

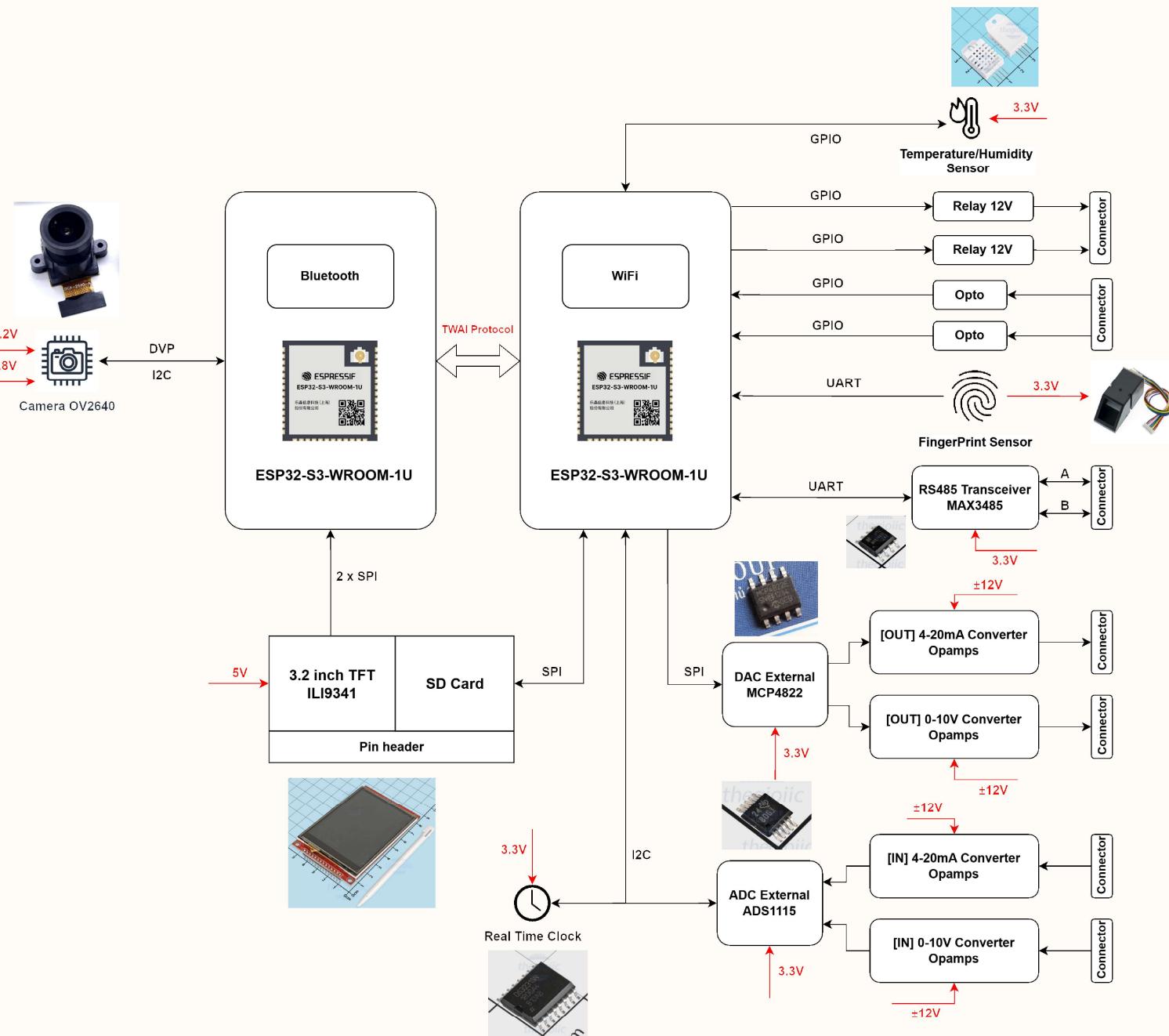
Table of Content

PAGE	COMPONENT/FUNCTION
001	Index
002	Block_Diagram
003	Overview_Schematic
004	Power_Supply
005	ESP32_BLE
006	ESP32_WiFi
007	Camera
008	Display
009	FingerPrint
010	UART_RS485
011	4-20mA_Converter
012	0-10V_Converter
013	DAC_ADC_External
014	Interface_IO
015	USB_To_TTL

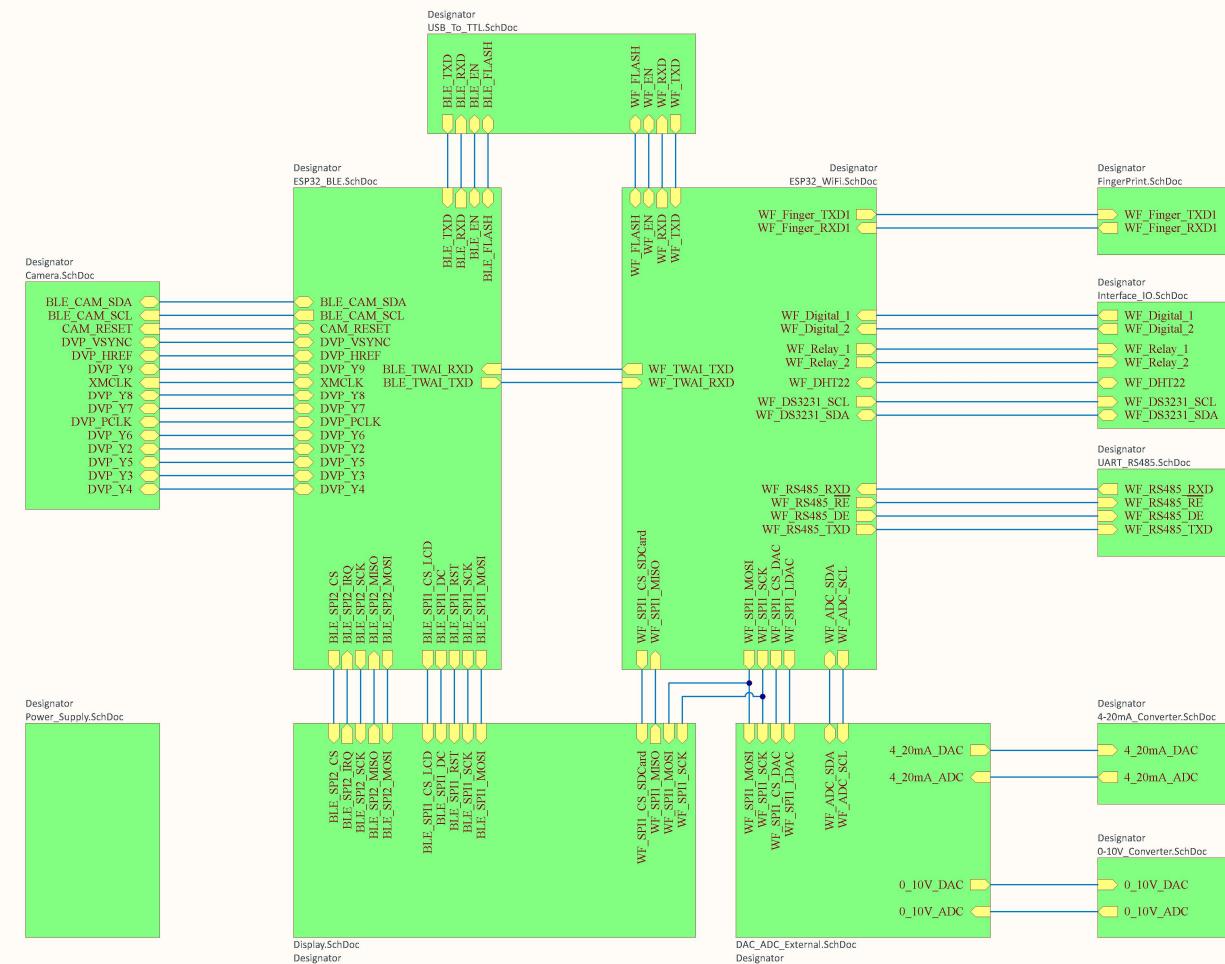
Bluetooth Gateway

Schematic V1.0.0

Project Name BluetoothGateway 		
Size A4	Revision	
Date: 1/24/2025	Last Modified: 1/23/2025	
Drawn By: *	Sheet 1 of 15	Checked By: *
File: Index.SchDoc		

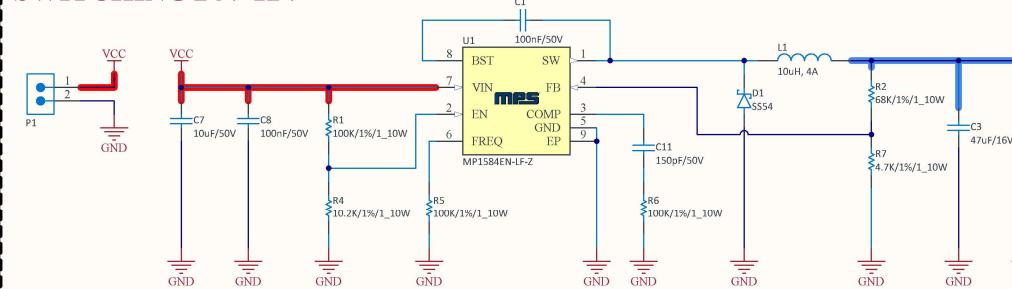


Project Name	
BluetoothGateway	
Size	Revision
A3	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 2 of 15 Checked By: *
File: Block_Diagram.SchDoc	

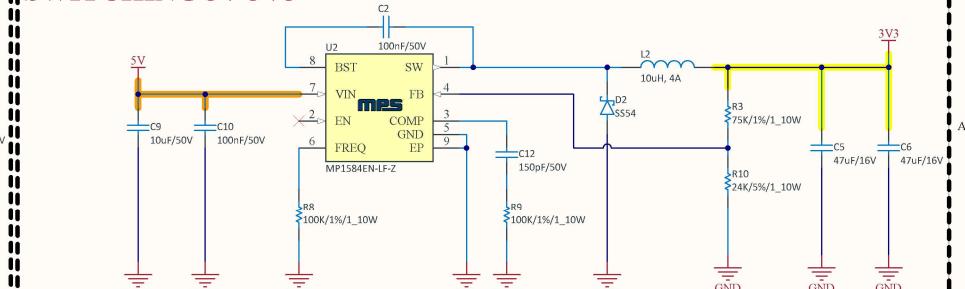


Project Name	
BluetoothGateway	
Size	Revision
A3	
Date: 1/24/2025	Last Modified: 1/23/2025
Drawn By: *	Sheet 3 of 15 Checked By: *
File: Overview_Schematic.SchDoc	

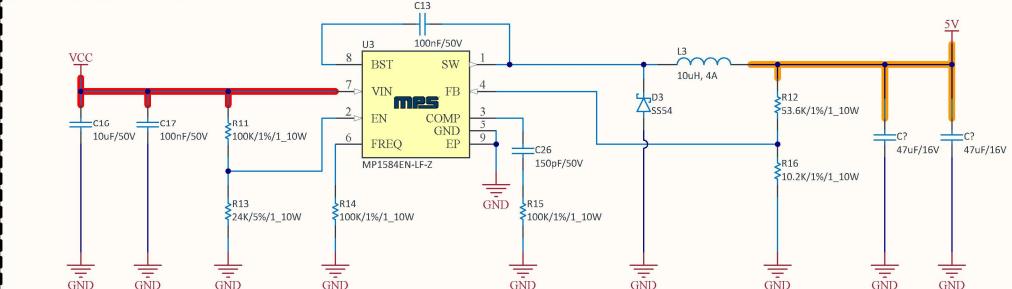
SWITCHING 24V-12V



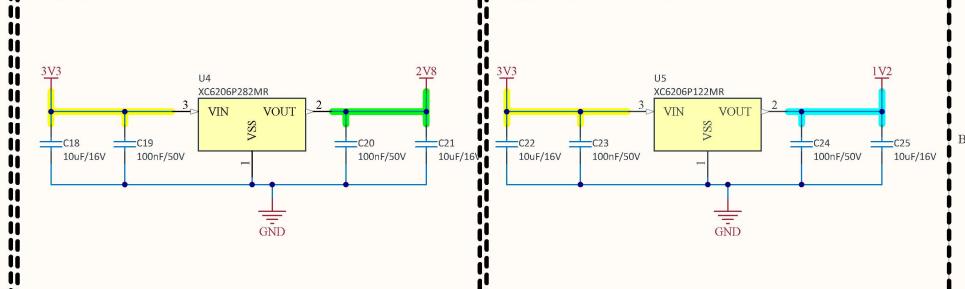
SWITCHING 5V-3V3



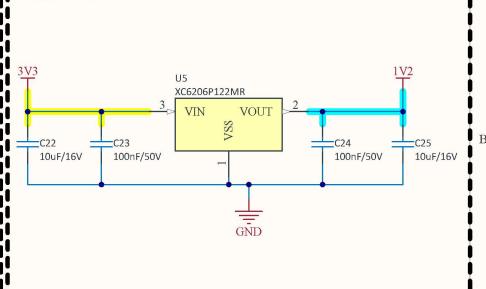
SWITCHING 24V-5V



LDO 3V3-2V8



LDO 3V3-1V2



Project Name

BluetoothGateway

Size

A3

Revision

Date:

1/24/2025

Last Modified:

1/24/2025

Drawn By:

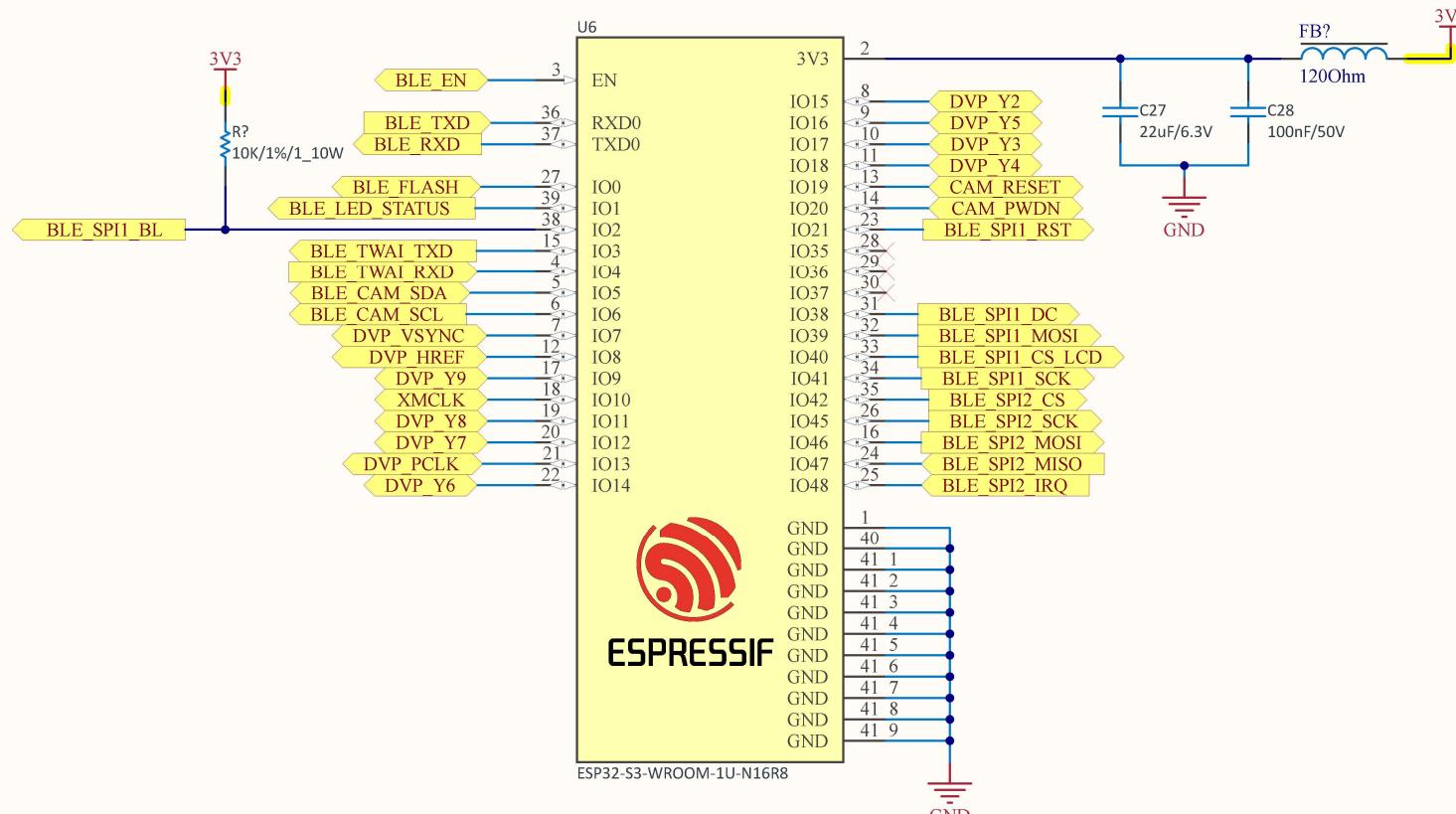
*

Sheet 4 of 15

Checked By:

File: Power_Supply.SchDoc

A



B

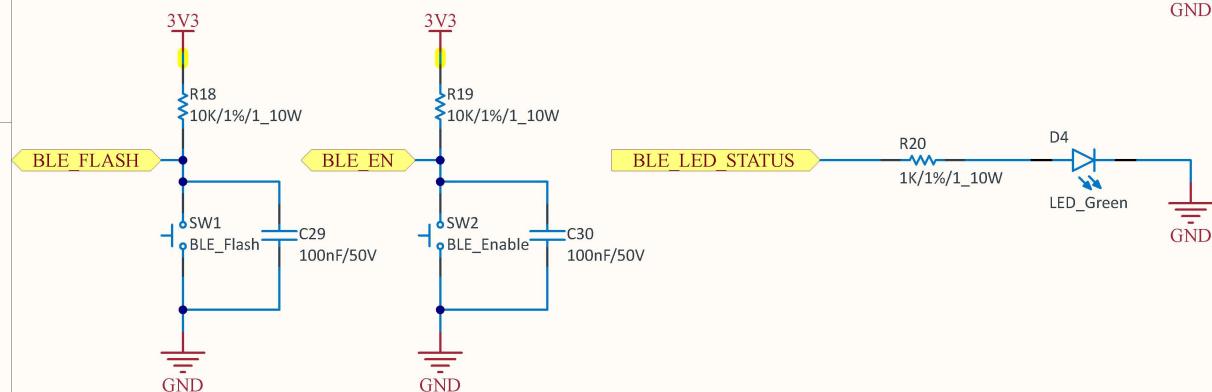
A

C

B

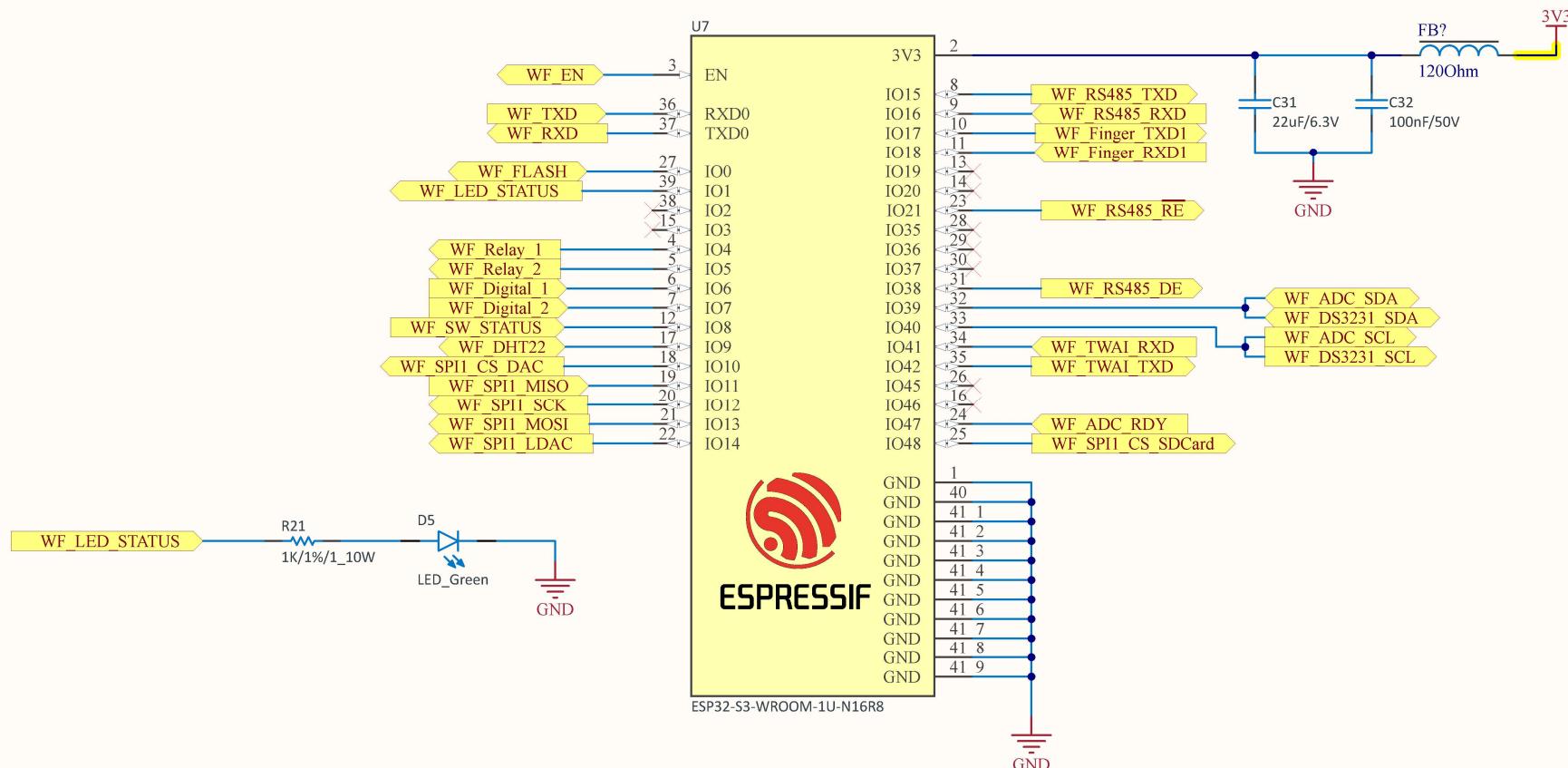
D

C

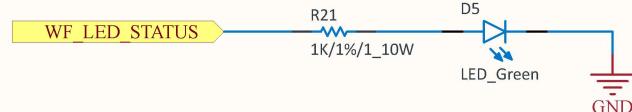


Project Name	
BluetoothGateway	
Size	Revision
A4	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 5 of 15
Checked By: *	
File: ESP32_BLE.SchDoc	

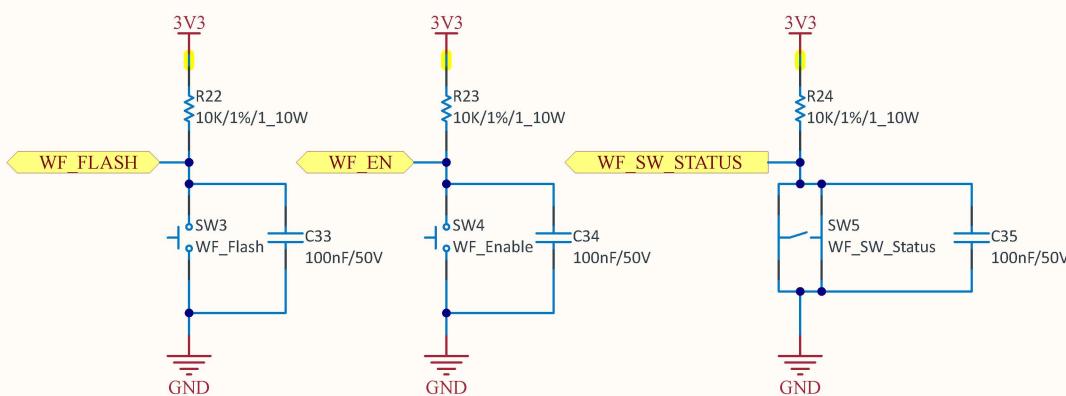
A



B



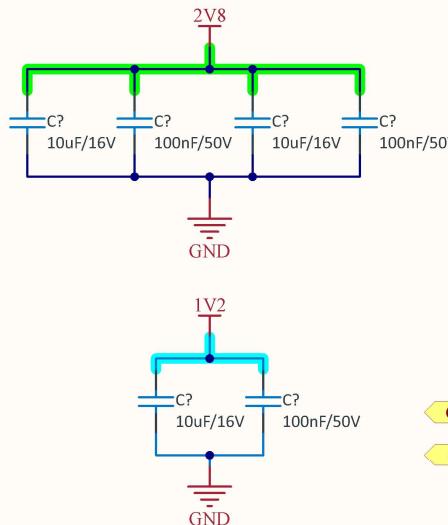
C



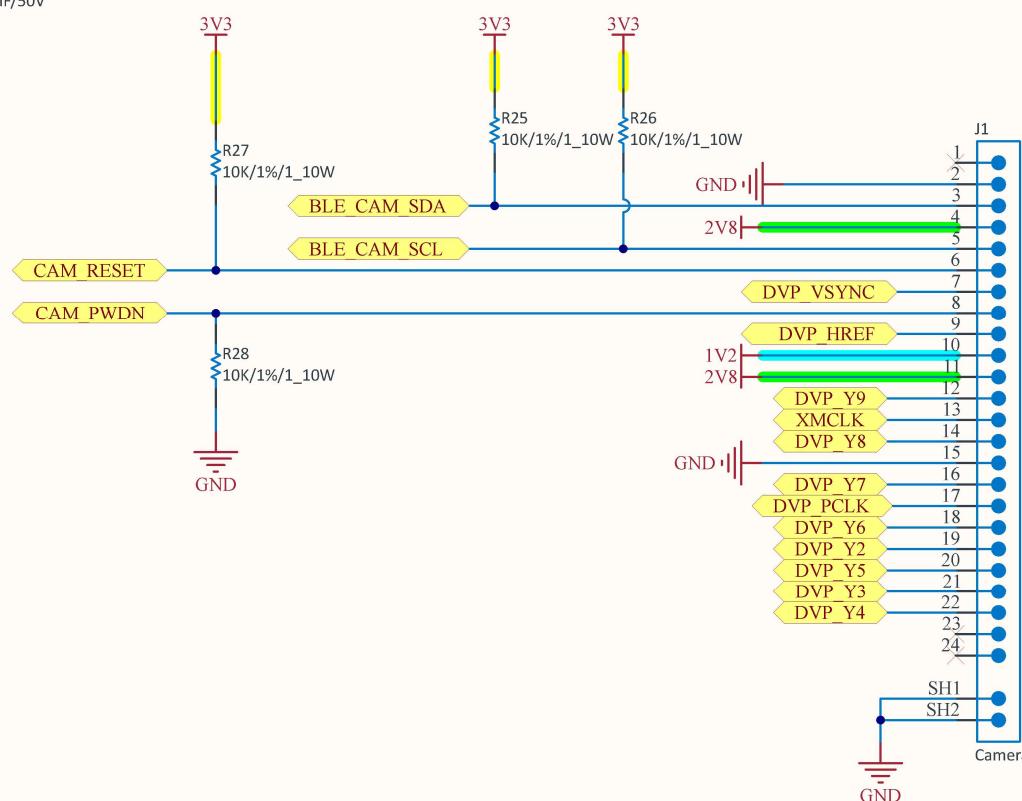
D

Project Name	
BluetoothGateway	
Size	Revision
A4	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 6 of 15
Checked By: *	
File: ESP32_WiFi.SchDoc	

A



B



C

Project Name

BluetoothGateway



Size

A4

Revision

Date: 1/24/2025

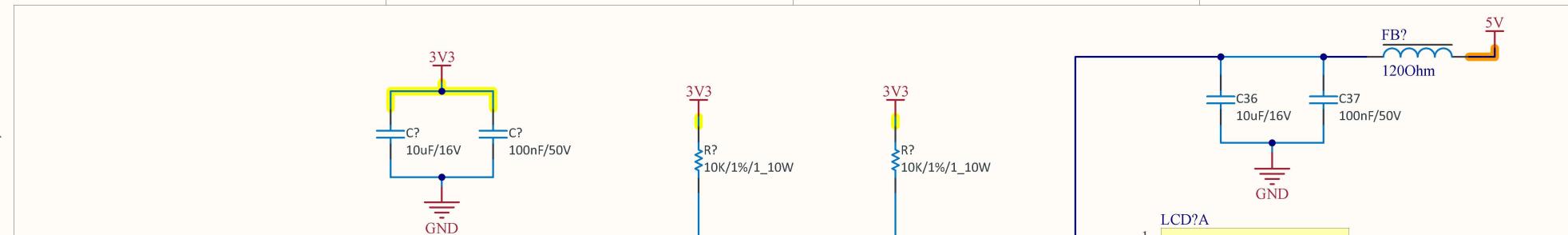
Last Modified: 1/24/2025

Drawn By: *

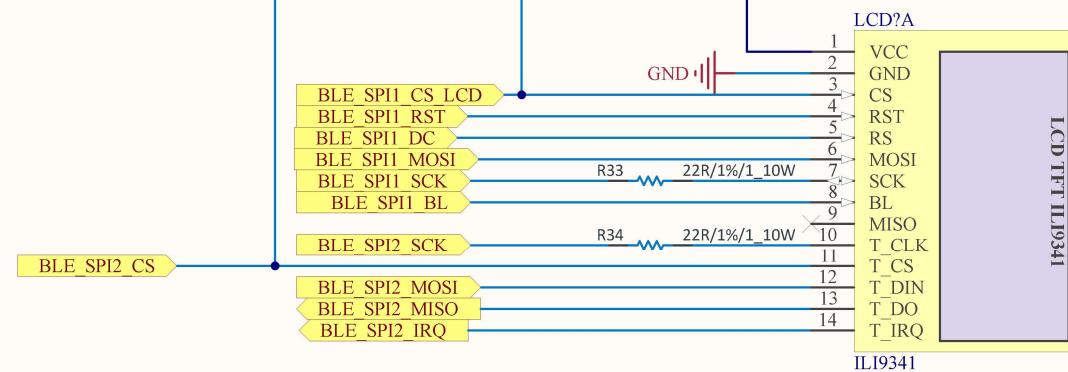
Sheet 7 of 15 | Checked By: *

File: Camera.SchDoc

A

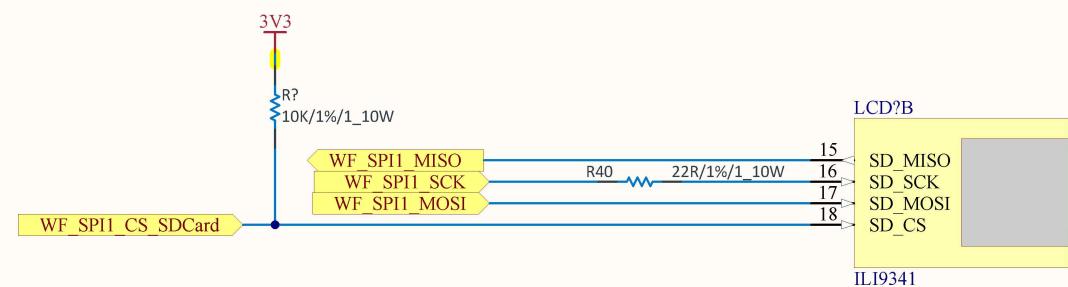


B



A

C



C

D

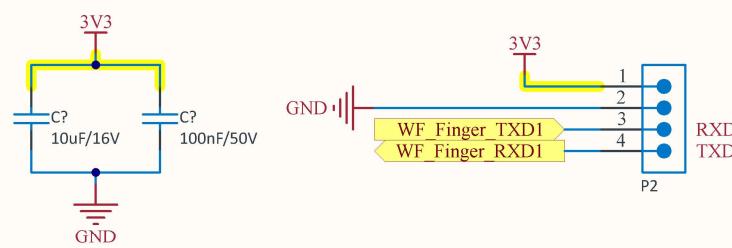
Project Name	
BluetoothGateway  	
Size	Revision
A4	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 8 of 15
	Checked By: *
File: Display.SchDoc	

A

A

B

B



C

C

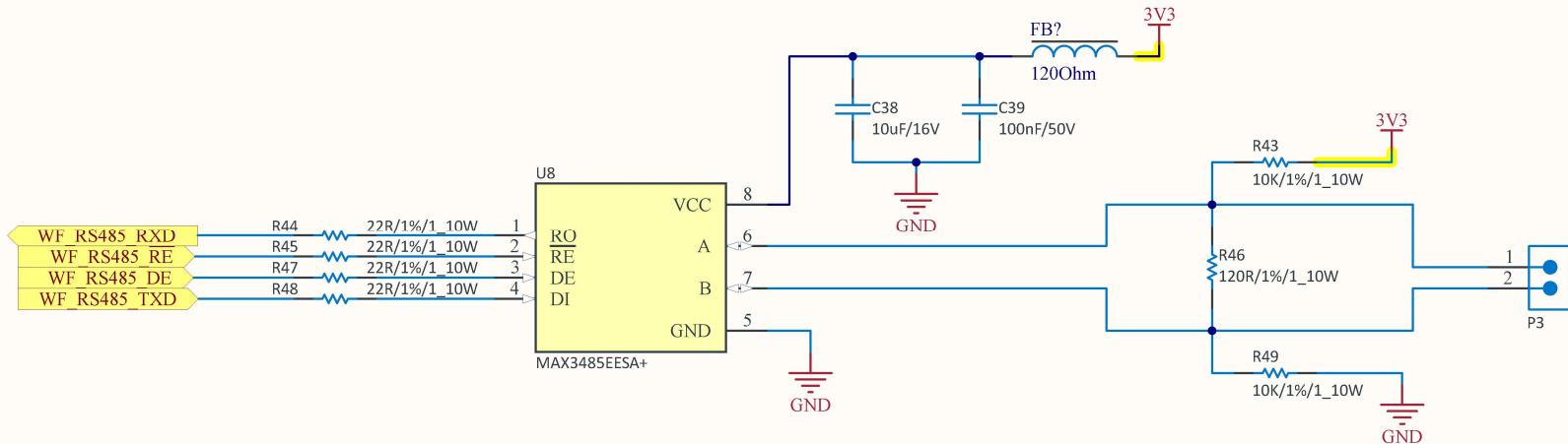
D

D

Project Name	
BluetoothGateway  	
Size	Revision
A4	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 9 of 15
	Checked By: *
File: FingerPrint.SchDoc	

A

A



B

B

C

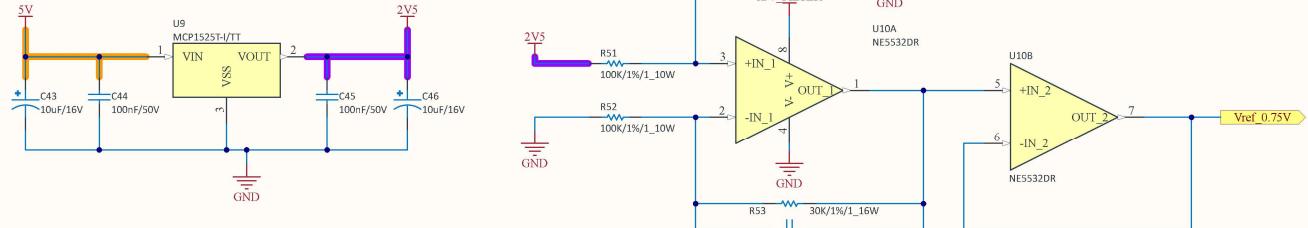
C

D

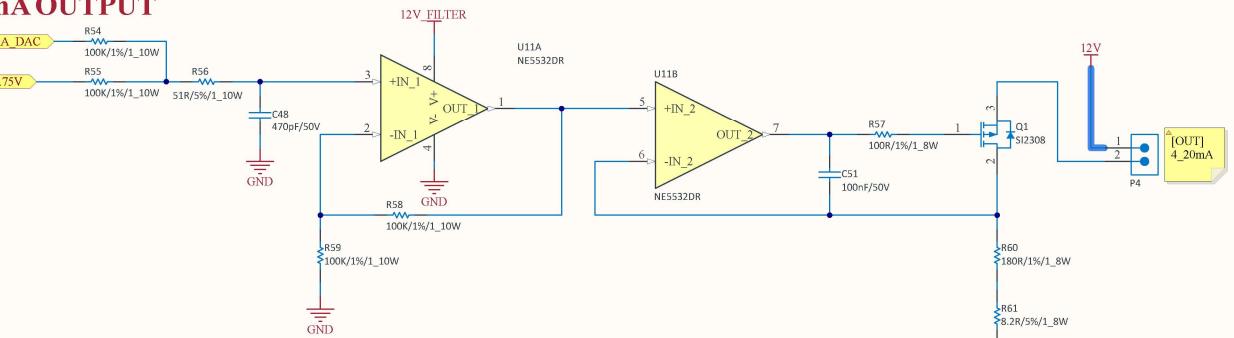
D

Project Name	
BluetoothGateway  	
Size	Revision
A4	
Date: 1/24/2025	Last Modified: 1/24/2025
Drawn By: *	Sheet 10 of 15
Checked By: *	
File: UART_RS485.SchDoc	

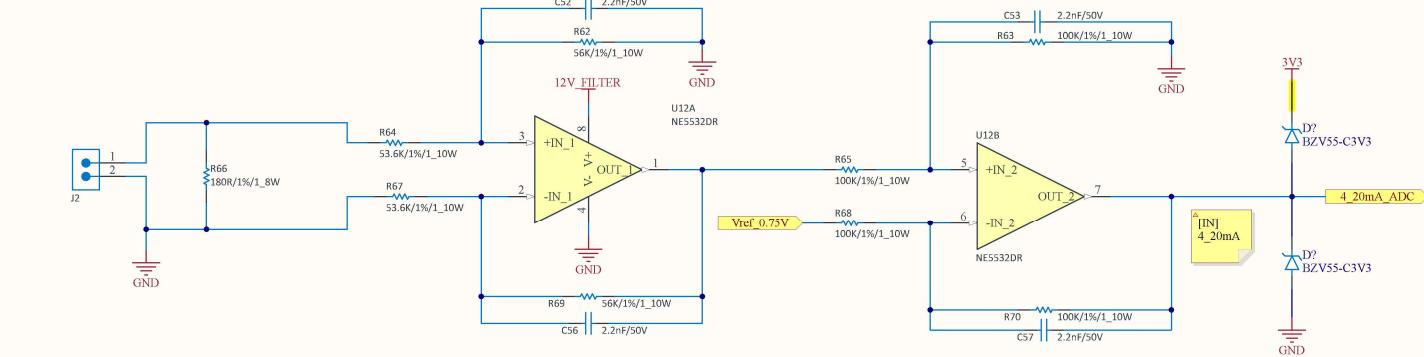
CREATE VREF 0.75V



4-20mA OUTPUT

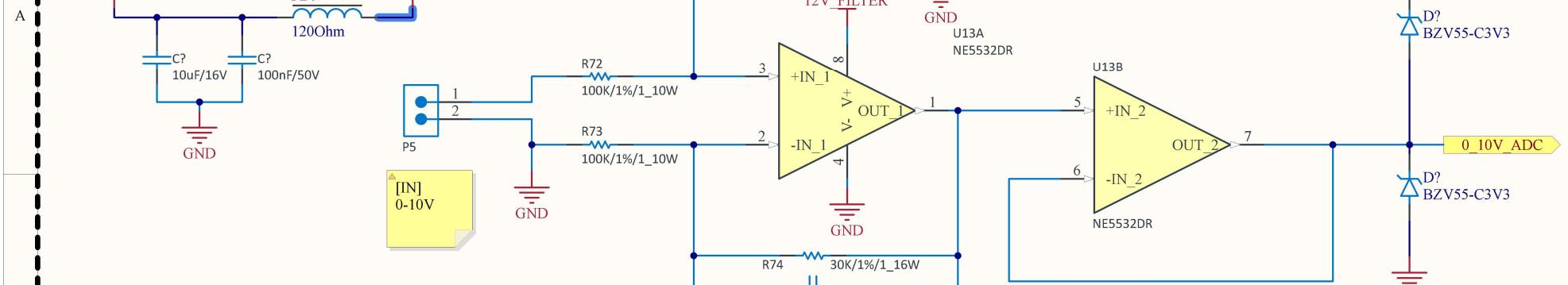


4-20mA INPUT

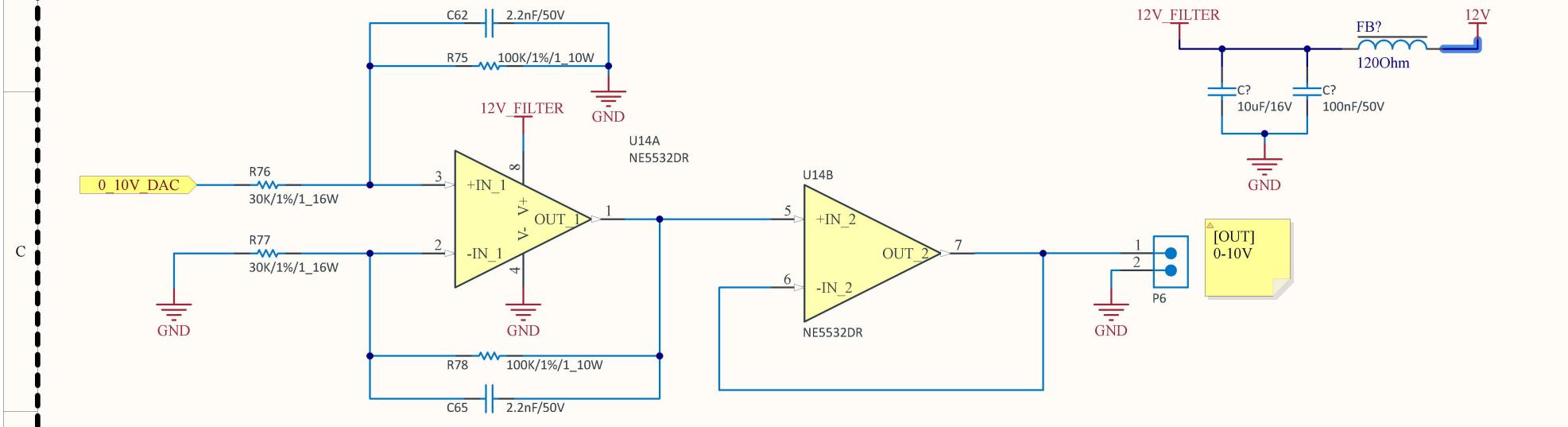


Project Name	
BluetoothGateway	
Size	A3
Revision	
Date:	1/24/2025
Last Modified:	1/24/2025
Drawn By:	Sheet 15 of 15
Checked By:	*
File:	4-20mA_Converter.SchDoc

0-10V INPUT



0-10V OUTPUT



Project Name

BluetoothGateway



Size
A4

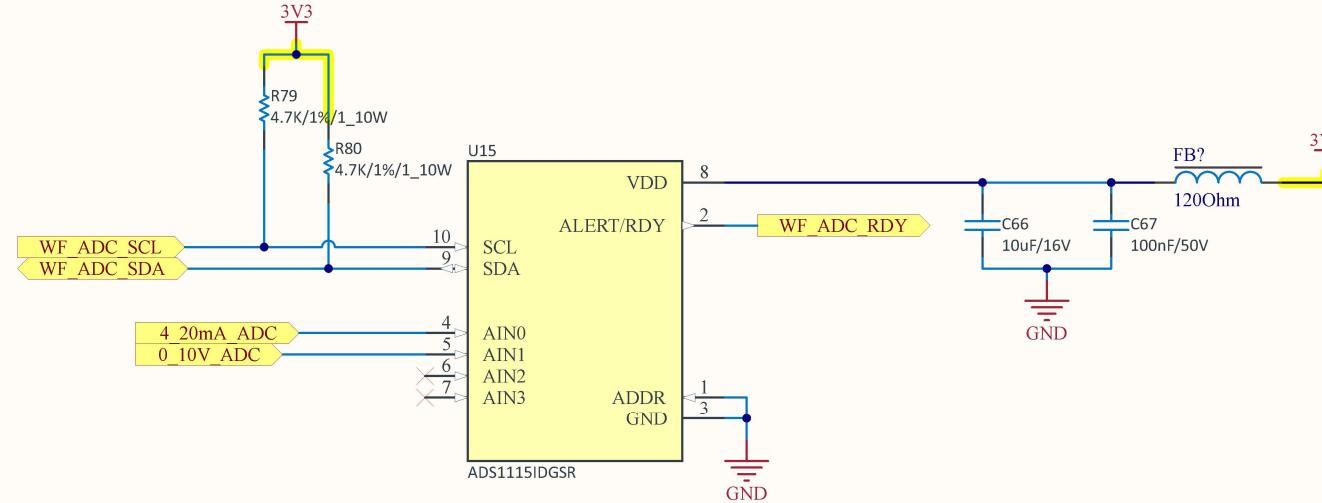
Revision

Date: 1/24/2025 Last Modified: 1/24/2025

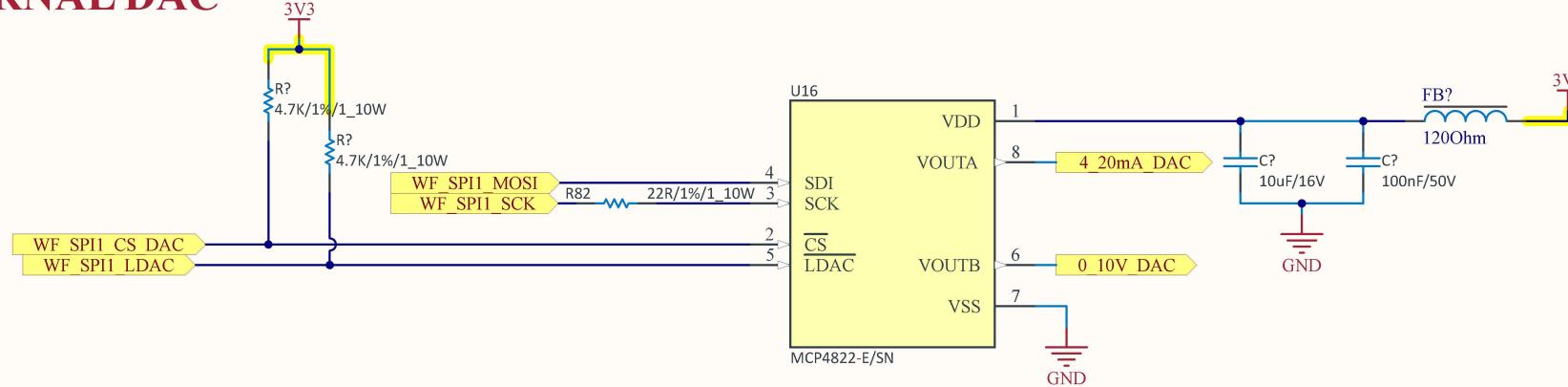
Drawn By: * Sheet 12 of 15 Checked By: *

File: 0-10V_Converter.SchDoc

EXTERNAL ADC



EXTERNAL DAC



Project Name

BluetoothGateway



A4

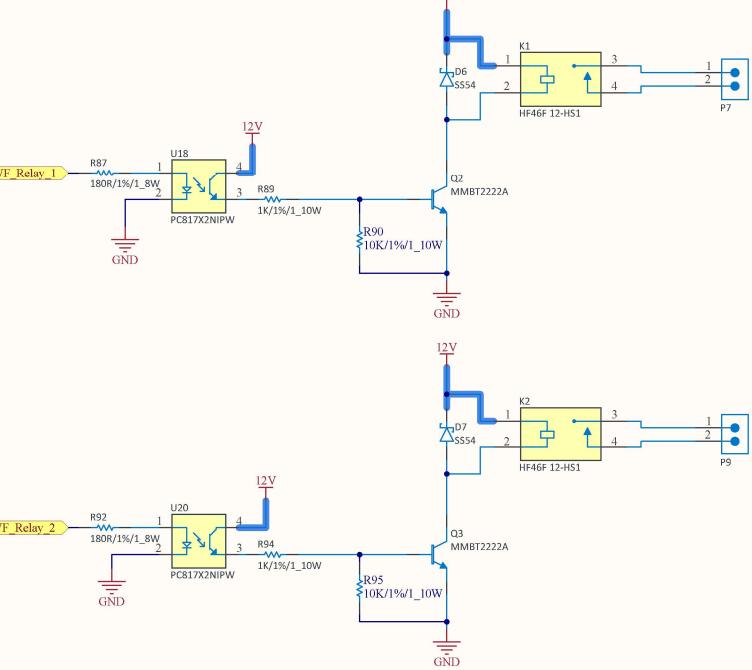
Revision

Date: 1/24/2025 Last Modified: 1/24/2025

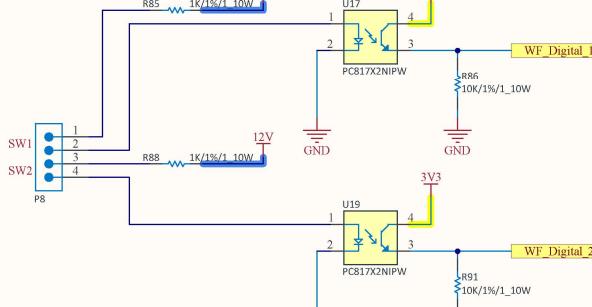
Drawn By: * Sheet 13 of 15 Checked By: *

File: DAC_ADC_External.SchDoc

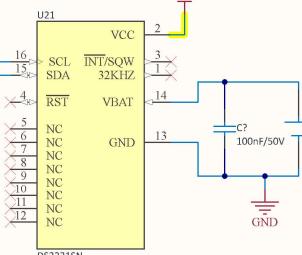
RELAY



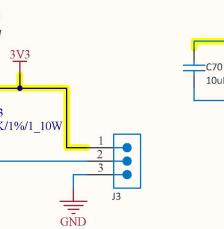
DIGITAL INPUT



RTC



DHT22



Project Name

BluetoothGateway



Size

A3

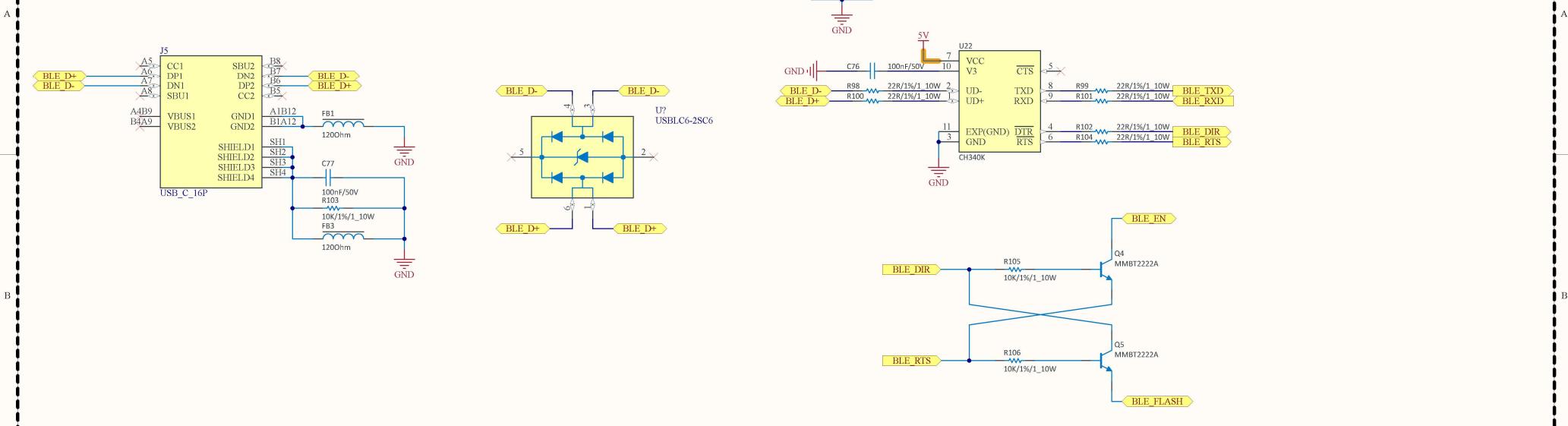
Revision

Date: 1/24/2025 Last Modified: 1/24/2025

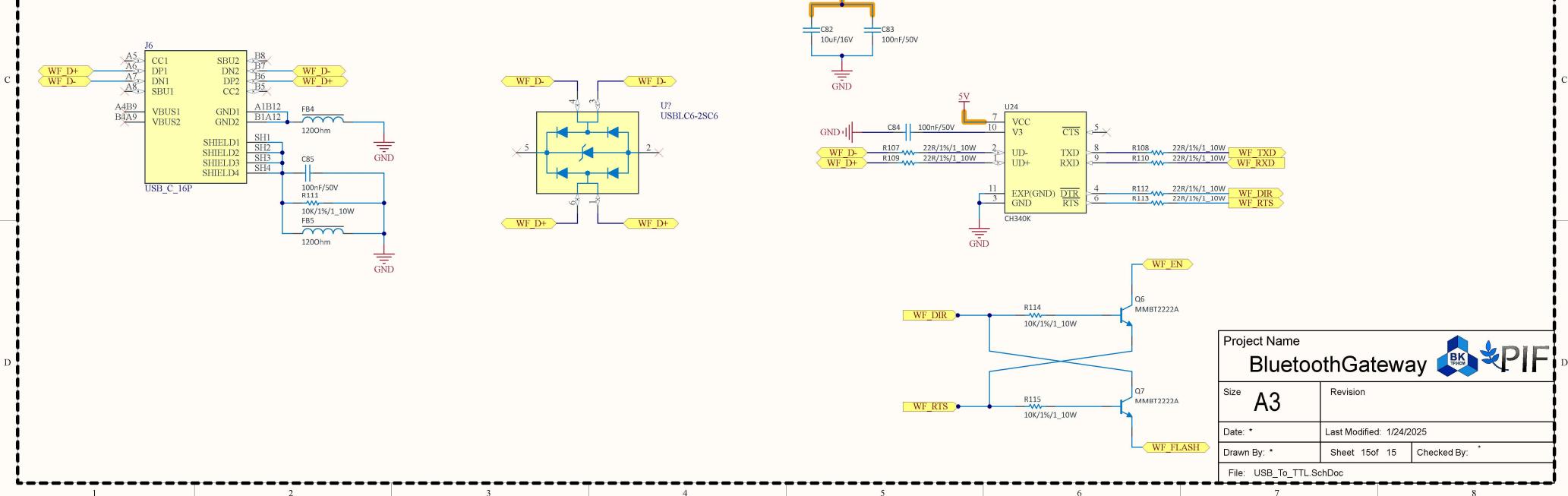
Drawn By: * Sheet 14of 15 Checked By: *

File: Interface_IO.SchDoc

PROGRAM ESP32-S3-Bluetooth



PROGRAM ESP32-S3-WiFi



Project Name	BluetoothGateway	
Size	A3	Revision
Date:	Last Modified: 1/24/2025	
Drawn By:	Sheet 15 of 15	Checked By:
File:	USB_To_TTL.SchDoc	