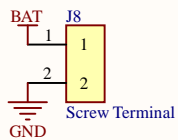
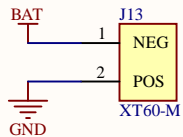


LiPo Battery

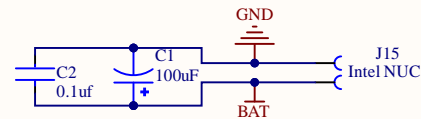
Battery Capacity: 4000mAh

Rated Discharge: 30C
∴ 120 Amps



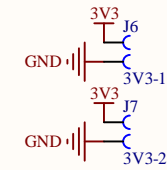
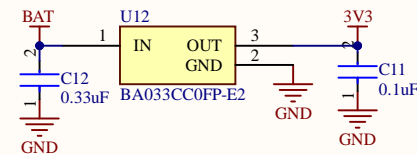
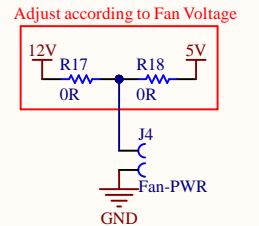
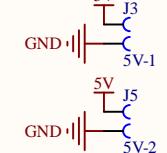
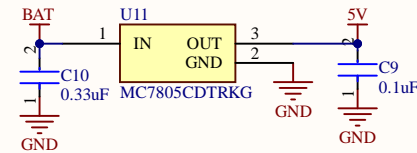
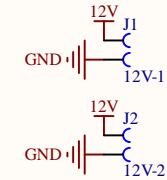
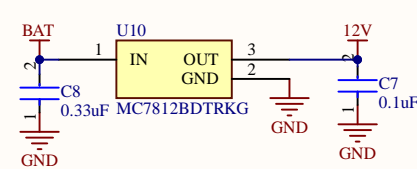
5S LiPo:
 • 100% → 21V
 • 75% → 19.92V
 • 50% → 19.18V
 • 25% → 18.73V
 • 0% → 16.37V

Intel NUC

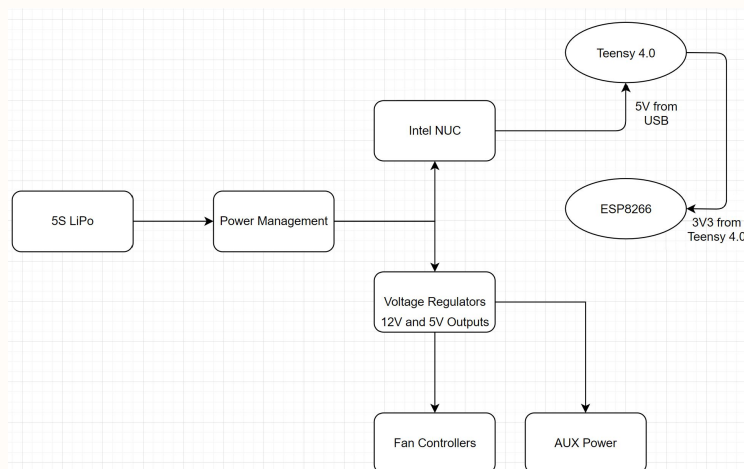


Intel NUC Requirements:
- 19V @ 3.43A

Voltage Regulators



OUTPUTS:
 - 12V @ 1A
 - 5V @ 1A
 - 3V3 @ 1A



- Power will be fed directly from the 5S LiPo to the Intel NUC and also to the relevant voltage regulators.
- A constant 19V Buck Boost IC was not found to supply continuous power to the NUC.
- AUX power will be supplied at 12V, 5V and 3V3 rails for fans, lights, etc.

Title: **Power Distribution & Management**

Size: A4 Author: K. Pereira, J. Vartanian, E. Andrade, J. Wind

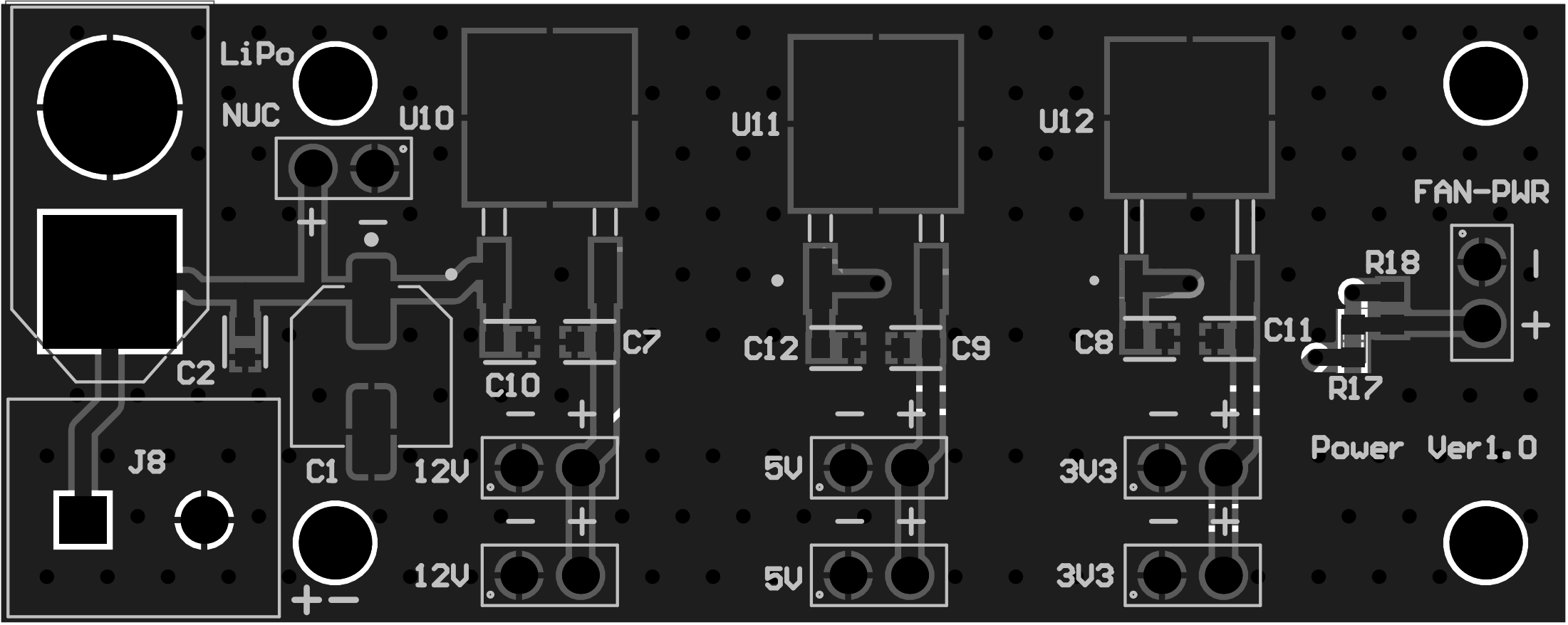
Date: May 2021

Revision: 1.0

Sheet: 1 of 1

Ignis Automation
15 Broadway
Ultimo, Sydney
NSW, 2007
Australia





Line #	Name	Description	Designator	Revision ID	Revision Status	Quantity	Manufacturer 1	Manufacturer Part Number 1	Manufacturer Lifecycle 1	Supplier 1	Supplier Part Number 1	Supplier Unit Price 1	Supplier Subtotal 1
	100uF	CAP ALUM 100UF 20% 25V SMD	C1			1							
	0.1uf, 0.33uF	CAP CER 0.1UF 50V X7R 0603, CAP CER 0.33UF 35V X7R 0603	C2, C7, C8, C9, C10, C11, C12			7	Samsung	CL10A106MP8NNNC	Volume Production	Mouser	187-CL10A106MP8NNNC	0.082	0.82
	12V-1	2 Pin	J1			1							
	12V-2	2 Pin	J2			1							
	5V-1	2 Pin	J3			1							
	Fan-PWR	2 Pin	J4			1							
	5V-2	2 Pin	J5			1							
	3V3-1	2 Pin	J6			1							
	3V3-2	2 Pin	J7			1							
	Screw Terminal	2 Position Wire to Board Terminal Block Horizontal with Board 0.197 _5.00mm_ Through Hole	J8			1							
	XT60-M	XT60	J13			1							
	Intel NUC	2 Pin	J15			1							
	0R	RES 0 OHM JUMPER 1/10W 0603	R17, R18			2	Panasonic	ERJ3EKF1001V	Volume Production	Digi-Key	P1.00KHCT-ND	0.1	0.2
	MC7812BDTRKG	IC REG LINEAR 12V 1A DPAK	U10			1							
	MC7805CDTRKG	IC REG LINEAR 5V 1A DPAK	U11			1							
	BA033CC0FP-E2	IC REG LINEAR 3.3V 1A TO252-3	U12			1							