

1	2	3	4	5	6
				REVISION	DESCRIPTION

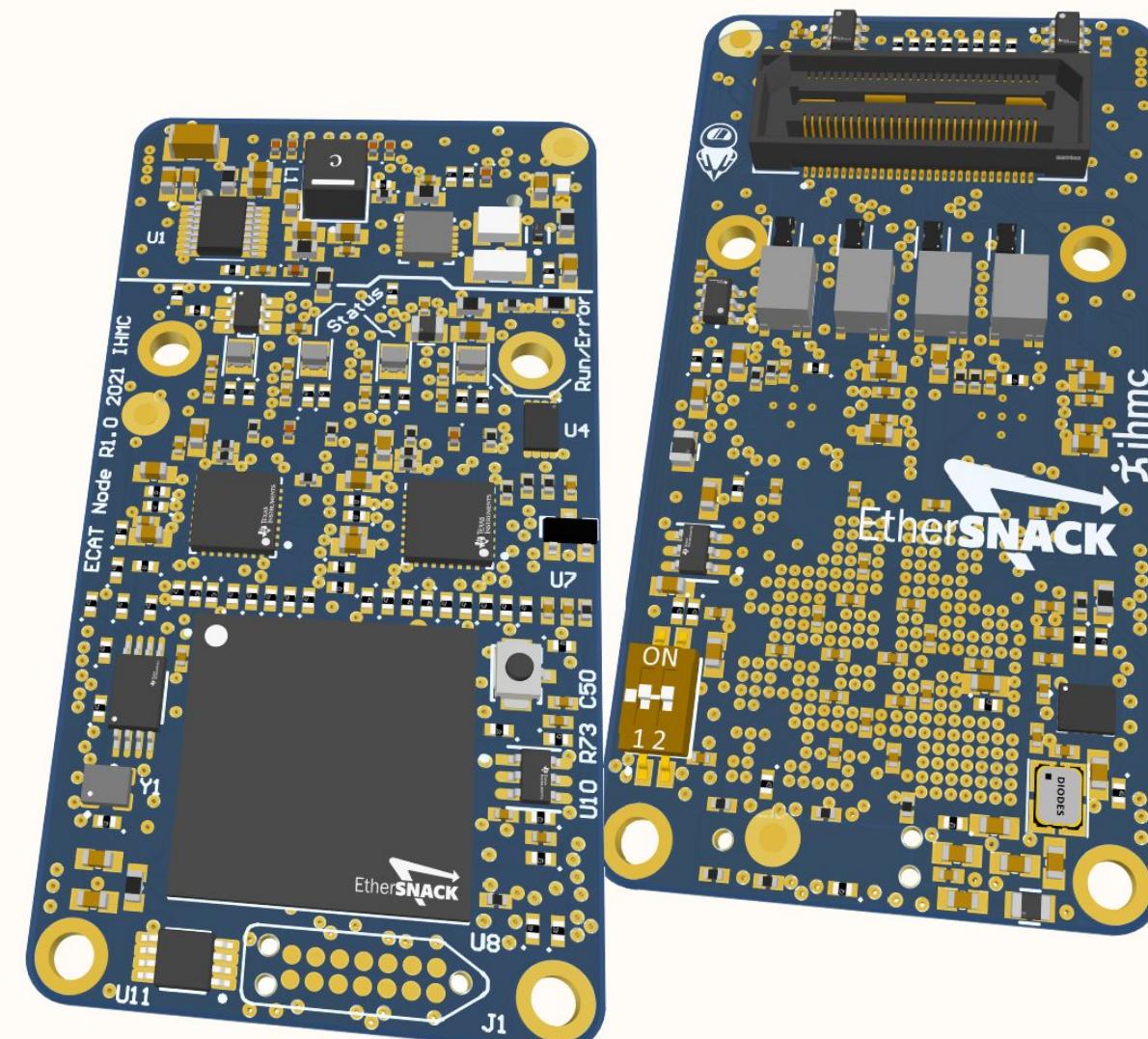
# Nadia

## F28388D\_ECAT\_Node

### REV1.0

#### Page Index

- .....
- 1 COVER PAGE
- 2 BLOCK DIAGRAM
- 3 POWER
- 4 F2838 GPIO
- 5 F2838 JTAG CLOCK SUP
- 6 F2838 ADC
- 7 ETHERCAT
- 8 SENSORS
- 9 CONNECTORS MECH



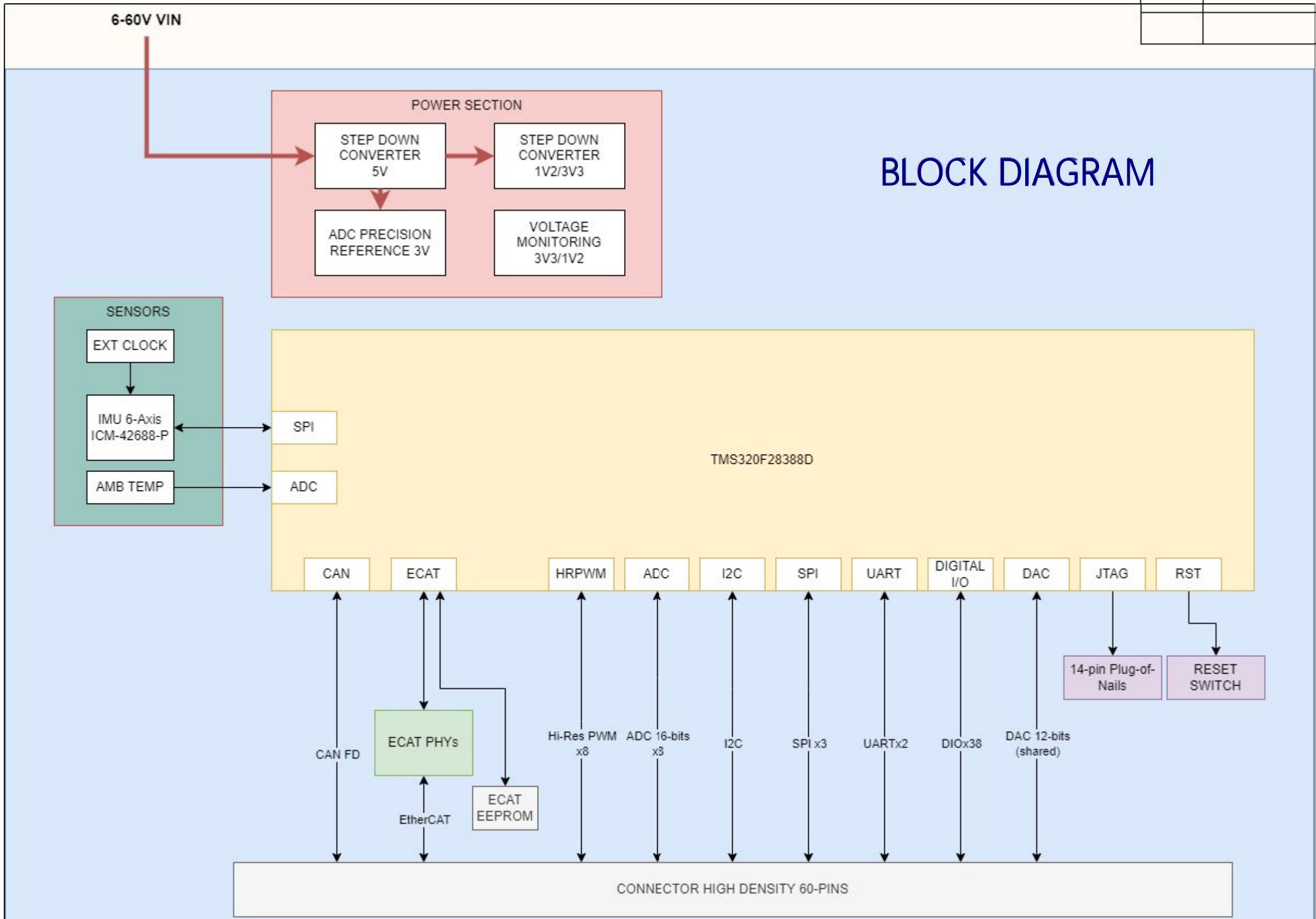
PROJECT: Nadia AUTHOR: A. MASLYCZYK

TITLE: F28388D\_ECAT\_Node

FILE NAME: [0] COVER PAGE.SchDoc

REVISION: 1.0 DATE: 24/11/2021

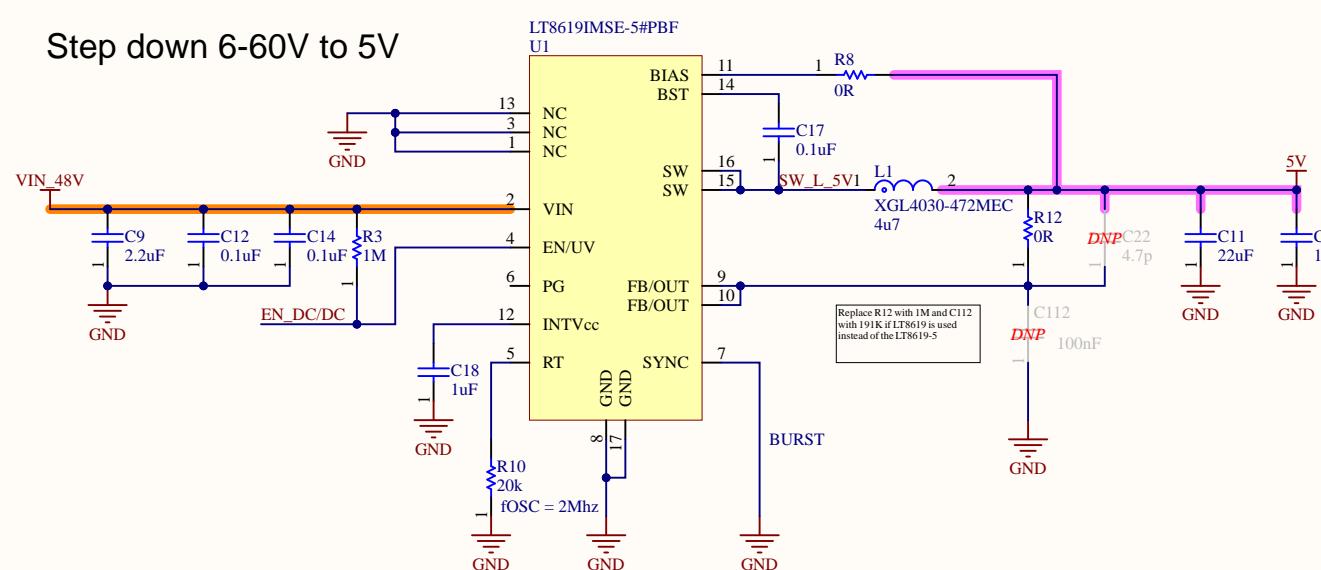
PCB: PCB\_F2838\_Node SHEET: 1 OF 9



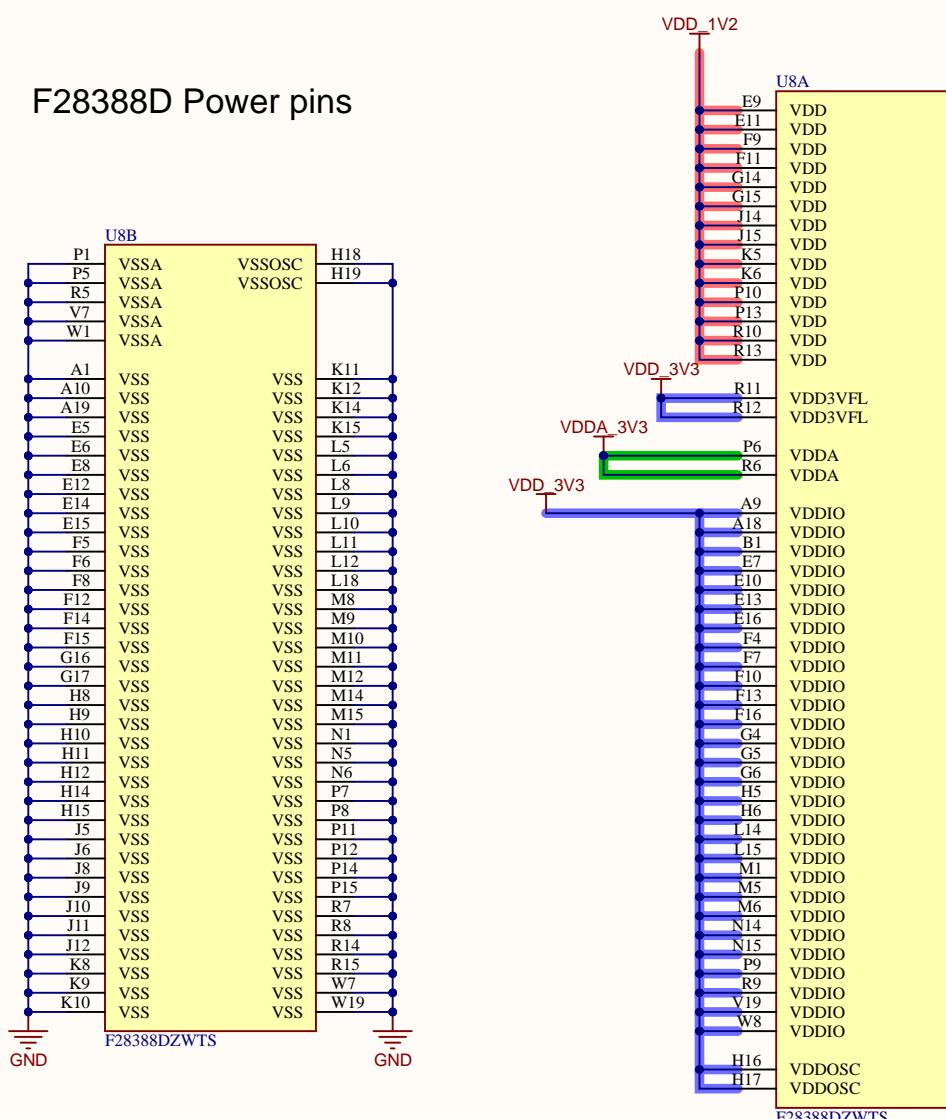
## BLOCK DIAGRAM

PROJECT: Nadia	AUTHOR: A. MASLYCZYK
TITLE: F28388D_ECAT_Node	
FILE NAME: [1] BLOCK DIAGRAM.SchDoc	
REVISION: 1.0	DATE: 24/11/2021
PCB: PCB_F2838_Node	SHEET: 2 OF 9

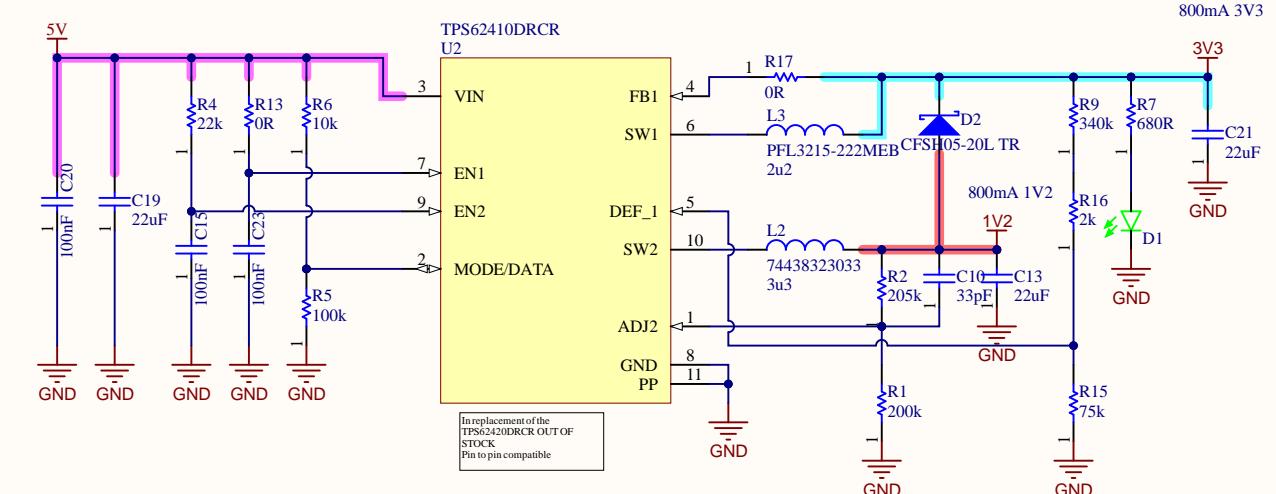
Step down 6-60V to 5V



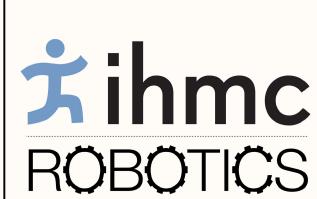
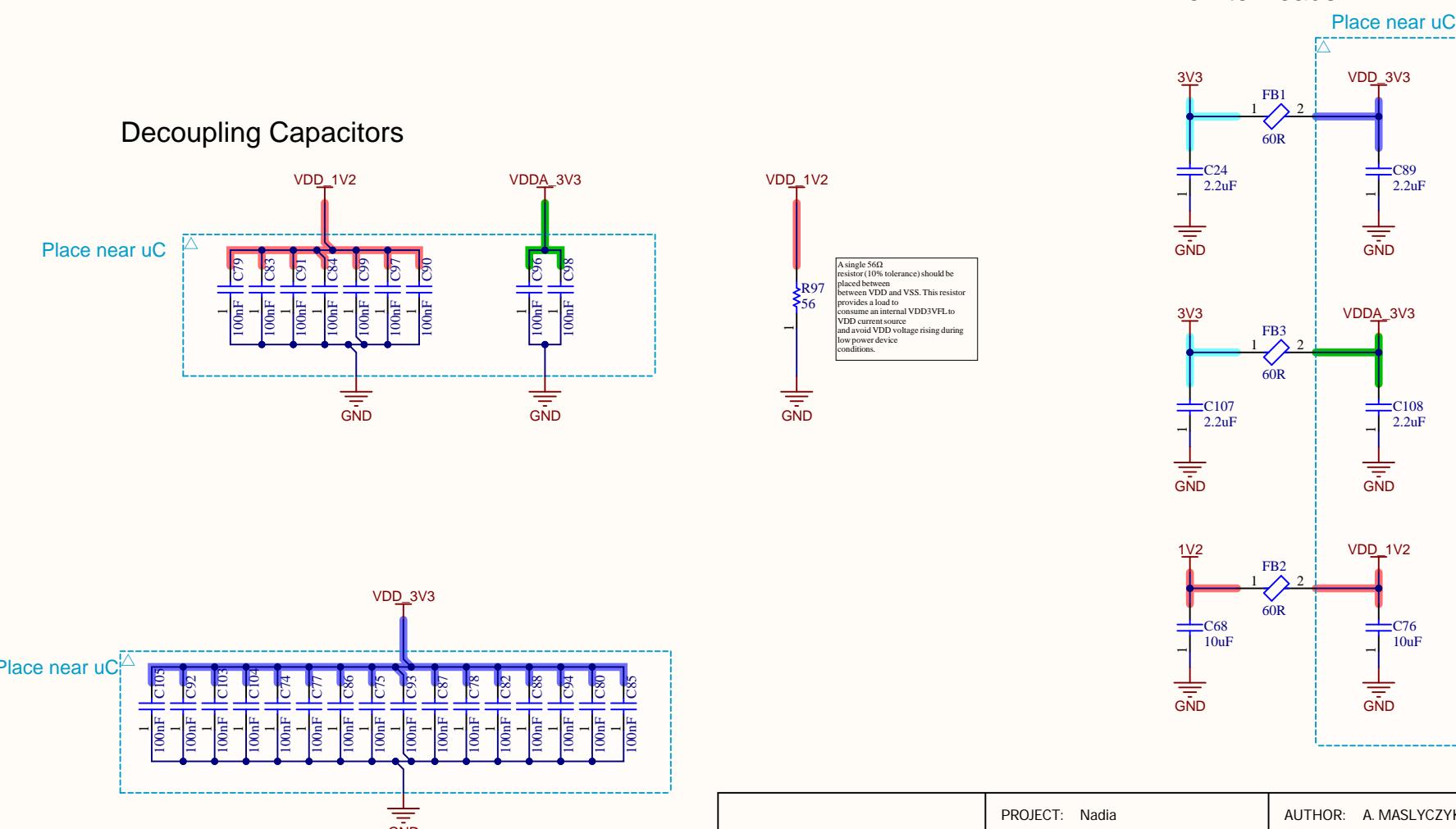
## F28388D Power pins



Step down 1V2 and 3V3 - 800mA



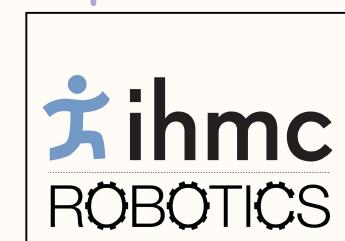
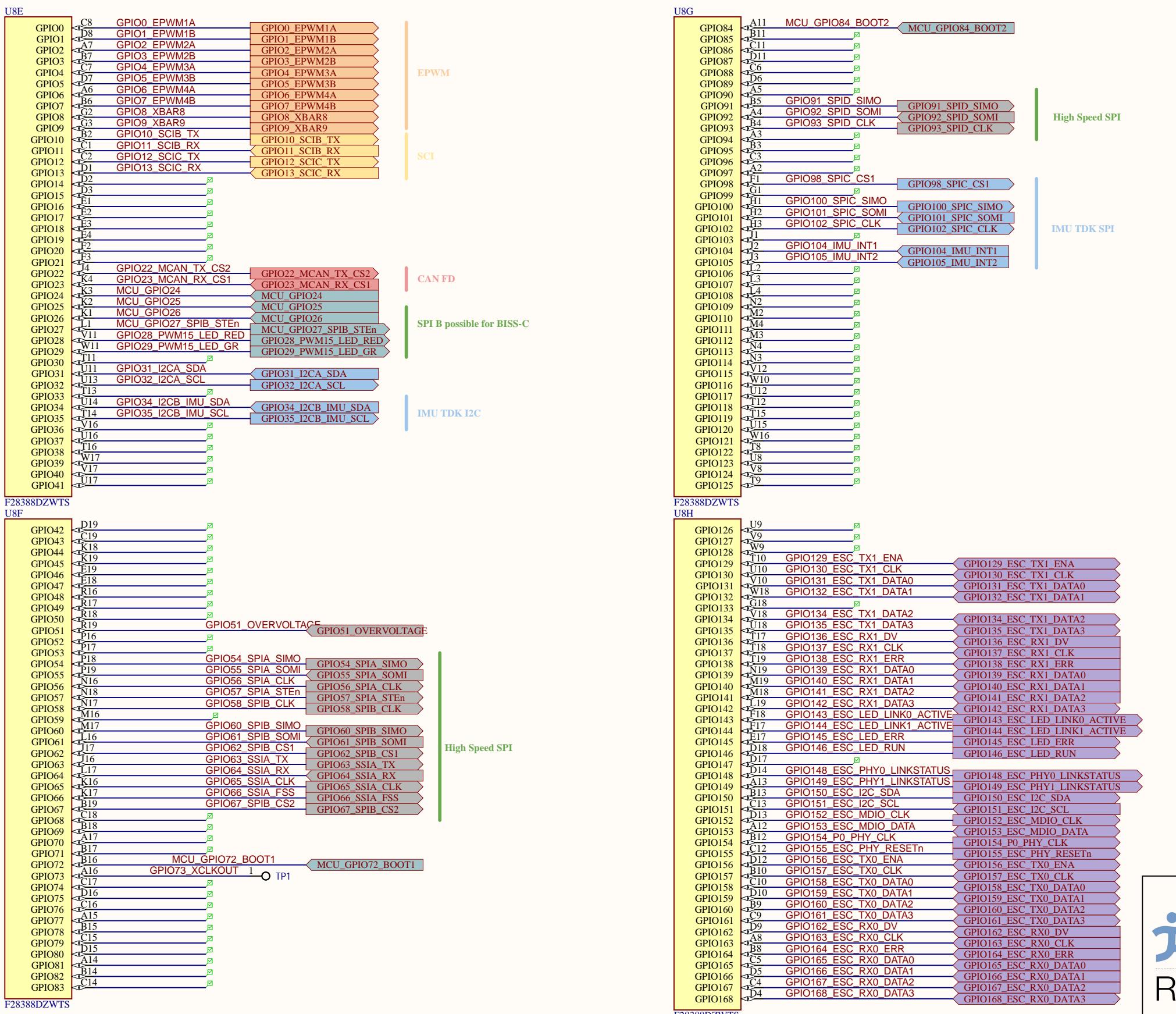
## Ferrite Beads



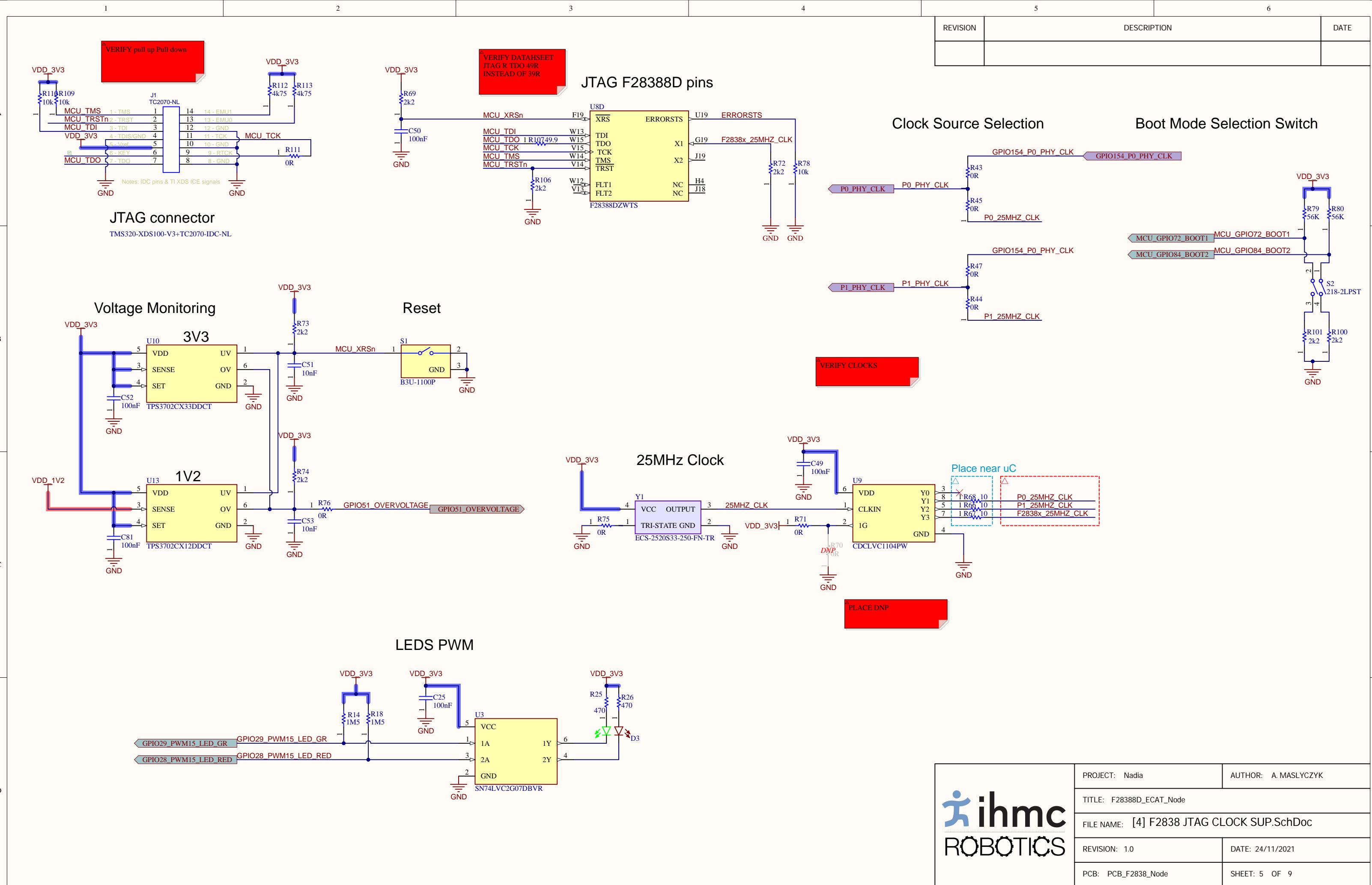
PROJECT: Nadia	AUTHOR: A. MASLYCZYK
TITLE: F28388D_ECAT_Node	
FILE NAME: [2] POWER.SchDoc	
REVISION: 1.0	DATE: 24/11/2021
PCB: PCB_F2838_Node	SHEET: 3 OF 9

1	2	3	4	5	6
				REVISION	DESCRIPTION
					DATE

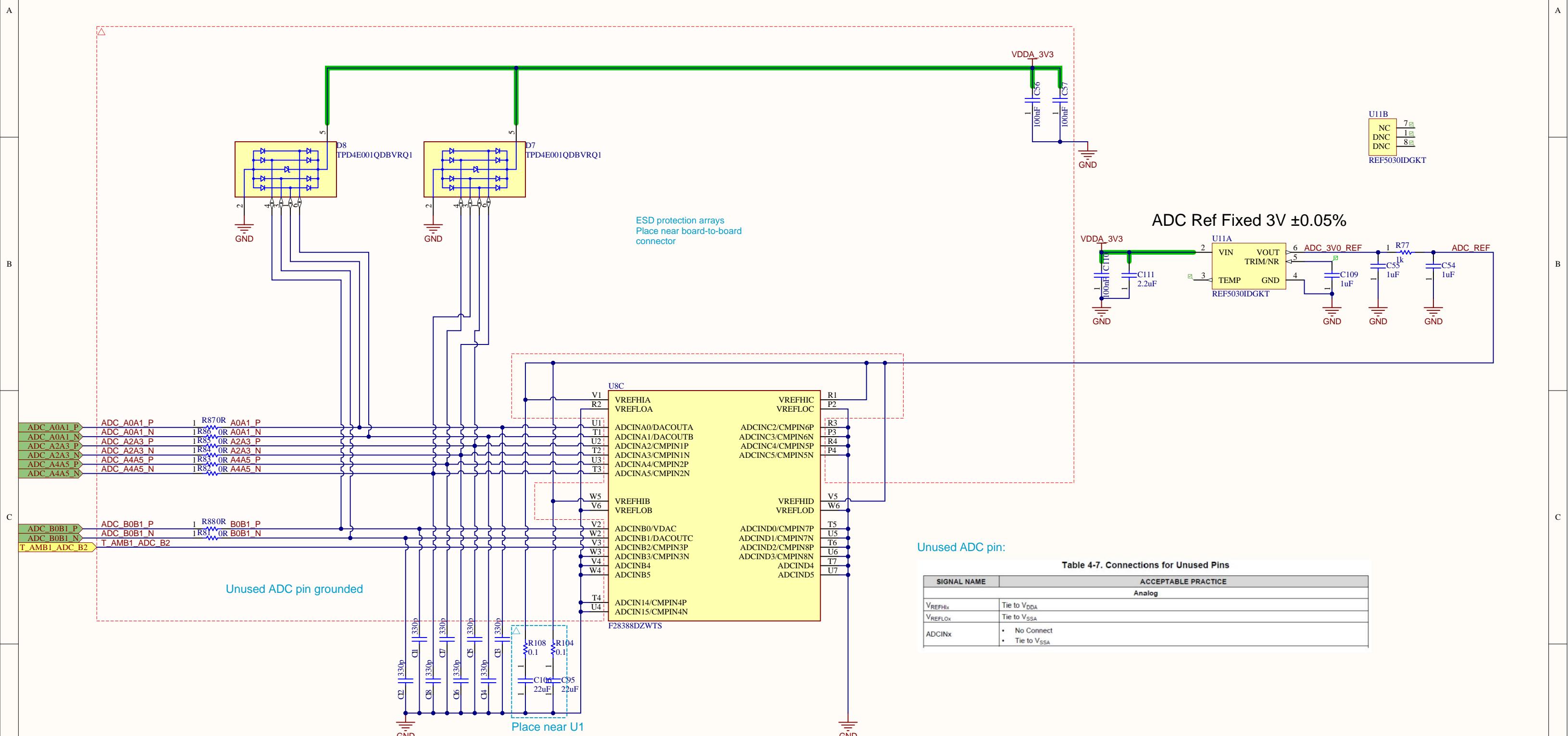
## F28388D GPIO pins



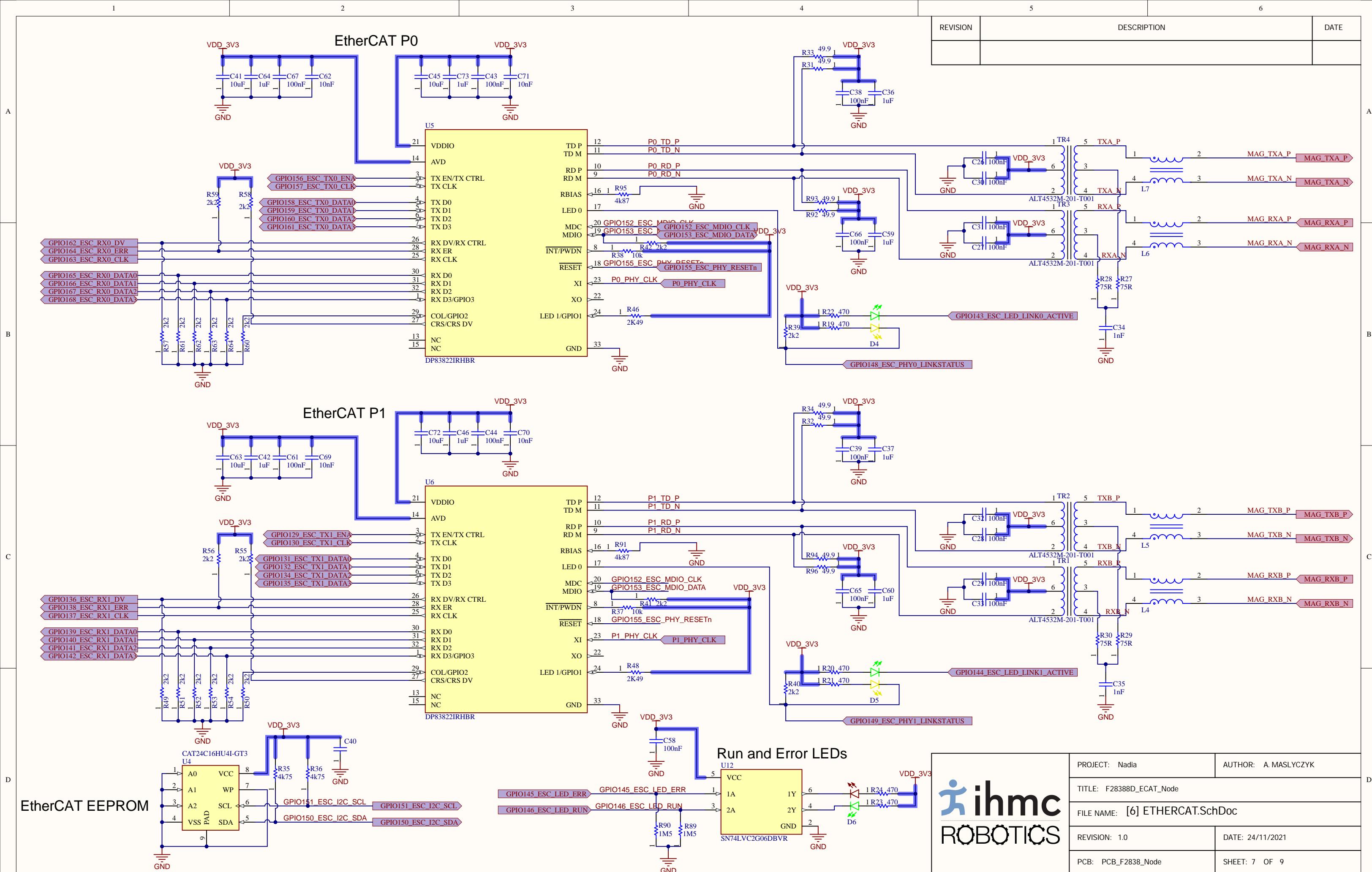
PROJECT: Nadia	AUTHOR: A. MASLYCZYK
TITLE: F28388D_ECAT_Node	
FILE NAME: [3] F2838 GPIO.SchDoc	
REVISION: 1.0	DATE: 24/11/2021
PCB: PCB_F2838_Node	SHEET: 4 OF 9



REVISION	DESCRIPTION	DATE



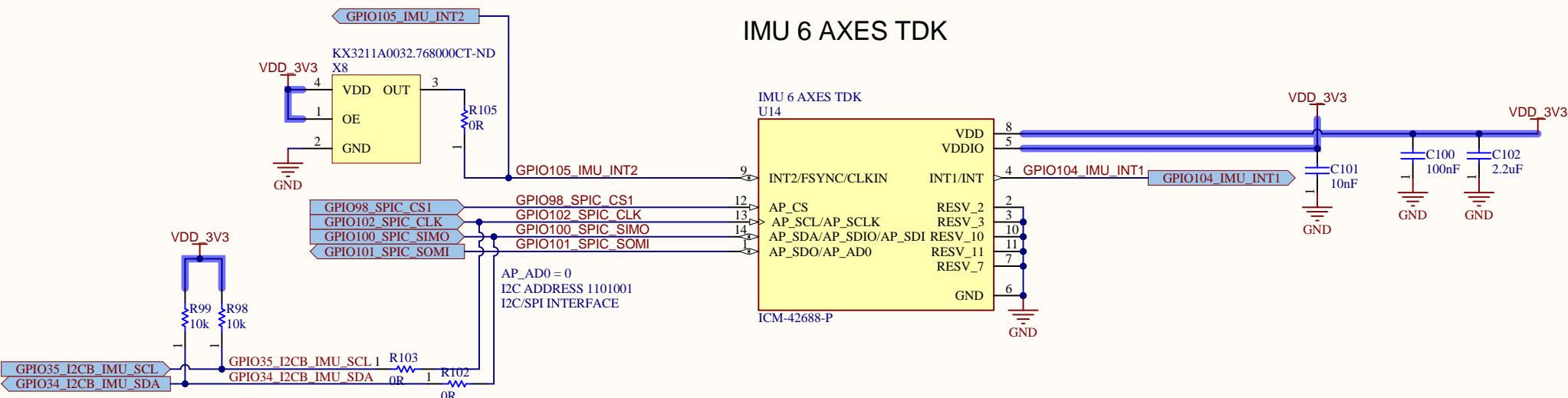
	PROJECT: Nadia	AUTHOR: A. MASLYCZYK
	TITLE: F28388D_ECAT_Node	
	FILE NAME: [5] F2838 ADC.SchDoc	
	REVISION: 1.0	DATE: 24/11/2021
	PCB: PCB_F2838_Node	SHEET: 6 OF 9



REVISION	DESCRIPTION	DATE

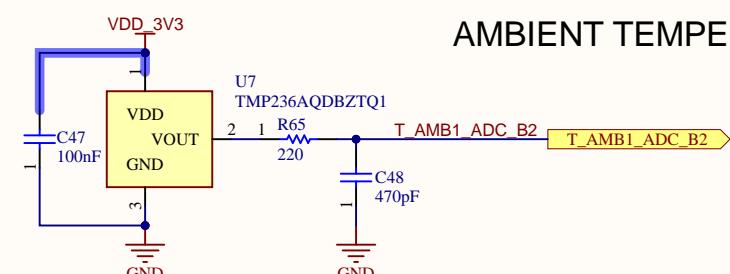
A

A

**IMU 6 AXES TDK**

B

B

**AMBIENT TEMPERATURE  $\pm 0.5^\circ\text{C}$** 

C

C



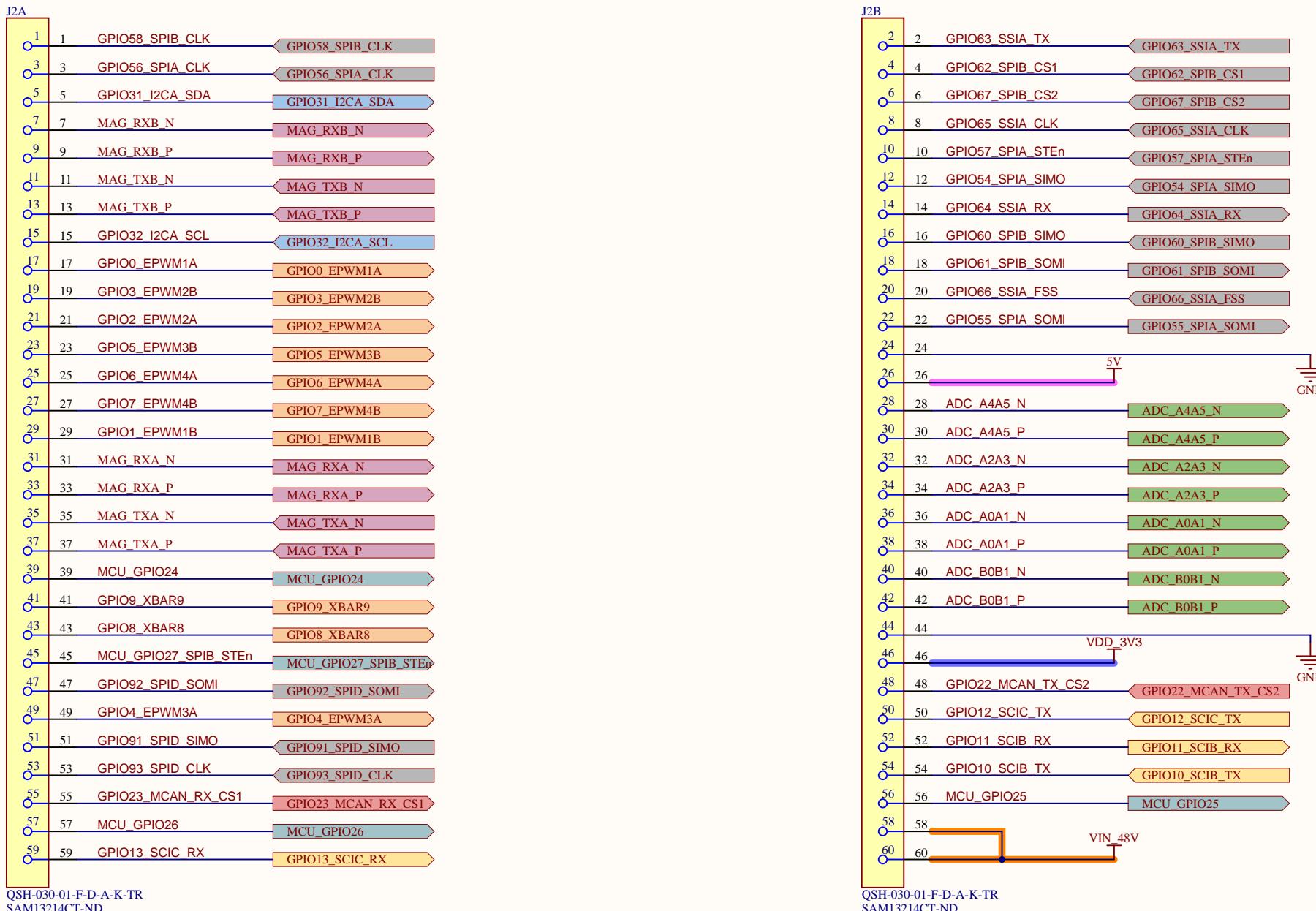
PROJECT: Nadia	AUTHOR: A. MASLYCZYK
TITLE: F28388D_ECAT_Node	
FILE NAME: [7] SENSORS.SchDoc	
REVISION: 1.0	DATE: 24/11/2021
PCB: PCB_F28388_Node	SHEET: 8 OF 9

D

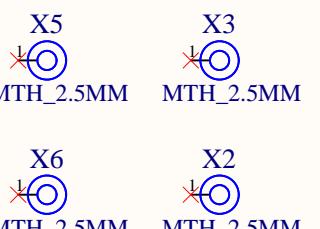
D

1	2	3	4	5	6
REVISION	DESCRIPTION			DATE	

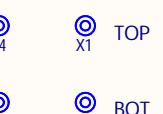
## A High Speed Socket Strip 60 POS



## MOUNTING HOLES



## FIDUCIALS



	PROJECT: Nadia	AUTHOR: A. MASLYCZYK
	TITLE: F28388D_ECAT_Node	
	FILE NAME: [8] CONNECTORS MECH.SchDoc	
	REVISION: 1.0	DATE: 24/11/2021
	PCB: PCB_F2838_Node	SHEET: 9 OF 9

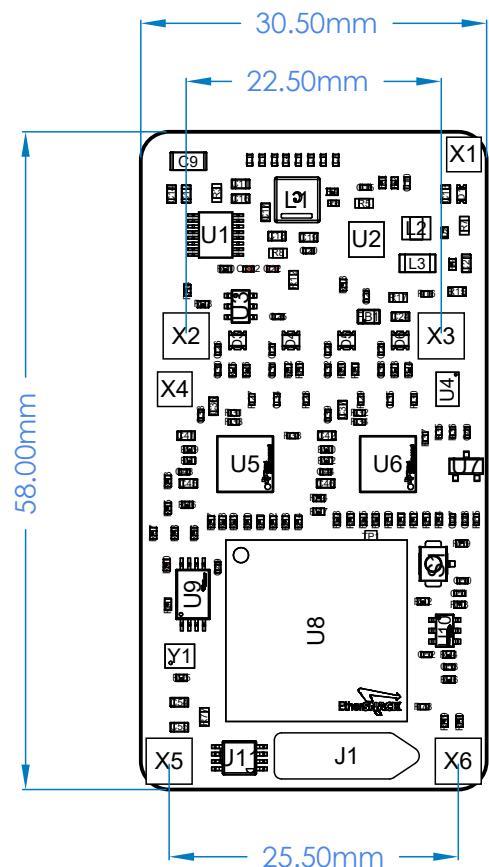
# Board assembly view

REV DOC: A

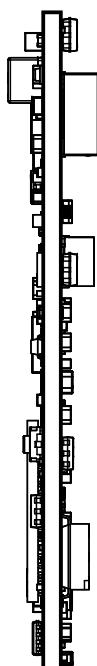
PCB: PCB\_F2838\_Node.PcbDoc

DESIGNED: Alexis Maslyczyk DATE: 12/5/2021

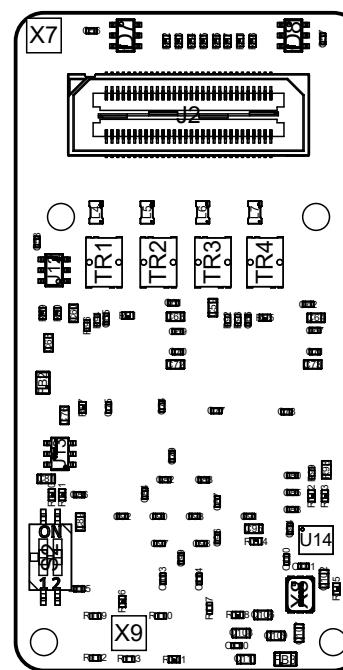
View from Top side (Scale 3:2)



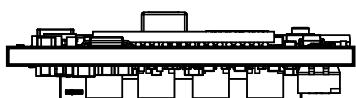
View from Right side (Scale 3:2)



View from Bottom side (Scale 3:2)



View from Front side (Scale 3:2)



# PCB Requirements

REV DOC: A

PCB: PCB\_F2838\_Node.PcbDoc

DESIGNED: Alexis Maslyczyk DATE: 12/5/2021

## 1. PCB Stackup

Layer Stack Legend

Material	Layer	Thickness	Dielectric Material	Type	Gerber
Top Overlay				Legend	GTO
Surface Material	Top Solder	0.50mil	Solder Resist	Solder Mask	GTS
CF-004	Top Layer	1.40mil		Signal	GTL
Prepreg		3.50mil	PP-006	Dielectric	
CF-004	L2 - GND	1.40mil		Signal	G1
Prepreg		4.00mil	PP-006	Dielectric	
Copper	L3 - SIG HOR	0.70mil		Signal	G2
		38.00mil	FR-4	Dielectric	
Copper	L4 - SIG VER	0.70mil		Signal	G3
Prepreg		4.00mil	PP-006	Dielectric	
CF-004	L5 - POWER	1.40mil		Signal	G4
Prepreg		3.50mil	PP-006	Dielectric	
CF-004	Bottom Layer	1.40mil		Signal	GBL
Surface Material	Bottom Solder	0.50mil	Solder Resist	Solder Mask	GBS
	Bottom Overlay			Legend	GBO
Total thickness: 61.00mil					

