

Intel Jasper Lake Platform

V1.1

TABLE OF CONTENTS

Page	Index	Page	Index
1	TABLE OF CONTENTS	30	USB-A, SD
2	System Block Diagram	31	USB C0: DATA
3	POWER TREE	32	USB C0: BATTERY CHARGER
4	POWER SEQUENCING	33	POWER: SOC RAILS 1
5	I2C MAP	34	POWER: SOC RAILS 2
6	OTHER INFO	35	POWER: SOC RAILS 3
7	JSL+: MEMORY	36	POWER: SYSTEM RAILS 1
8	JSL+: DISPLAY, CAMERA, I2C	37	POWER: SYSTEM RAILS 2
9	JSL+: USB, PCIE, CNVI	R1082	POWER: SYSTEM RAILS 2
10	JSL+: AUDIO, SD, EMMC, CNVI, CLOCKS	39	SUB-BOARD CONNECTORS
11	JSL+: ESPI, SPI		
12	JSL+: POWER SEQUENCING		
13	JSL+: STRAPS		
14	JSL+: CPU AND PCH POWER		
15	JSL+: POWER DECOUPLING		
16	JSL+: GROUND, RESERVED		
17	JSL+: DEBUG, MIPI60		
18	LPDDR4X: CH A+B		
19	LPDDR4X: CH C+D		
20	WP, CBI EEPROM, SPI ROM		
21	H1		
22	C2D2		
23	STORAGE: EMMC		
24	AUDIO		
25	KBD, BTNS, LEDS, TRACKPAD, PEN GARAGE		
26	SENSORS		
27	LID: DISPLAY, CAMERA, SENSORS		
28	WIFI, BT, LTE		
29	EC		

BITLAND		Bitland Information Technology Co.,Ltd.	
Page Name COVER PAGE			
Size A3	Project Name Wheelie		Rev 1.0
Date: Monday, March 15, 2021	Sheet	1 of 40	
<small>PROPERTY NOTE: this document contains information confidential and property to Bitland Technology Co.,Ltd. and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained with the expressed written consent of Bitland</small>			

PPVAR_SYS

SY8288A

PP3300_G

RES

PP3300_RTC

RES

PP3300_H1_G

RES

PP3300_EC_G

NPCX796FC

PP1800_EC_G

RES

PP3300_USB_C0_G

TPS22976NDPUT

PP3300_A_R

TPS22976NDPUT

PP3300_PANEL_S0

RT9078N-08GJ5

PP2800_CAMER

AP2553FDC-7R

PP3300_SD_U

TPS22914CYFPR

PP3300_TOUCH_S0

RT6258C

PP5000_U

RES

PP5000_USB_C0_VCONN

AP2553FDC-7R

PP5000_USB_A0_VBUS

RES

PP5000_KB_BL_U

RES

PP5000_SPK

RT8068A

PP1800_A

RES

PP1800_SSD_A

RES

PP1800_SYS_A

RES

PP1800_SOC_A

RES

PP1800_CAMER_A

TPS22971YZPR

PP1800_AGSH_S0

RT9078N-08GJ5

PP1200_CAMERA

NB688A

PP1100_DRAM_U

RES

PP1100_DRAM_U

RES

PP1800_DRAM_U

RES

PP600_DRAM_U

RES

PP3300_A

RES

PP3300_SOC_A

RES

PP3300_SSD_A

RES

PP3300_WLAN_A

RES

PP3300_TRACKPAD_A

RES

PP3300_DISPLAY_S0

RES

PP5000_WMR_S0

LSP1050_OUT_PCH

TPS22971YZPR

P1050_ST_S

RT3612EBGQW

PPVAR_VCCIN

APW8738A

PP1050_V1P05EXT

RT6543AGQW

PPVAR_VCCIN_AUX

APW8738A

PP1050_V1P05EXT

APW8738A

PPVAR_VNNEXT

ANX3447QN-AC-R

PPVAR_USB_C0_VBUS

FUSE

PPVAR_BL_PWR

IC

LOAD_SWITCH

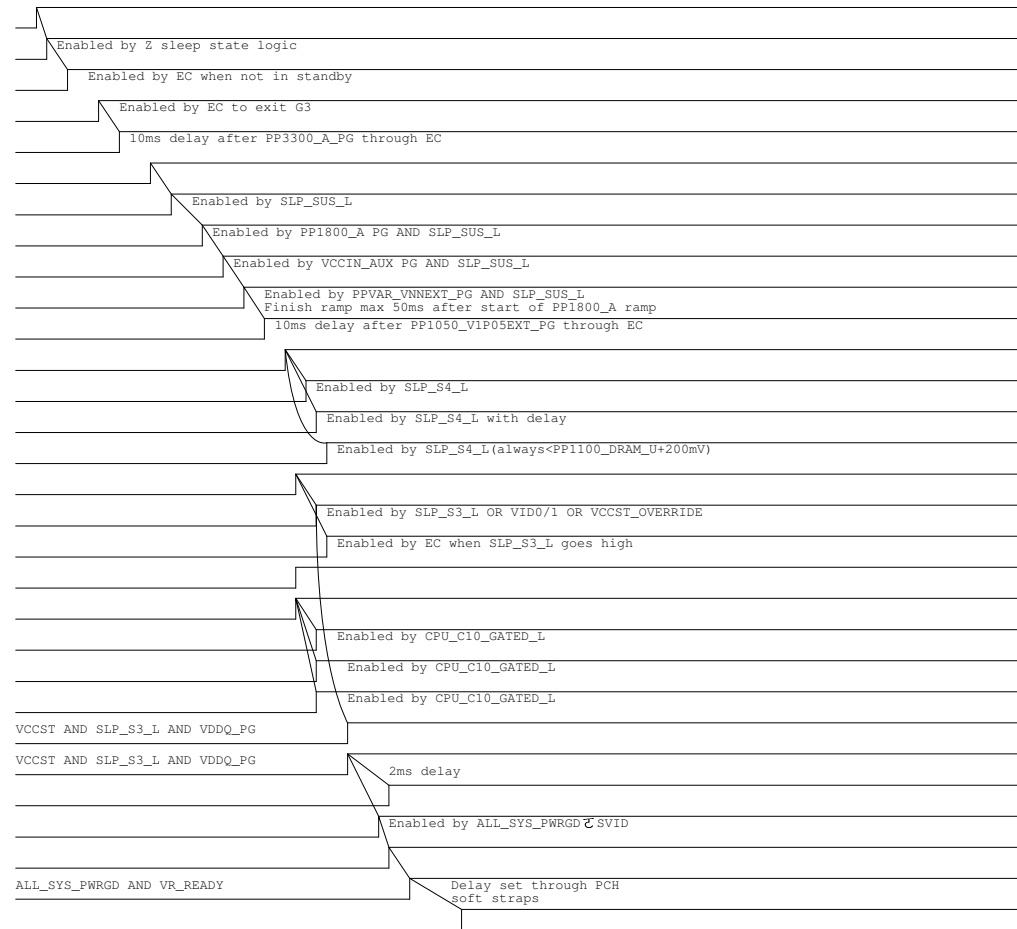
LED

POWER_SWITCH

SUB BOARD POWER TREE

BITLAND		Bitland Information Technology Co.,Ltd.	
Page Name		Power block diagram	
Size	Project Name	Rev	
A2	Wheelie	1.0	
Date: Monday, March 15, 2021		Sheet	3 of 40
PROPERTY NOTE: this document contains information confidential and property to Bitland Technology Co., Ltd. and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained with the expressed written consent of Bitland.			

PPVAR_VSYS
PP3300_G(EC/H1)
PP5000_U
PP3300_A
DSW_PWROK
SLP_SUS_L
PP1800_A
PPVAR_VCCIN_AUX
PPVAR_VNNEXT
PP1050_VIP05EXT
RSMRST_ODL
SLP_S4_L
PP1800_DRAM_U
PP1100_DRAM_U
PP600_DRAM_U
SLP_S3_L
PP1050_ST_S
VCCIO_EXT
SLP_S0_L
CPU_C10_GATED_L
PP1800_TCSS_S0
PP1100_PLLOC_S0
PP1050_STG_S0
VCCST_PWRGD
ALL_SYS_PWRGD
SYS_PWROK
PPVAR_VCCIN
VR_READY
PCH_PWROK
PLT_RST_L



Power Rail
Signal from PCH
Signal from Platform

POWER SEQUENCING


Master	Prot	Voltage Domain	Bus name	Bus Speed	Slave device	7-bit Addr(s*)	Int Priority	Noye
AP (JSL+)	0	PP3300_A	AP_I2C_TP	400KHz	Trackpad	Project-specific	0	Trackpad
	1	PP1800_A	AP_I2C_EMR	400KHz	SUBE-xxxxxMI	0x09	0	NA
					HPDxxxx-920	?	0	NA
	2	PP3300_TOUCH_S0	AP_I2C_TS	400KHz	Touchscreen	Project-specific	0	Touchscreen
					Panel	Project-specific	-	MIPI Panel
	3	PP1800_A	AP_I2C_CAMERA	400KHz	UFC	Project-specific	-	NA
					WFC	Project-specific	-	NA
	4	PP1800_A	AP_I2C_AUDIO	400KHz	ALC1015	0x28 (left), 0x29 (right)	-	Speakers
					ALC5682I	0x1A	0	Headphone
					DA7219	0x1A	0	Headphone
	5	PP3300_A	AP_I2C_SUB	400KHz	SX9324	Project-specific	0	P seneor

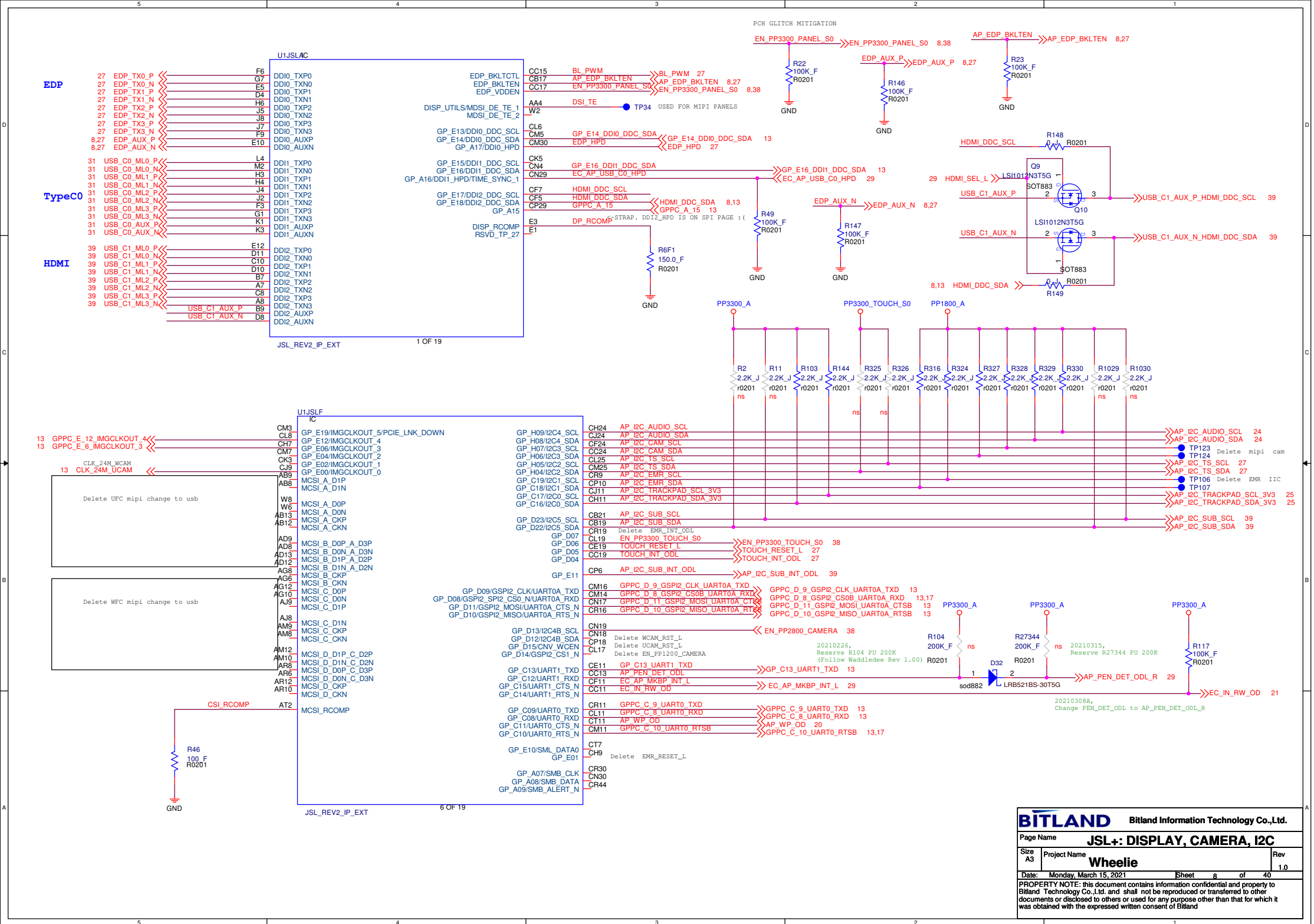
Master	Prot	Voltage Domain	Bus name	Bus Speed	Slave device	7-bit Addr(s*)	Int Priority	Noye
EC	IT8320:0	PP3300_EC_G	EC_I2C_EEPROM	400KHz	N24C02	0x30 (PSWP), 0x50 (memory)	-	CBI EEPROM
					IT8320	0x35, 0x5A, 0x79	-	EC flash
	IT8320:1	PP3300_EC_G	EC_I2C_BATTERY	100KHz	Smart battery	Project-specific	-	Fuel gauge
	IT8320:2	PP1800_A	EC_I2CSENSOR	400KHz	LSM6DS3TR	0x6A	-	Gyro/accel
					LIS2DWLTR	TBD	-	Lid accel
					KB backlight	Project-specific	-	KB backlight
					IMVP9	Project-specific	-	IMVP9
	IT8320:5	PP3300_EC_G	EC_I2C_USB_C0	1MHz	RAA489000	0x09 (+0x0C SMBus ARA)	1	Charger
					RAA489000	0x22	0	TCPC
					IT5205	0x48	-	MUX
					PI3USB9201	0x5F	2	BC1.2

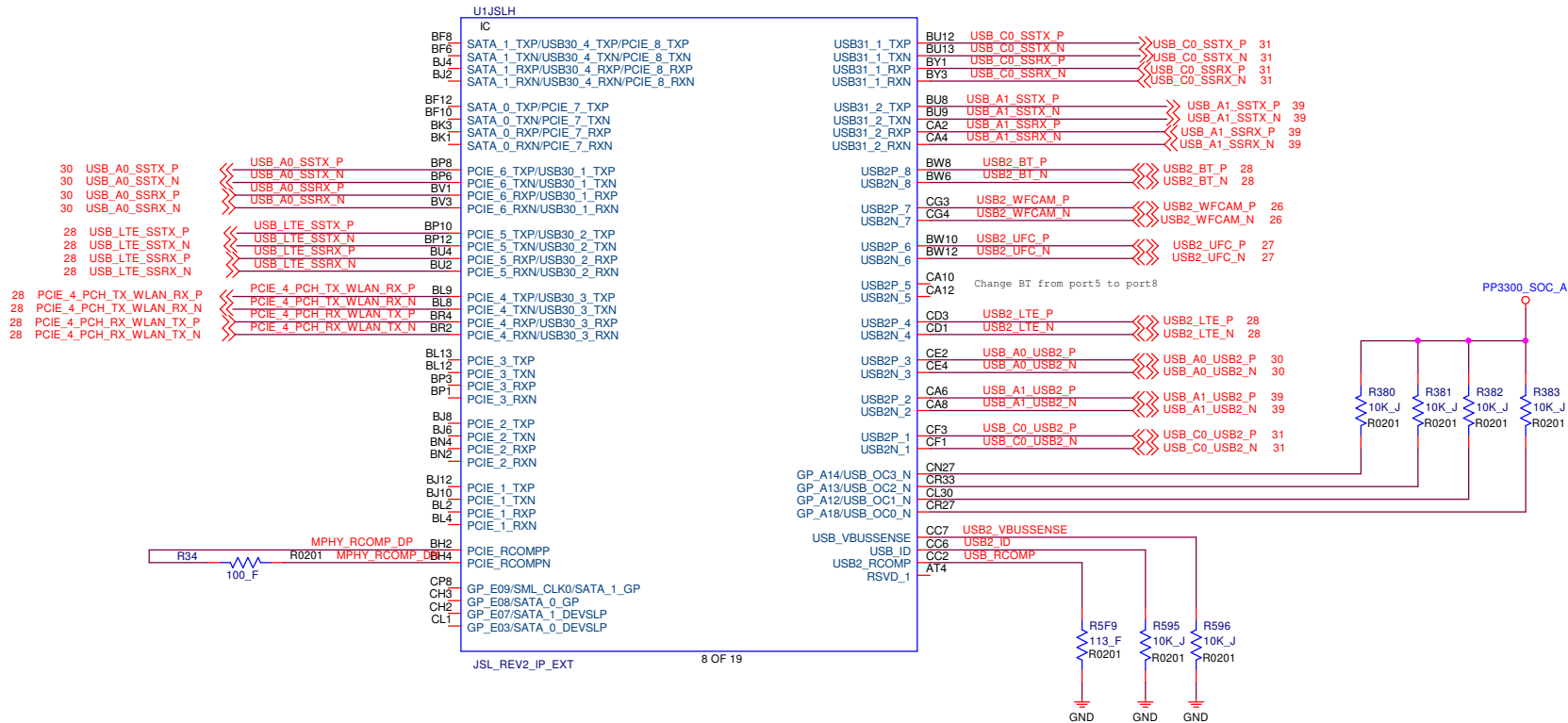
www.teknisi-indonesia.com

BITLAND		Bitland Information Technology Co.,Ltd.	
Page Name		Power Sequence	
Size A3	Project Name	Wheelie	Rev 1.0
Date:	Monday, March 15, 2021	Sheet	5 of 40
PROPERTY NOTE: this document contains information confidential and property to Bitland Technology Co.,Ltd. and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained with the expressed written consent of Bitland			

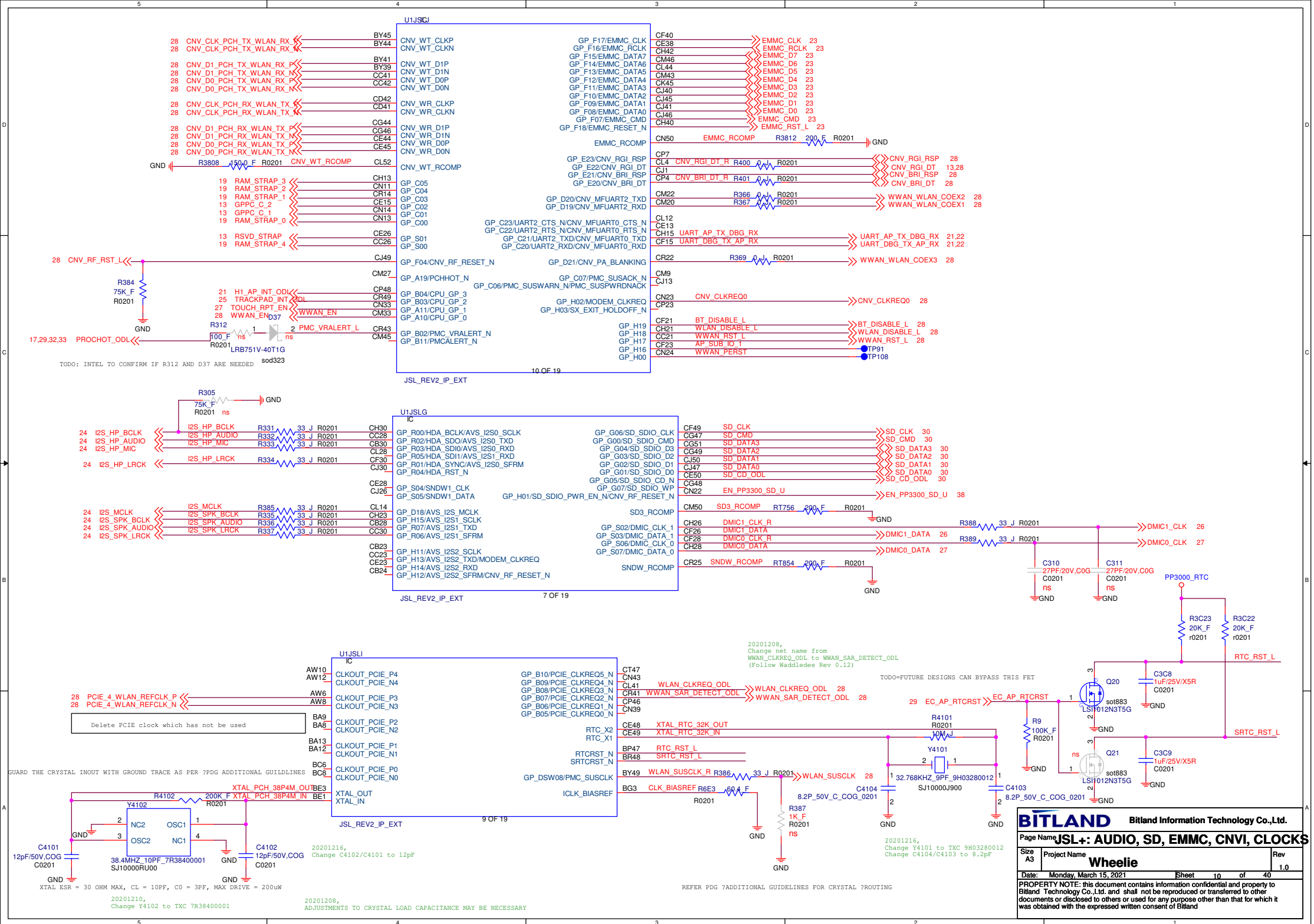


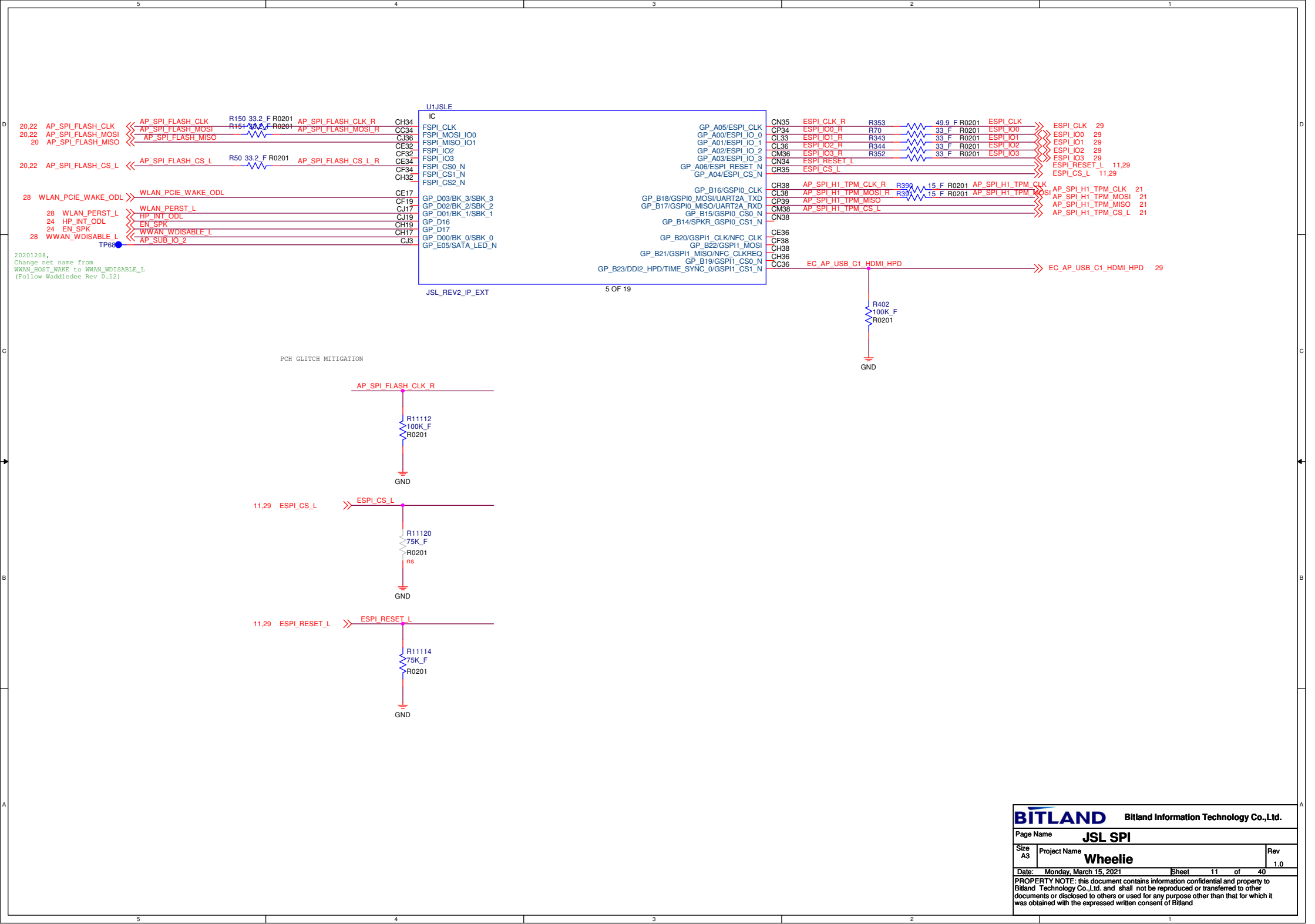
		Bitland Information Technology Co.,Ltd.	
Page Name			
Size A3	Project Name Wheelie		Rev 1.0
Date: Monday, March 15, 2021	Sheet	6	of 40
PROPERTY NOTE: this document contains information confidential and property to Bitland Technology Co.,Ltd. and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained with the expressed written consent of Bitland			



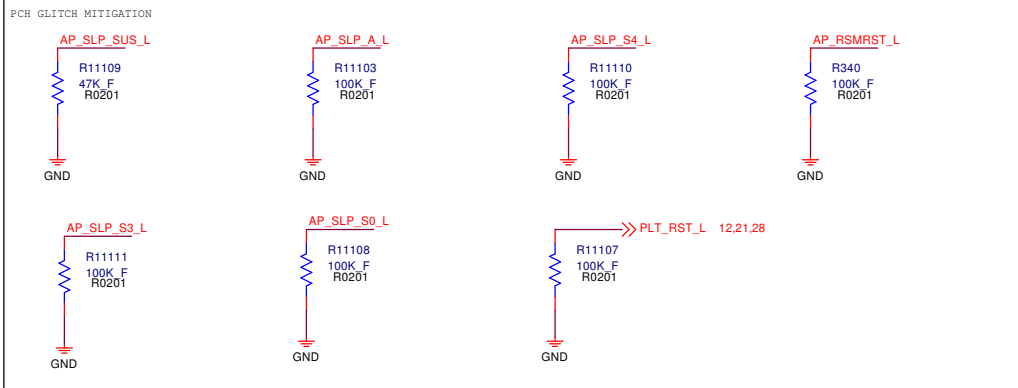
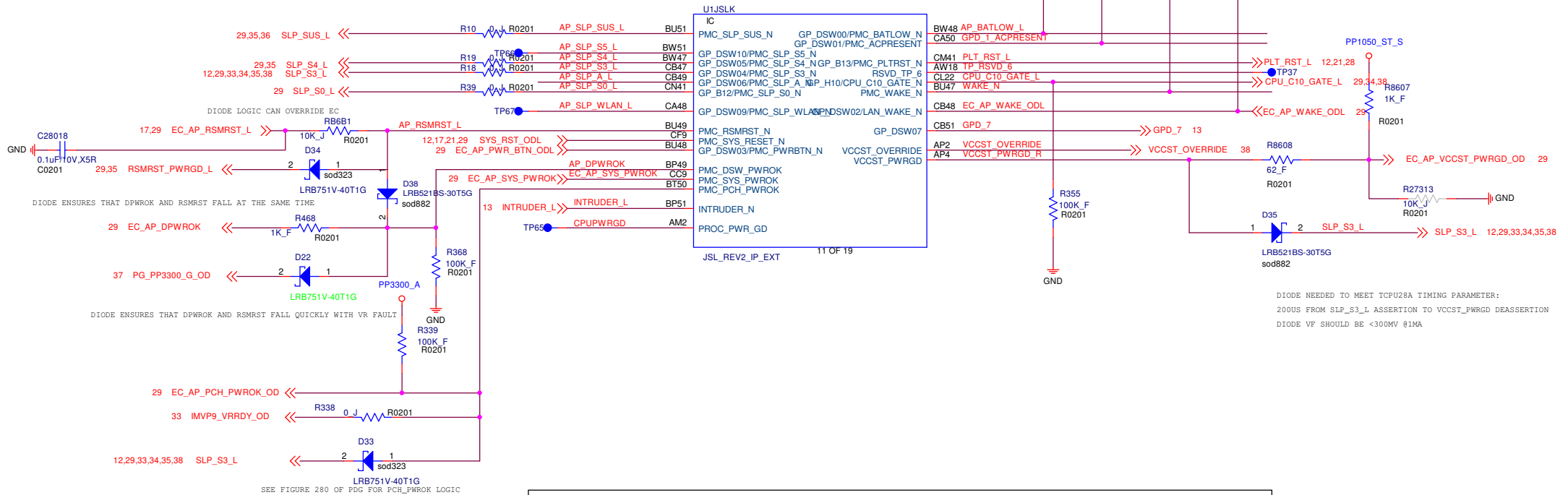


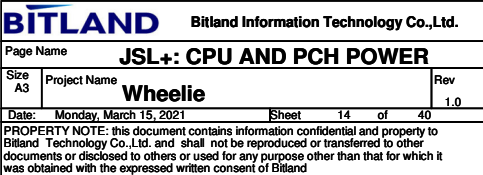
www.teknisi-indonesia.com

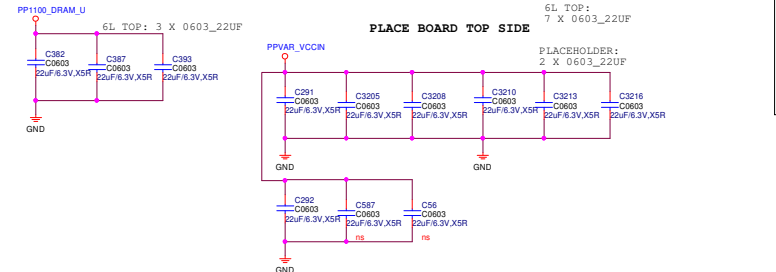
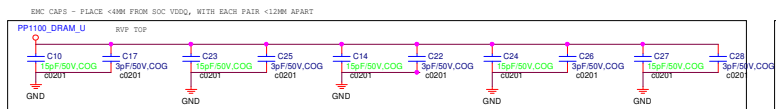




10US MAX FROM RSMRST_PWRGD_L ASSERTION TO AP_RSMRST_L ASSERTION
RSMRST_PWRGD_L DIODE IS NEEDED TO MEET TPLT19 TIMING PARAMETER:



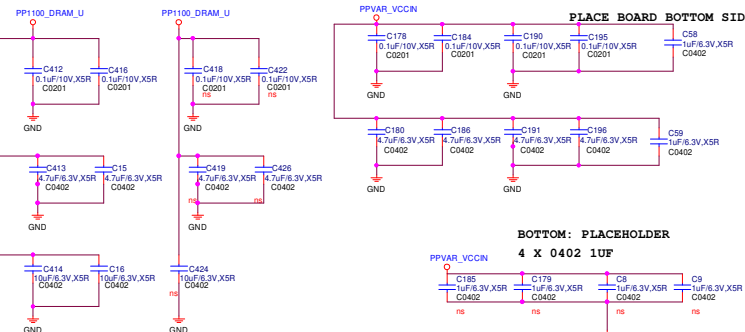




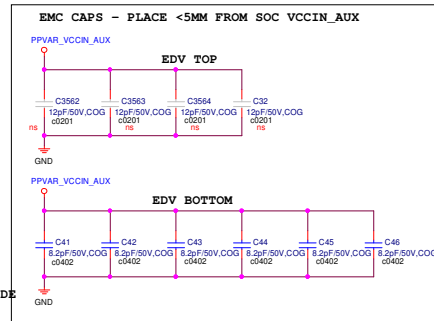
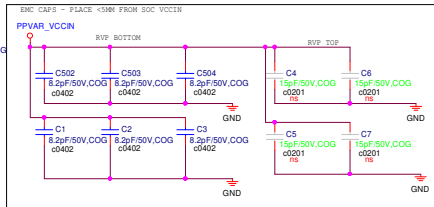
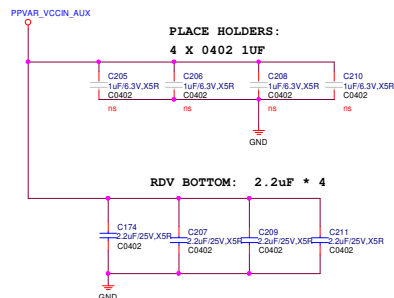
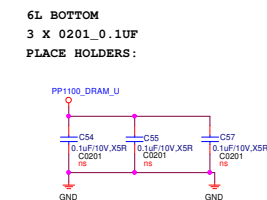
6L BOTTOM
2 X 0201_0.1UF
2 X 0402_4.7UF
2 X 0402_10UF

6L BOTTOM
2 X 0201_0.1UF
2 X 0402_4.7UF
1 X 0402_10UF

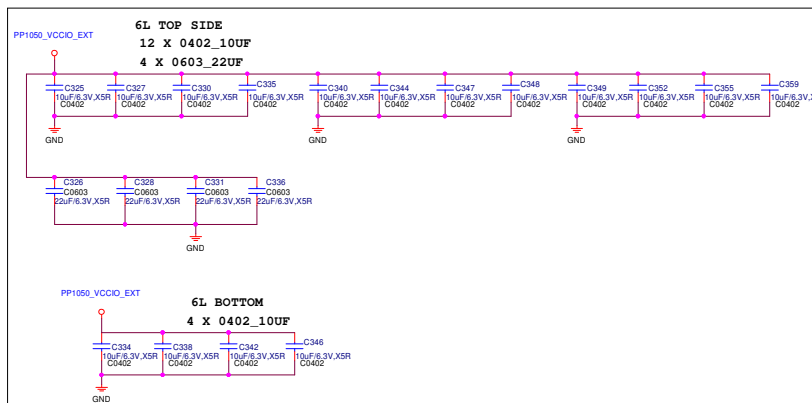
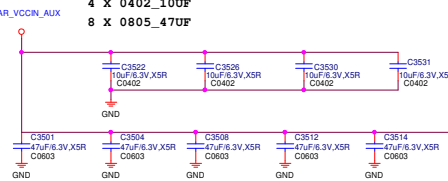
6L BOTTOM
4 X 0201_0.1UF
2 X 0402_1UF
4 X 0402_4.7UF



BOTTOM: PLACEHOLDER
4 X 0402 1UF

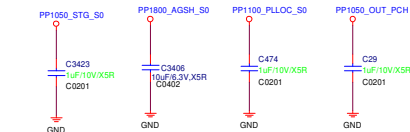


RDV TOP
4 X 0402_10UF
8 X 0805_47UF

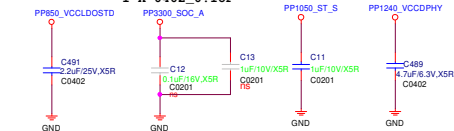


+VCCSTG_OUT

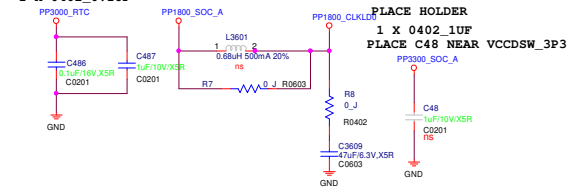
RVP TOP SIDE RVP TOP SIDE RVP TOP SIDE RVP TOP SIDE
1 X 0402_1UF 1 X 0402_10UF 1 X 0402_1UF 1 X 0402_1UF



RVP TOP SIDE 6L TOP SIDE RVP TOP SIDE RVP TOP SIDE
1 X 0402_1UF 1 X 0402_1UF 1 X 0402_1UF 1 X 0402_4.7UF
1 X 0402_0.1UF

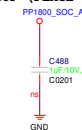


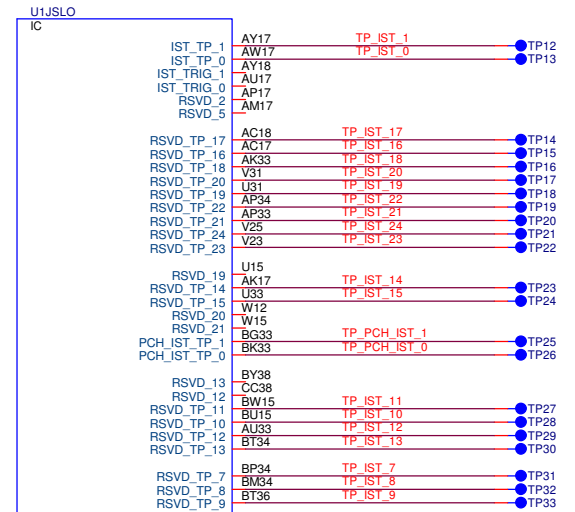
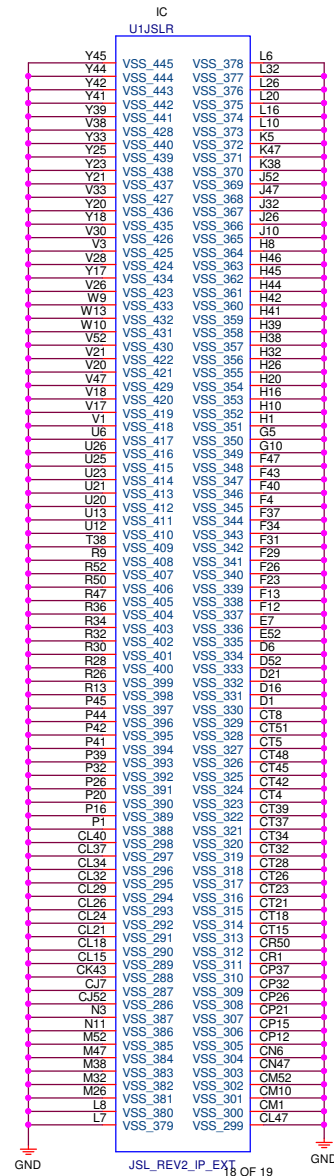
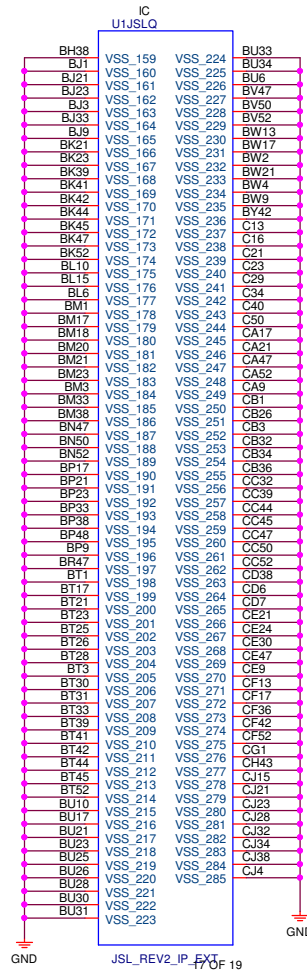
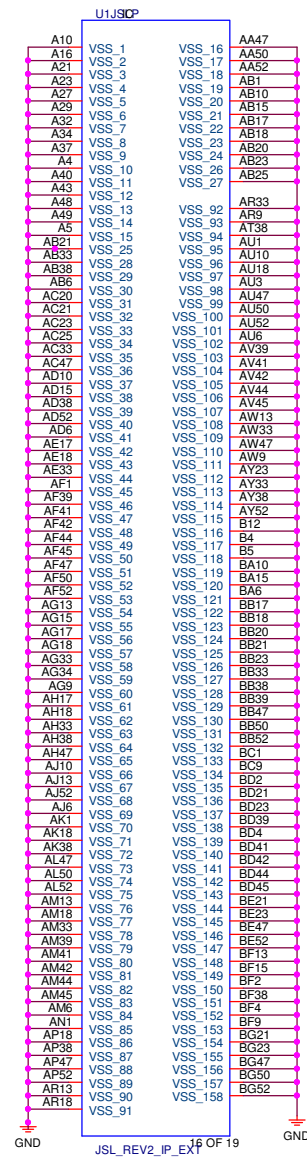
6L TOP SIDE
1 X 0402_1UF
1 X 0402_0.1UF

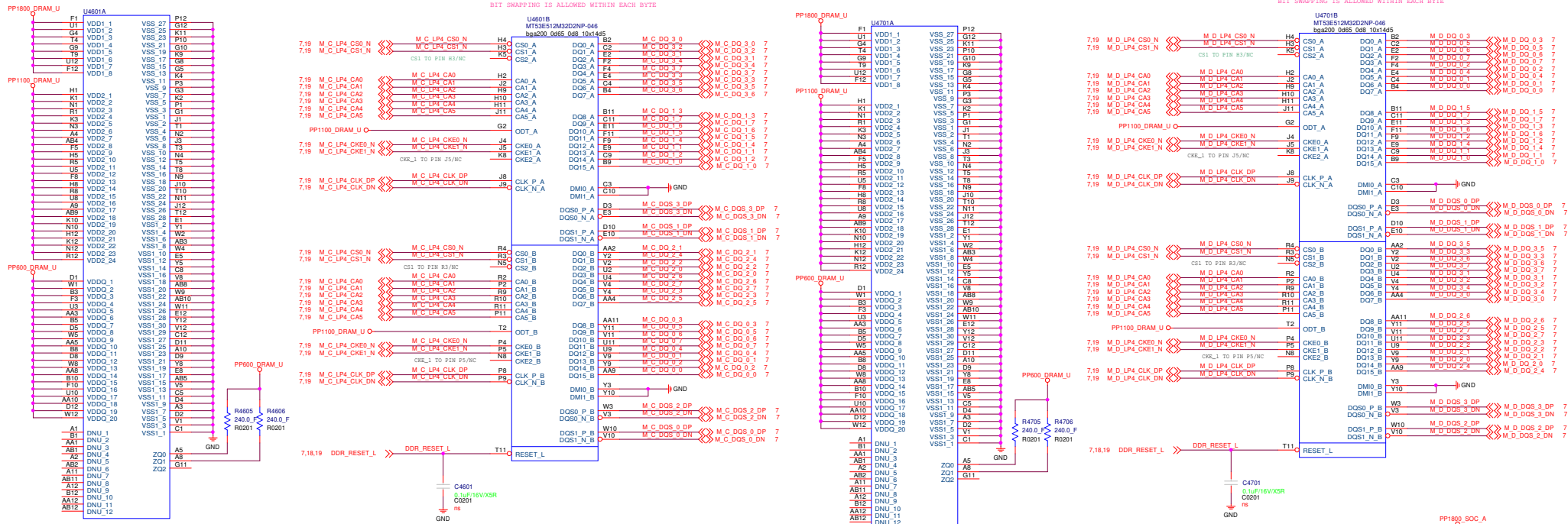


RVP TOP SIDE

1 X 0402_1UF (PLACE HOLDER)

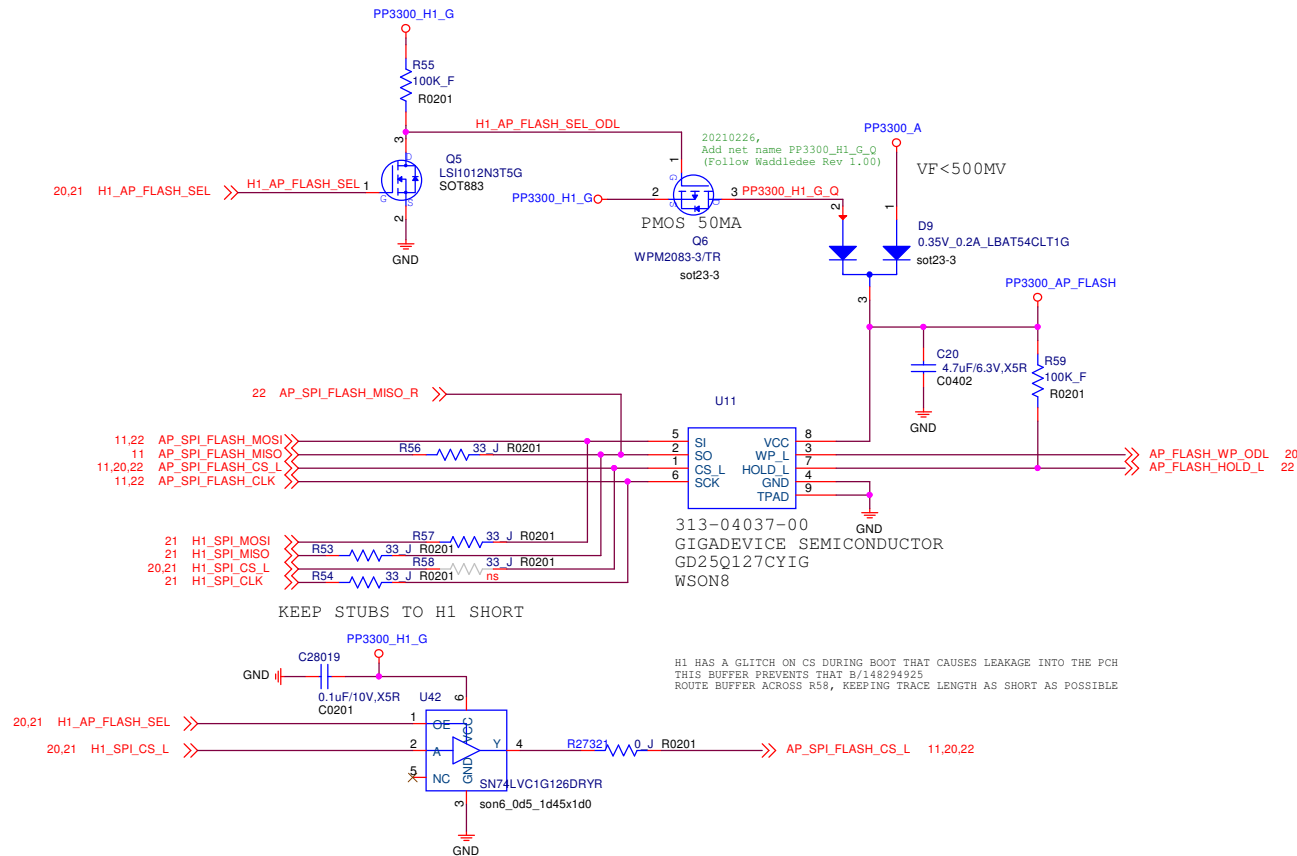
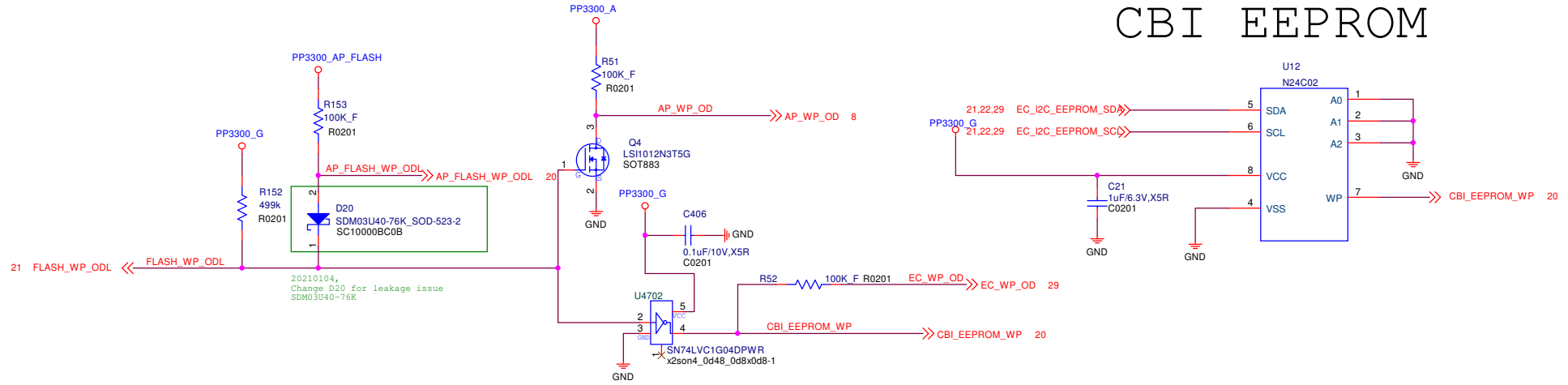


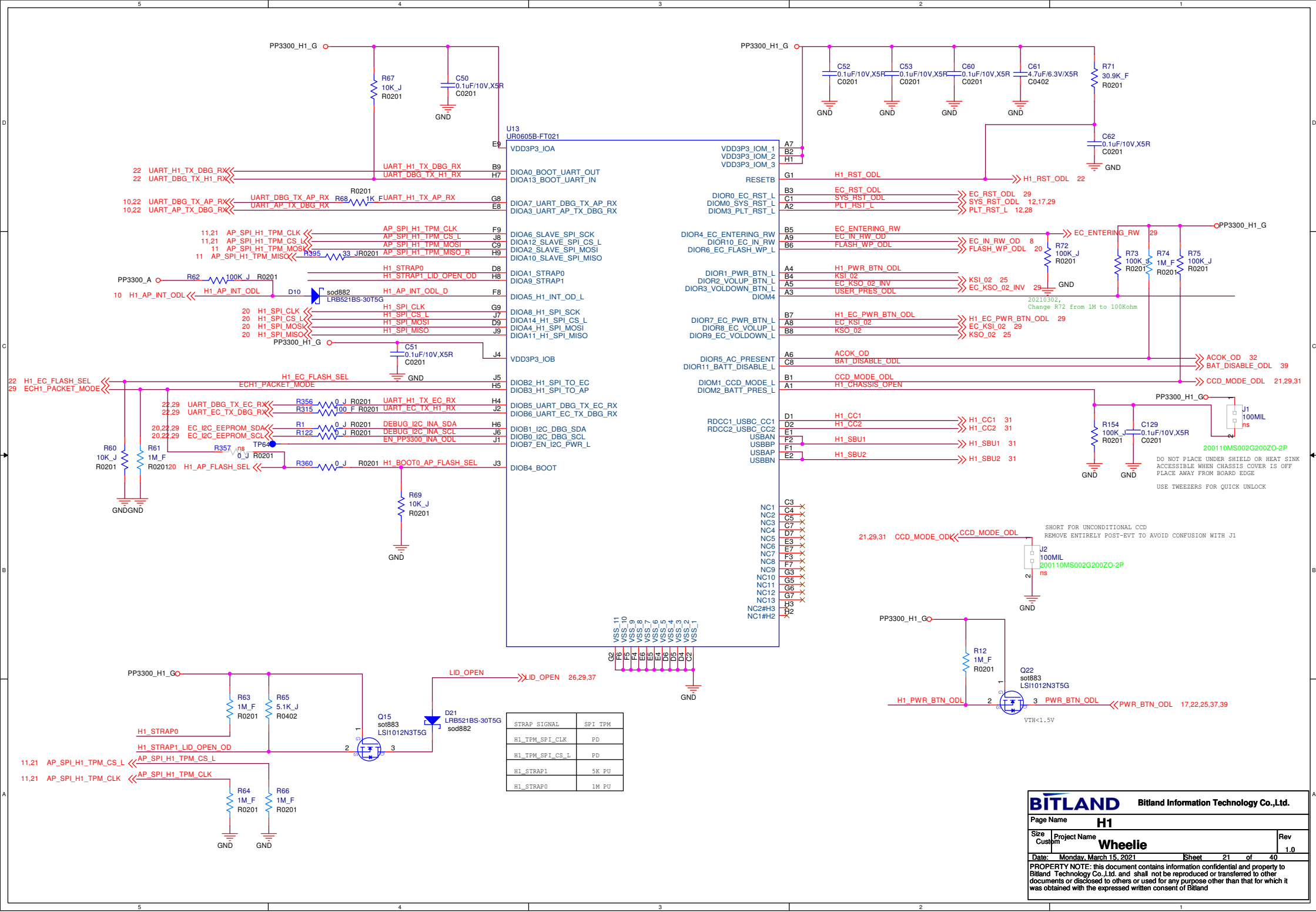


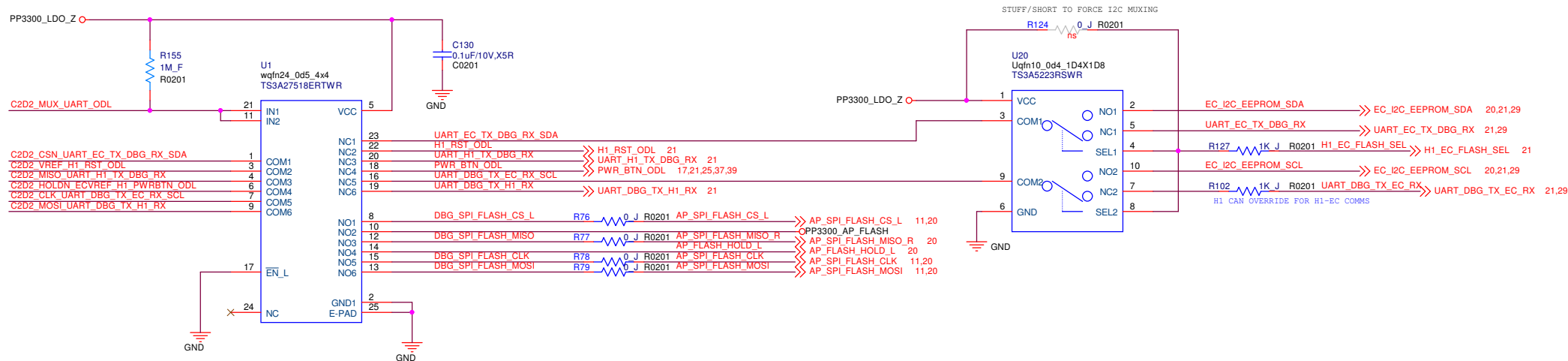
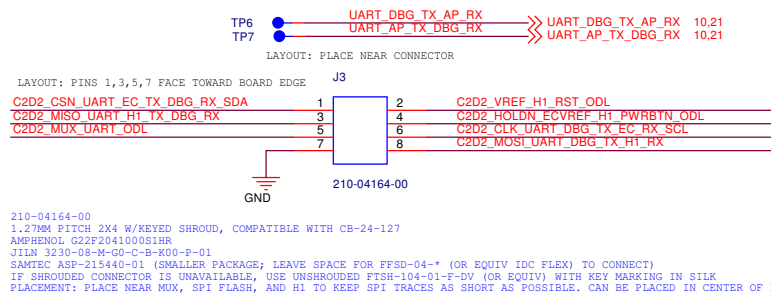


WP TREE

CBI EEPROM

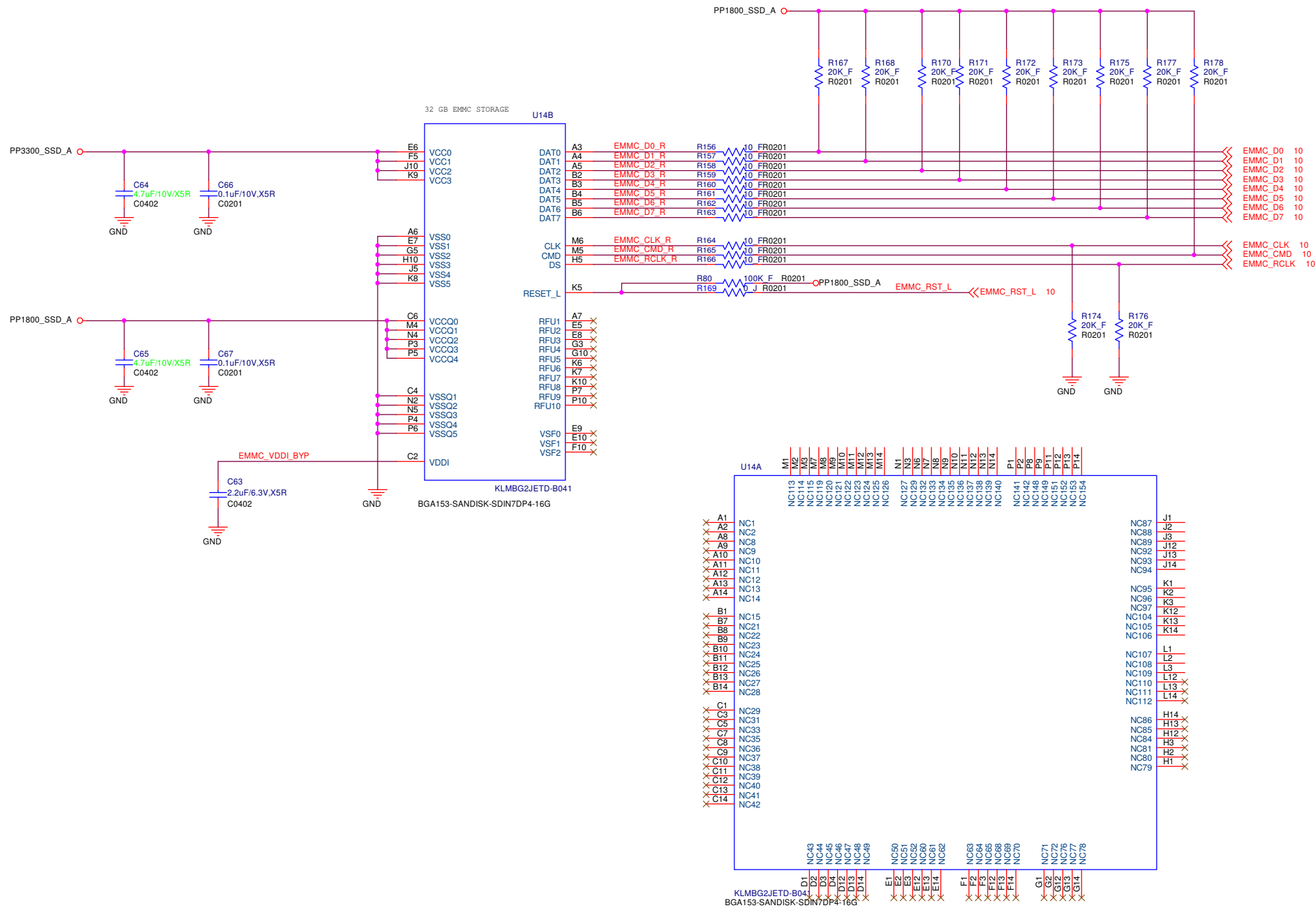


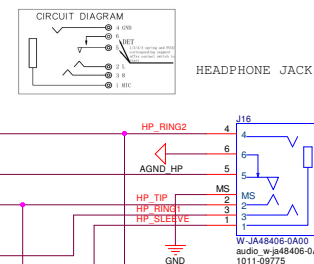
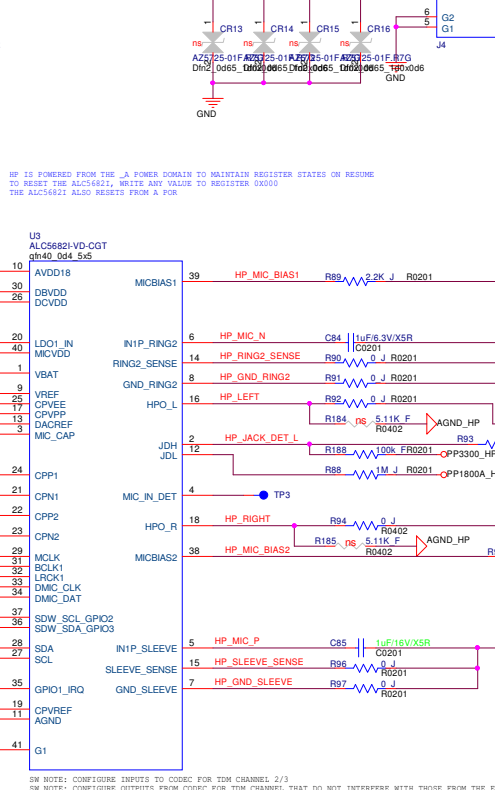
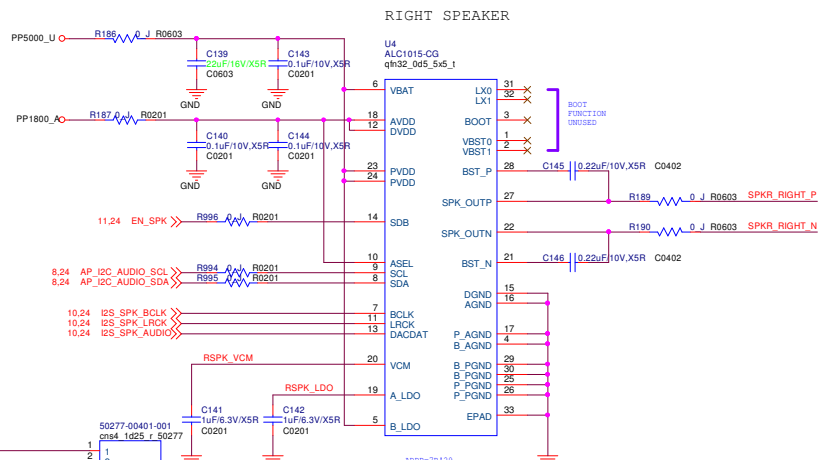




FOR SYSTEMS WITH I2C-FLASHED ECS, WHERE H1_VDDIOM=H1_VDDIOA=H1_VDDIOB=3.3V
SYSTEMS WITH SPI- OR UART-FLASHED ECS DO NOT REQUIRE THE EXTRA MUXING BASED ON H1_EC_FLASH_SEL
SYSTEMS WITH H1_VDDIOA!=3.3V NEED LEVEL SHIFTING ON H1_RST_ODL
SYSTEMS WITH H1_VDDIOB!=3.3V NEED LEVEL SHIFTING ON PWR_BTN_ODL

www.teknisi-indonesia.com





```
ROUTE SENSE SIGNALS CLOSE TO JACK CONNECTOR
ROUTE HP_SLEEVE AND HP_SLEEVE_SENSE DIFFERENTIALLY
ROUTE HP_RING2 AND HP_RING2_SENSE DIFFERENTIALLY
```

SW NOTE: CONFIGURE INPUTS TO CODEC FOR TDM CHANNEL 2/3

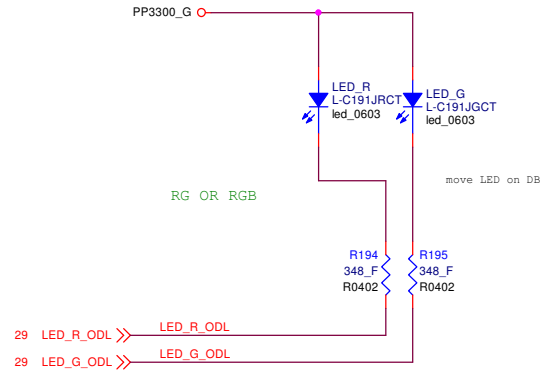
ADDR=7B'1A

BUTTONS (IF ON DB)

Remove button and put them on DB

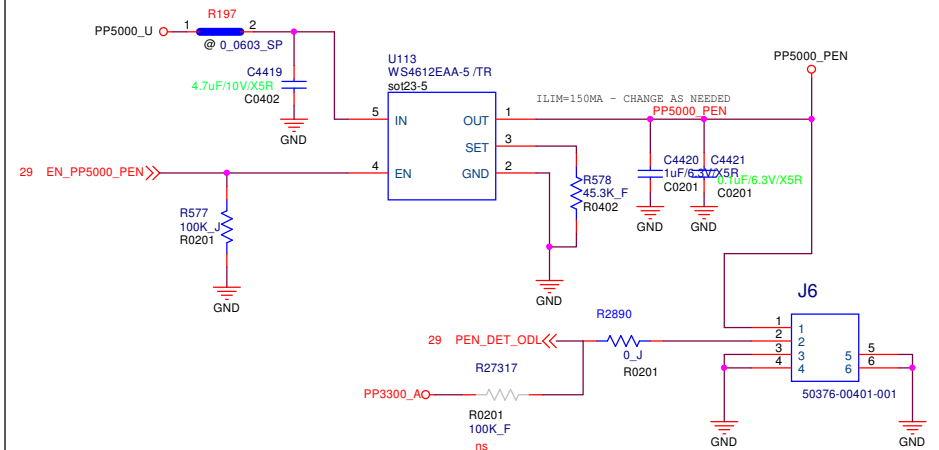
LEDS

ADJUST RESISTORS TO MATCH SELECTED LED

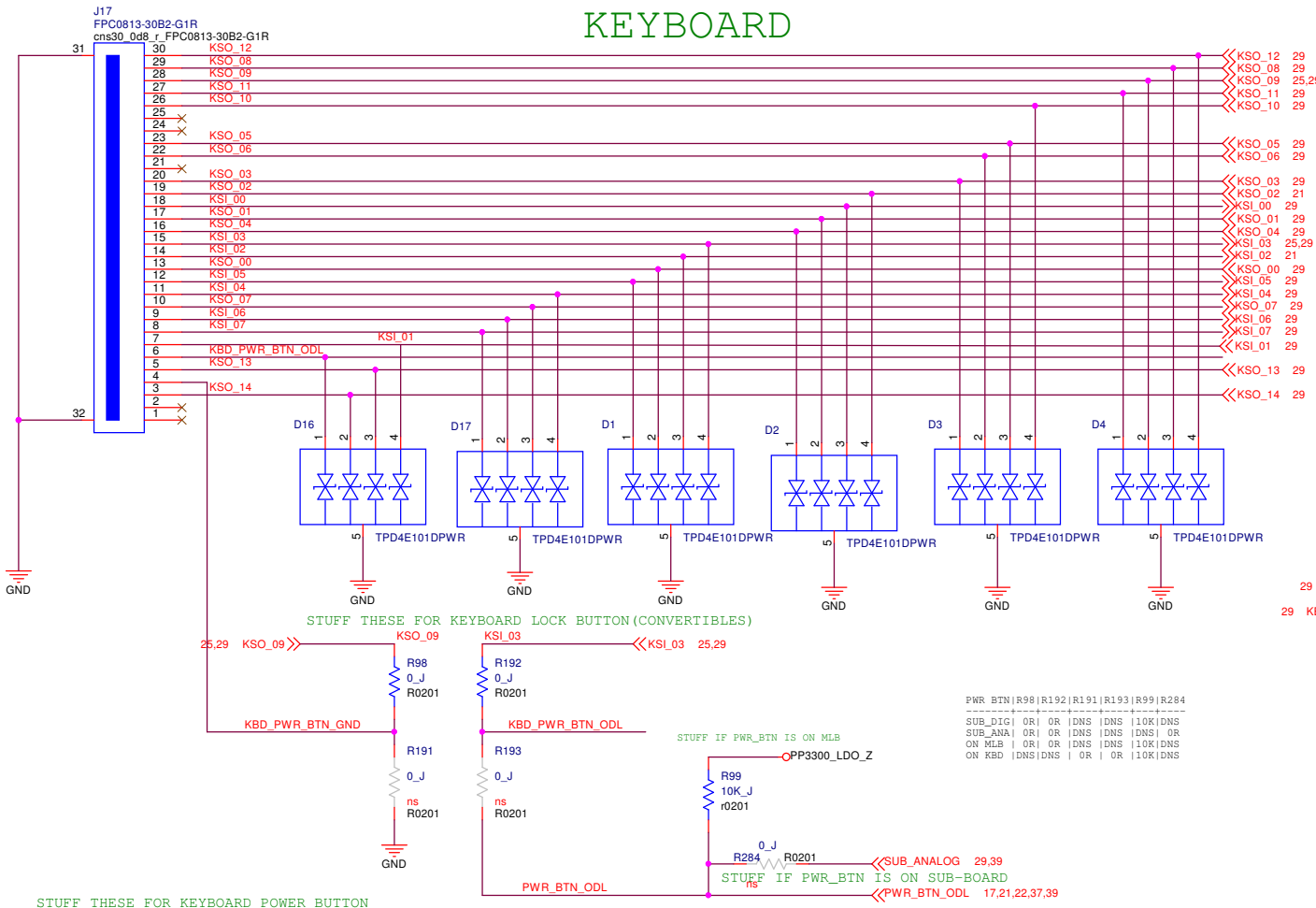


PEN GARAGE

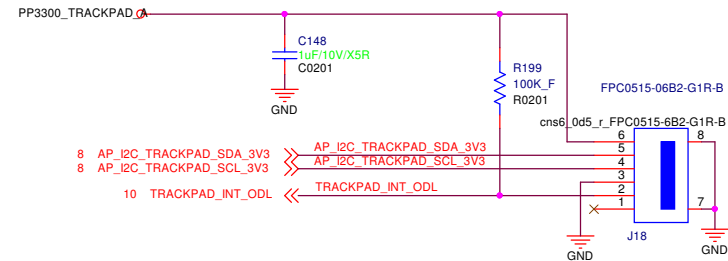
TODO:FIGURE OUT THE CHARGING/DETECT CIRCUIT



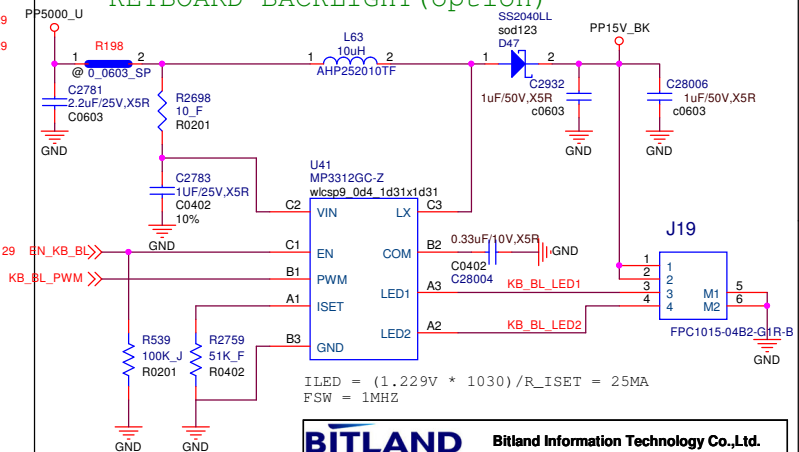
KEYBOARD

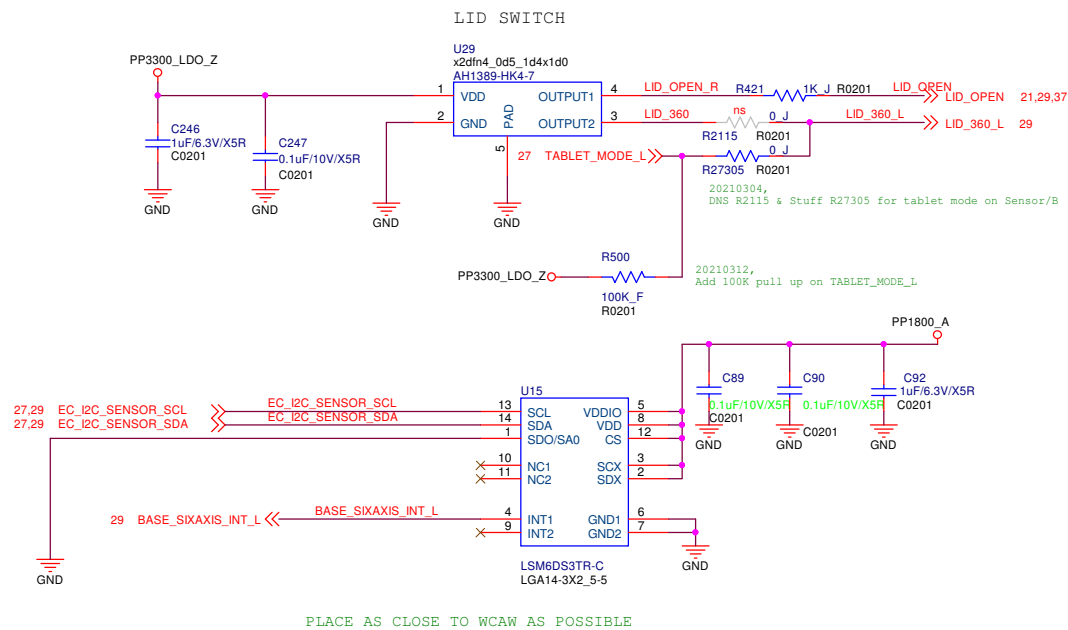


TRACKPAD



KEYBOARD BACKLIGHT (option)





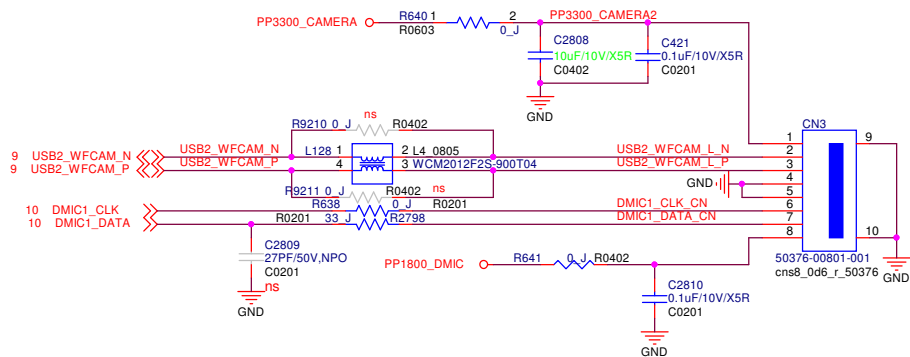
LID-SENSOR (GMR)

Only place one sensor
Clamshells use Single output sensor
Convertibles use Dual output sensor

20201214A,
Delete APX8132HAI-TRG

www.teknisi-indonesia.com

WCM change mipi to USB



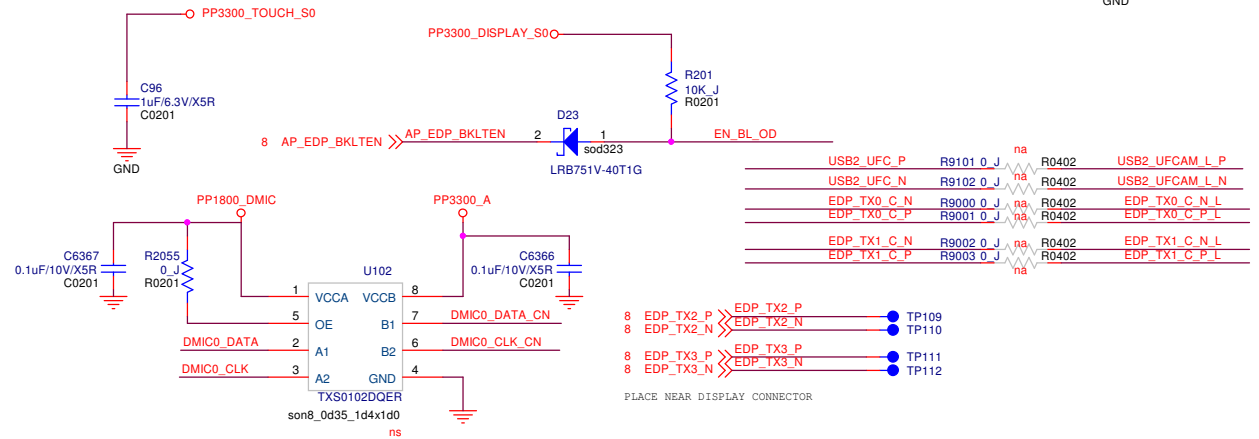
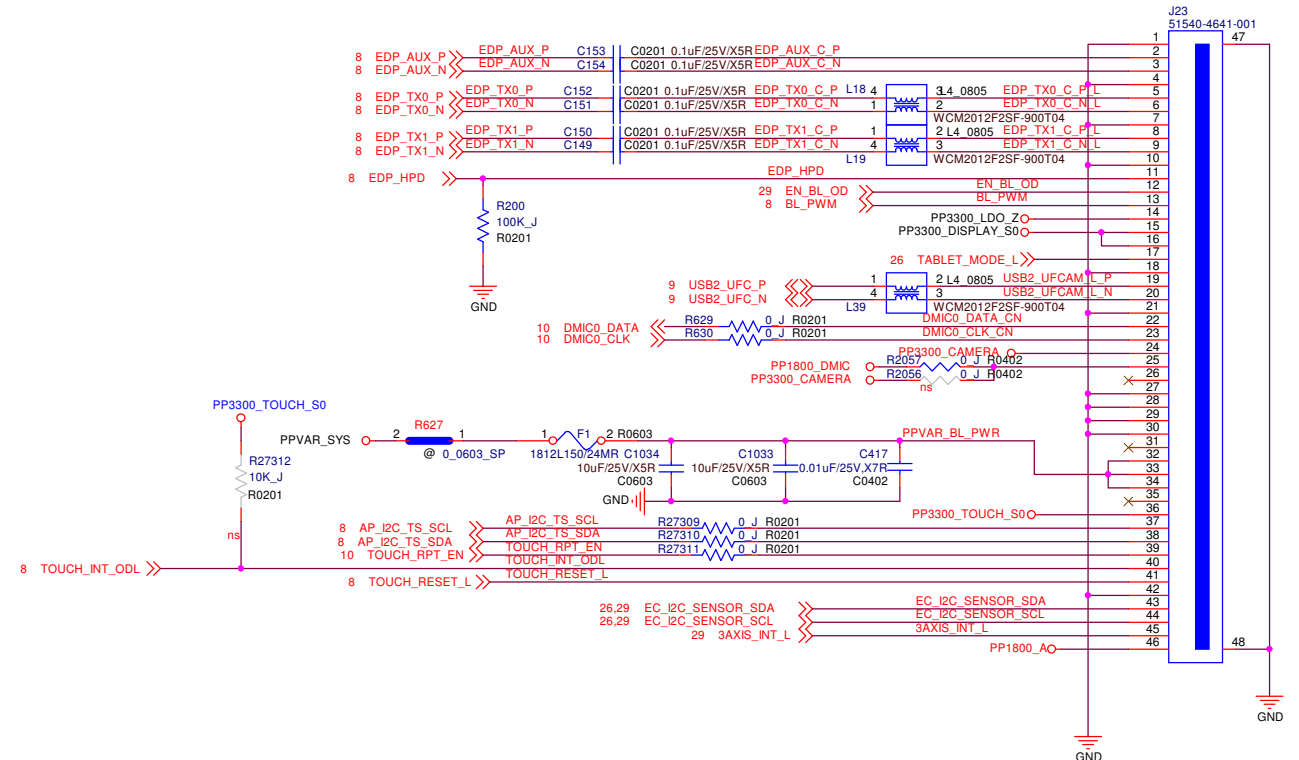
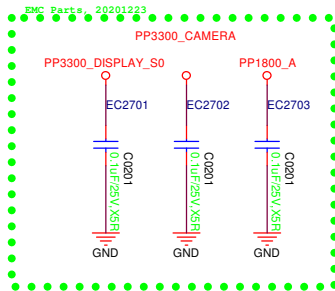
USER-FACING CAMERA
ADDRESS =0X??
PLACEHOLDER/CONNECTOR DOESN'T MATCH ANYTHING

DISPLAY CONNECTOR GO HERE
PLACEHOLDER CONNECTOR

Delete mipi for UFC.

Delete EMR

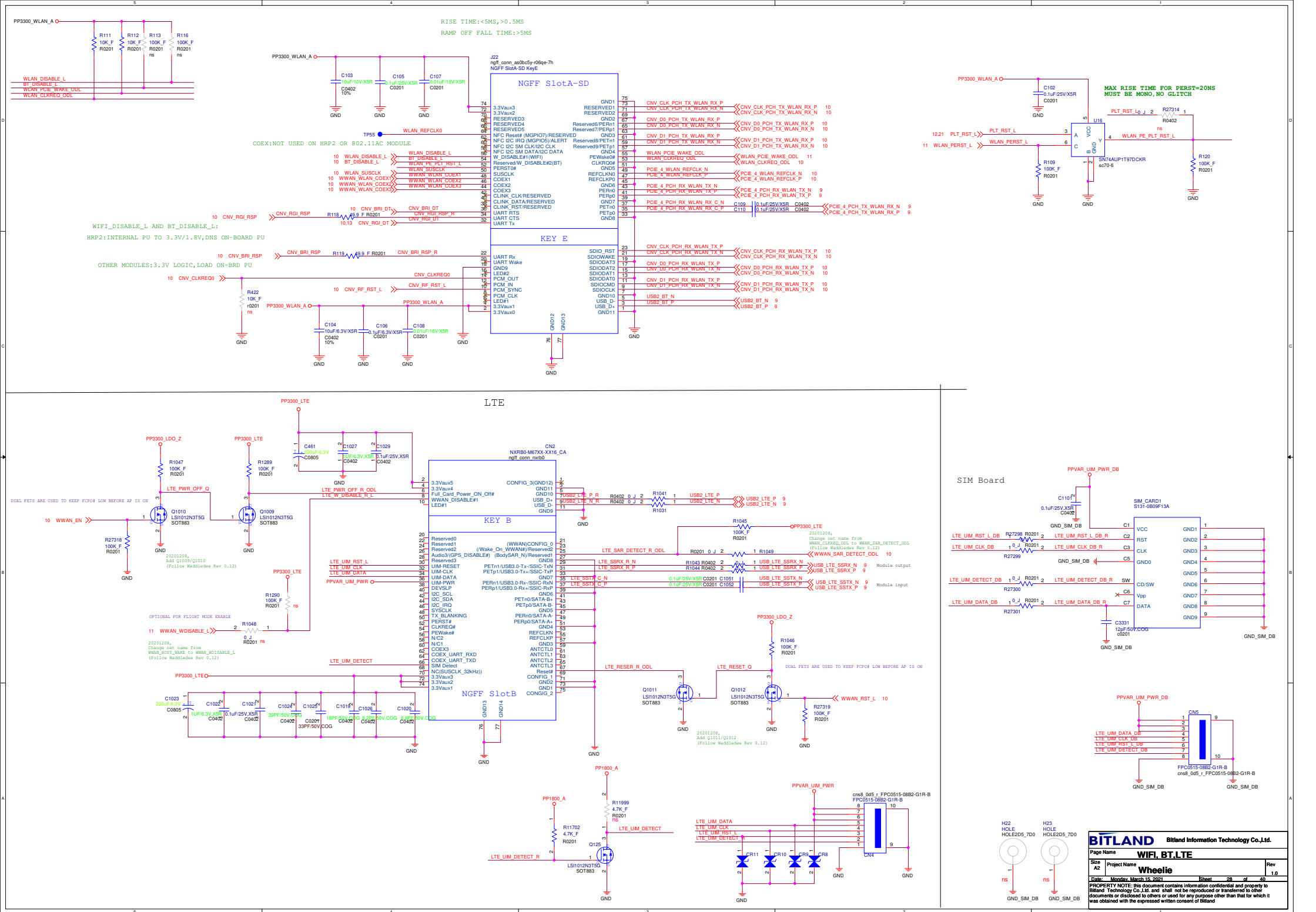
Remove Touchscreen and put it on EDP connector

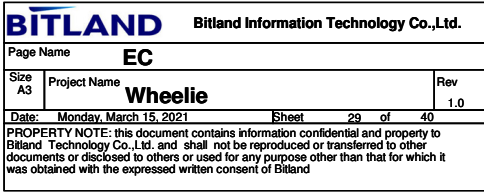


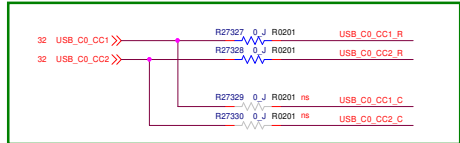
DMIC level shift for 1.8V and 3.3V

20201208,
Swap U102 A/B net

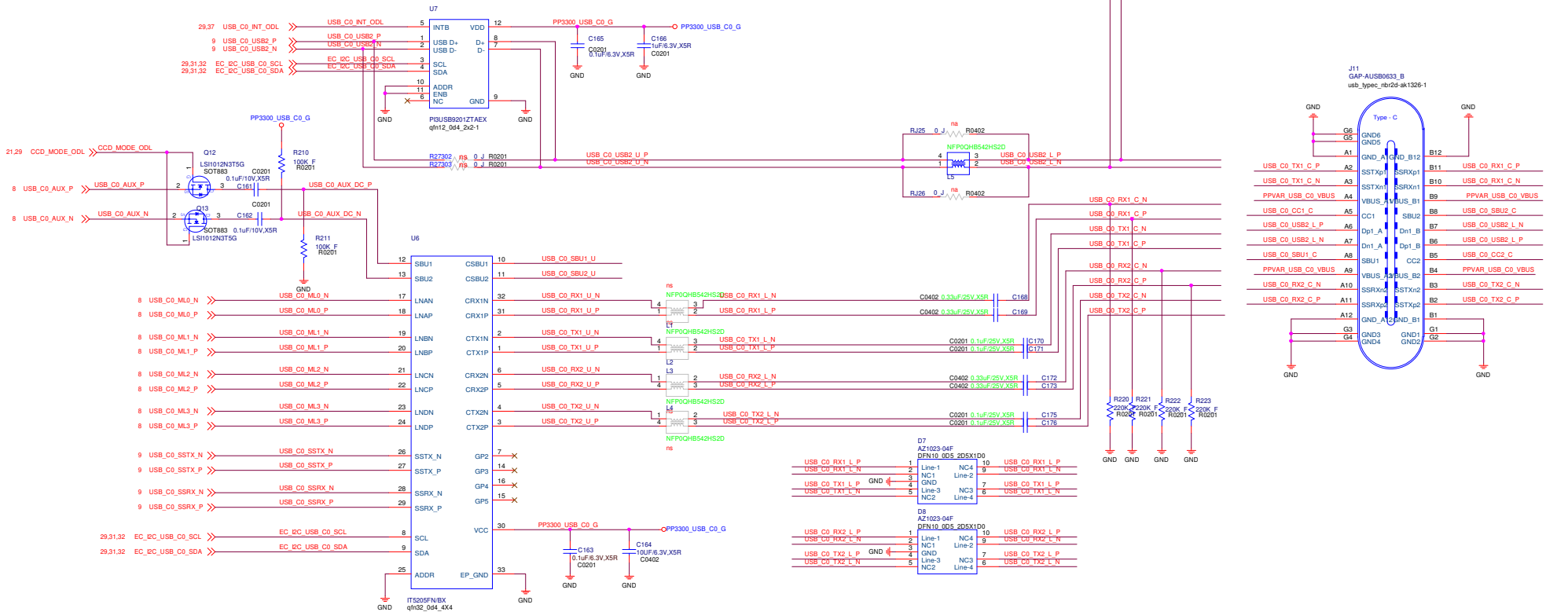
20201209,
Swap Pin 2/3, Pin 6/7 net

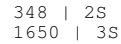




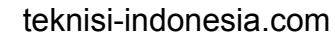
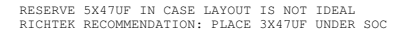


20210104,
Add 0 ohm for CC protection

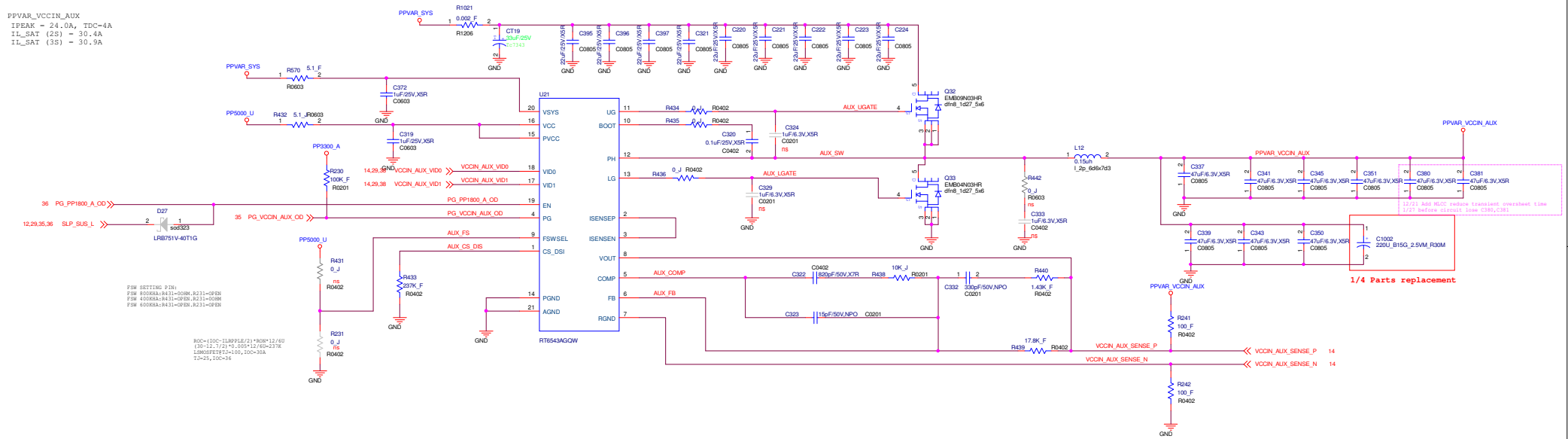




35A PEAK, 10A TDC
IL_SAT (2S) = 41.4A
IL_SAT (3S) = 41.9A
DCLL = 0.002 OHM



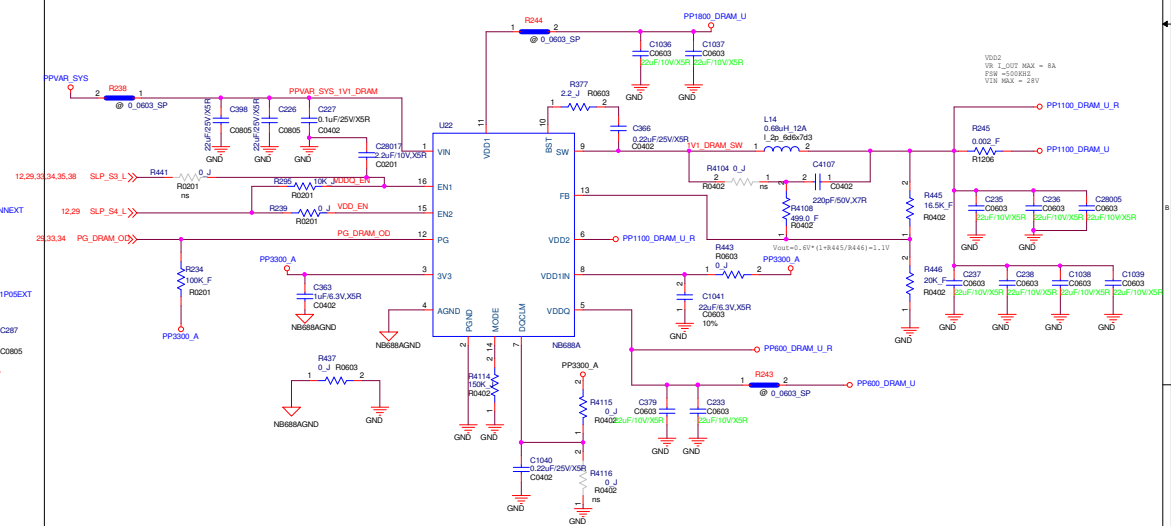
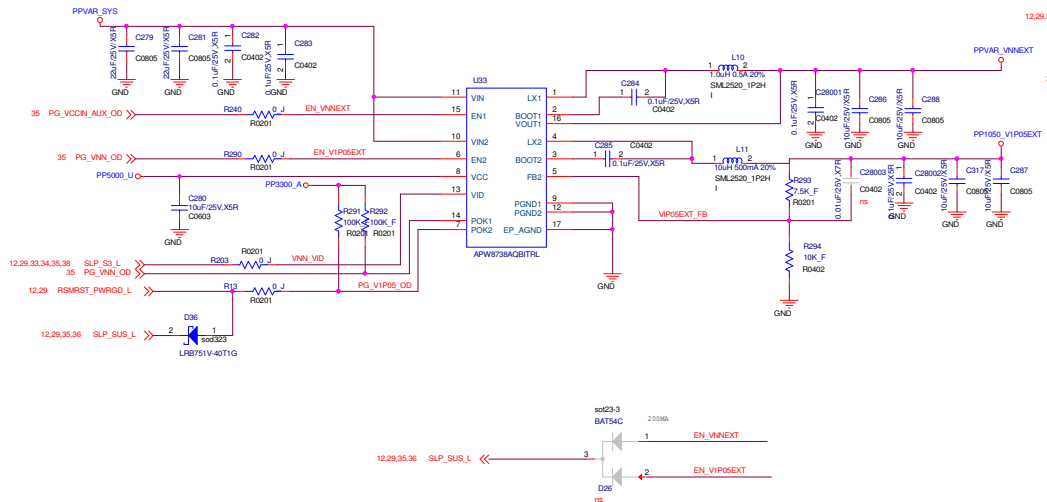
```
PFVAR_VCCIN_AUX
IPEAK = 24.0A, TDC-4A
IL_SAT (2S) = 30.4A
IL_SAT (3S) = 30.9A
```



PPVAR_VNNEXT & PP1050_V1P05EXT BYPASS RAILS

```
IMAX = 0.5A
IL_SAT (2S/3S) = 1A
FSW = 800KHZ
```

```
IMAX = 0.5A
IL_SAT (2S/3S) = 0.6A
FSW = 800KHZ
```

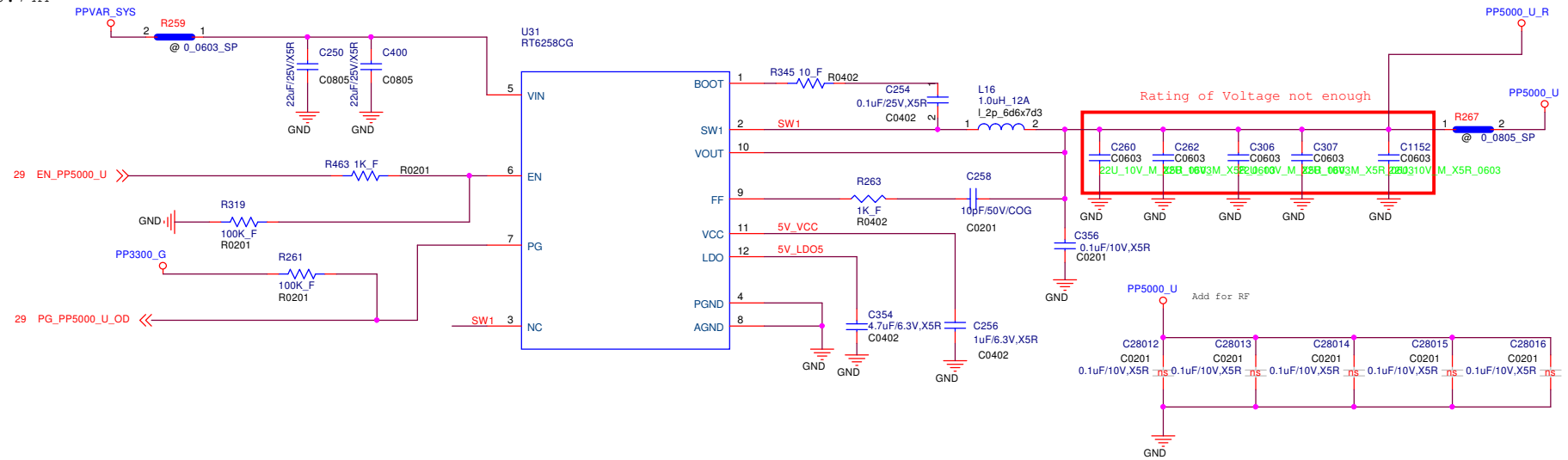


Mode Selection			
State	USB	Frequency	Resistor to GND
H1	NO	700KHz	0 ohm
H2	YES	700KHz	90k ohm
H3	NO	500KHz	150k ohm

ILIMIT_SOURCE	VDDQ Ilimit
DQCLM = 0	1.5A
DQCLM = 3.3V	2.5A

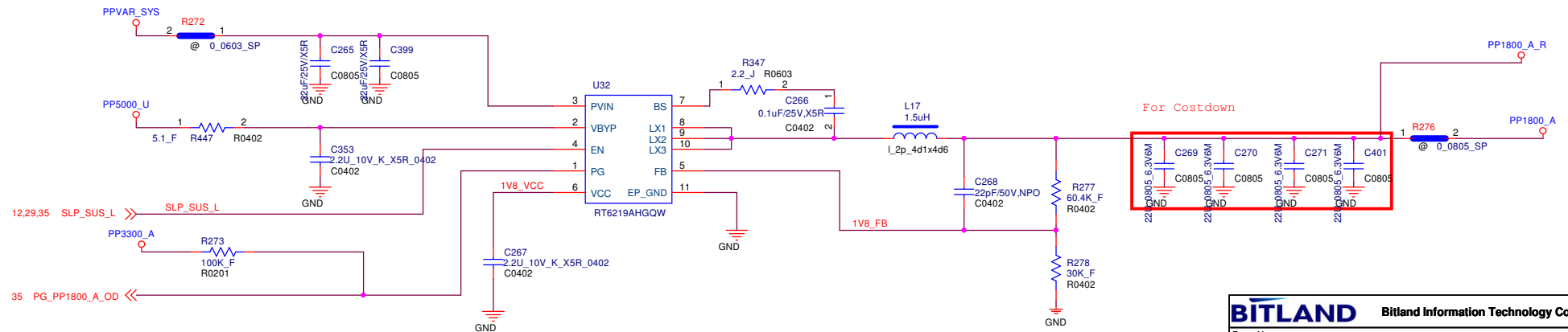
PP5000_U

PEAK CURRENT: 3.3A
IL_SAT (2S): 4.99A
IL_SAT (3S): 5.74A



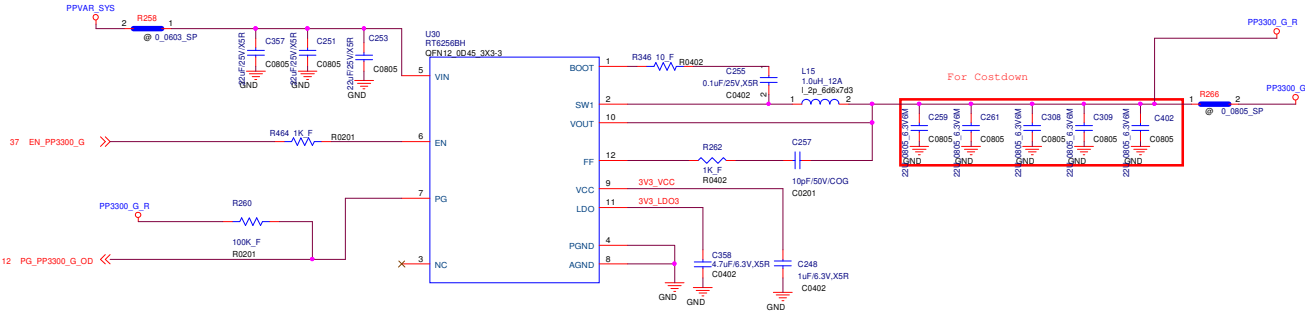
PP1800_A

PEAK CURRENT: 2.94A
IL_SAT (2S): 4.06A
IL_SAT (3S): 4.16A



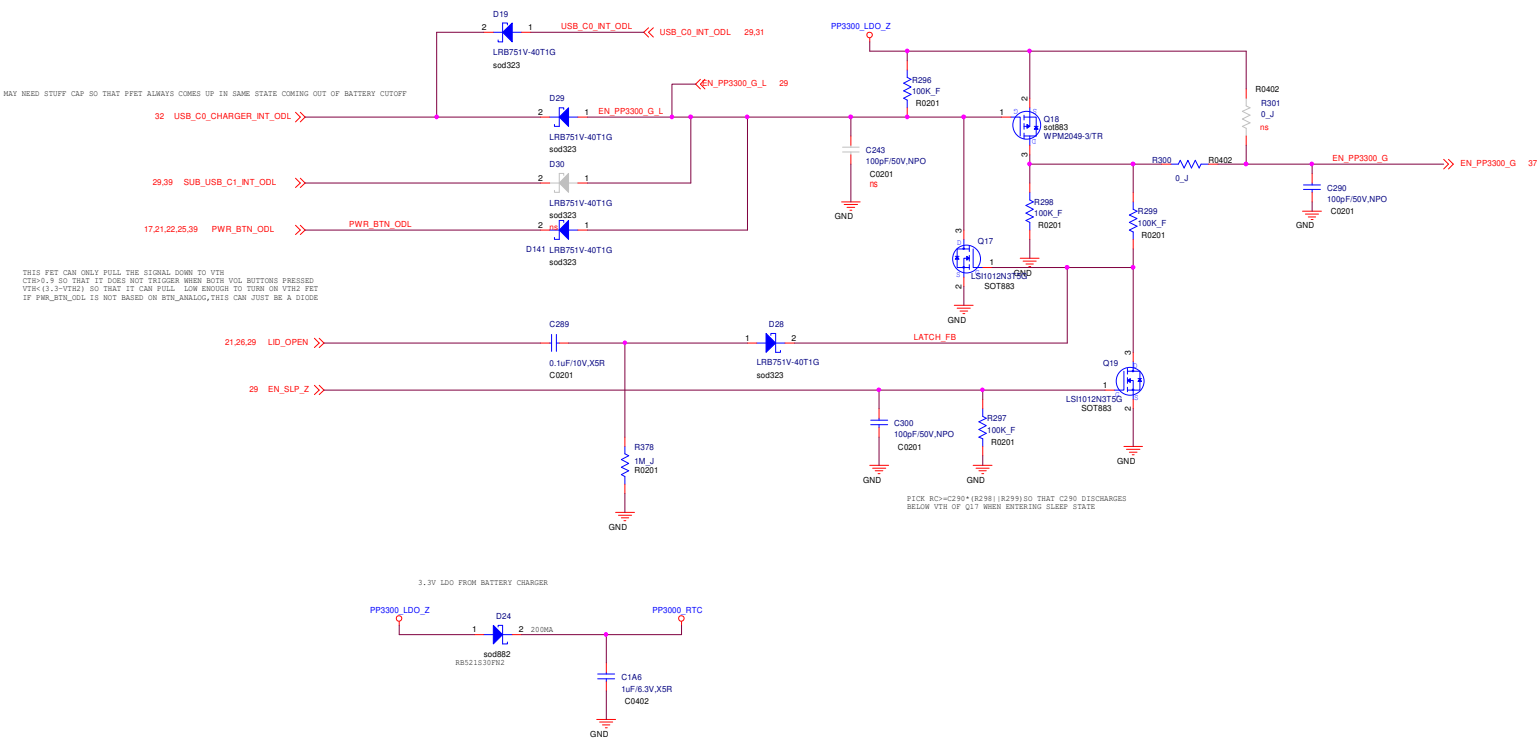
PP3300_G

PEAK CURRENT: 4.06A
IL_SAT (2S): 6.47A
IL_SAT (3S): 6.96A

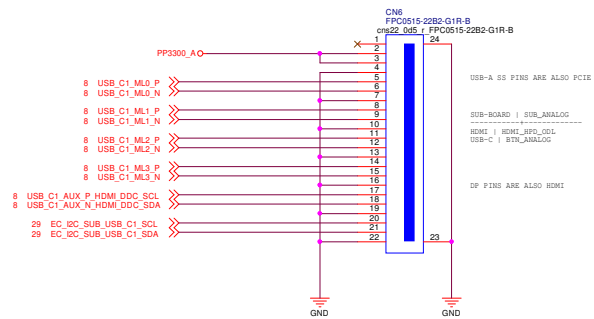
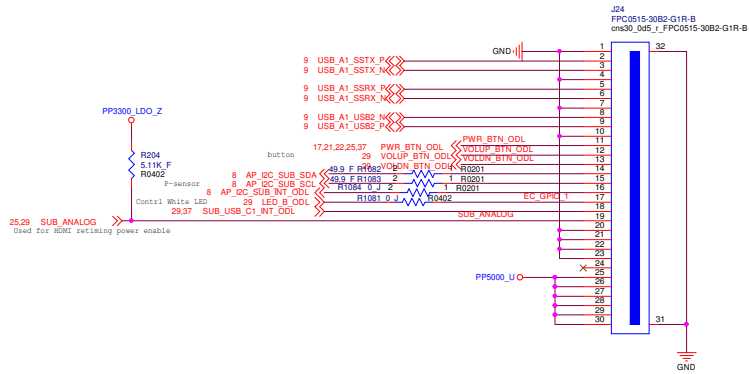


Z SLEEP STATE LOGIC

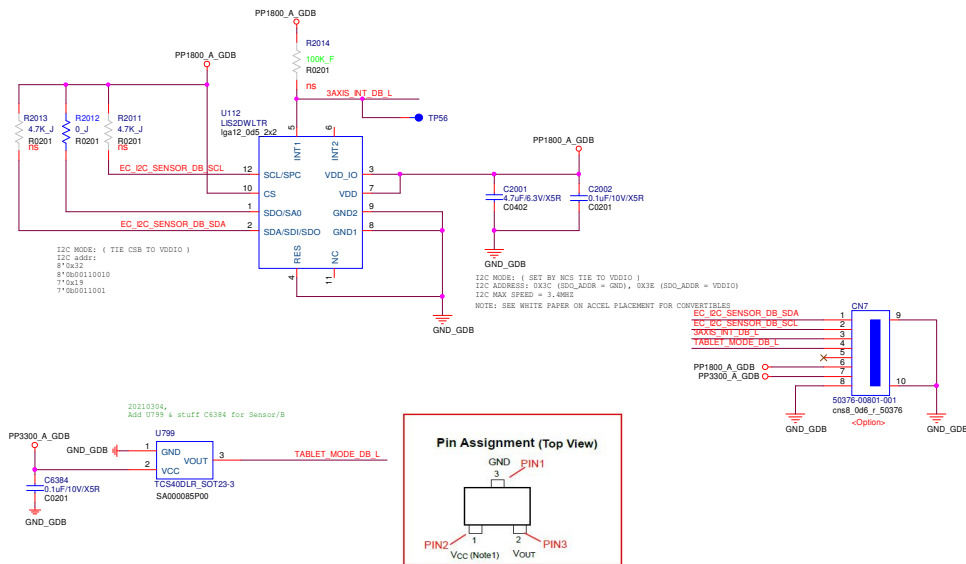
SUPER LOW POWER STATE WITH ONLY AP RTC ON. WAKES FROM PWR BTN, LIT USB-C EVENT



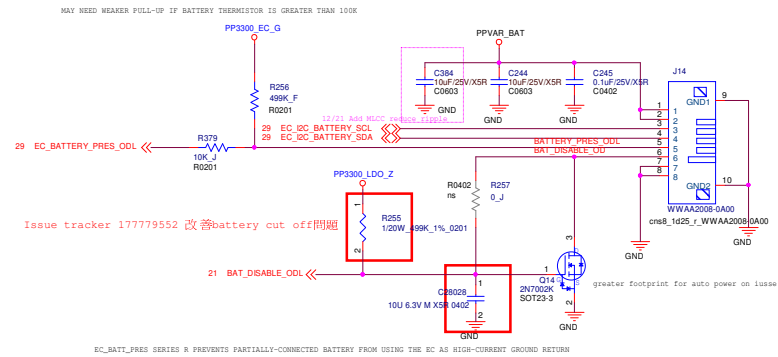
DETACH OR DISABLE BATTERY WHEN SWAPPING SUB-BOARDS



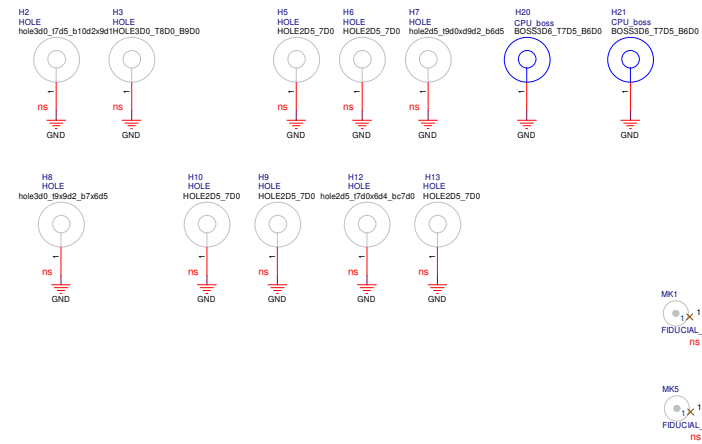
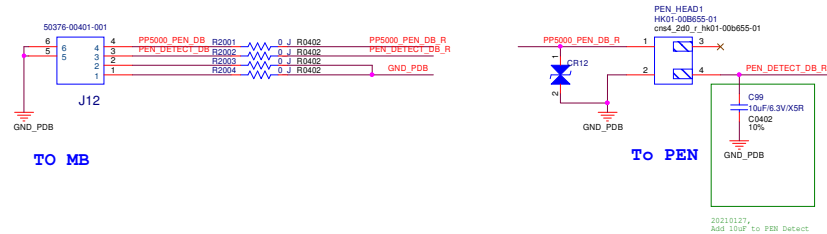
G-sensor DB (Same as Treeya solution)



SMART BATTERY



PEN Charging DB



BITLAND		Bitland Information Technology Co.,Ltd.	
Page Name		SUB-BOARD CONNECTORS	
Size A2	Project Name	Wheeie	Rev 1.0
Date:	Monday, March 15, 2021	Sheet	39 of 40

PROPERTY NOTE: this document contains information confidential and proprietary to Bitland Technology Co.,Ltd. and shall not be reproduced or transferred to other documents or disclosed to others or used for any purpose other than that for which it was obtained with the expressed written consent of Bitland

