

# PDNode-600Pro

## Rev 1.0.0

# BladeCore-M54

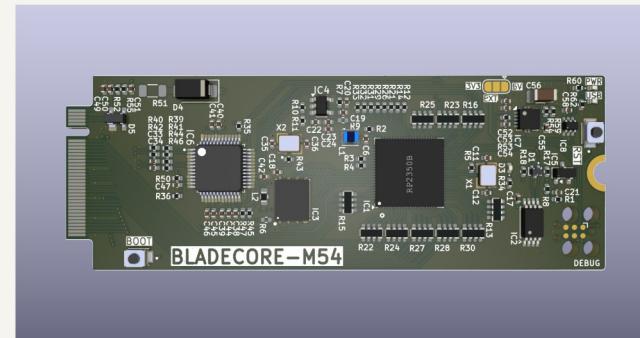
## Variant: Pro

07.02.2026

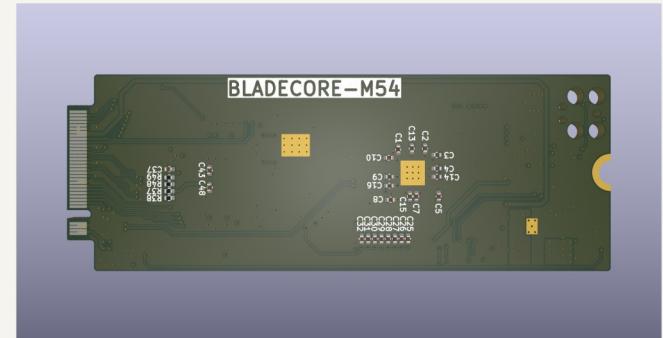
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### PCB TOP VIEW



### PCB BOTTOM VIEW



### NOTES

Not fitted components are marked as

### VERSION:

DRAFT - Very early stage of schematic, ignore details.

PRELIMINARY - Close to final schematic.

CHECKED - There shouldn't be any mistakes. Contact the engineer if you find any.

RELEASED - A board with this schematic has been sent to production.

Comments:	Company: DavidMakesThings	Variant: Pro	Git Hash:
Sheet Title:	Board Name: BladeCore-M54	Project Name: PDNode-600 Pro	
File Name: BladeCore-M54.kicad_sch	Designer: David Sipes	Date: 2026-02-05	Revision: 1.0.0
Sheet Path: /	Reviewer:	Size: <b>A3</b>	Sheet: <b>1</b> of <b>7</b>

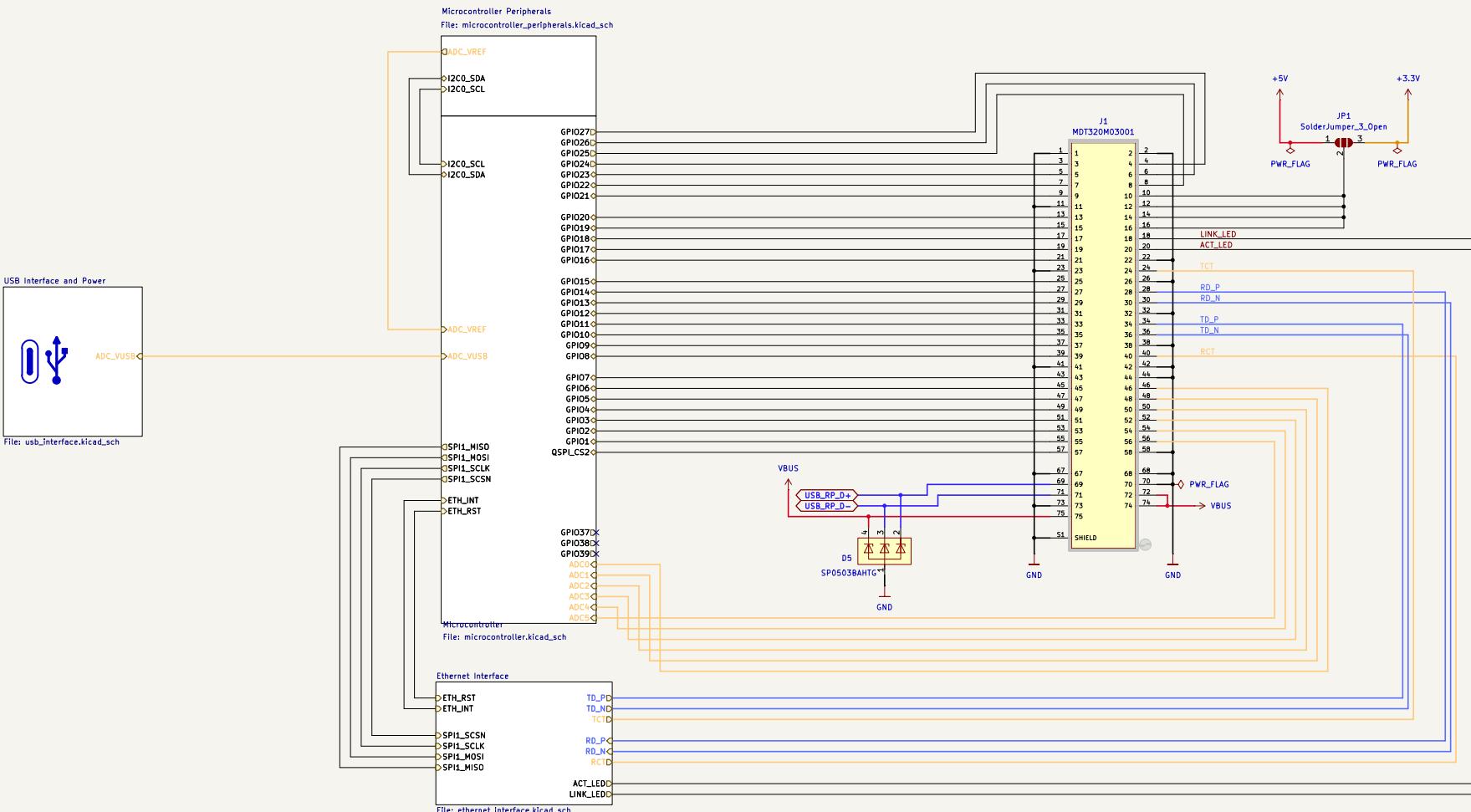
Block Diagram

File: Project Architecture.kicad\_sch

Revision History

File: Revision History.kicad\_sch

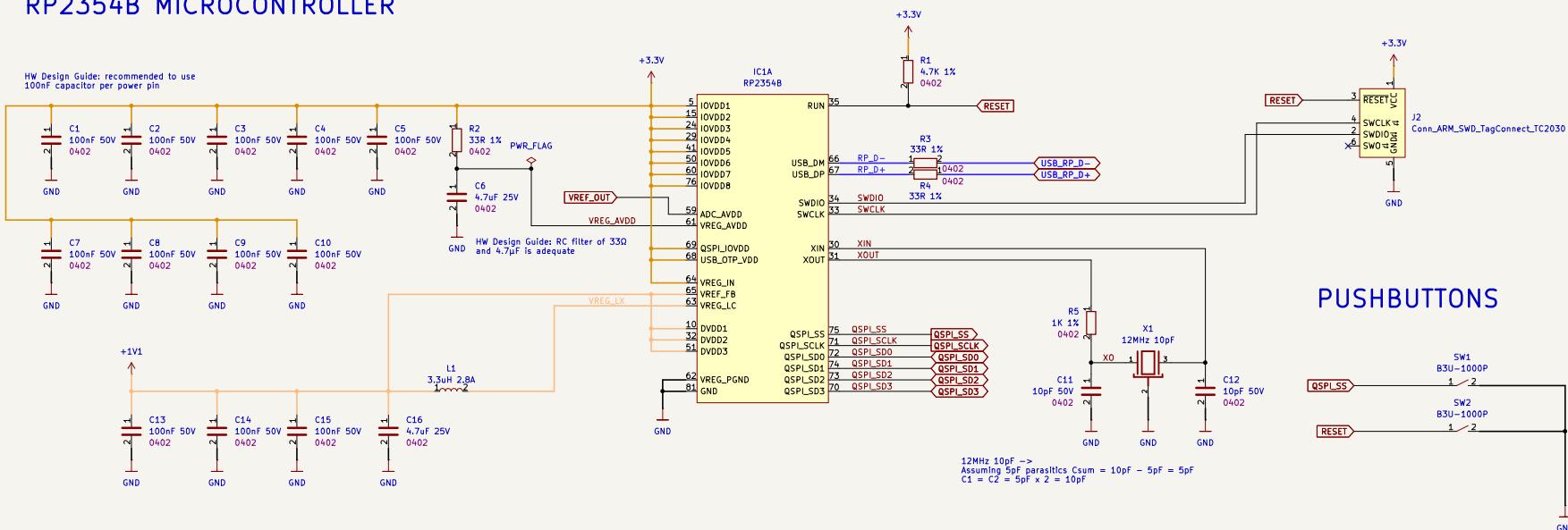
# Block Diagram



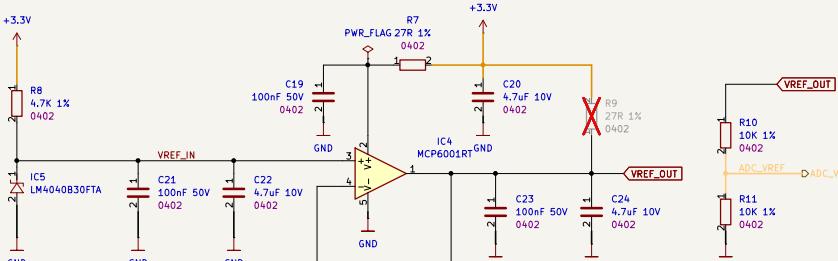
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	DvidMakesThings	Pro	
Board Name:	Project Name:		
<b>BladeCore-M54</b>	<b>PDNode-600 Pro</b>		
Sheet Title:	File Name:	Designer:	Date:
Project Architecture	Project_Architecture.kicad_sch	David Sipes	2026-02-05
Sheet Path:	Reviewer:	Size:	Sheet:
/Block Diagram/		A3	2 of 7

# Microcontroller Peripherals

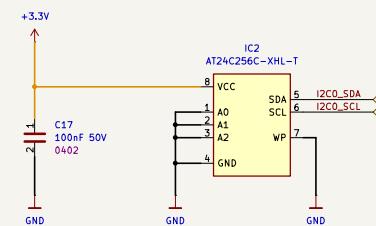
## RP2354B MICROCONTROLLER



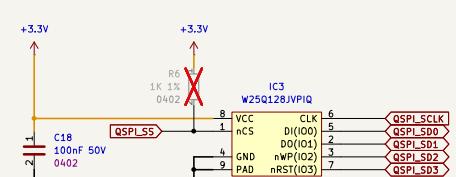
## 3.0V ADC VOLTAGE REFERENCE



## EXTERNAL EEPROM



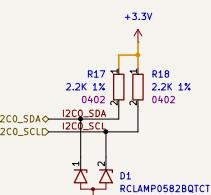
## EXTERNAL FLASH



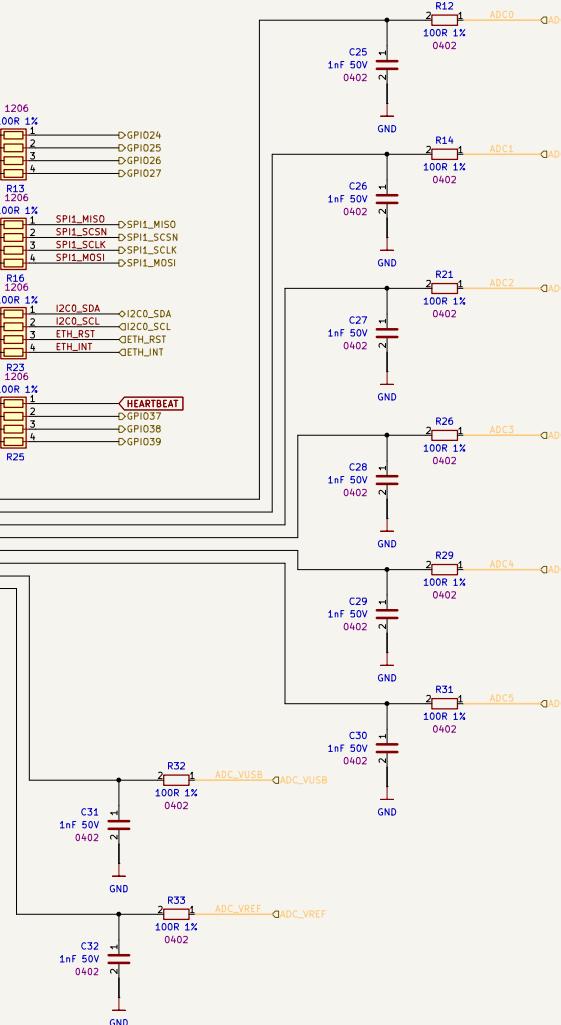
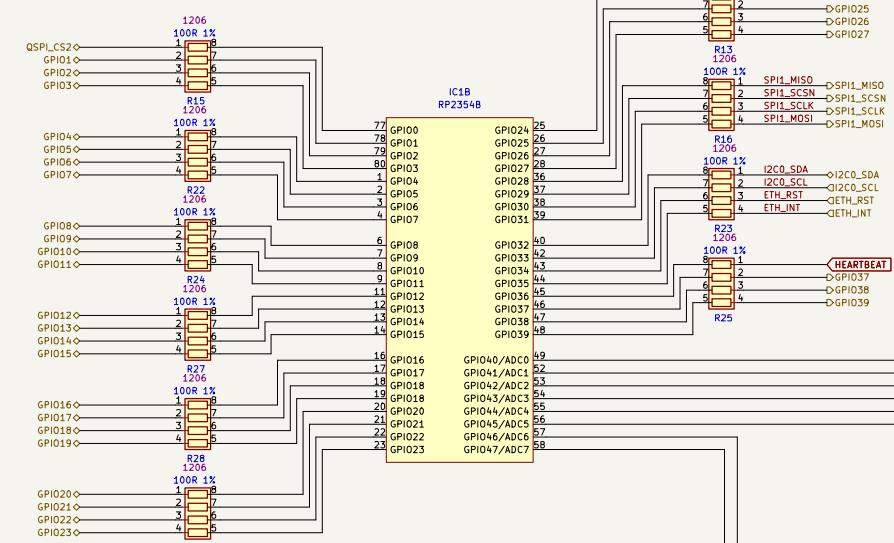
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	DvidMakesThings		Pro	
	Board Name:	BladeCore-M54		Project Name:
	Sheet Title:	Microcontroller Peripherals	Designer:	Date:
		microcontroller_peripherals.kicad_sch	David Sipes	2026-02-05
	Sheet Path:	/Block Diagram/Microcontroller Peripherals/	Reviewer:	Size:
			A3	Sheet: 3 of 7

# Microcontroller

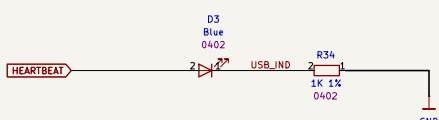
## I2C PULLUP



## RP2354B GPIO ASSIGNMENT



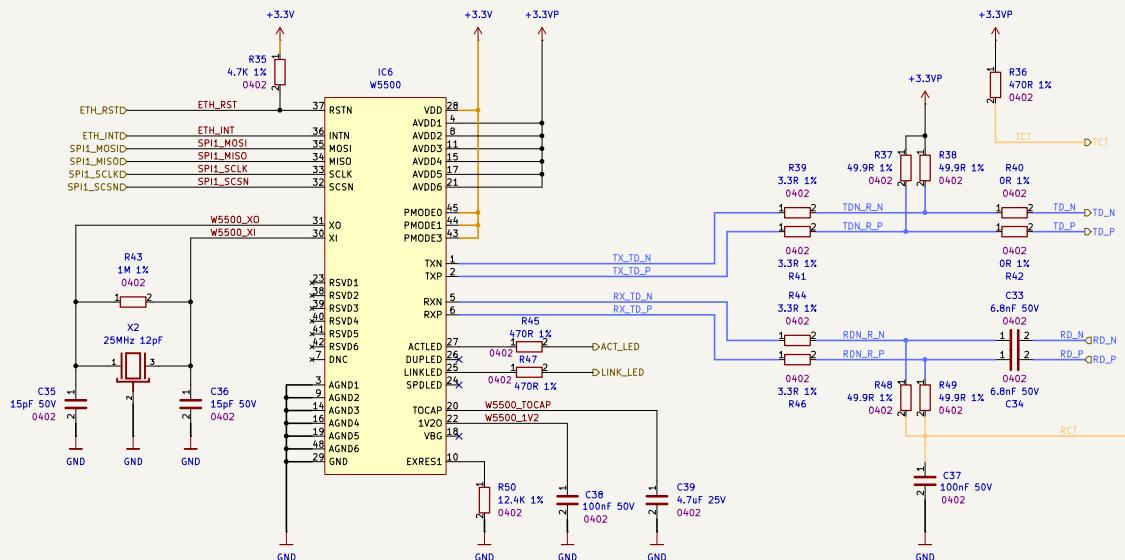
## HEARTBEAT LED



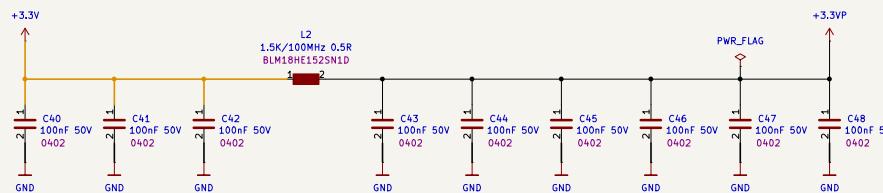
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	DvidMakesThings	Pro	
Board Name:	Project Name:		
BladeCore-M54	PDNode-600 Pro		
Sheet Title:	File Name:	Designer:	Date:
Microcontroller	microcontroller.kicad_sch	David Sipes	2026-02-05 1.0.0
Sheet Path:	Reviewer:	Size:	Sheet:
/Block Diagram/Microcontroller/		A3	4 of 7

# Ethernet Interface

# W5500 ETHERNET CONTROLLER WITH PHY



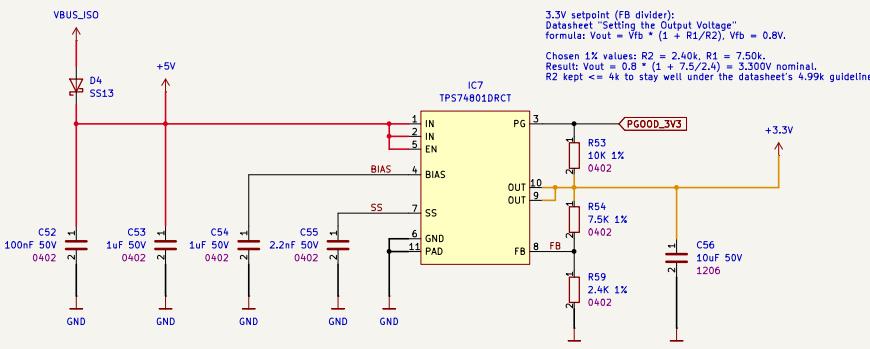
## DECOUPLING



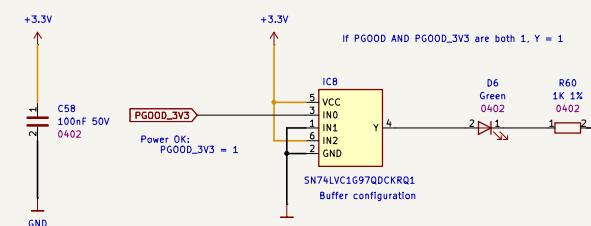
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		Board Name: <b>BladeCore-M54</b>	Project Name: <b>PDNode-600 Pro</b>	
	Sheet Title: Ethernet Interface	File Name: ethernet_interface.kicad_sch	Designer: David Sipes	Date: 2026-02-05 Revision: 1.0.0
	Sheet Path: /Block Diagram/Ethernet Interface/	Reviewer:	Size: <b>A3</b>	Sheet: <b>5 of 7</b>

# USB Interface and Power

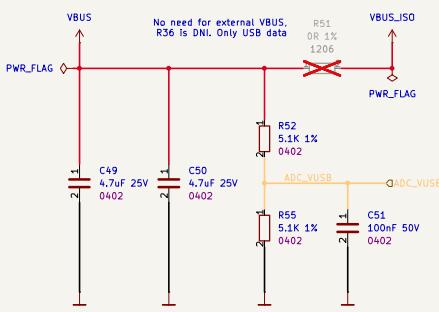
## +5V to 3.3V PMIC



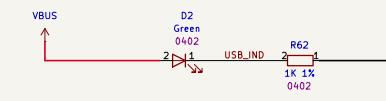
## PGOOD LOGIC



## VBUS DECOUPLING



## USB INDICATOR LED



	Comments:	Company: DavidMakesThings	Variant: Pro	Git Hash:
	Board Name: <b>BladeCore-M54</b>	Project Name: <b>PDNode-600 Pro</b>		
Sheet Title:	File Name: usb_interface.kicad_sch	Designer: David Sipes	Date: 2026-02-05	Revision: 1.0.0
Sheet Path:	/Block Diagram/USB Interface and Power/	Reviewer:	Size: <b>A3</b>	Sheet: <b>6</b> of <b>7</b>

# Revision History

DATE	REVISION	RESPONSIBLE	CHANGE
07.02.2026	1.0.0	DMT	INITIAL CREATION

5	Comments:	Company: DvidMakesThings	Variant: Pro	Git Hash:
	Board Name: <b>BladeCore-M54</b>	Project Name: <b>PDNode-600 Pro</b>		
	Sheet Title: Revision History	File Name: Revision History.kicad_sch	Designer: David Sipes	Date: 2026-02-05 Revision: 1.0.0
	Sheet Path: /Revision History/	Reviewer:	Size: <b>A3</b>	Sheet: <b>7</b> of <b>7</b>