

power

File: power.kicad\_sch

Connectors

File: connector.kicad\_sch

Ethernet

File: ethernet.kicad\_sch

Approved By: Jones Kisaka

Deigned By: Rodney Osodo

**Abstract Machines**

Sheet: /

File: s0-base-board.kicad\_sch

**Title: S0 Base Board**

Size: A4

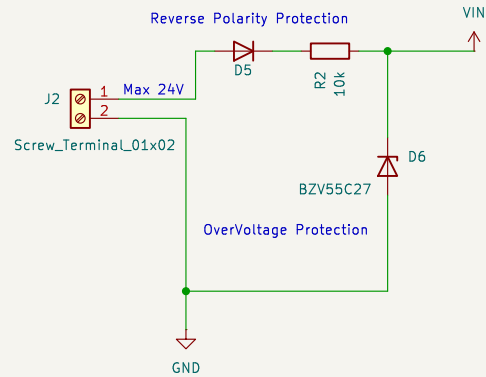
Date: 2025-02-26

**Rev: v0.1.0**

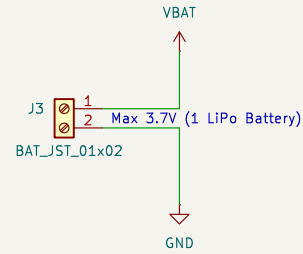
KiCad E.D.A. 8.0.8

Id: 1/4

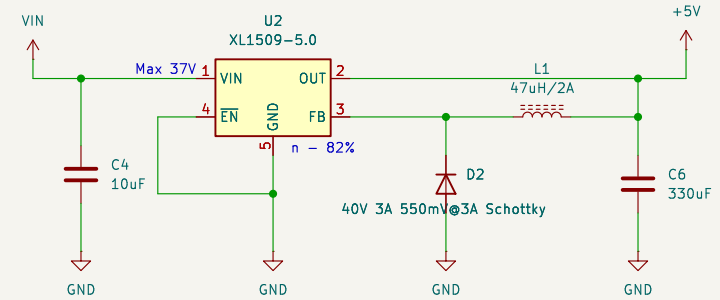
## T-BLOCK



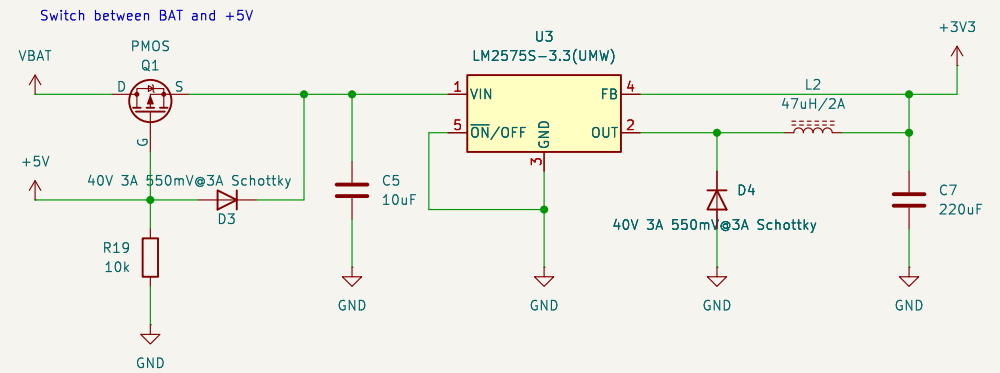
## BAT



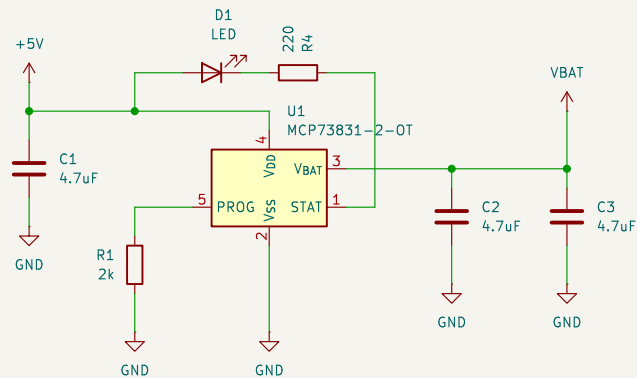
## VIN - 5V CONV



## 5V - 3.3V CONV



## BATTERY CHARGER



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Designed By: Rodney Osodo  
**Abstract Machines**

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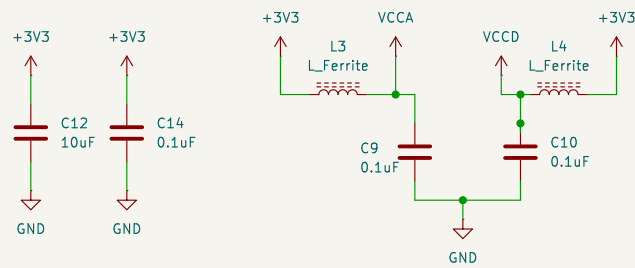
**Title: S0 Base Board**

Size: A4 Date: 2025-02-26  
KiCad E.D.A. 8.0.8

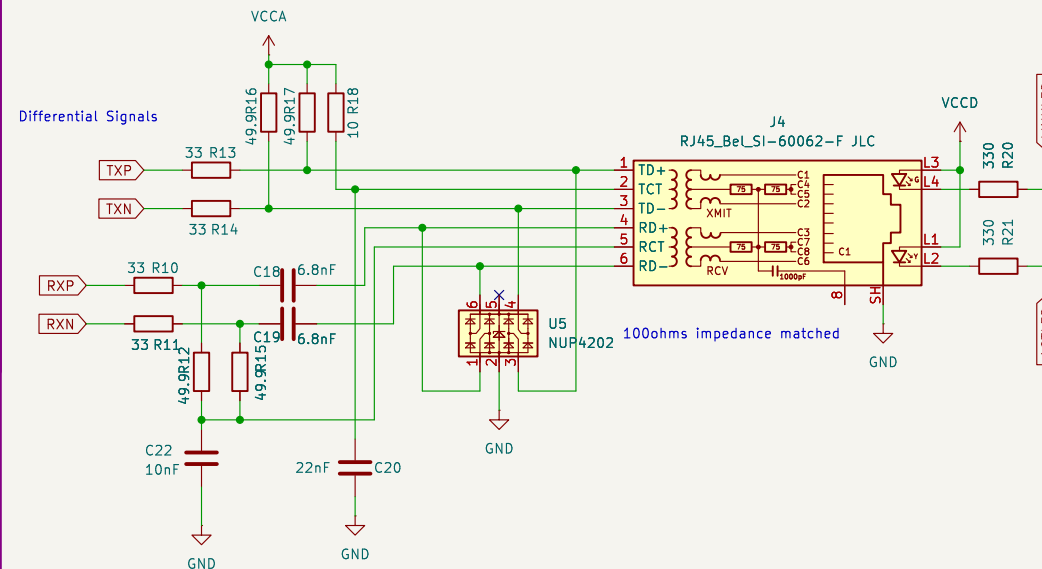
**Rev: v0.1.0**  
Id: 2/4

## DECOUPLING CAPS

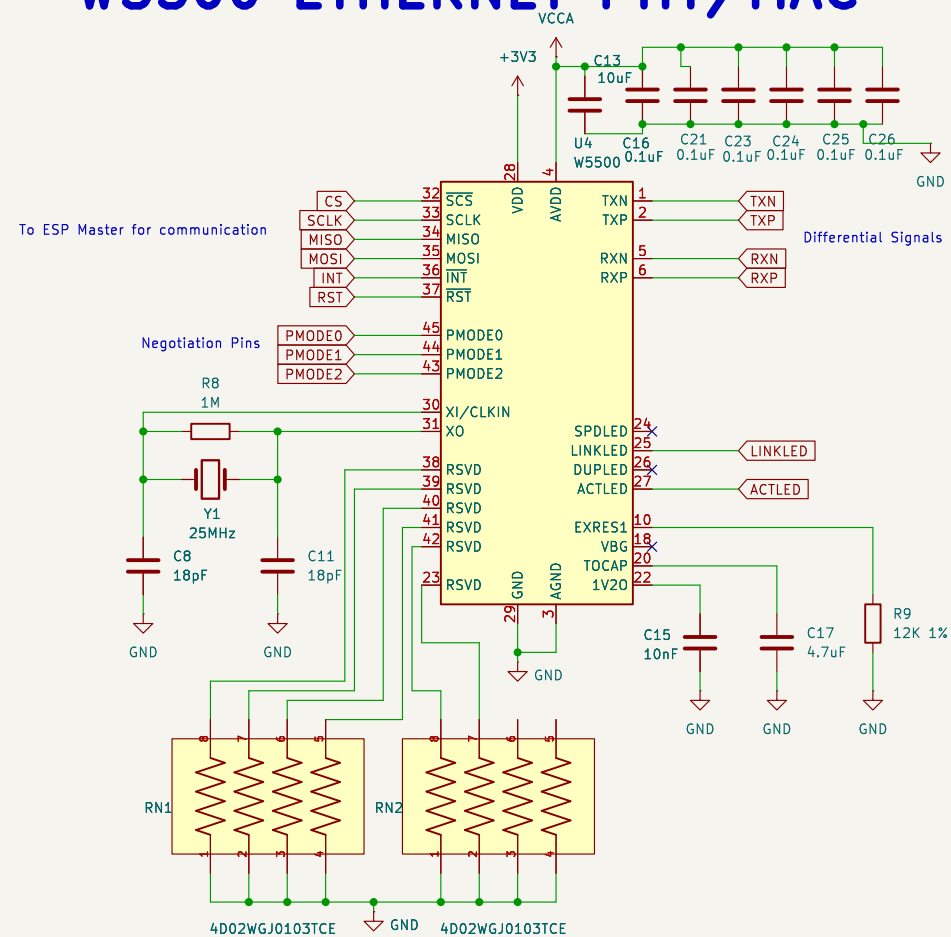
Decoupling Caps help ensure stable operation  
Filtering noise  
Maintain a steady power supply.



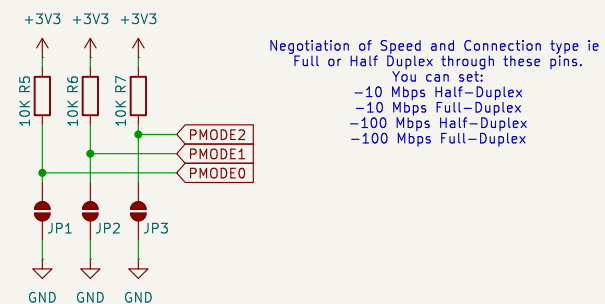
# JACK & MAGNETICS



# W5500 ETHERNET PHY/MAC



## AUTO-NEGOTIATING MODES



Approved By: Jones Kisaka  
Deigned By: Rodney Osodo  
**Abstract Machines**  
Sheet: /Ethernet/  
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**Title: S0 Base Board**

Size: A3	Date: 2025-02-26
KiCad E.D.A. 8.0.8	

# BeagleBone Cape Board

U6  
BEAGLEBONEBLACK

BeagleBone Black Pin	Cape Board Pin	Connector Pin
P9_9	PWR_BUTTON	P9_24
P9_10	SYS_RESET	P9_26
P9_39	AIN0	P9_21
P9_40	AIN1	P9_22
P9_37	AIN2	
P9_38	AIN3	P9_13
P9_33	AIN4	P9_11
P9_36	AIN5	P8_37
P9_35	AIN6	P8_38
J1_4	B_UART0_RX	
J1_5	B_UART0_TX	
P9_17	I2C1_SCL	P8_36
P9_18	I2C1_SDA	P8_34
P9_19	I2C2_SCL	P8_35
P9_20	I2C2_SDA	P8_33
P9_28	SPI1_CS0	P8_31
P9_29	SPI1_D0	P8_32
P9_30	SPI1_D1	
P9_31	SPI1_SCLK	P8_7
P9_14	EHRPWM1A	P8_8
P9_16	EHRPWM1B	P8_9
P8_19	EHRPWM2A	P8_10
P8_13	EHRPWM2B	
P8_25	GPI01_0	P9_42
P8_24	GPI01_1	P9_27
P8_5	GPI01_2	P9_41
P8_6	GPI01_3	P9_25
P8_23	GPI01_4	
P8_22	GPI01_5	P8_18
P8_3	GPI01_6	P8_45
P8_4	GPI01_7	P8_46
P8_12	GPI01_12	P8_43
P8_11	GPI01_13	P8_44
P8_16	GPI01_14	P8_41
P8_15	GPI01_15	P8_42
P9_15	GPI01_16	P8_39
P9_23	GPI01_17	P8_40
P9_12	GPI01_28	
P8_26	GPI01_29	P8_27
P8_21	GPI01_30	P8_29
P8_20	GPI01_31	P8_28
	SHIELD	P8_30
	DGND	J1_B
	GND_ADC	

Female Pin Headers connected to the BeagleBone Cape

J5  
Conn\_02x23\_Odd\_Even

J6  
Conn\_02x23\_Odd\_Even

+5V +3V3

+3V3

+5V

GND

GND

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KiCad E.D.A. 8.0.8		Id: 4/4

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