

PRECISION AGRICULTURE NODE

Sheet 1: Index

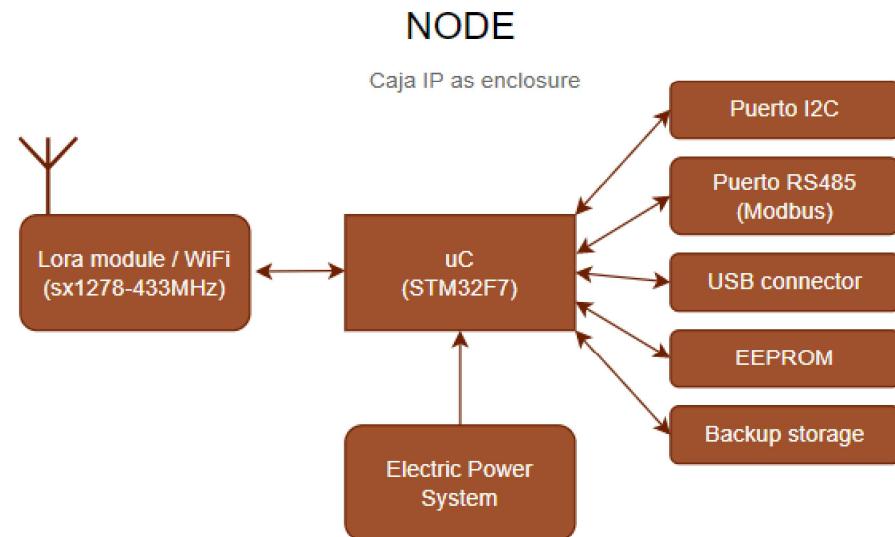
Sheet 2: Connections

Sheet 3: STM32F723 MCU

Sheet 4: Peripherals

Sheet 5: Wireless

Sheet 6: Power System



Node Index		Revision v1.01	Sheet 1 of 10
Size A4	Project Number: 0012		
Date: 8/29/2023	File: node_index.SchDoc		Drawn By: Luis Sayaverde Bravo



1

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A

A

B

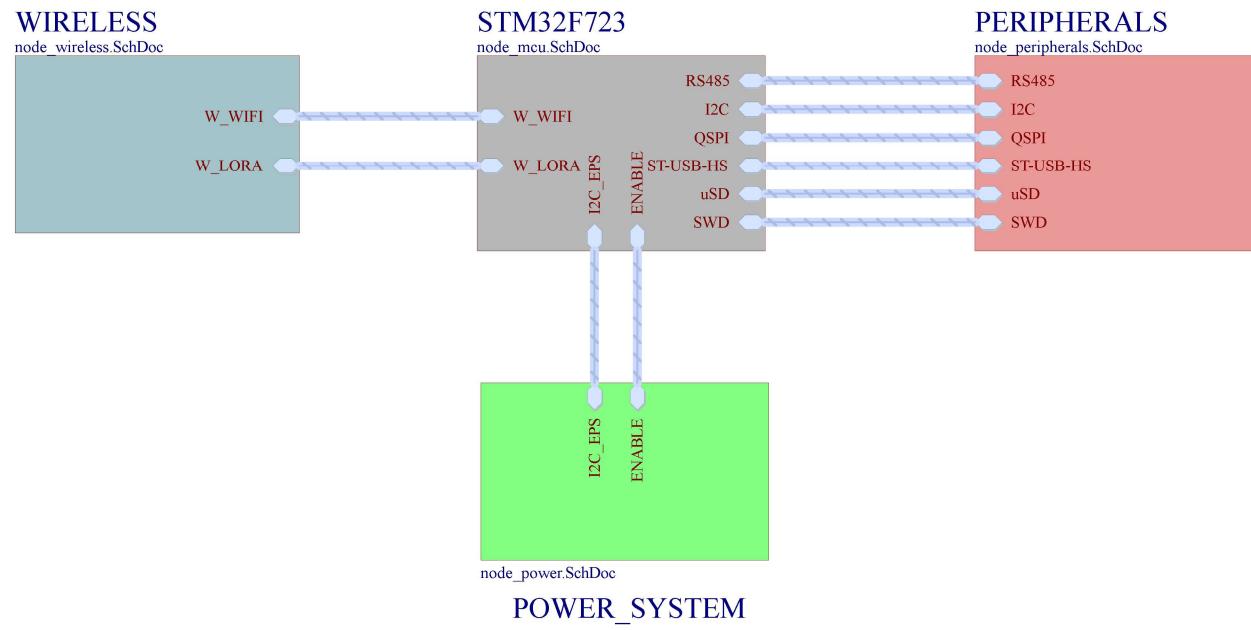
B

C

C

D

D



Node Connections

Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 2 of 10	
File: node_connections.SchDoc	Drawn By: Luis Sayaverde Bravo	

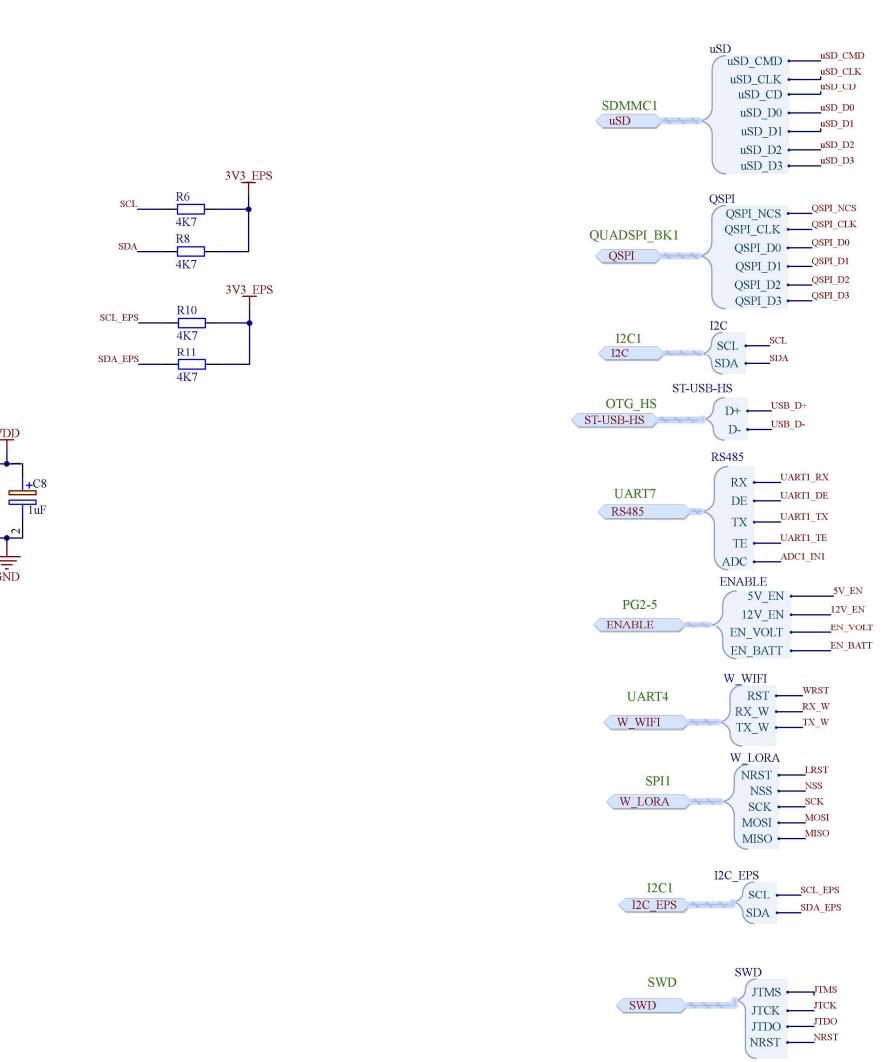
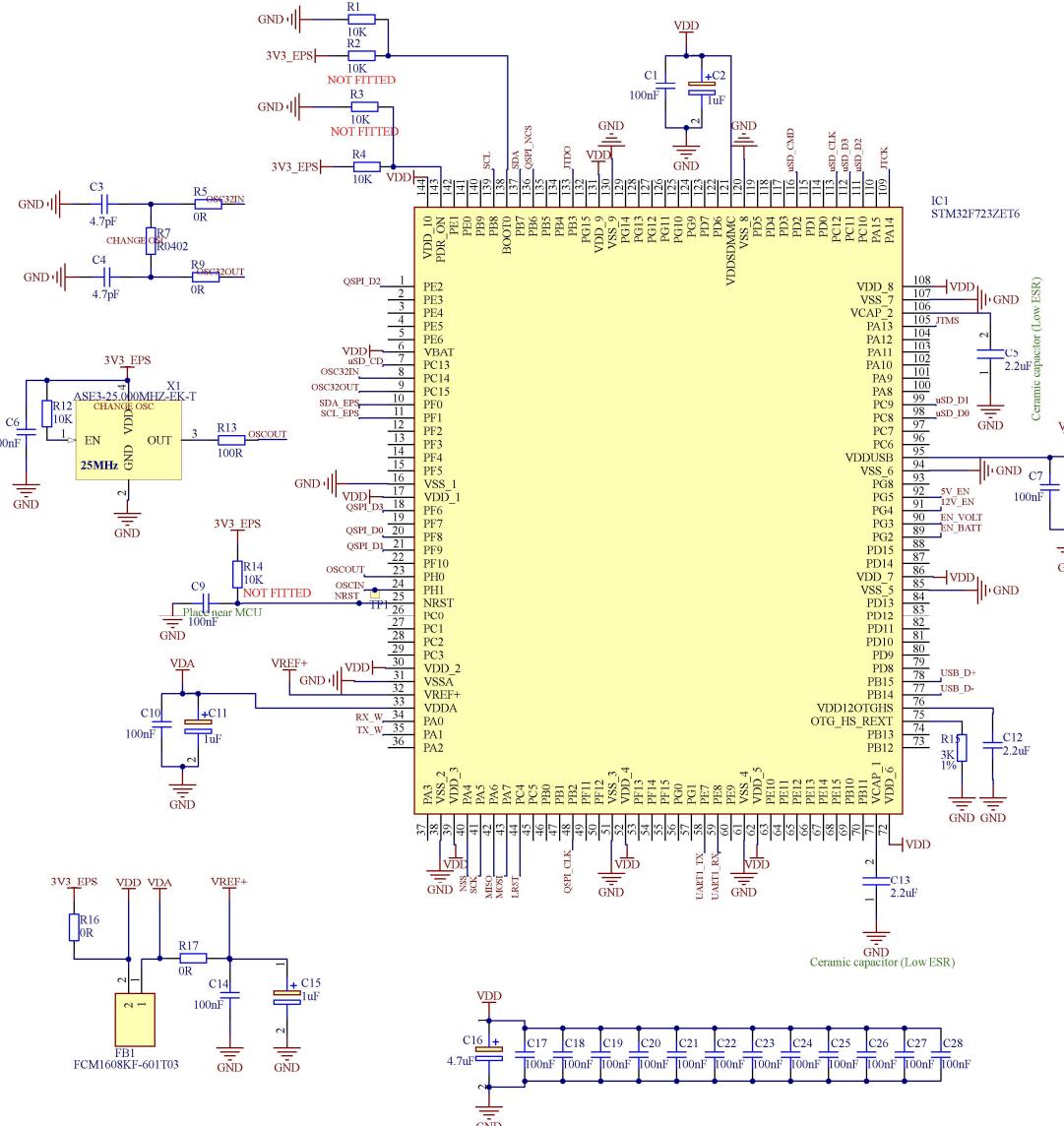


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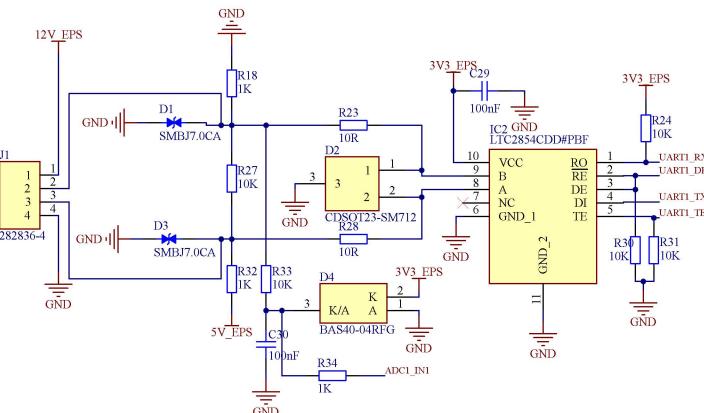
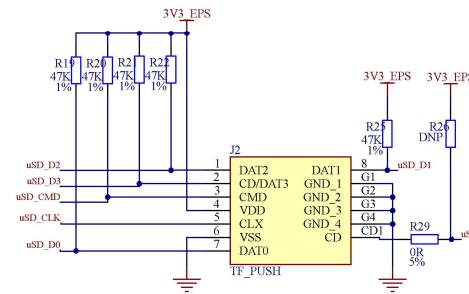
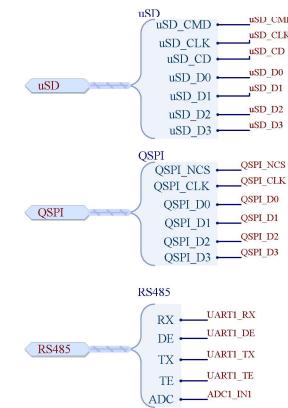
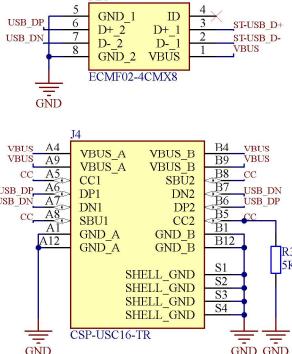
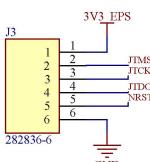
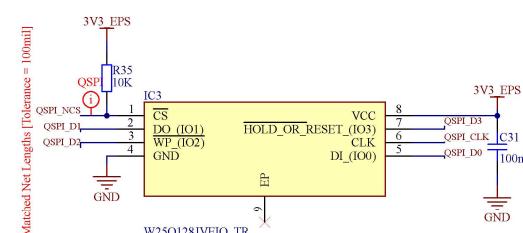
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Node STM32F723ZET6		
Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 3	of 10
File: node_mcu.SchDoc	Drawn By:	Luis Sayaverde Bravo

RS485 INTERFACE**uSD Holder****CONNECTIONS****STM32F7-USB-OTG-HS****SWD CONNECTOR****I2C CONNECTOR****QSPI FLASH MEMORY 128Mbits****Node Peripherals**

Size A3	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 4	of 10
File: node_peripherals.SchDoc	Drawn By:	Luis Sayaverde Bravo

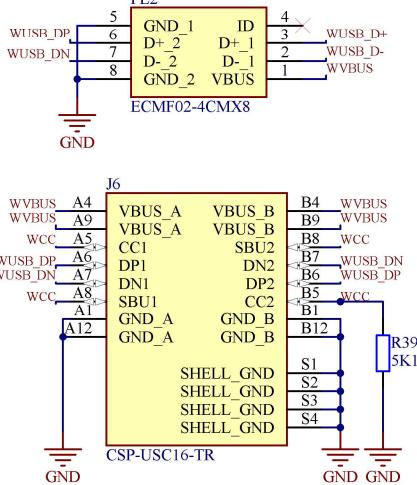
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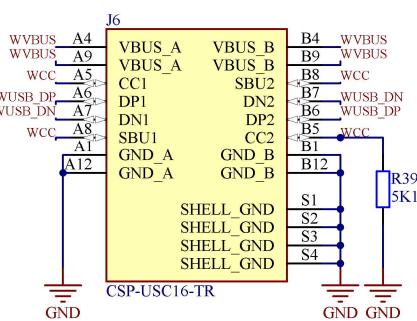
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A

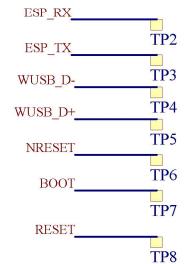


ESP32-C3

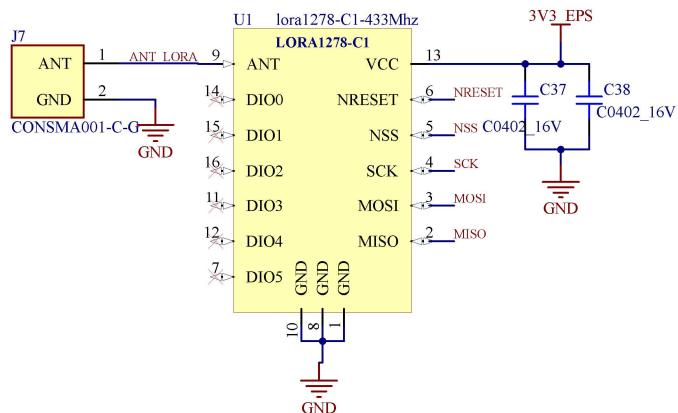
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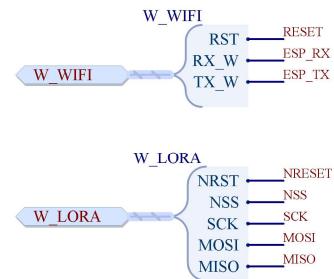
Test Points



LORA-1278-C1-433Mhz



Connections



Node Wireless

Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 5 of 10	
File: node_wireless.SchDoc	Drawn By: Luis Sayaverde Bravo	



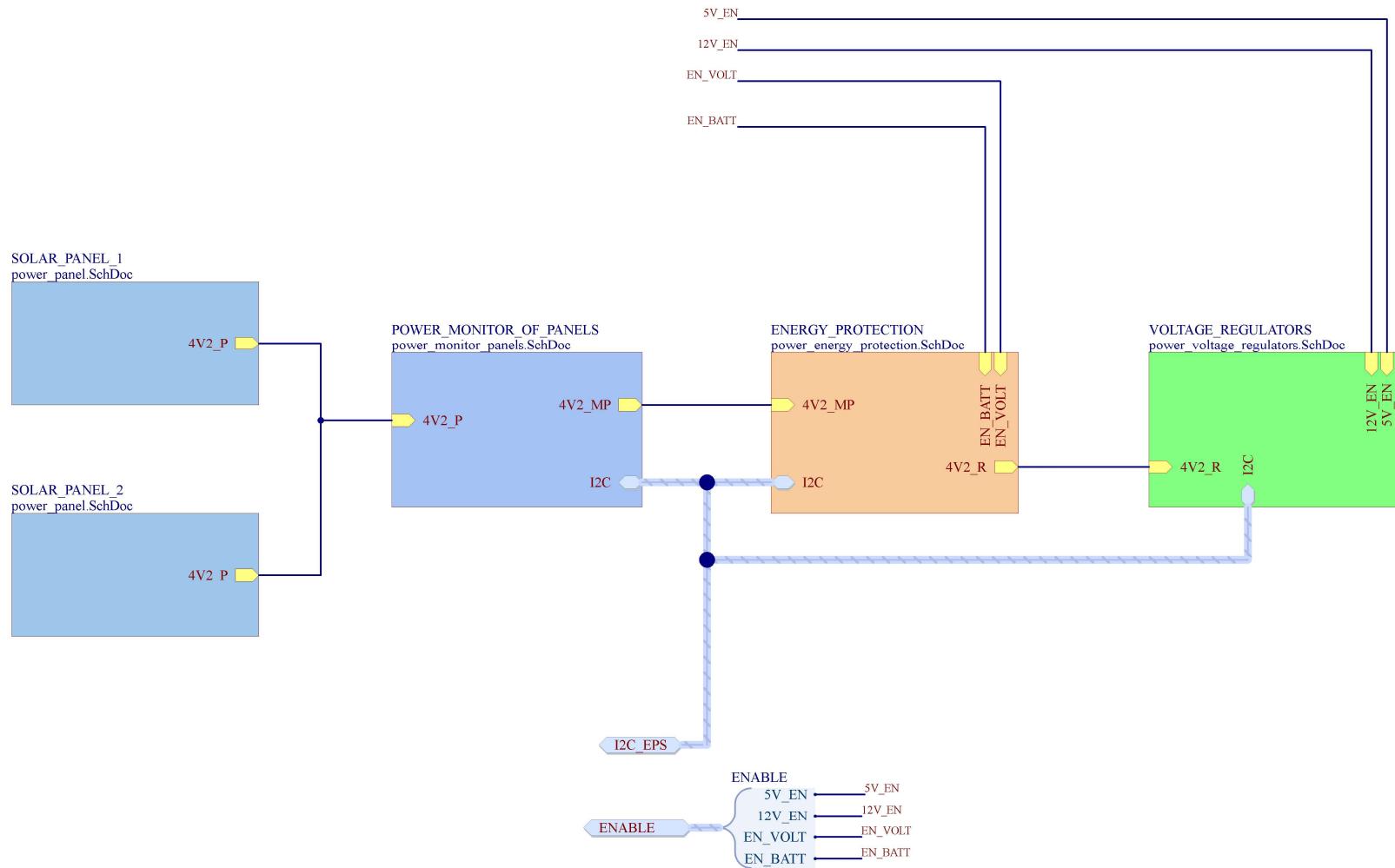
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Node Power system

Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 6 of 10	
File: node_power.SchDoc	Drawn By: Luis Sayaverde Bravo	



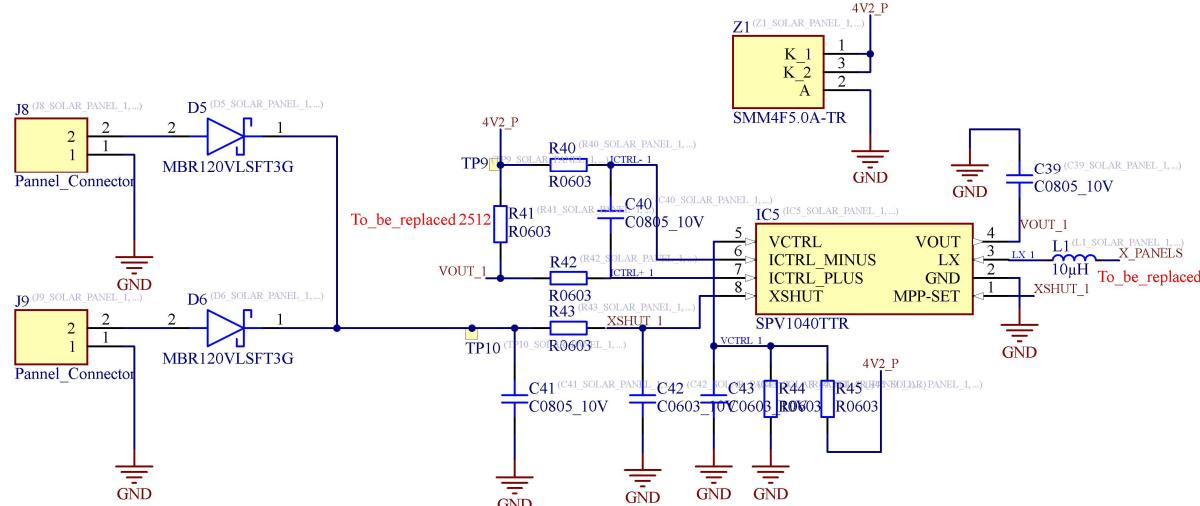
A

A

SOLAR BATTERY CHARGER (PANEL)

B

B



C

C

4V2_P —> 4V2_P

D

D

Node Solar panel

Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 7 of 10	
File: power_panel.SchDoc	Drawn By: Luis Sayaverde Bravo	



1

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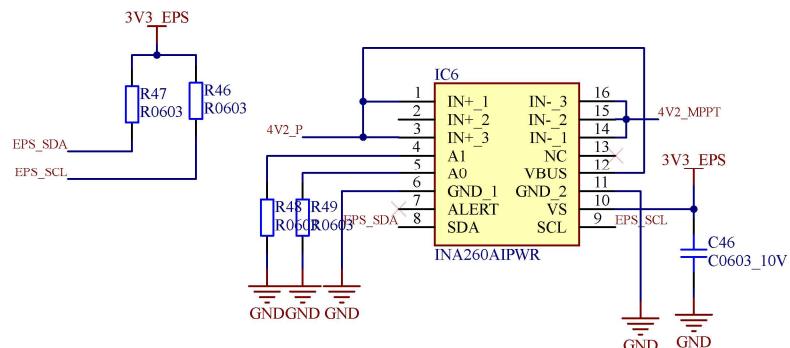
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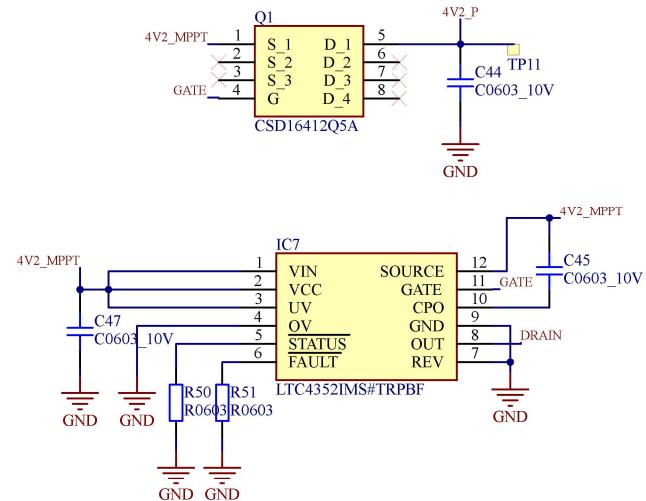
SOLAR PANELS BUS POWER MONITOR



B

B

IDEAL DIODE



C

C

CONNECTORS



D

D

Node Monitor panels

Size A4	Project Number: 0012	Revision v1.01
Date: 8/29/2023	Sheet 8 of 10	
File: power_monitor_panels.SchDoc	Drawn By: Luis Sayaverde Bravo	

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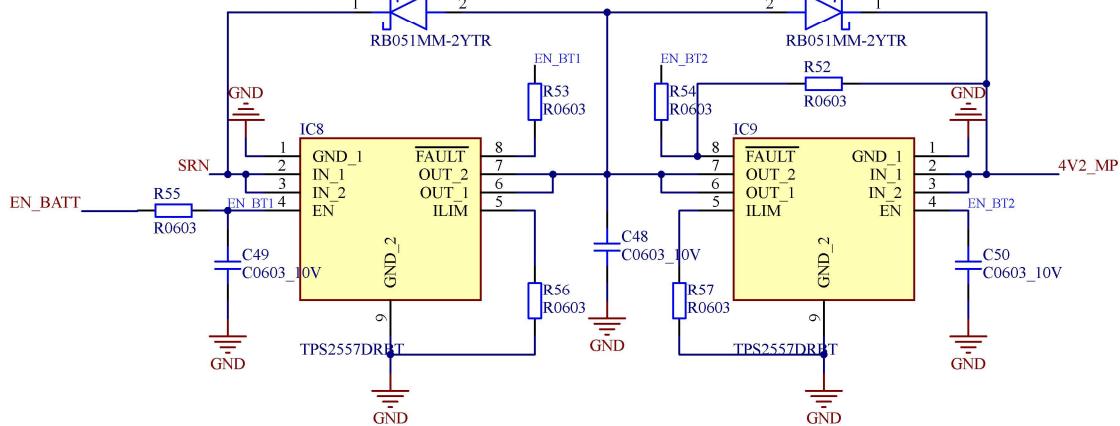
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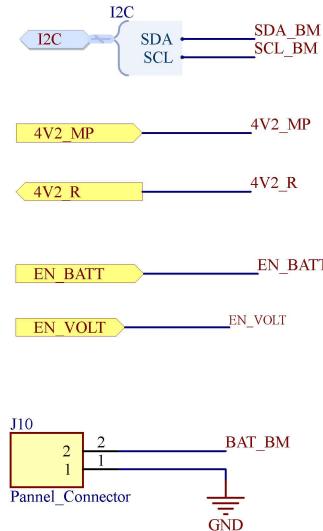
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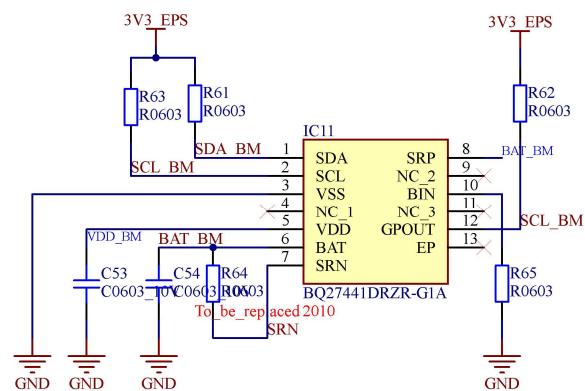
BATTERY PROTECTION



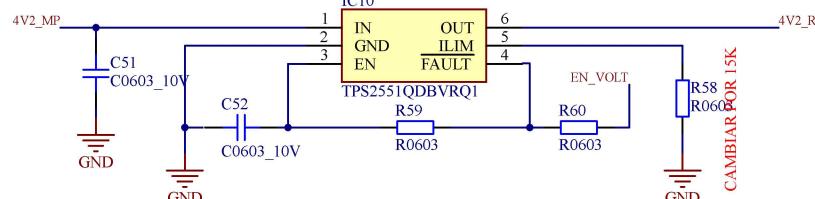
CONNECTORS



BATTERY MONITORING



VOLTAGE PROTECTION



Node Energy Protection

Size	Project Number:	Revision
A4	0012	v1.01
Date:	8/29/2023	Sheet 9 of 10
File:	power_energy_protection.SchDoc	Drawn By: Luis Sayaverde Bravo



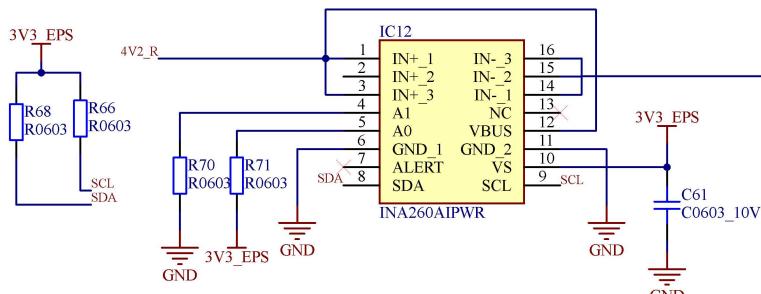
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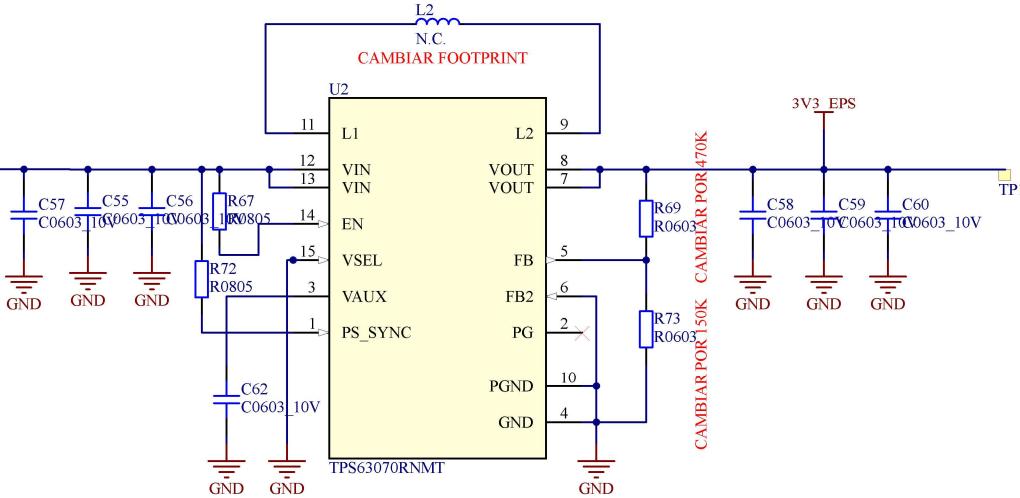
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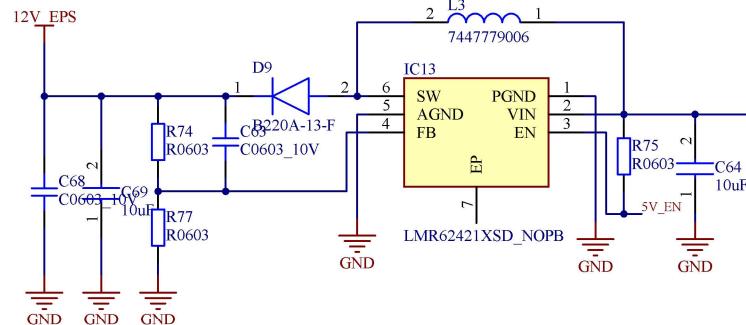
VOLTAGE MONITOR



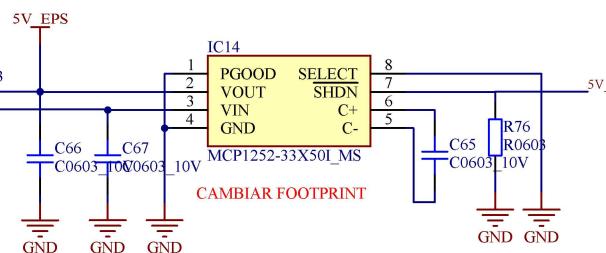
3.3V VOLTAGE REGULATOR



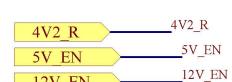
12V VOLTAGE REGULATOR



5V VOLTAGE REGULATOR



CONNECTORS



Node Voltage regulators

Size	Project Number:	Revision
A4	0012	v1.01
Date:	8/29/2023	Sheet 10 of 10
File:	power_voltage_regulators.SchDoc	Drawn By: Luis Sayaverde Bravo

