

HiveBoard

PMC

SwarmUS

Revision 1.000

Date: 2020-06-01

TOP
HIVE_BOARD_TOP.SchDoc

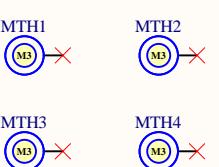
Block diagram
HIVE_BOARD_BLOCK_DIAG.SchDoc

The following components were changed:

BSS138LT1G → BVSS138LT1G

SMLVT3V3 → SMBJ3V3-M3/5B

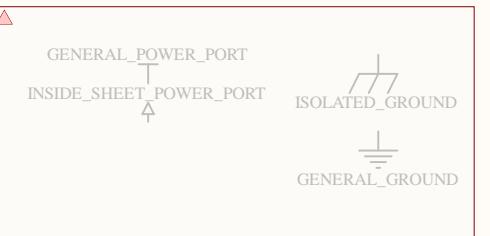
Mounting holes



Fiducials



Revision history	



Package size conversion	
Metric	Imperial
1005	0402
1608	0603
2012	0805
3216	1206
3225	1210
6432	2512

Usage notes

Routing notes

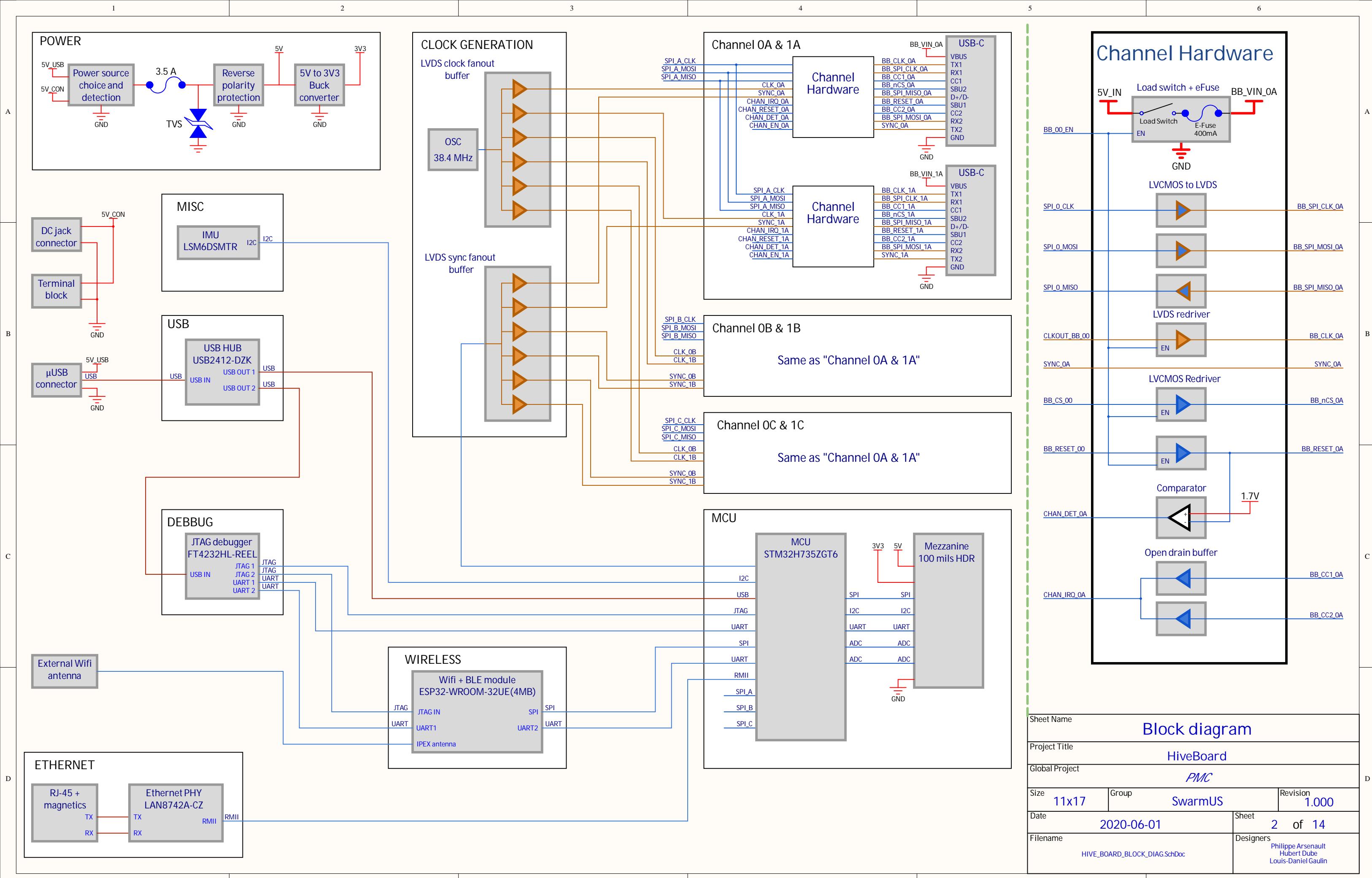
Power notes

Questions / TODO

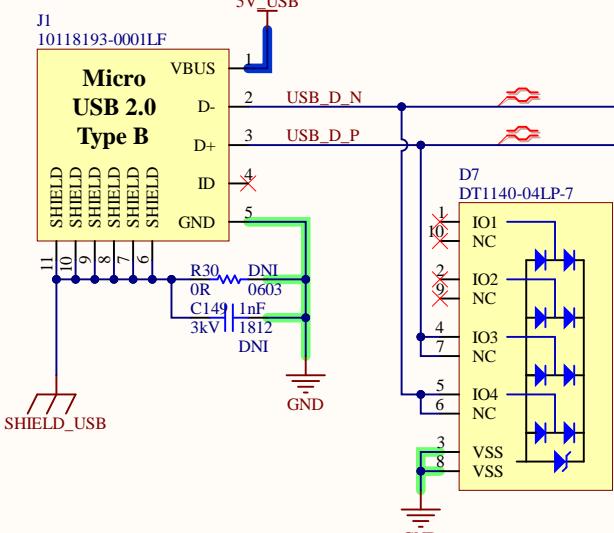
Section name

power

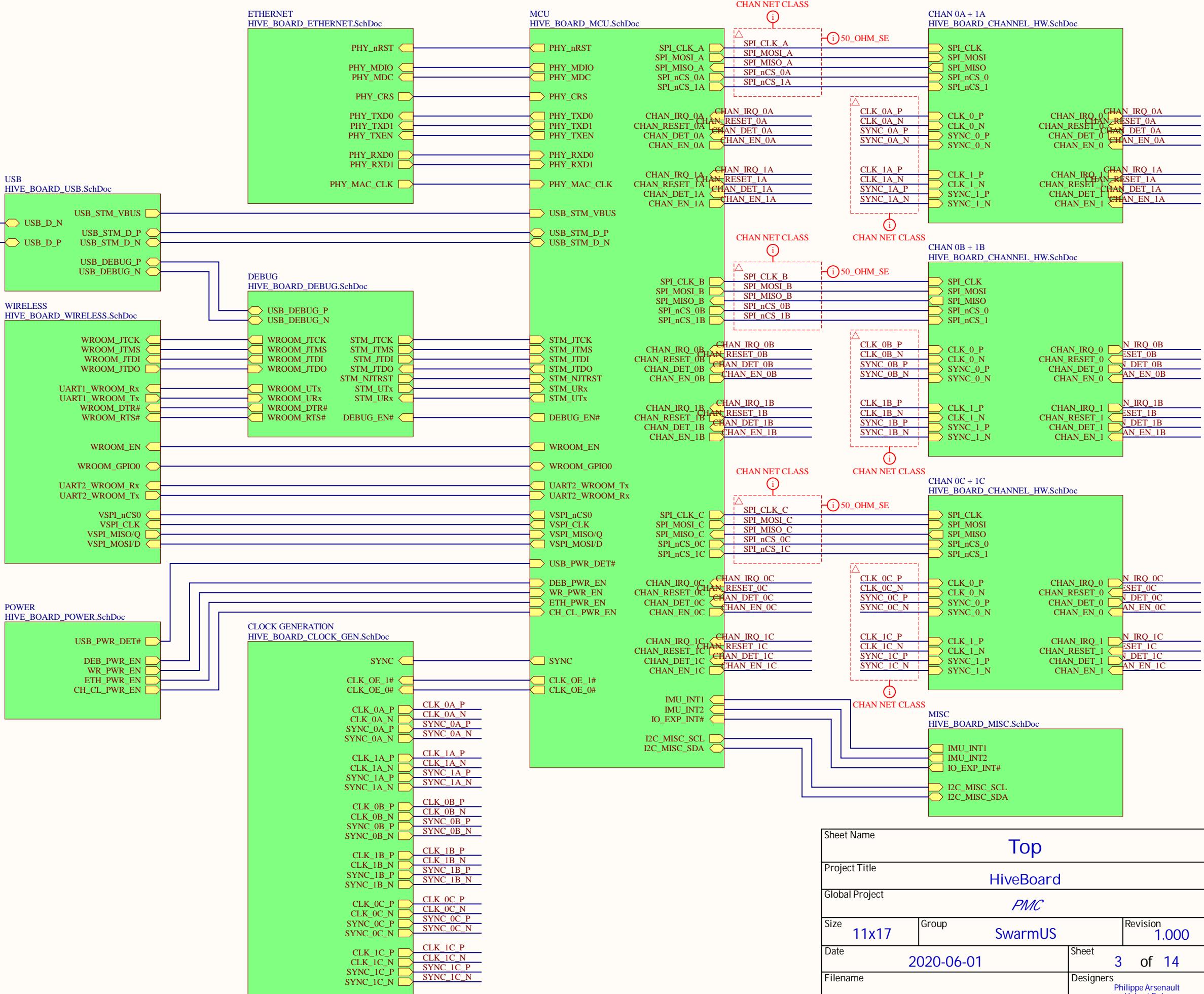
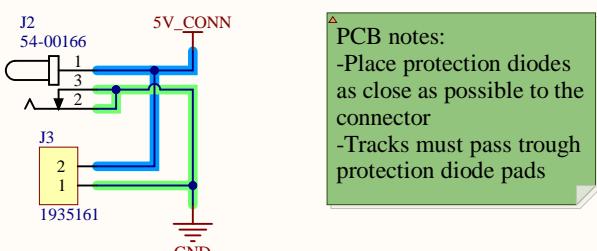
Project Title	HiveBoard		
Global Project	PMC		
Size	11x17	Group	SwarmUS
Date	2020-06-01	Revision	1.000
Filename	HIVE_BOARD_TITLE.SchDoc		
Designers	Philippe Arsenault Hubert Dube Louis-Daniel Gaulin		

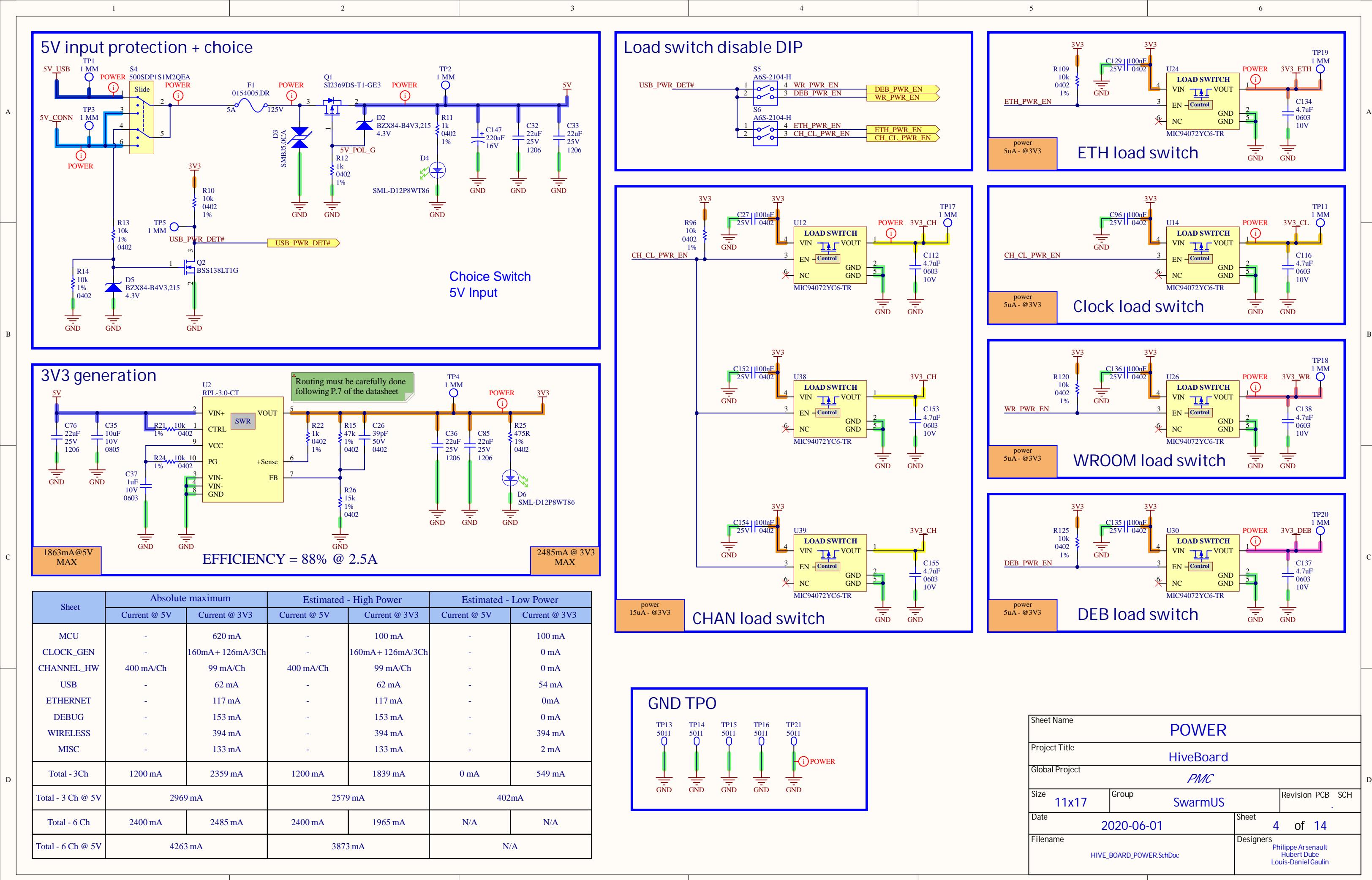


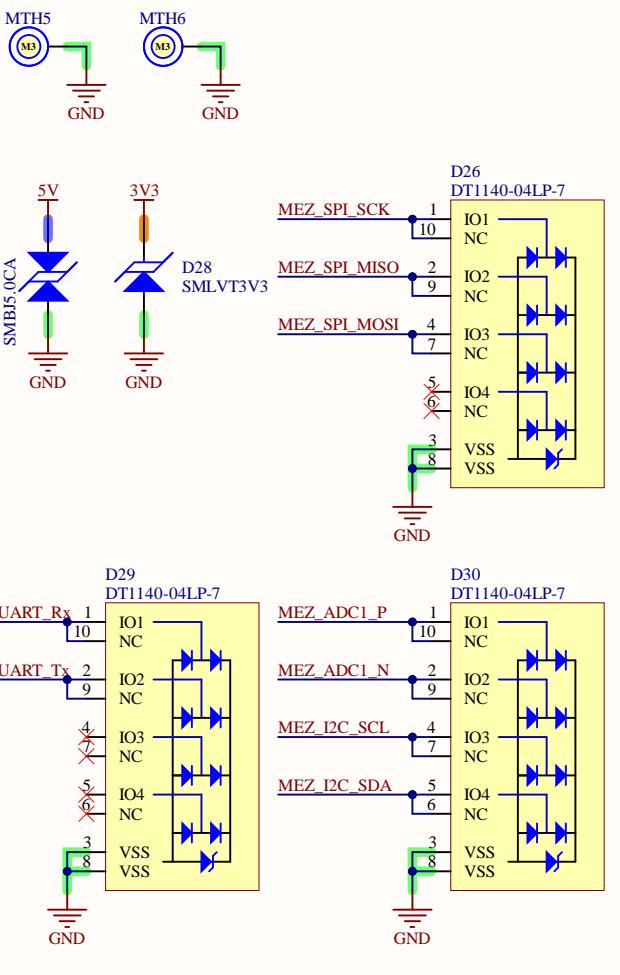
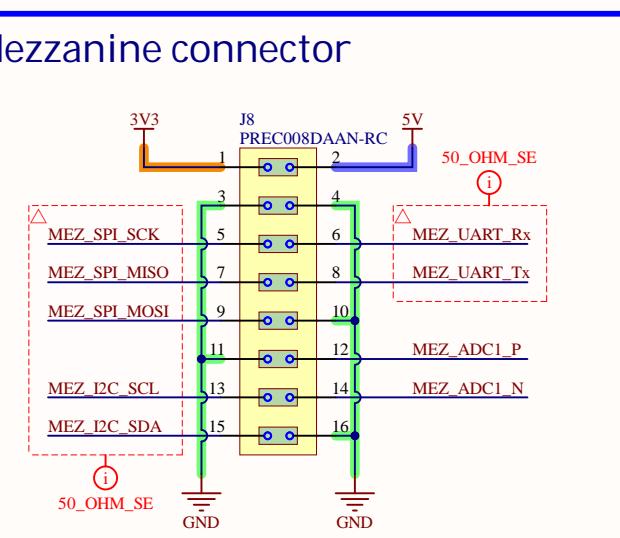
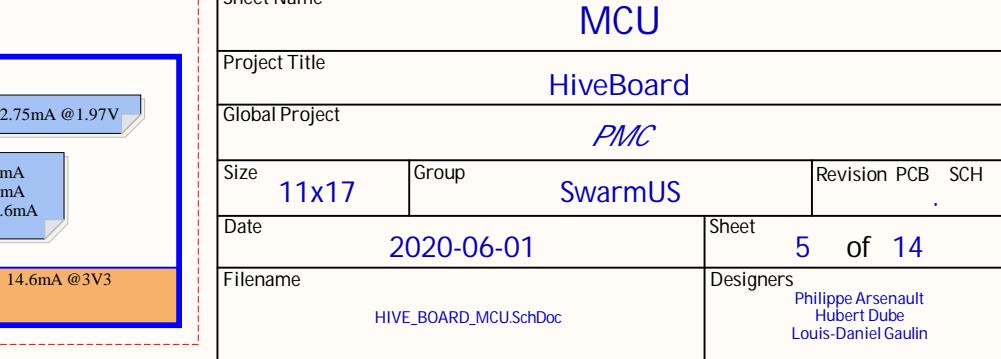
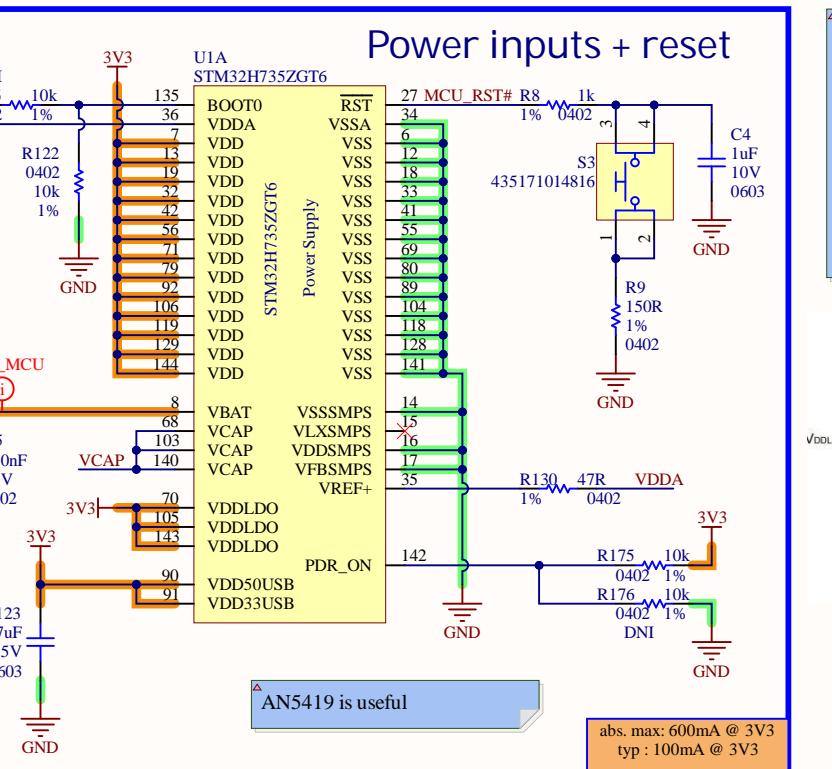
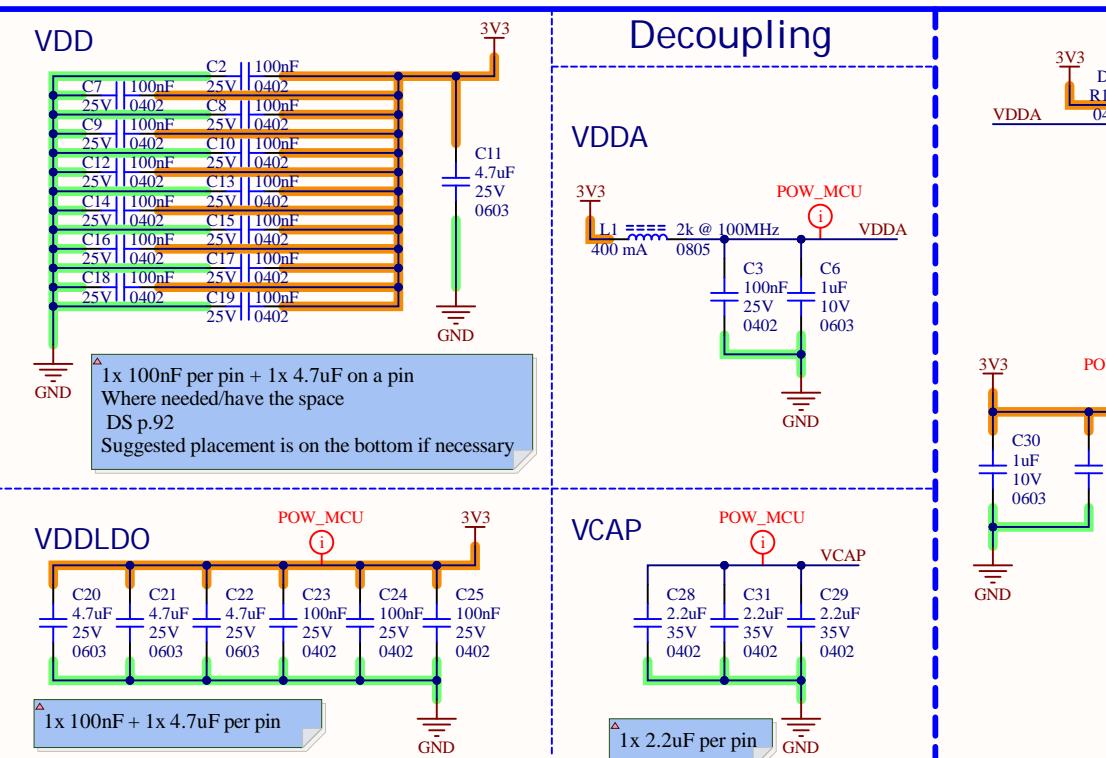
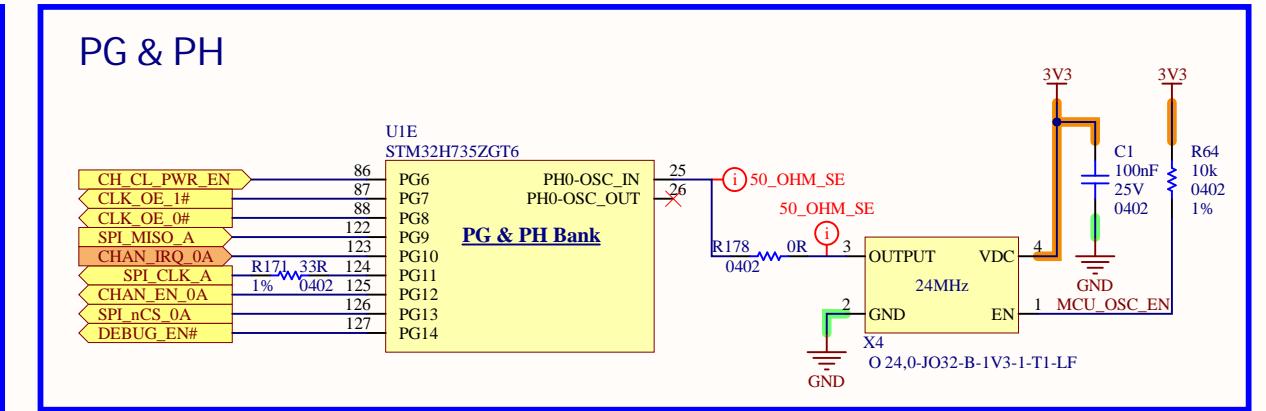
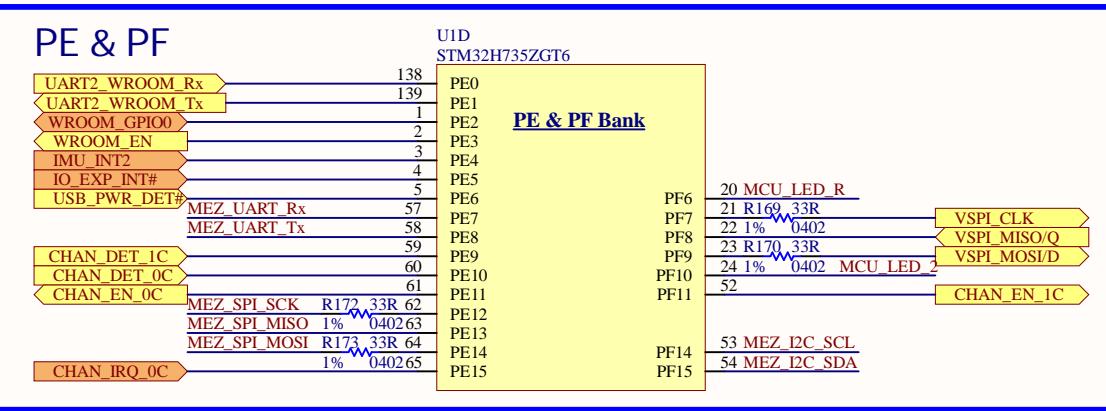
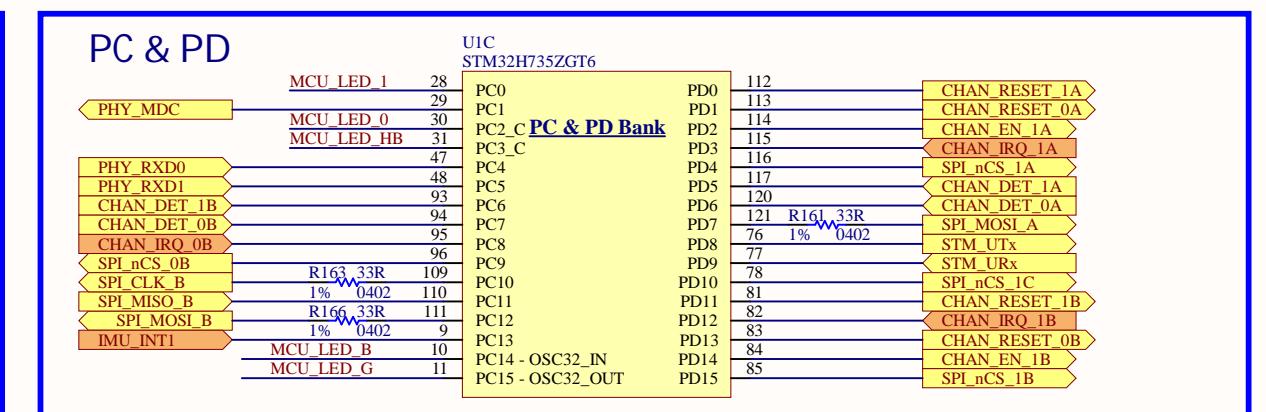
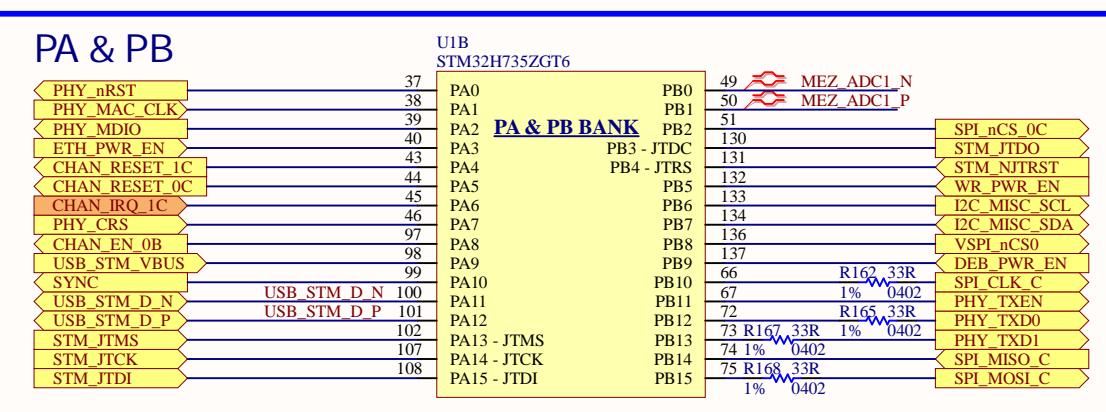
USB protection and input



Power input DC jack + terminal

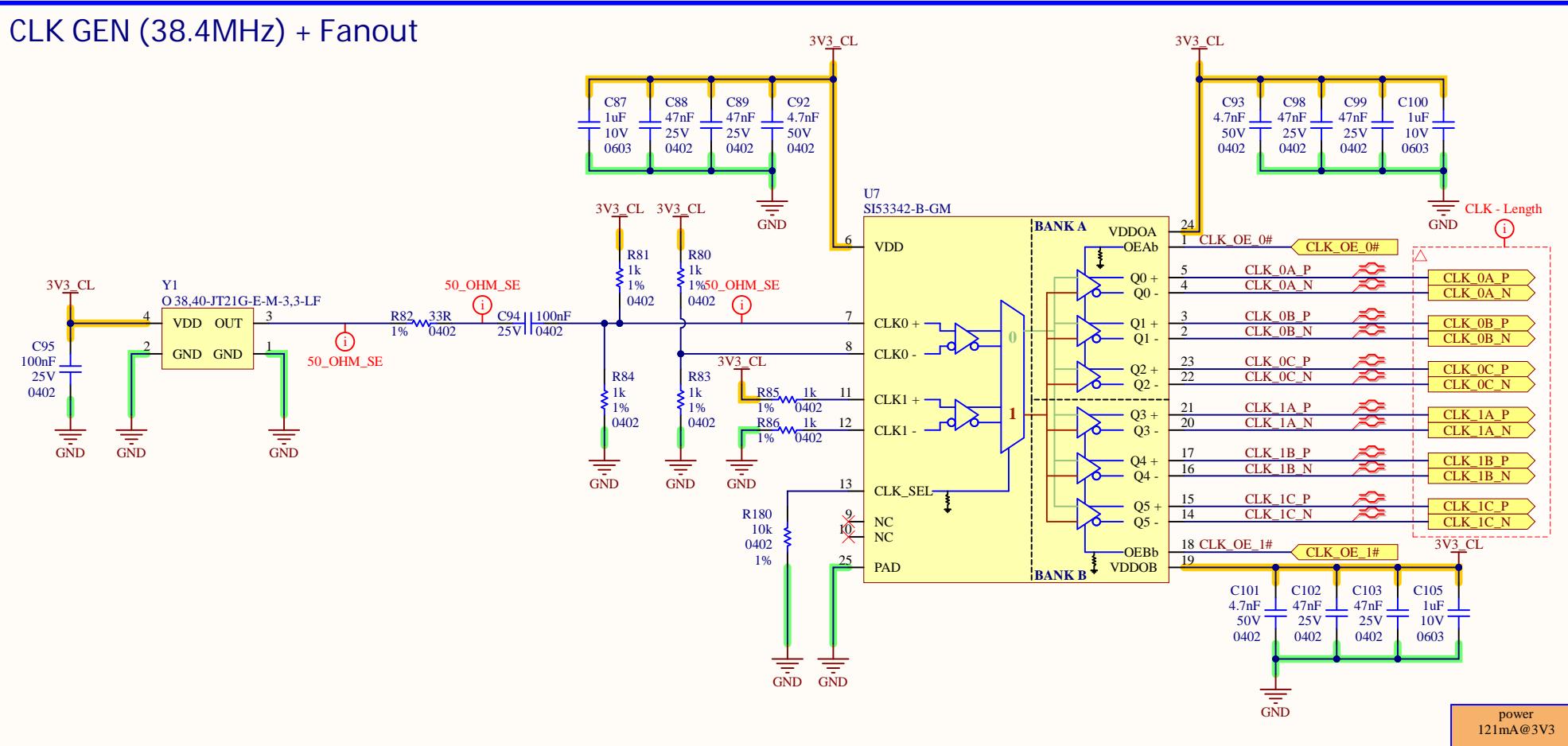






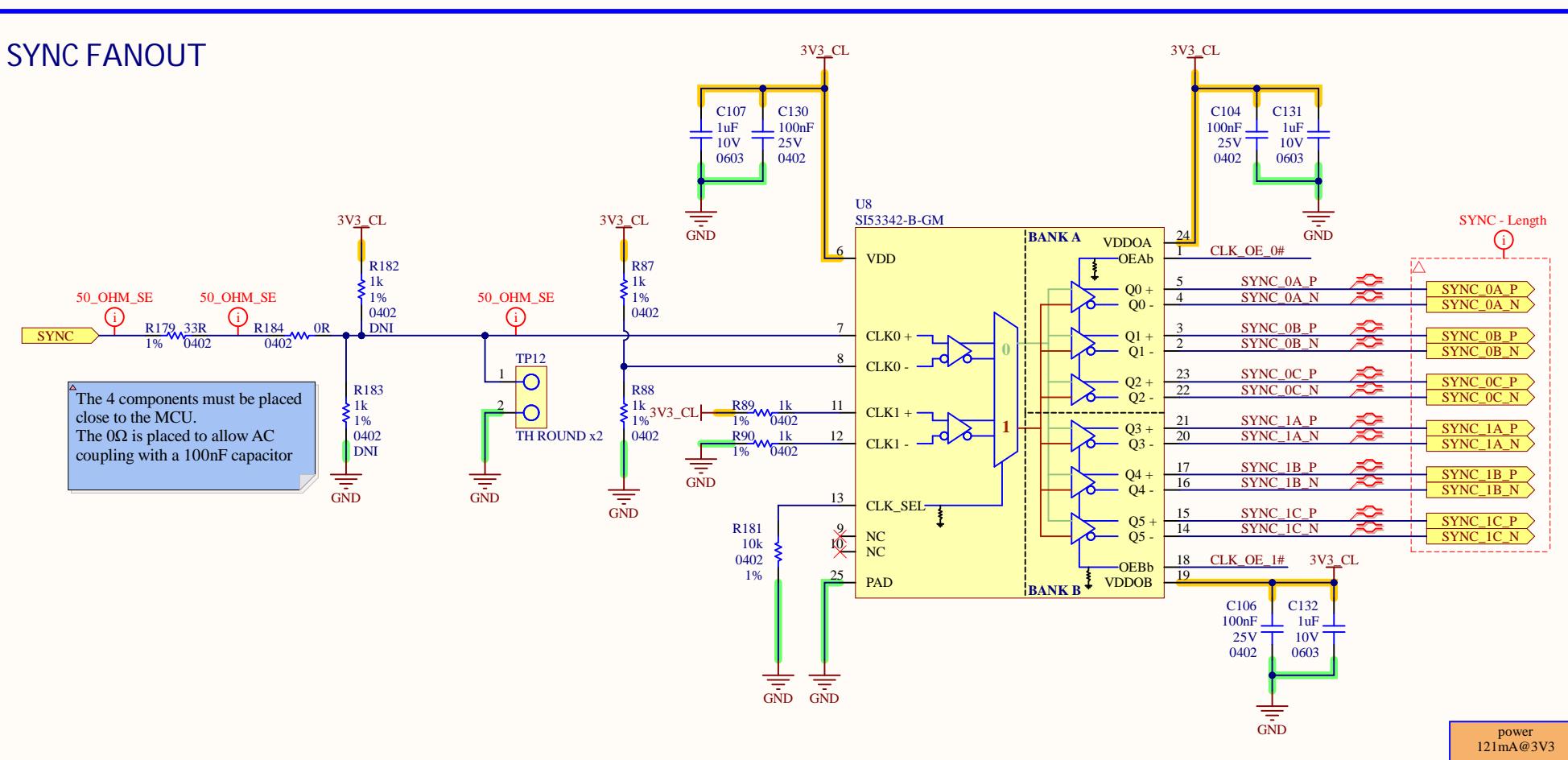
CLK GEN (38.4MHz) + Fanout

A

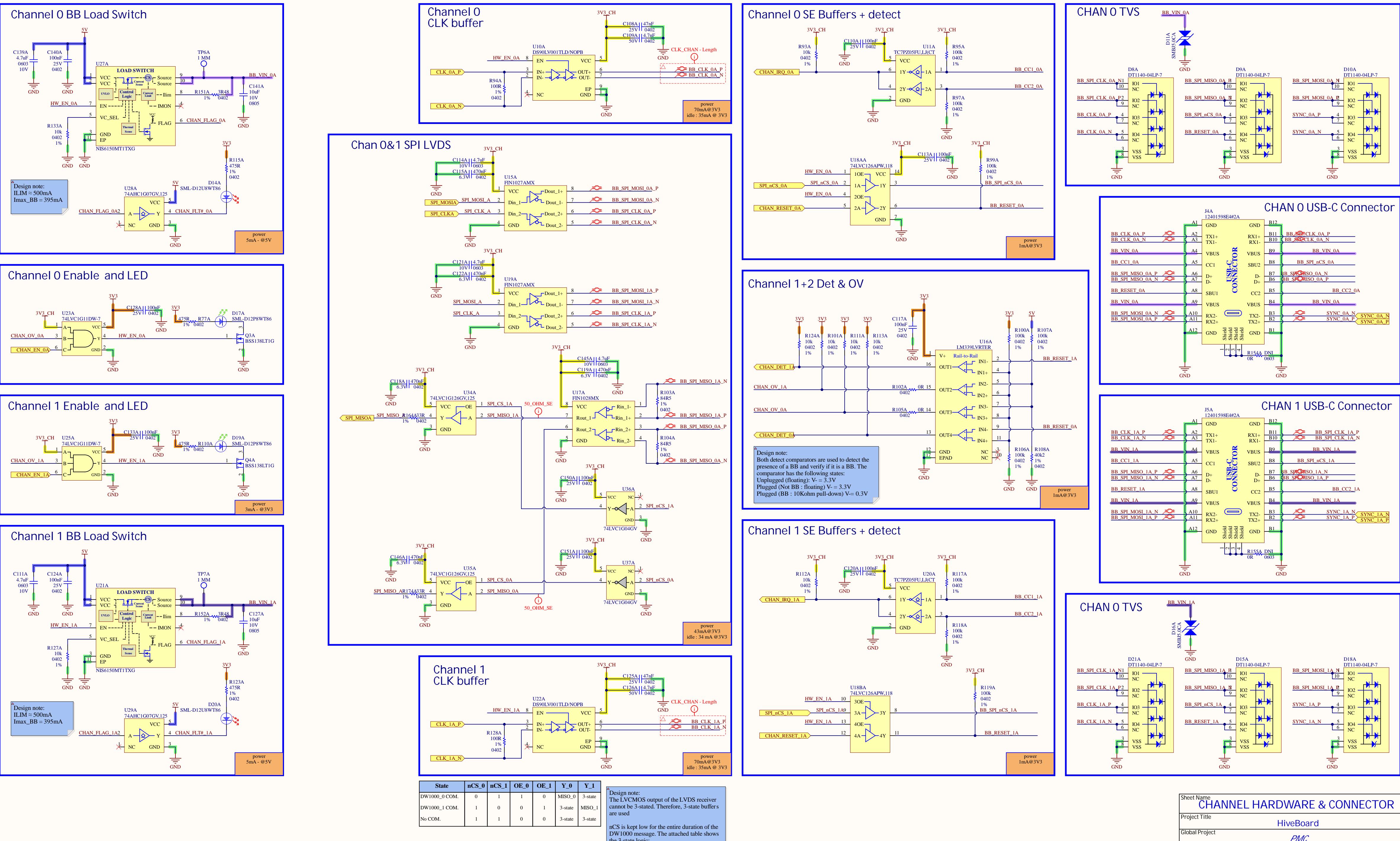


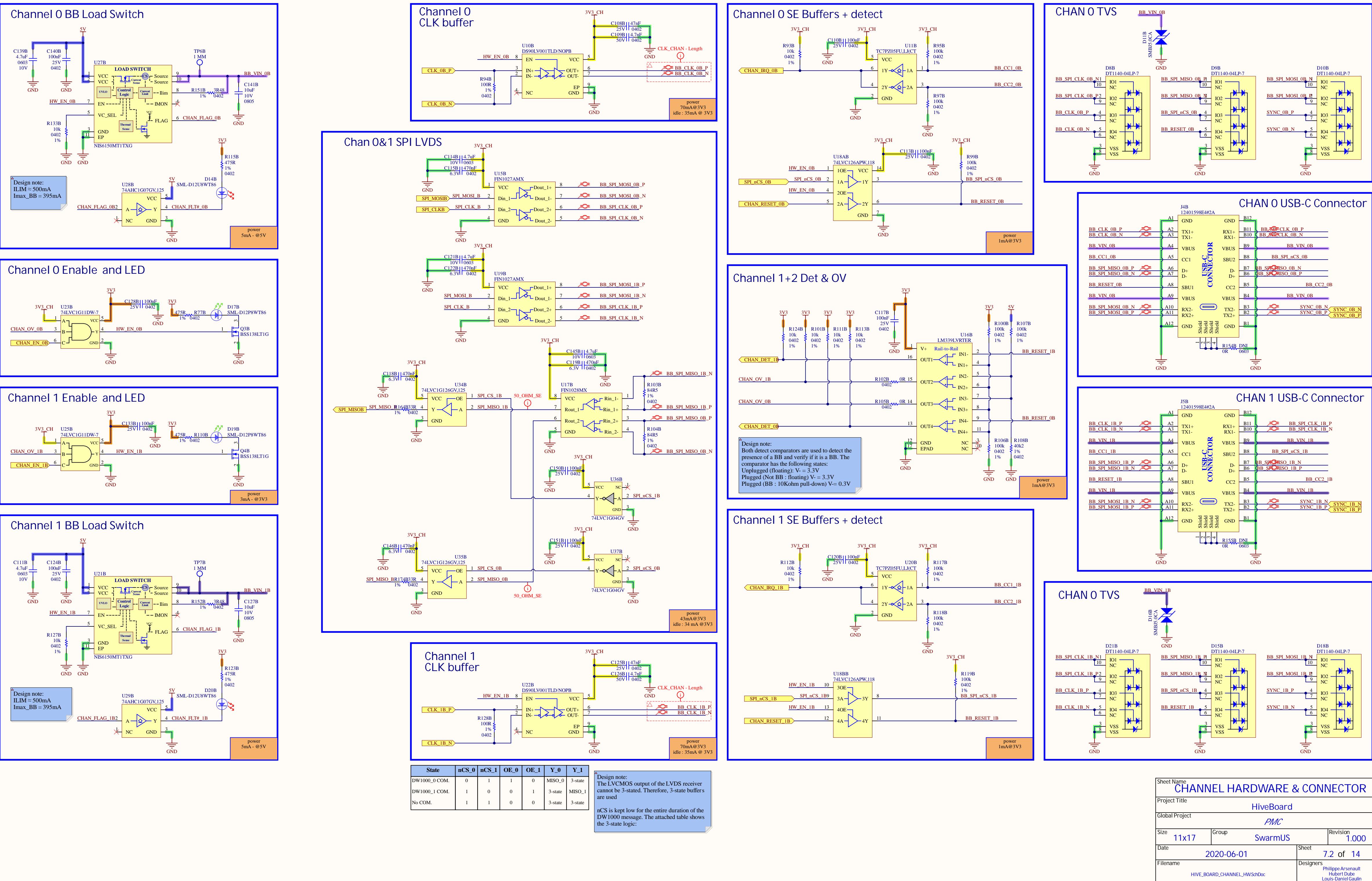
SYNC FANOUT

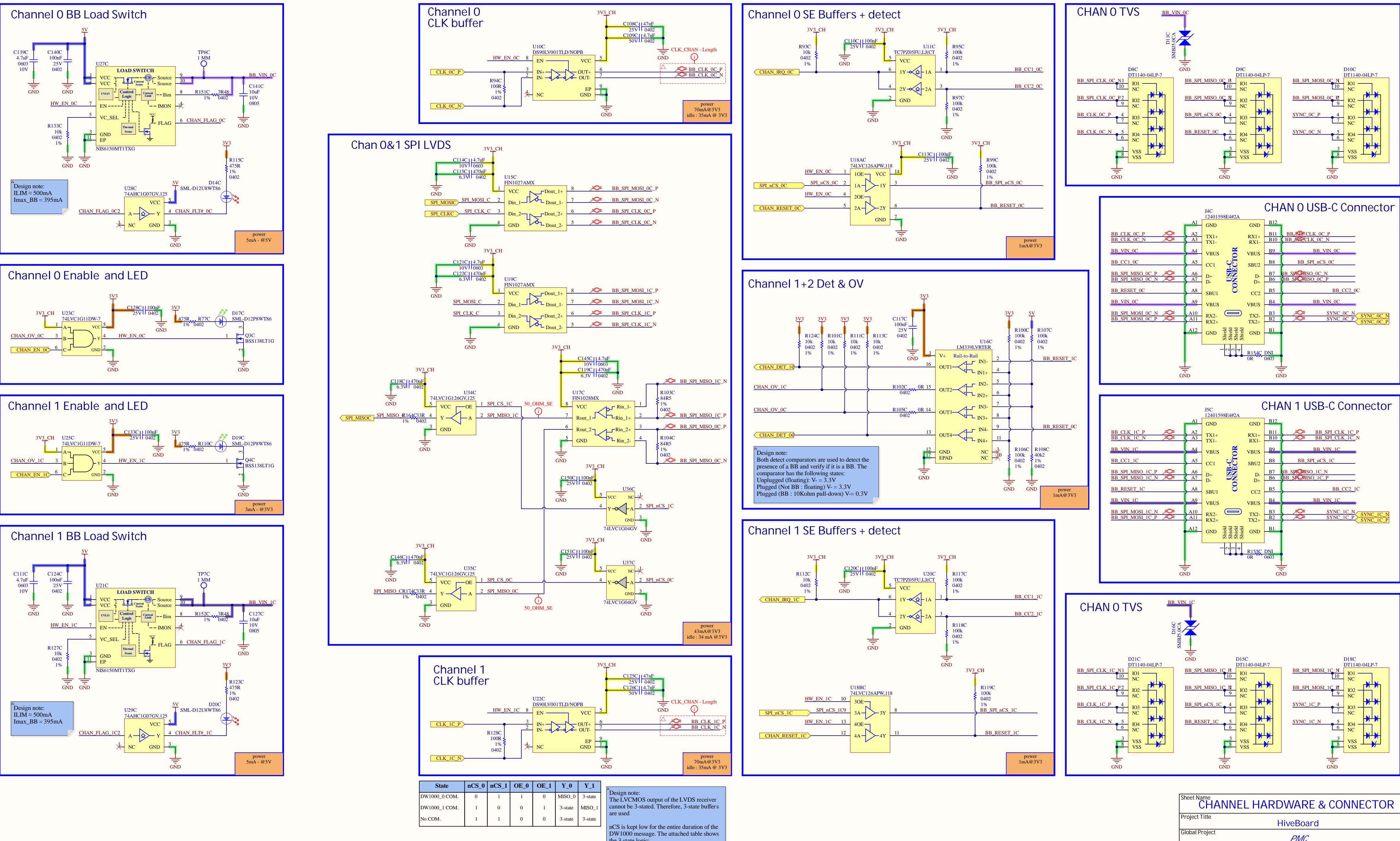
C



Sheet Name	CLOCK GEN & FANOUT		
Project Title	HiveBoard		
Global Project	PMC		
Size	11x17	Group	SwarmUS
Date	2020-06-01	Revision	PCB SCH
Filename	HIVE_BOARD_CLOCK_GEN.SchDoc		
Designers	Philippe Arsenault Hubert Dube Louis-Daniel Gaulin		

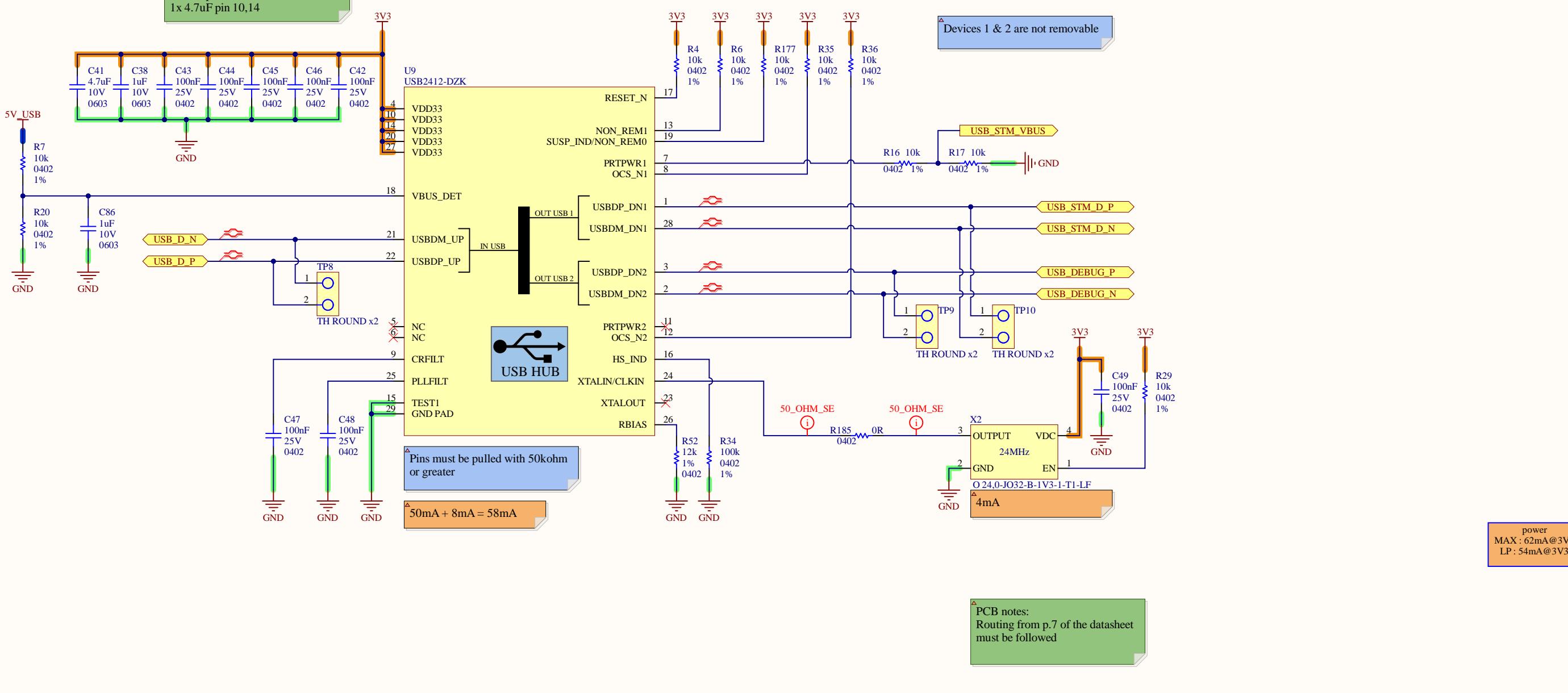






USB Hub

PCB notes:
1x 100nF per pin
1x 1uF pin 4,20,27
1x 4.7uF pin 10,14



Sheet Name

USB Hub

Project Title

HiveBoard

Global Project

PMC

Size

11x17Group **SwarmUS** Revision PCB SCH

Date

2020-06-01Sheet **8 of 14**

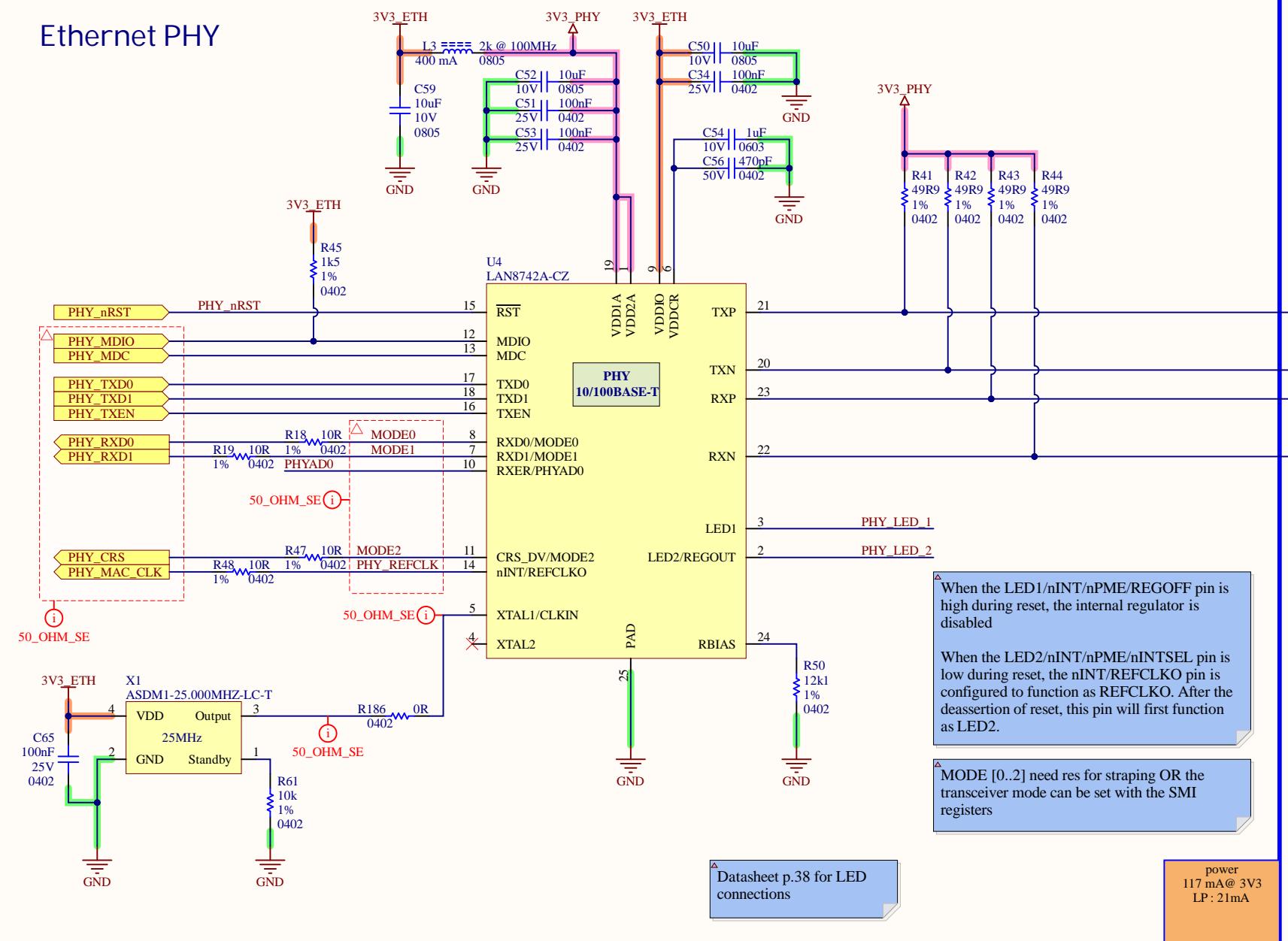
Filename

HIVE_BOARD_USB.SchDoc

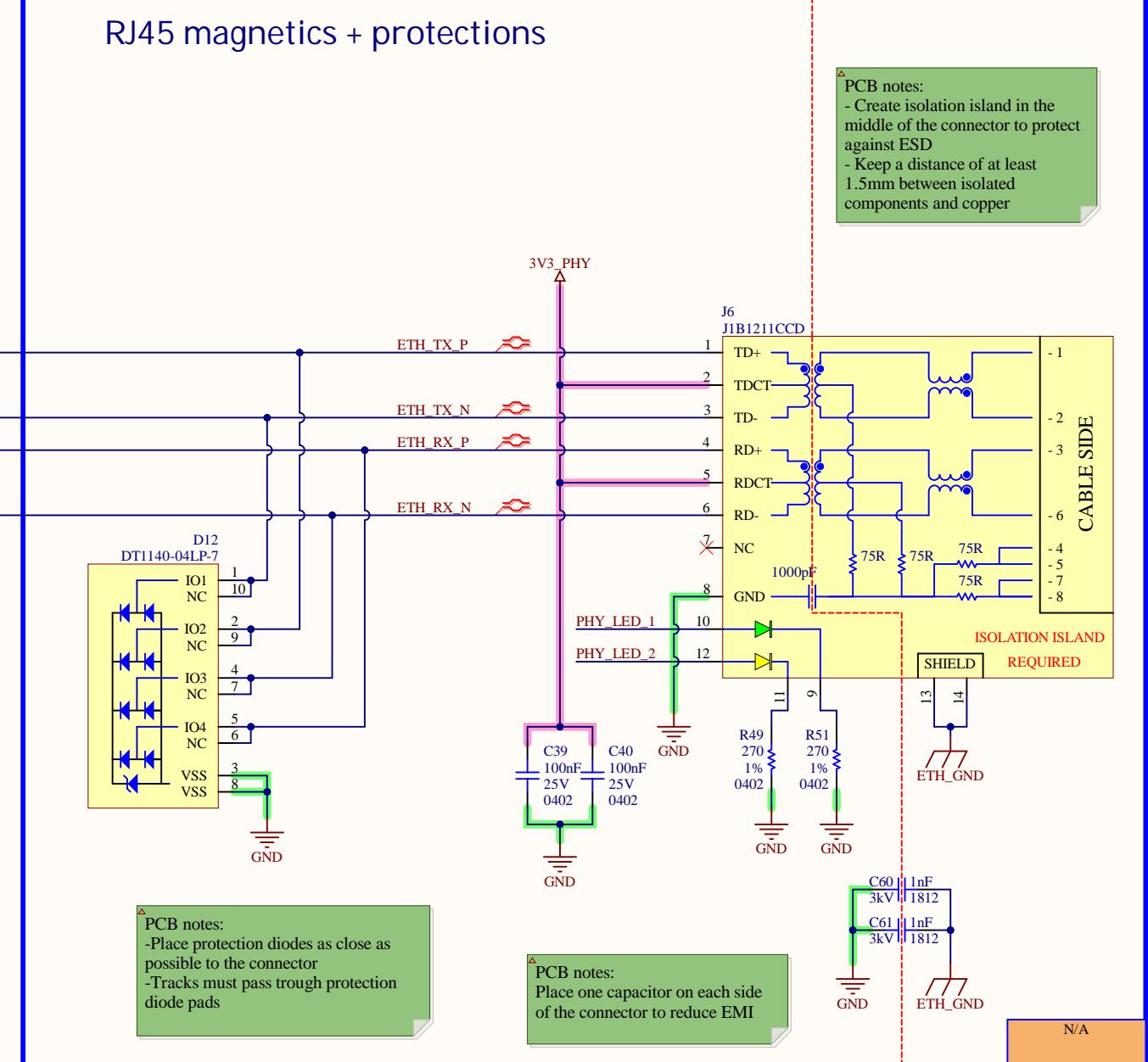
Designers

Philippe Arsenault
Hubert Dube
Louis-Daniel Gaulin

Ethernet PHY

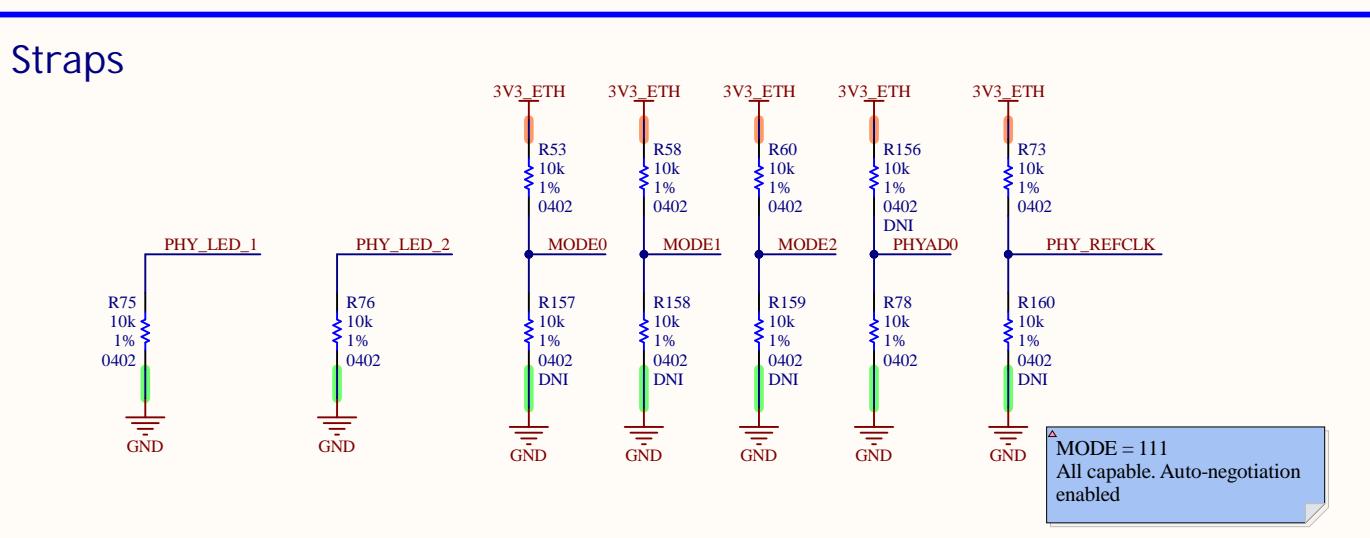


RJ45 magnetics + protections



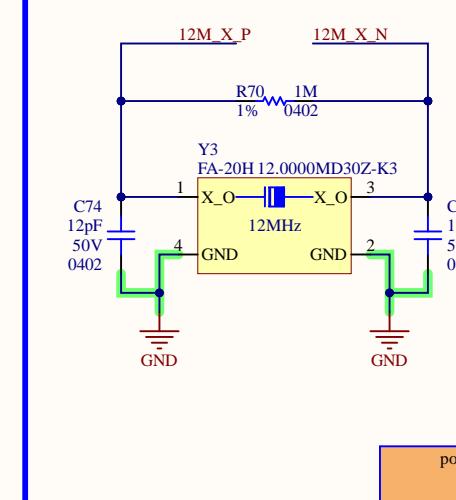
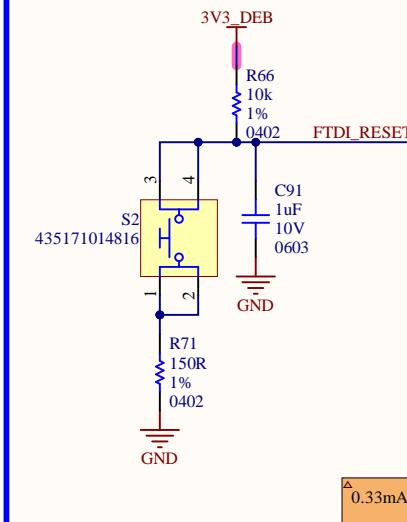
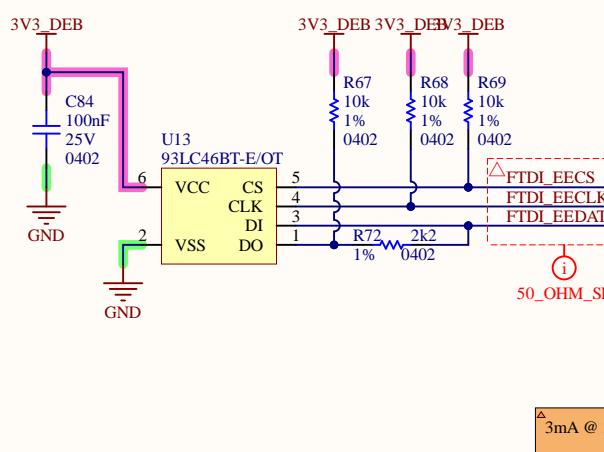
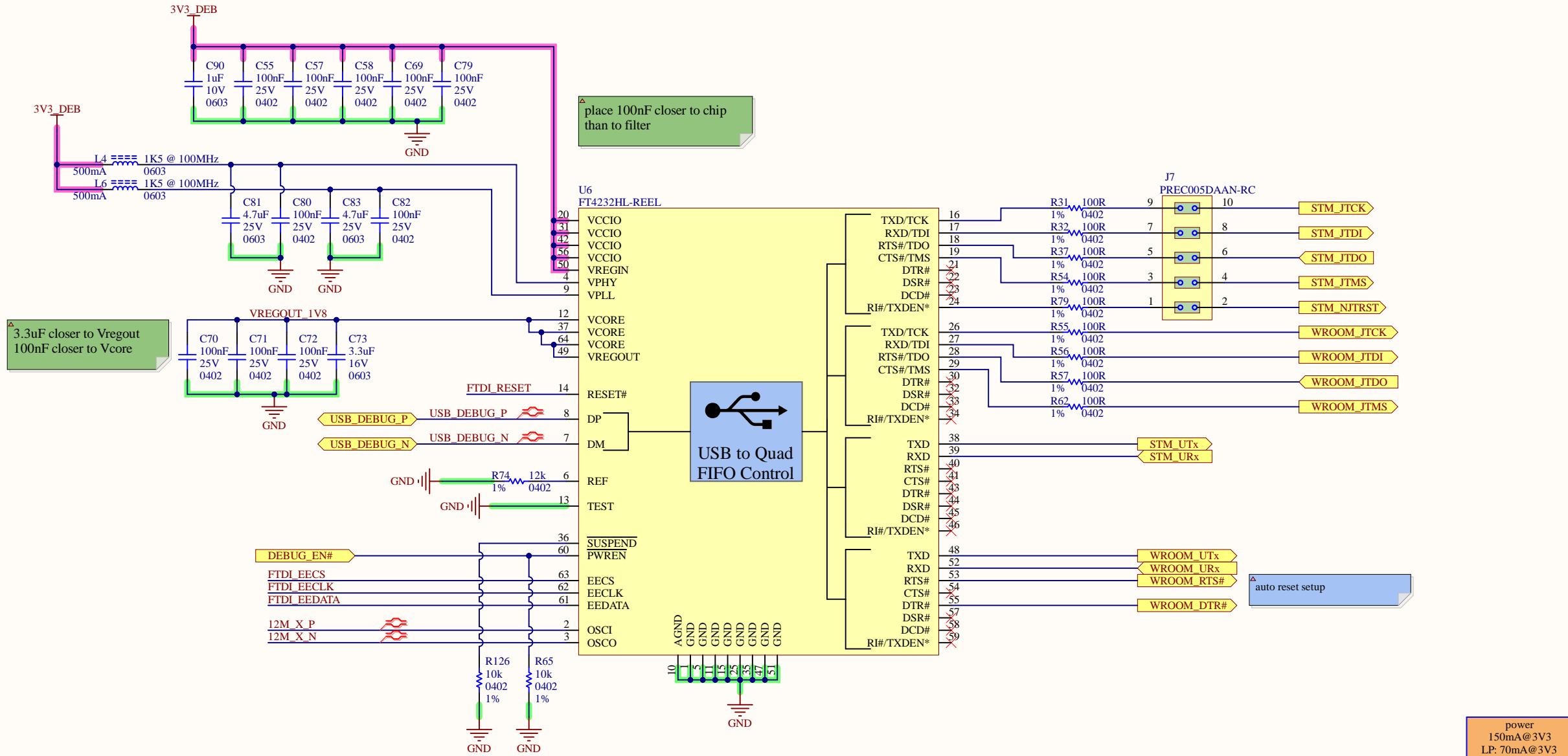
RMII CLOCK
frequency is 50MHz.
13ieme harmonique is 650MHz.
Wavelength is 46cm
IF MAC CLK is less than 11cm : not considered a transmission line

Straps



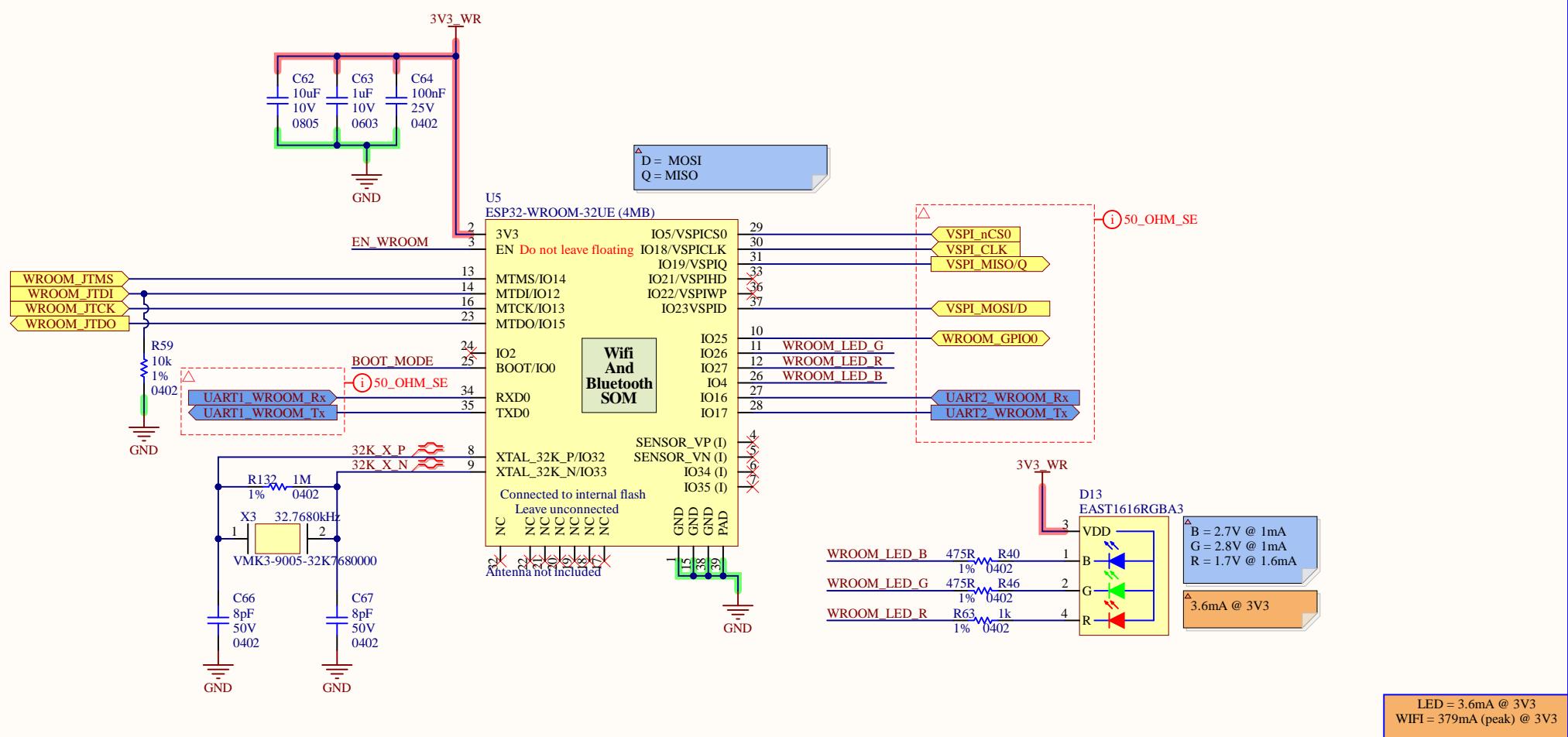
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Project Title	HiveBoard		
Global Project	PMC		
Size	11x17	Group	SwarmUS
Date	2020-06-01	Sheet	9 of 14
Filename	HIVE_BOARD_ETHERNET.SchDoc		
Designers	Philippe Arsenault Hubert Dube Louis-Daniel Gaulin		

FTDI Debug Chip

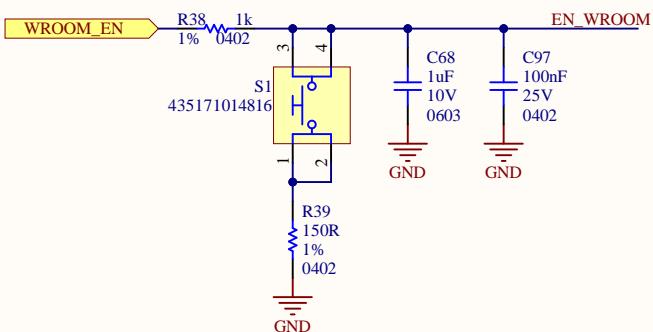


Sheet Name		DEBUG		
Project Title		HiveBoard		
Global Project		PMC		
Size	11x17	Group	SwarmUS	Revision PCB SCH .
Date	2020-06-01		Sheet	10 of 14
Filename	HIVE_BOARD_DEBUG.SchDoc		Designers	Philippe Arsenault Hubert Dube Louis-Daniel Gaulin

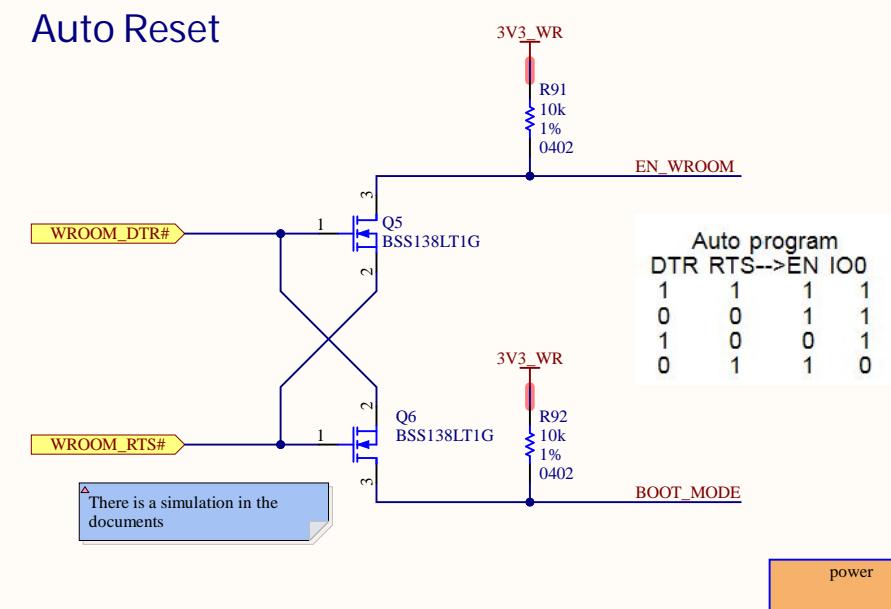
WROOM



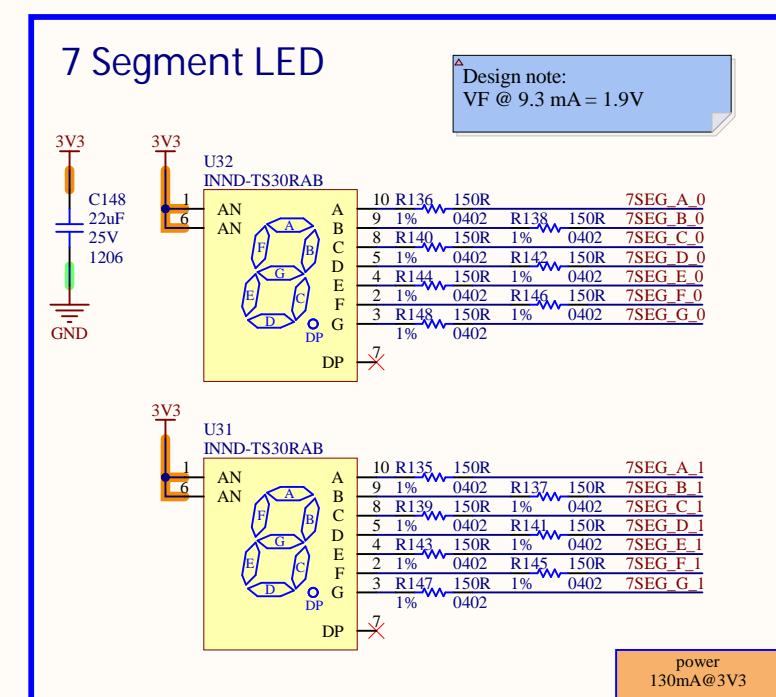
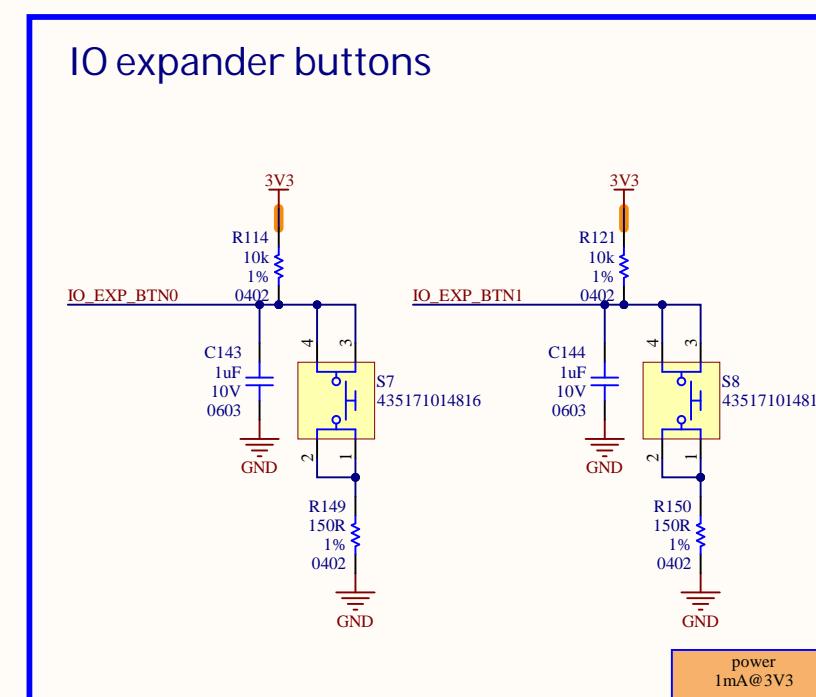
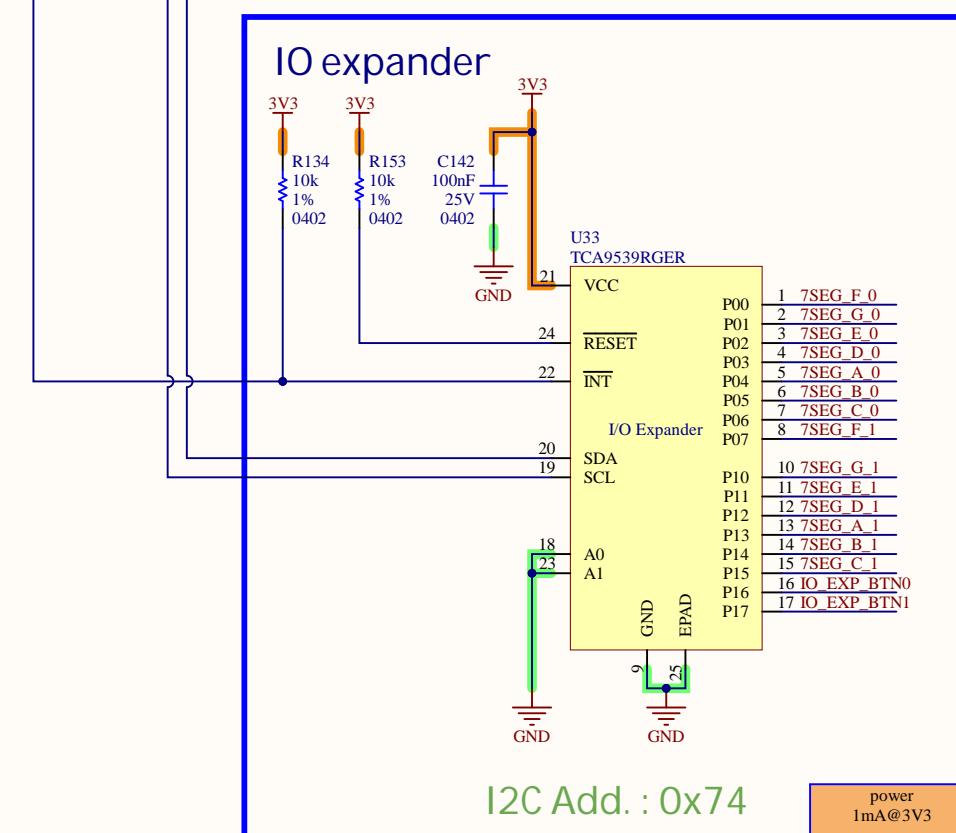
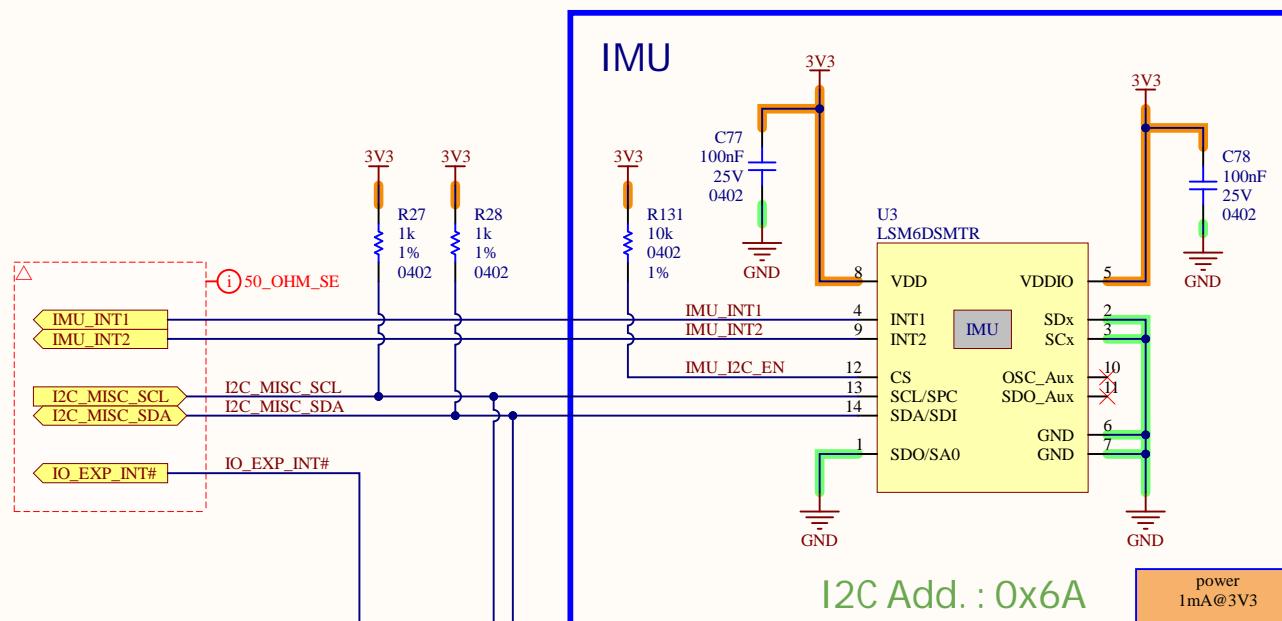
Reset BTN



Auto Reset



Sheet Name	WIRELESS		
Project Title	HiveBoard		
Global Project	PMC		
Size 11x17	Group SwarmUS	Revision PCB	SCH .
Date 2020-06-01	Sheet 11 of 14		
Filename HIVE_BOARD_WIRELESS.SchDoc	Designers Philippe Arsenault Hubert Dube Louis-Daniel Gaulin		



Sheet Name	MISC		
Project Title	HiveBoard		
Global Project	PMC		
Size	11x17	Group	SwarmUS
Date	2020-06-01	Revision	PCB SCH
Filename	HIVE_BOARD_MISC.SchDoc		Designers
	Philippe Arsenault Hubert Dube Louis-Daniel Gaulin		