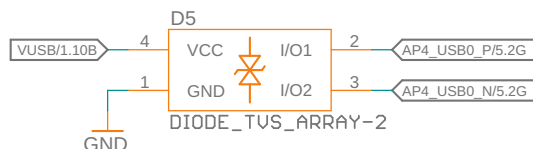
1uF

+2V5

GND

GND

Module-Rev-B: +2V5-OQ-EN  
TotTag-Rev-O: Remove OQ hedge



datasheet: est't's Rdrp =0  
If tgt: 20 mA ~~~cheap 0402 R's dissap limit 10mW~~~  
1.0 SUPPLY 2.5 SUPPLY  
Vf red: 1.5 0.3V 150 6mW 1.0V 500 20mW  
Vf grn: 1.7 0.1V 50 2mW 0.8V 400 16mW  
Vf Blu: 1.7 0.1V 50 2mW 0.8V 400 16mW

+1V8

D1  
MCL0606FRD1GR1T

R5 15  
R2 5.1

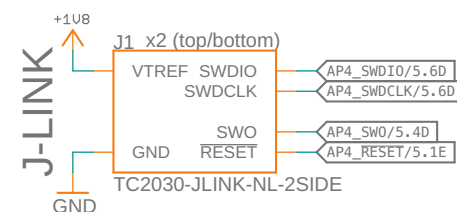
AP4\_GP53/LED1\_RED/5.9D  
AP4\_GP51/LED1\_GREEN/5.8D

BICOLOR-SMD  
D2  
MCL0606FYW1RD1T

R4 15  
R3 5.1

AP4\_GP79/LED2\_RED/5.11H  
AP4\_GP88/LED2\_YLW/5.11J

BICOLOR-SMD



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