

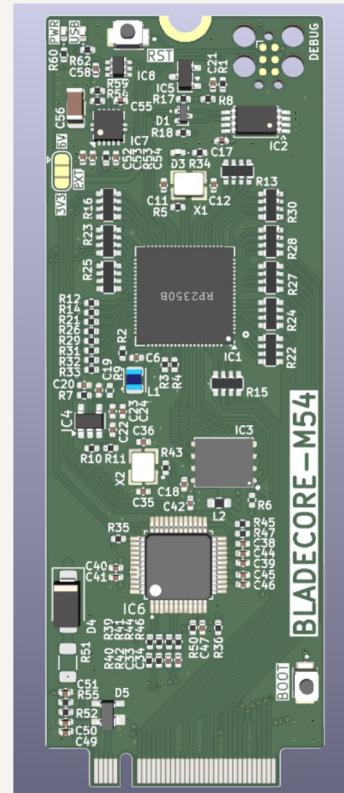
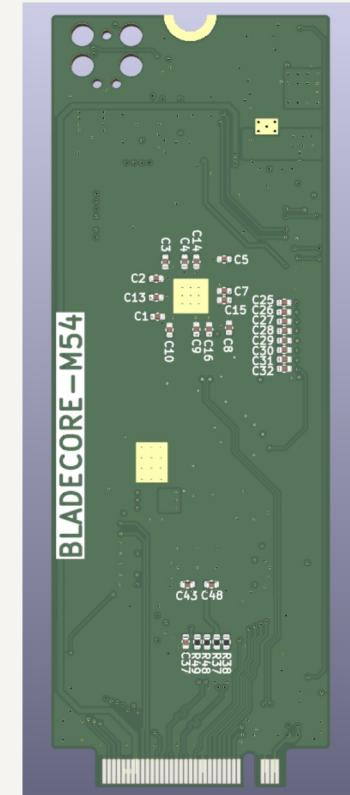
Project: PDNode-600**BladeCore-M54****Pro**

Rev 1.0.0

2026-02-07

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TOP VIEW**PCB PREVIEW****BOTTOM VIEW****COMMENT GUIDELINES**

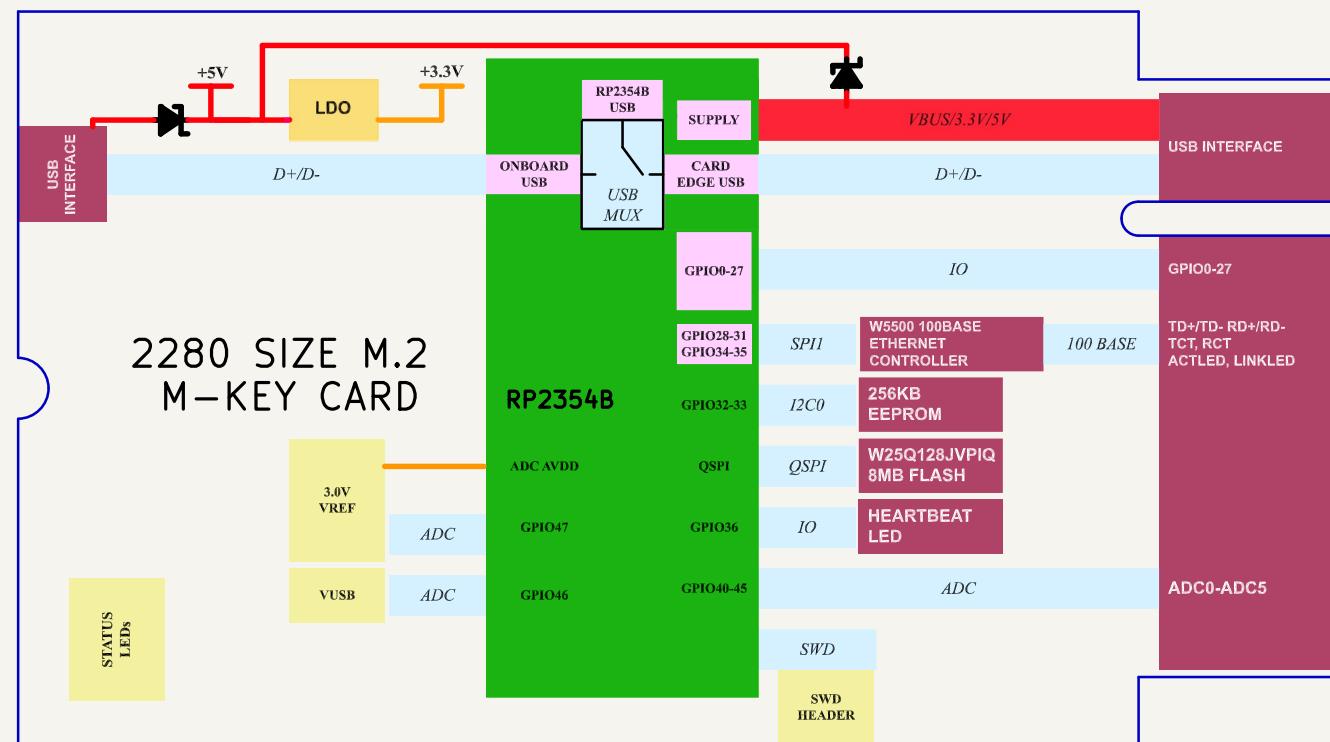
General comments are black, 50 mil size
 Design notes and guidelines are blue, 50 mil size
 Layout instructions are red, 50 mil size

NOTES

Not fitted components are marked as

	Board Name: PDNode-600	Project Name: BladeCore-M54
Date:	2026-01-31	Revision:
File Name:	BladeCore-M54.kicad_sch	Variant:
Sheet Title:	Root	I.0.0 Pro
Company:	DvidMakesThings	Size:
Designer:	David Sipos	Sheet:
Reviewer:		A3 1 of 9

[2] Block Diagram



Electrical specifications:

Input voltage:	3.3V - 5.5 V
Absolut maximum current consumption	480 mA
Typical current consumtum	60mA
IO voltage	3.3V
Onboard LDO output capacity	1.5A
LDO Dropout	60mV

EEPROM	256 kbit
External Flash	8MB



Board Name:
PDNode-600

Project Name:
BladeCore-M54

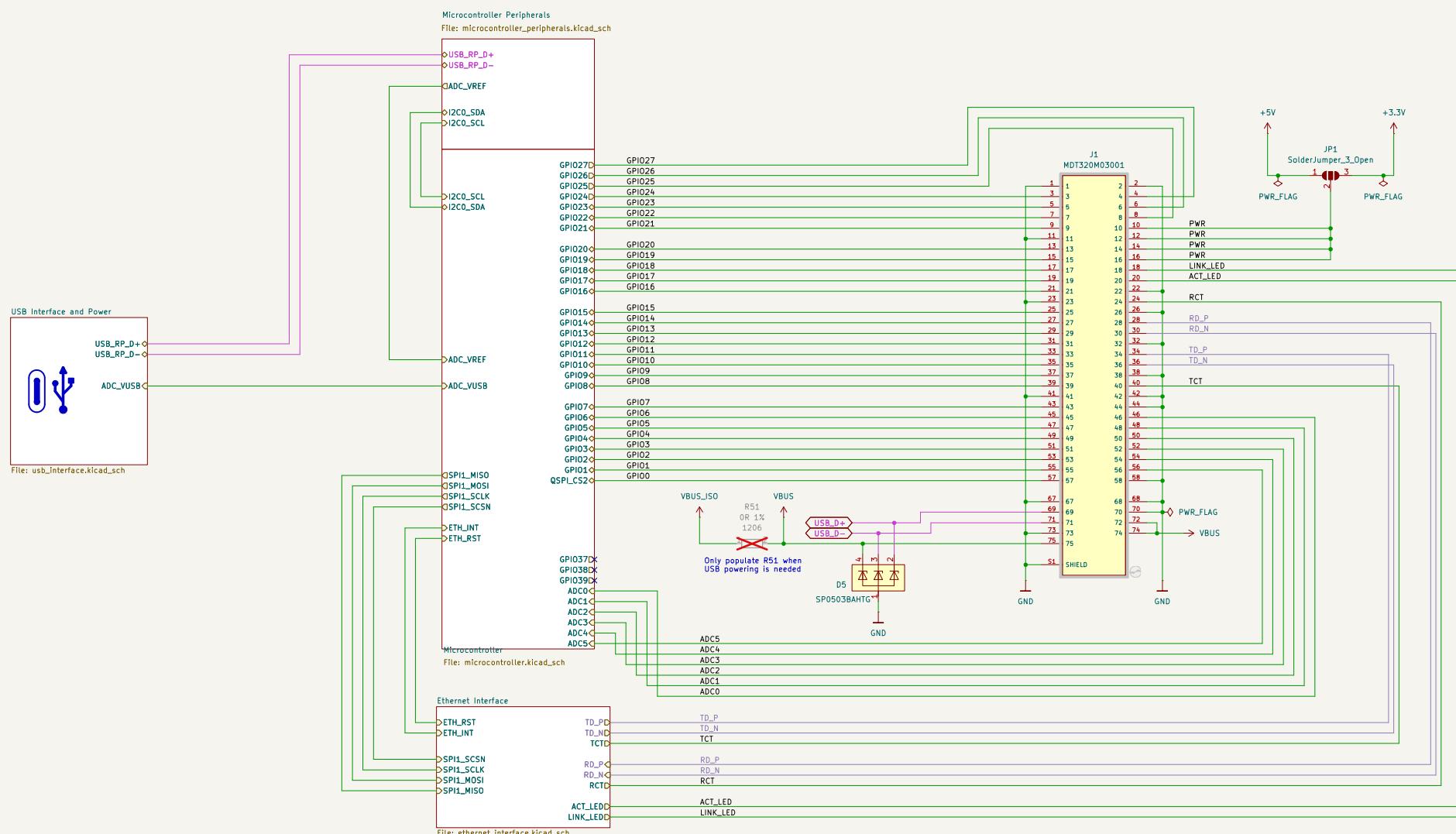
Date: 2026-01-31
File Name: Block Diagram.kicad_sch

Revision: 1.0.0
Variant: Pro

Sheet Title: Company:
Block Diagram **DvidMakesThings**

Designer: David Sipos
Reviewer: **A3** Sheet: **2 of 9**

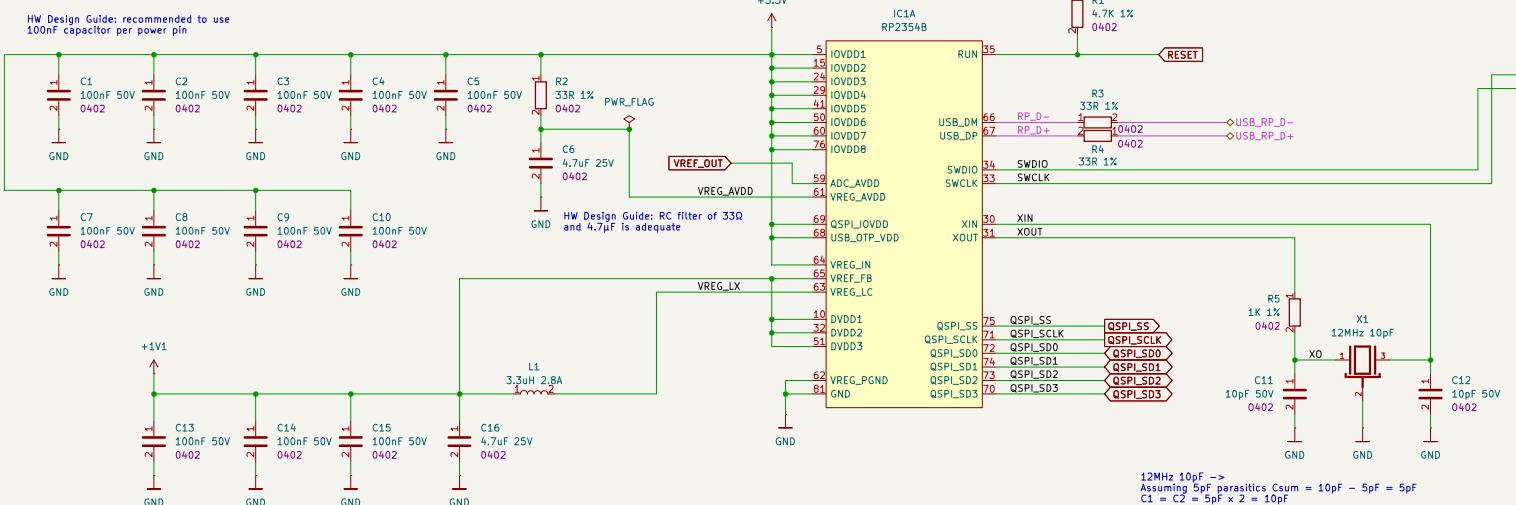
[3] Project Architecture



	Board Name: PDNode-600	Project Name: BladeCore-M54	
	File Name: Project.Architecture.kicad_sch	Revision: 1.0.0	Variant: Pro
Company: DvidMakesThings	Designer: David Sipos Reviewer:	Size: A3	Sheet: 3 of 9

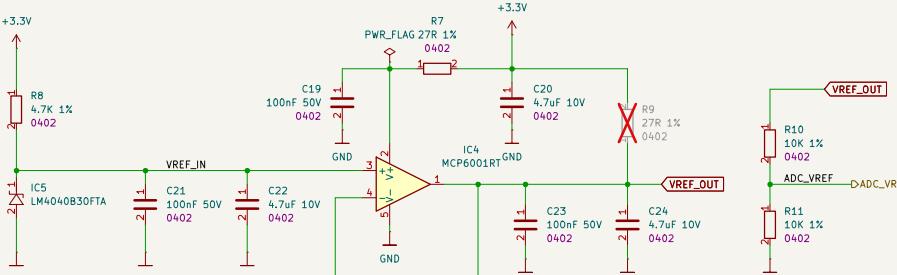
[4] Microcontroller Peripherals

RP2354B MICROCONTROLLER

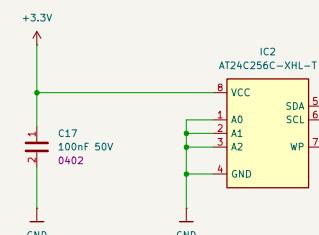


PUSHBUTTONS

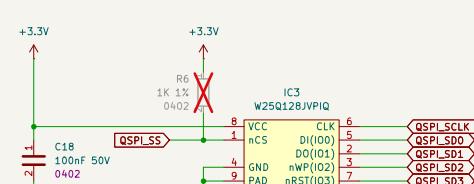
3.0V ADC VOLTAGE REFERENCE



EXTERNAL EEPROM



EXTERNAL FLASH



Board Name:	PDNode-600		Project Name:	BladeCore-M54	
File Name:	microcontroller_peripherals.kicad_sch		Revision:	1.0.0	
Sheet Title:	Microcontroller Peripherals		Variant:	Pro	
Company:	DavidMakesThings	Designer:	David Sipos	Size:	A3
Reviewer:				Sheet:	4 of 9

Date: 2026-01-31

Sheet Title:

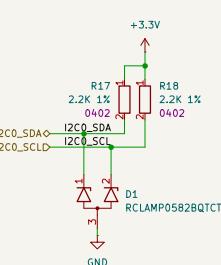
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Designer:

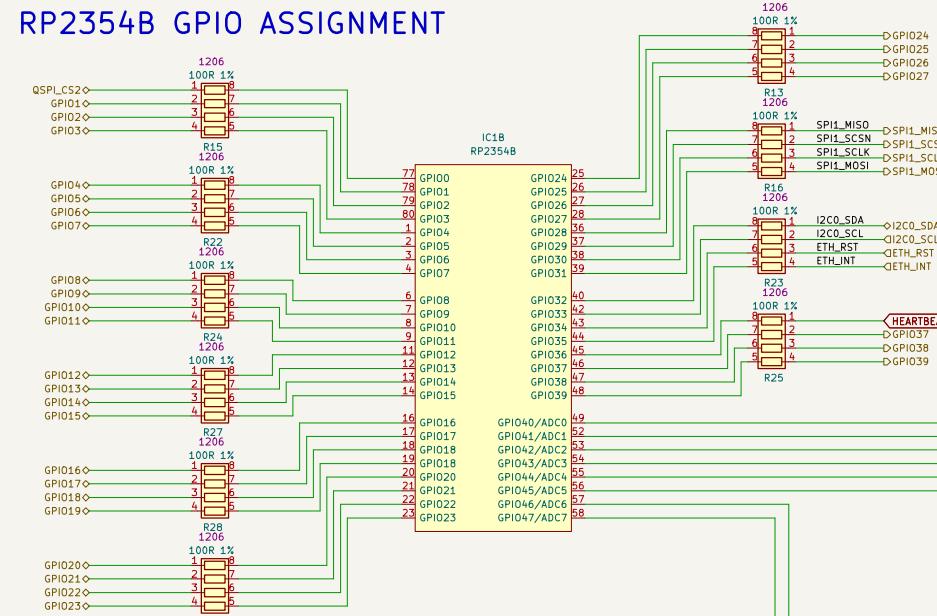
Reviewer:

[5] Microcontroller

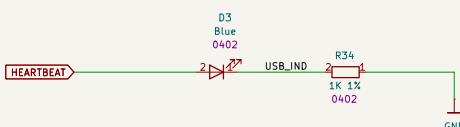
I2C PULLUP



RP2354B GPIO ASSIGNMENT



HEARTBEAT LED



Date: 2026-01-31

Sheet Title:

Microcontroller

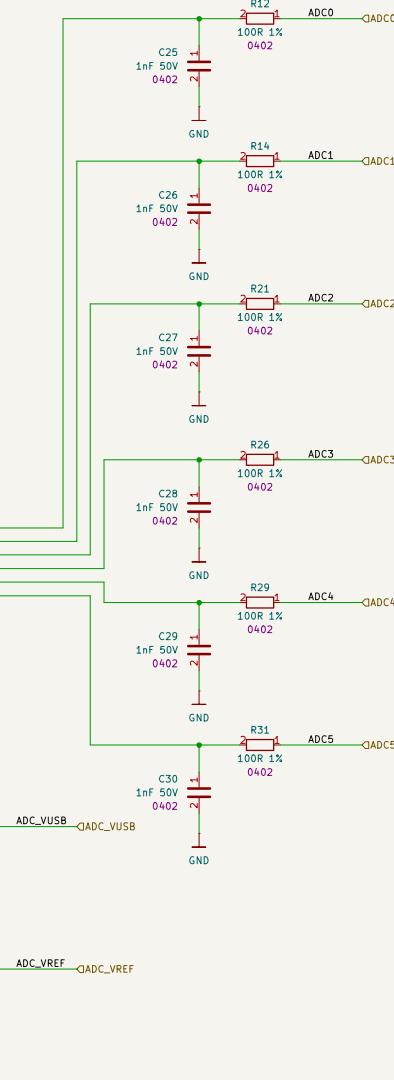
Board Name: PDNode-600	Project Name: BladeCore-M54
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File Name: microcontroller.kicad_sch	Revision: 1.0.0
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Sheet Title: Company: DavidMakesThings	Variant: Pro
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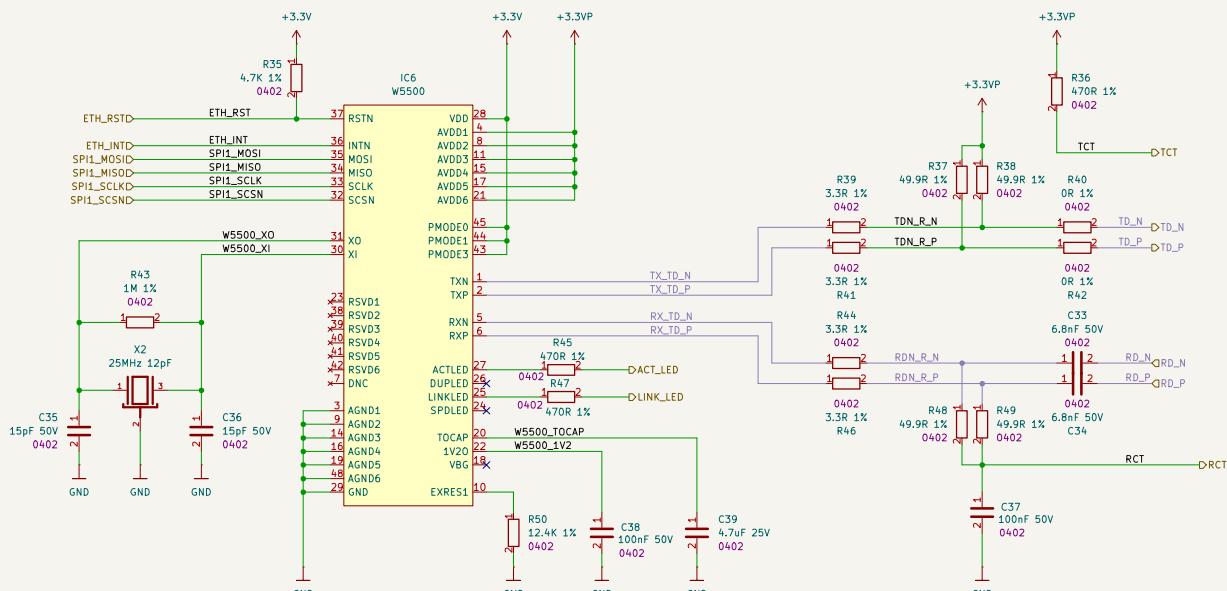
Designer: David Sipos	Size: A3
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Reviewer: 	Sheet: 5 of 9
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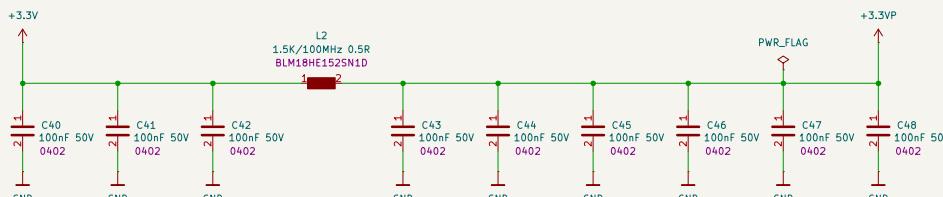


[6] Ethernet Interface

W5500 ETHERNET CONTROLLER WITH PHY



DECOUPLING



PDNode-600

Date: 2026-01-31

Board Name: **PDNode-600** Project Name: **BladeCore-M54**

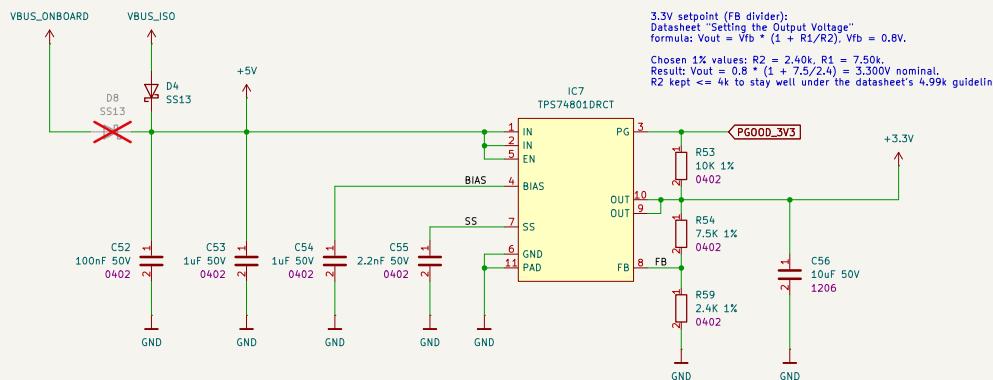
File Name: ethernet_interface.kicad_sch Revision: 1.0.0 Variant: Pro

Sheet Title: Ethernet Interface Company: DavidMakesThings

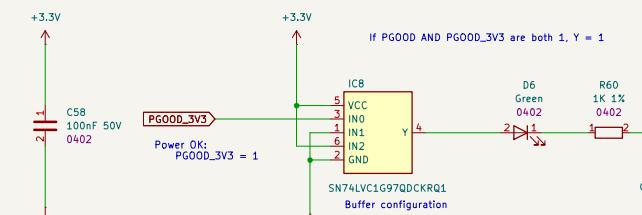
Designer: David Sipos Reviewer: Size: A3 Sheet: 6 of 9

[7] USB Interface and Power

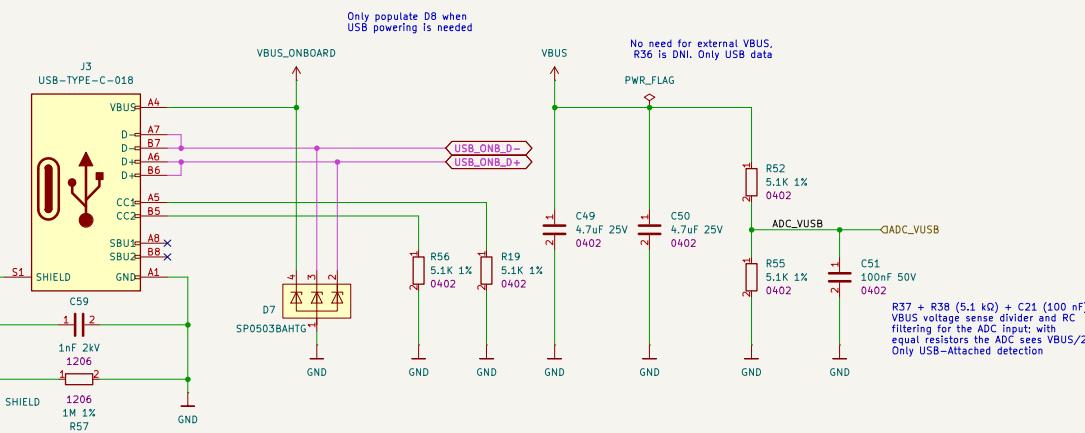
+5V to 3.3V PMIC



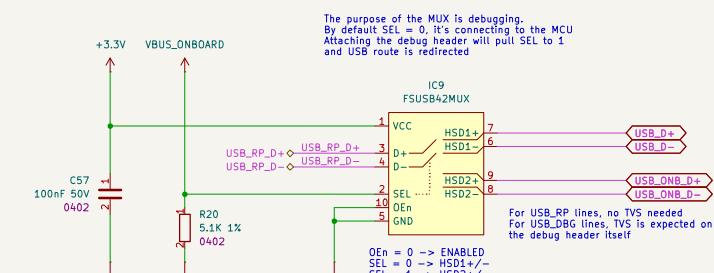
PGOOD LOGIC



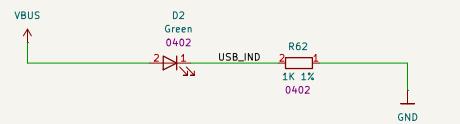
ONBOARD USB CONNECTOR



USB DATA-PATH SELECTOR



USB INDICATOR LED



DMT

Date: 2026-01-31

Board Name:

PDNode-600

File Name:

usb_interface.kicad_sch

Sheet Title:

USB Interface and Power

Project Name:

BladeCore-M54

Revision:

1.0.0

Variant:

Pro

Designer:

David Sipos

Reviewer:

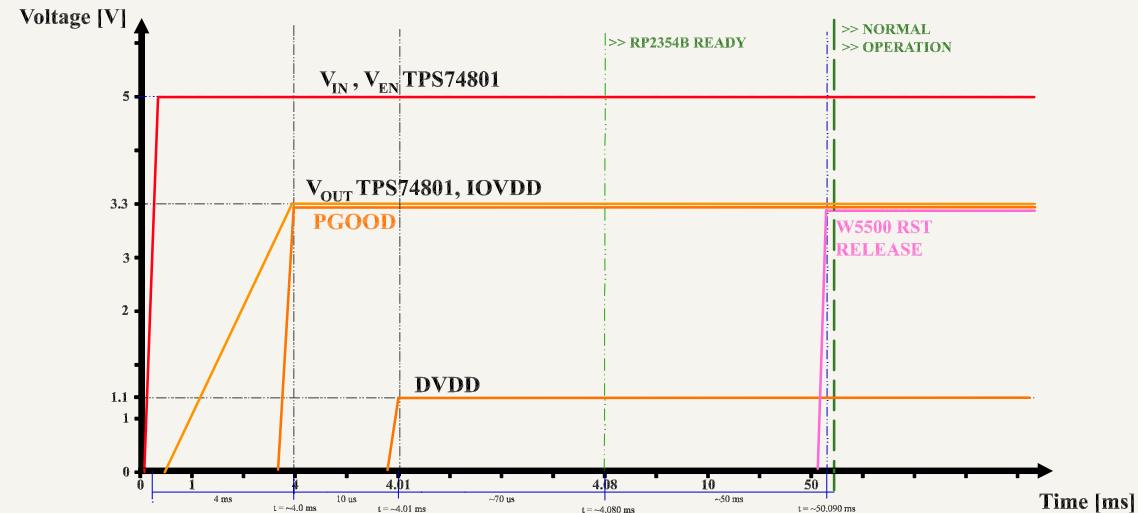
A3

Size:

Sheet:

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[8] Power - Sequencing



#	Stage	Δt	Total elapsed
1	VIN applied (5.0V)	0	0.000 ms
2	VEN high (TPS74801 EN)	0	0.000 ms
3	VOUT = 3.3V (soft-start)	4.000 ms	4.000 ms
4	PGOOD valid	0	4.000 ms
5	RP2354B 3.3V present	0	4.000 ms
6	RP2354B 1.1V valid (POR)	0.010 ms	4.010 ms
7	RP2354B ready	0.080 ms	4.090 ms
8	W5500 ready	50.000 ms	54.090 ms



DMT

Date: 2026-01-31

Board Name:
PDNode-600

File Name:
Power-Sequencing.kicad_sch

Revision: 1.0.0
Variant: Pro

Sheet Title:
Power - Sequencing

Company:
DavidMakesThings

Designer: David Sipos
Reviewer:

Project Name:
BladeCore-M54

Size: A3
Sheet: 8 of 9

[9] Revision History

DATE	REVISION	RESPONSIBLE	CHANGE
31.01.2026	1.0.0	DMT	INITIAL CREATION



Date: 2026-01-31

Sheet Title:

Revision History

Board Name:
PDNode-600

File Name:

Revision History.kicad_sch

Company:

DavidMakesThings

Designer:

David Sipos

Reviewer:

Project Name:
BladeCore-M54

Revision:

1.0.0 Pro

Variant:

A3

Size:

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Sheet: