Wistron Confidential

Silverton / SilverOak

2014-12-09

REV : 0 (X-build)

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Title	01_Cover	
Size A3	Document Number SILVERTON/SILVEROAK	Rev 0
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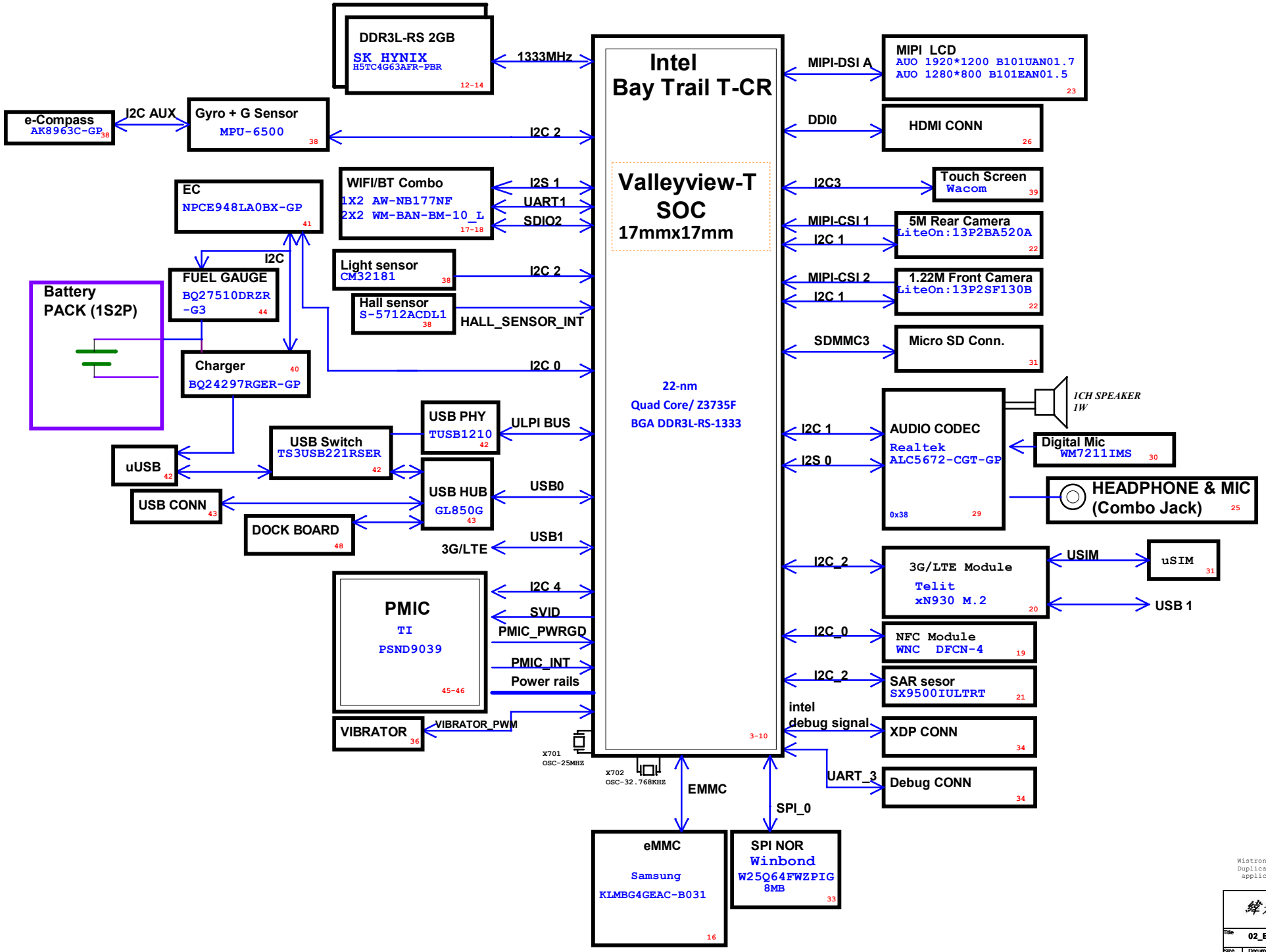
Project Name: Silverton
Project Code: 4PD03P010001
PCB No: 14238

Block Diagram



System Power PMIC PSND9039	
INPUTS	OUTPUTS
+VSYS	+V_VNN +V_VCC +VDDQ +V1P0SX +V1P0A +V1P8A +V3P3A_PMIC +V2P85S +VRTC +AVDD_CAM +V1P8_Rear V1P8SX_2 +V3P3A_TP +VSDIO +VSD +V3P3A LCM_VDD_3V3
+V1P8A	+V1P2Sx +V1P2A

RT9040GQW-2-GP	
INPUTS	OUTPUTS
+VDDQ	+VDDQ_VTT

CHARGER BQ24297	
INPUTS	OUTPUTS
5V / VBAT	+VSYS

5V BOOST SY7066QMC-GP	
INPUTS	OUTPUTS
+VSYS	+V5P0_BOOST

3V3 BUCK SY8010ZDEC-GP	
INPUTS	OUTPUTS
+VSYS	+3V3_A

PCB LAYER LDI 8L	
L1:Top	L5:Signal
L2:GND	L6:Signal
L3:Signal	L7:GND
L4:GND	L8:Bottom

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Title: 02_Block Diagram
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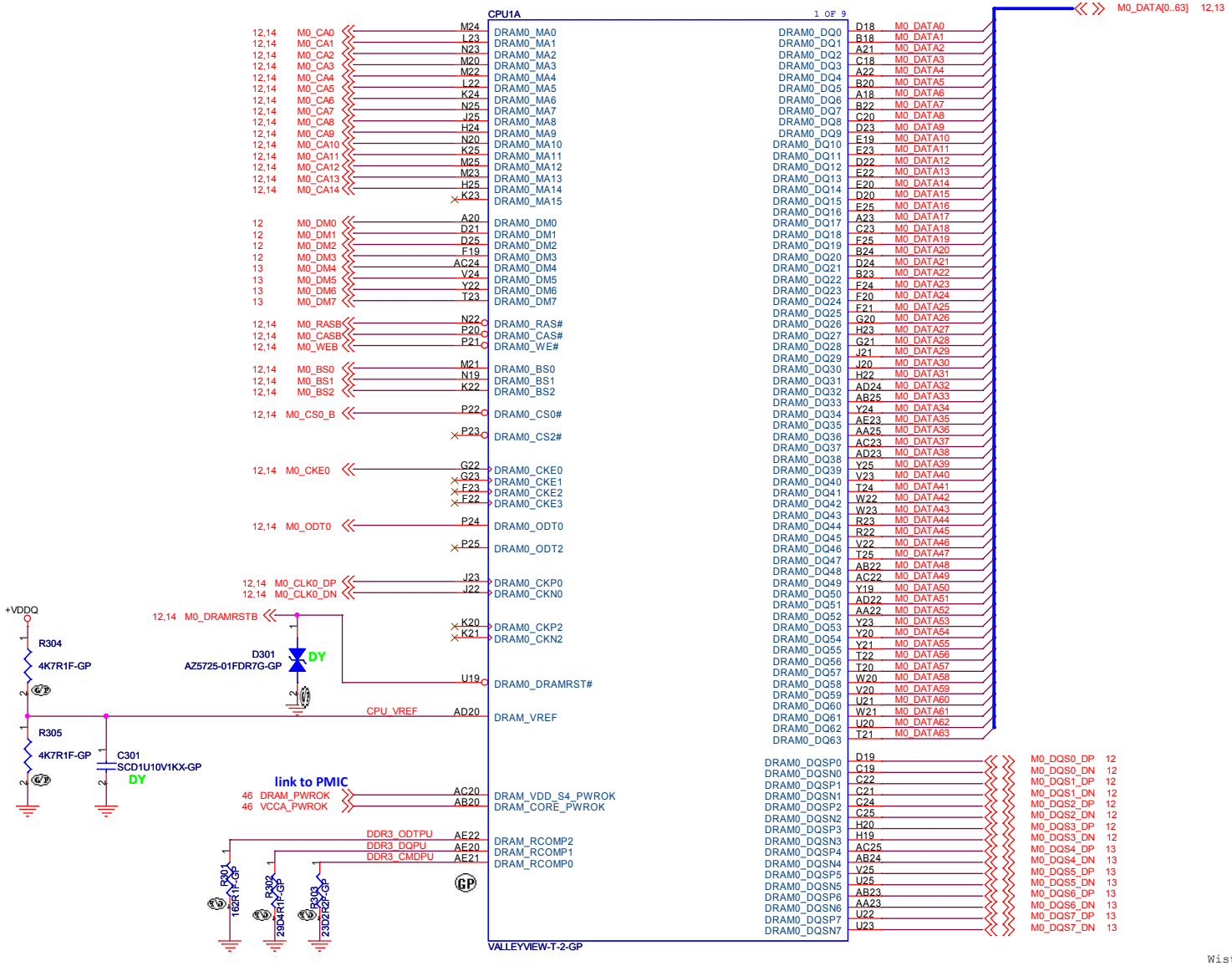
SOC MEM SECTION : 1&2



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Title	03_CPU (LPDDR3)	
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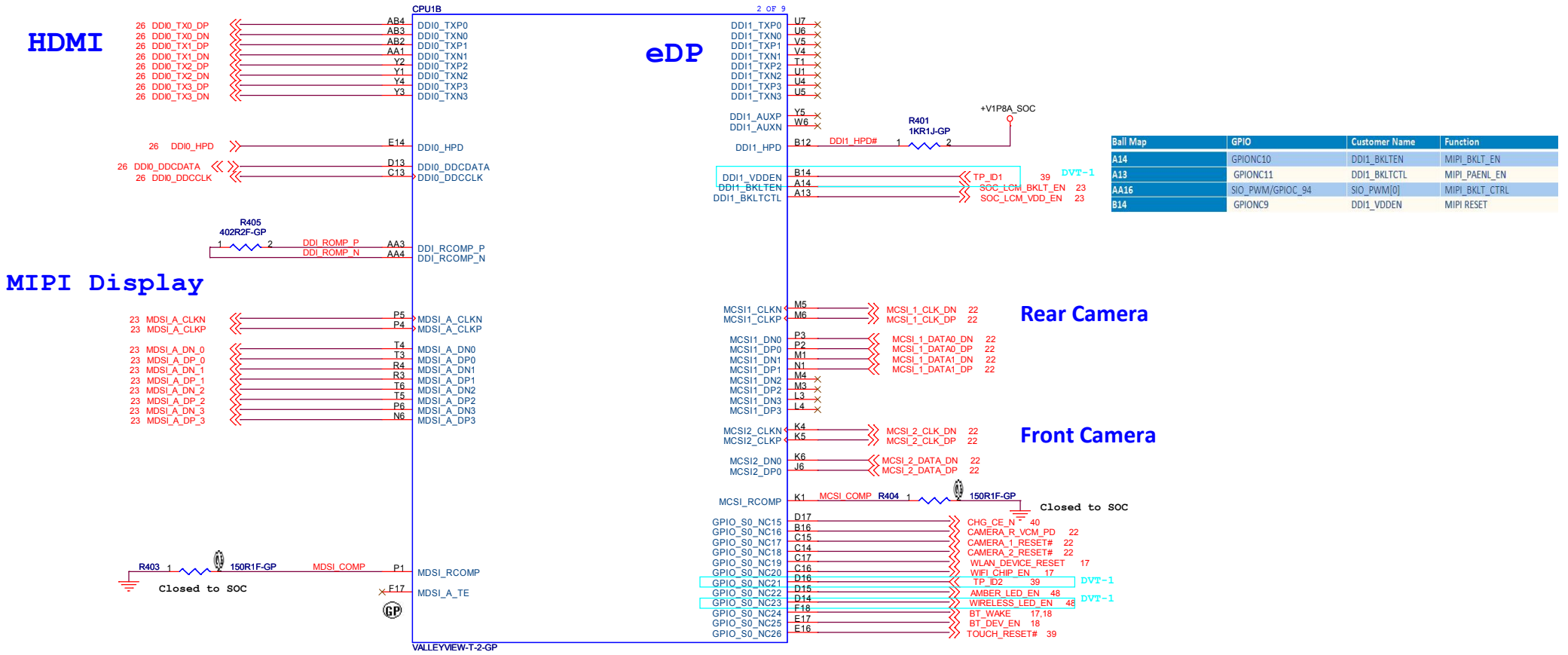
SOC : DDI 0&1 / MIPI-DIS/MIPI-CSI/MIPI-GPIO



Ball Map	GPIO	Customer Name	Function
A14	GPIONC10	DDI1_BKLTEN	MIPI_BKLT_EN
A13	GPIONC11	DDI1_BKLTCTL	MIPI_PAENL_EN
AA16	SIO_PWM/GPIOC_94	SIO_PWM[0]	MIPI_BKLT_CTRL
B14	GPIONC9	DDI1_VDDEN	MIPI RESET

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Title	04_CPU (eDP/HDMI/MIPI)	
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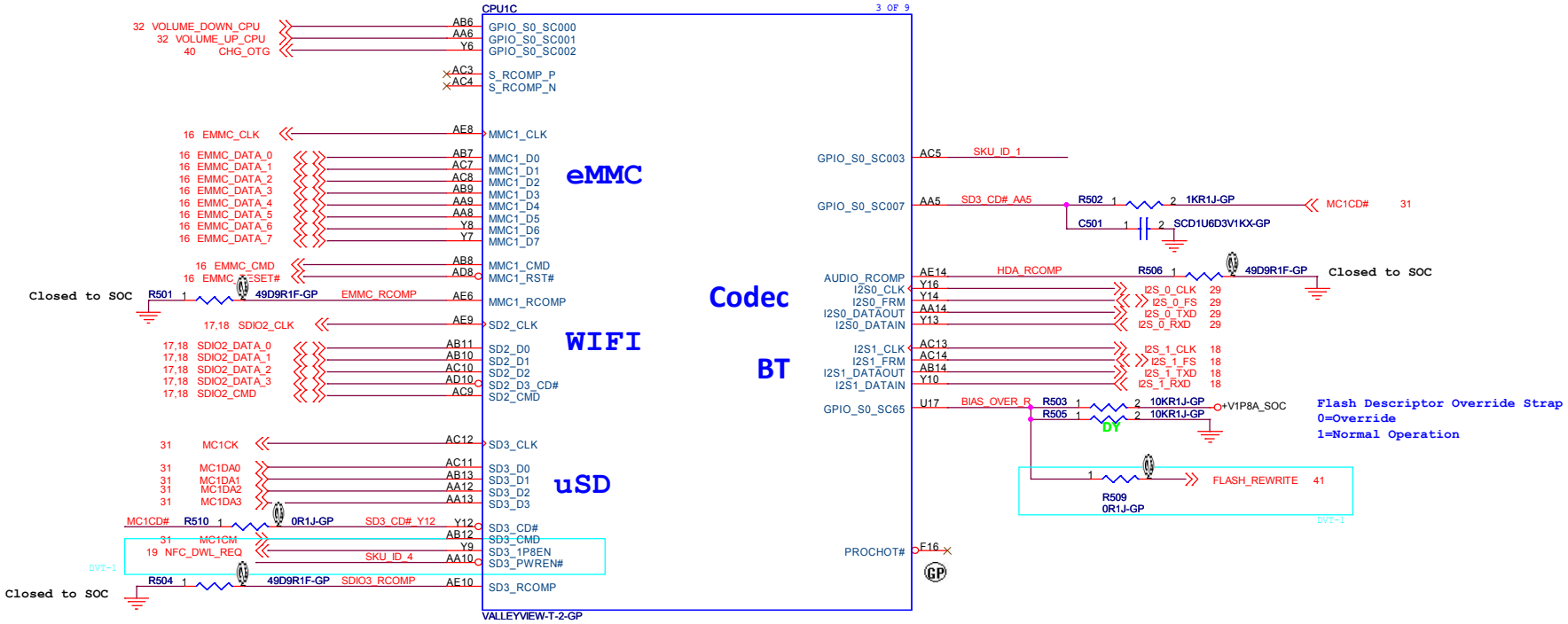
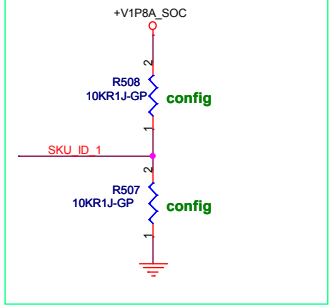
SOC : eMMC/SD/GPIO/I2S

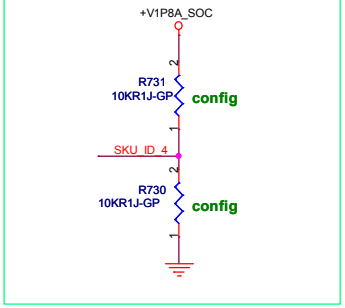


NFC ID (GPIOC_3)
H: with NFC
L: without NFC



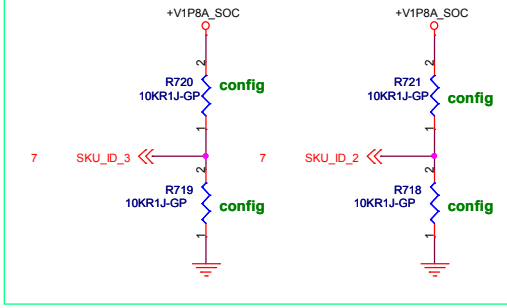
DVT-2

WWAN ID (GPIOC_41)
H: with WWAN
L: without WWAN



DVT-2

EMMC ID1 GPIOC_74 / EMMC ID2 GPIOC_75



DVT-2

Function	GPIO	16G	32G	64G
EMMC_ID1	GPIOC_74	1	0	1
EMMC_ID2	GPIOC_75	0	1	1

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Title	05_CPU (SD/eMMC/AUDIO)	
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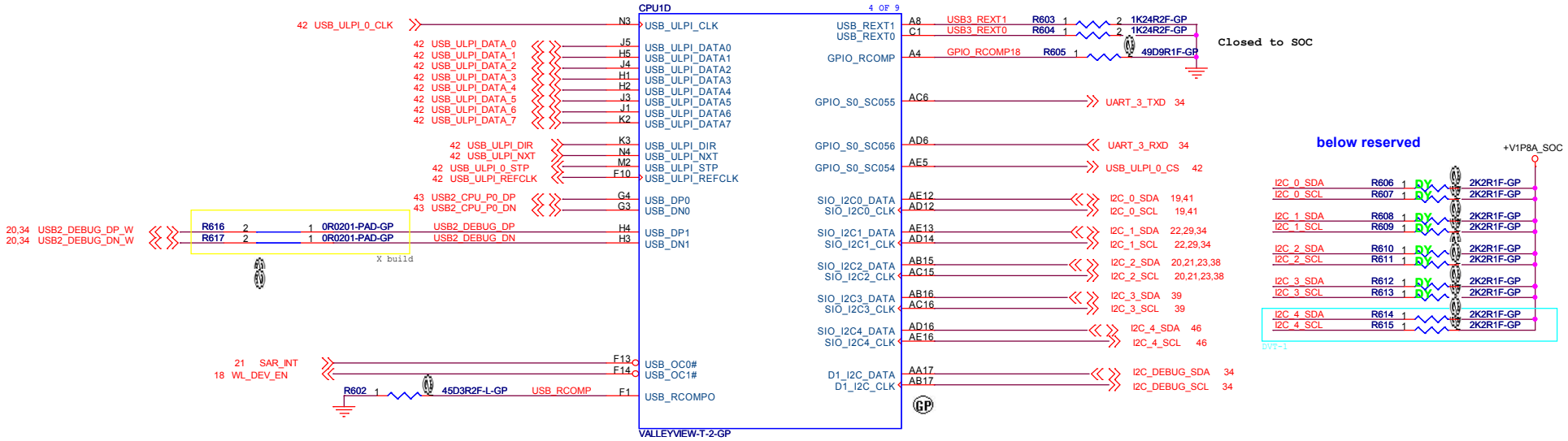
SOC : USB/ULPI/HSIC/LPC/SMBUS/HSI/I2C



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Title: 06_CPU (USB/HSIC/LPC/HIS/I2C)		
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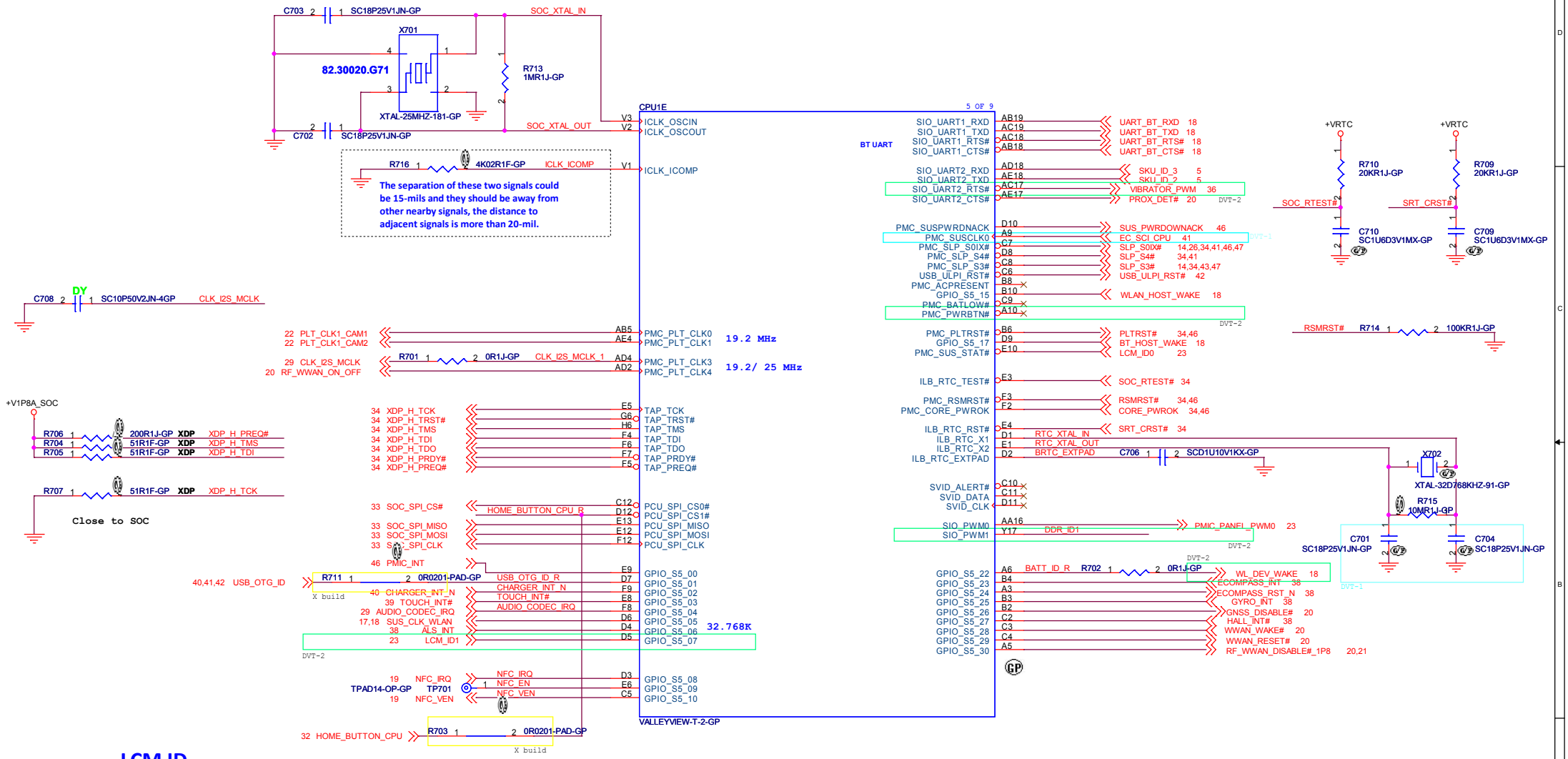
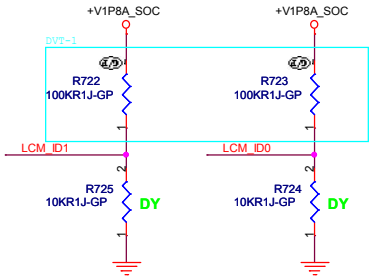
SOC : CLK/ITP/SPI NOR/GPIO SUS/HSUART/PMU/RTC

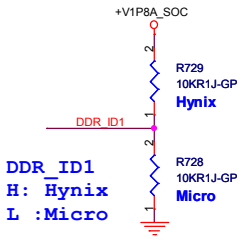


LCM ID



		LCM_ID1	LCM_ID0
		Supplier ID	Resolution ID
		Pin 8	Pin 28
AUO	WXGA	NC	GND
AUO	WUXGA	NC	NC
BOE	WXGA	GND	GND
(To Be Defined)	WUXGA	GND	NC

DDR ID



DDR_ID1
H: Hynix
L :Micro

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Title	07_CPU (CLK/ITP/SPI/MISC/PMU)	
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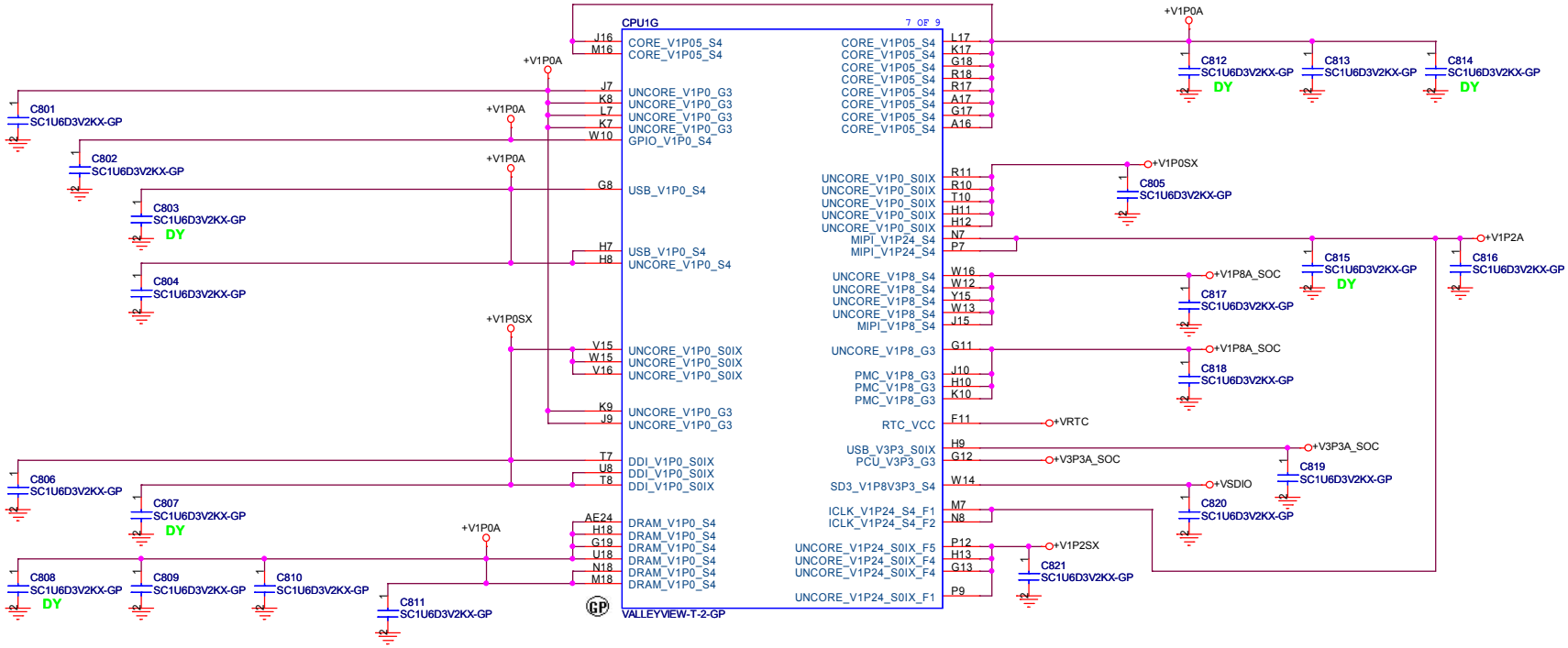
SOC : VCCIO



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Title	08_CPU (VCCIO)	
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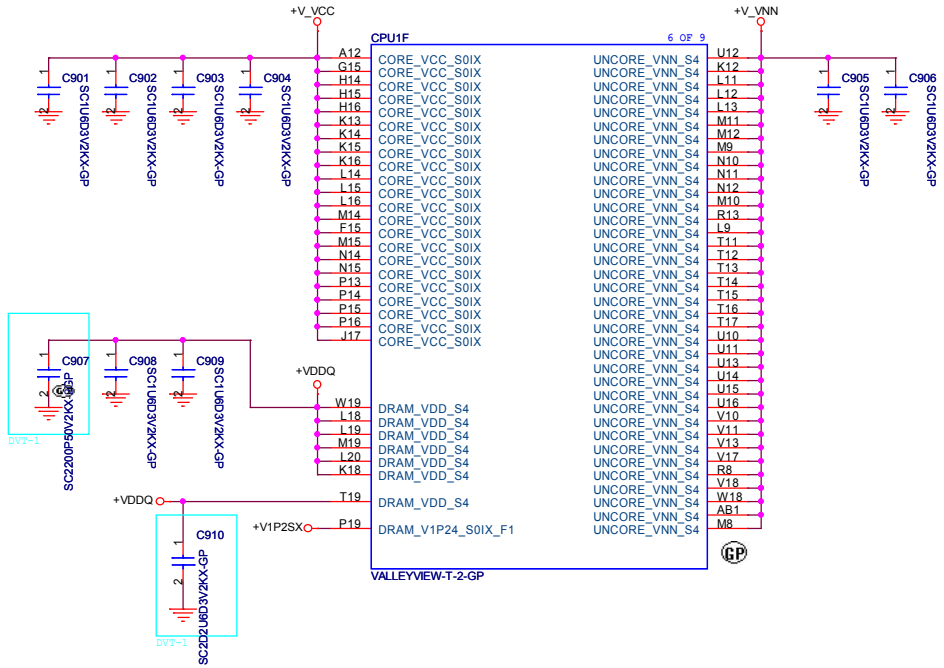
SOC : VCC/VNN



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Title	09_CPU (VCC/VNN)	
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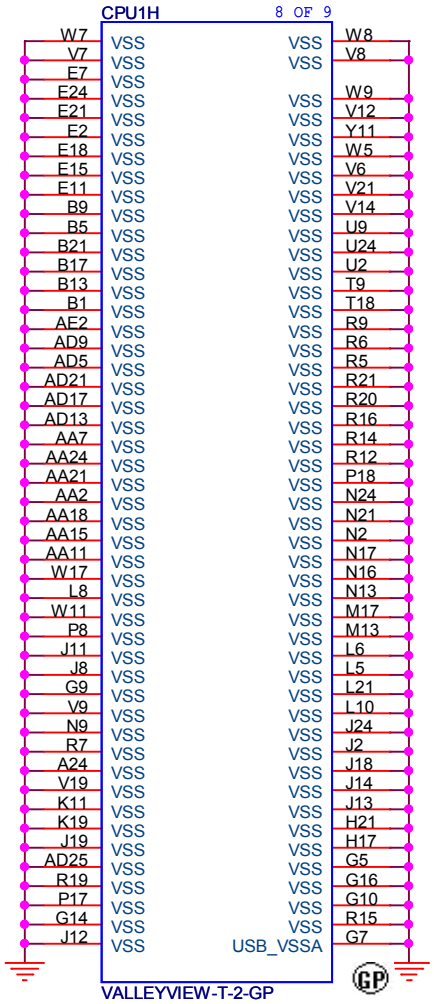
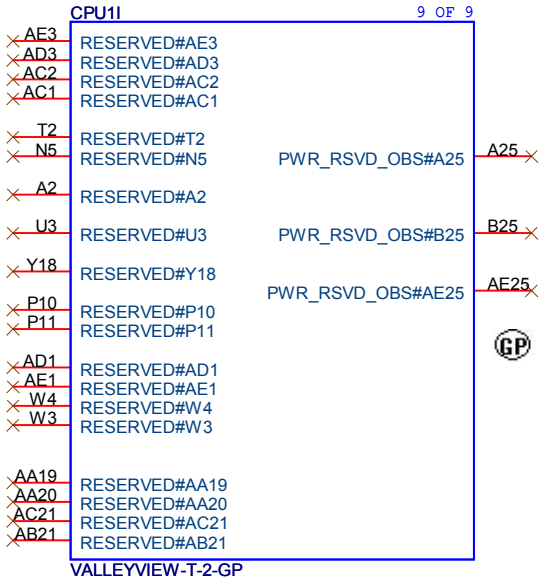
SOC : GROUND





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Title	10_CPU (VSS)	
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SOC DECOUPLING

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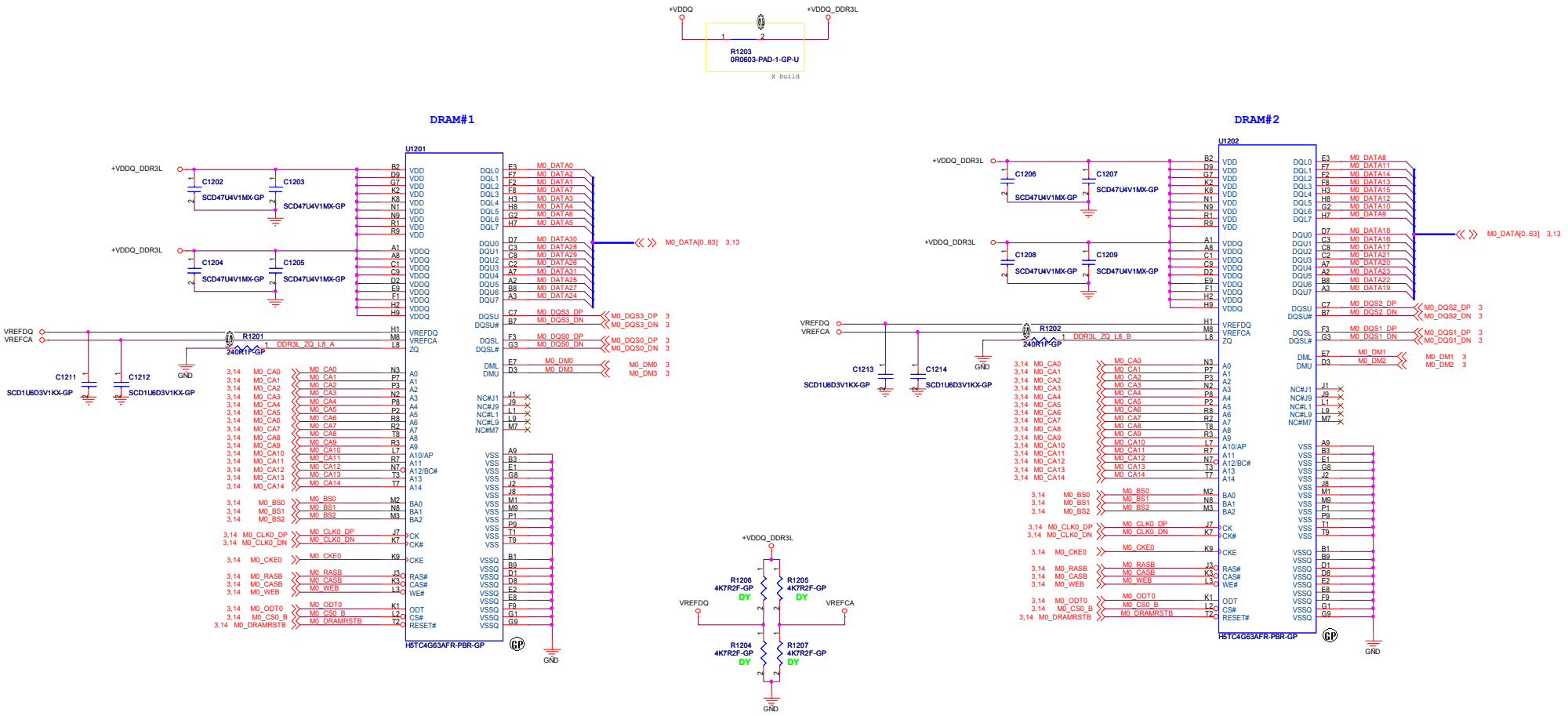
DDR3L SDRAM (CHANNEL0-1)



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Title	12_DDR3L SDRAM CH0	
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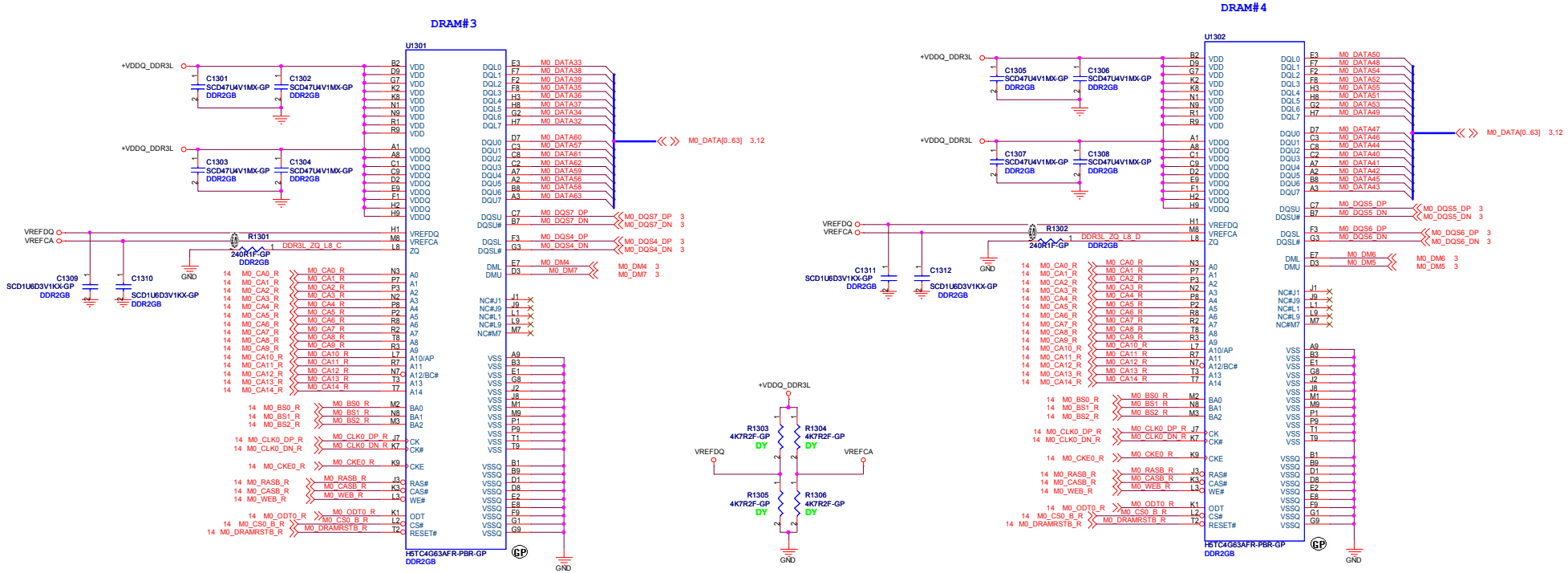
DDR3L SDRAM (CHANNEL0-2)



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Title	13_DDR3L SDRAM (CH1)	
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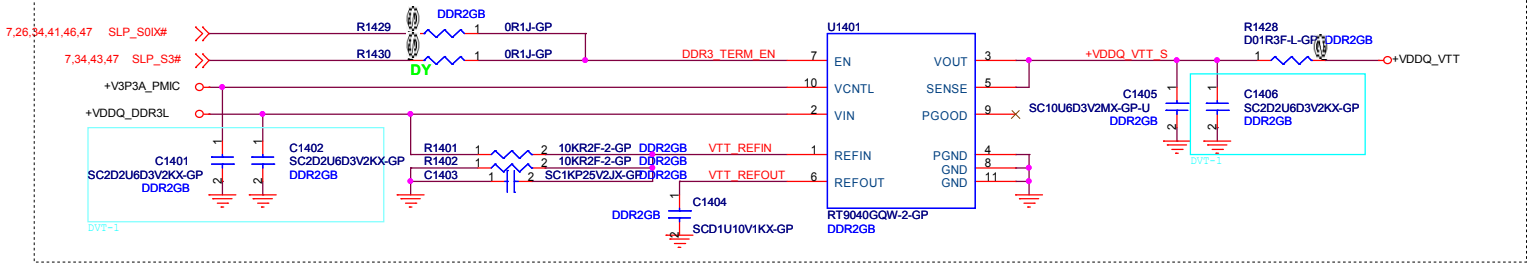
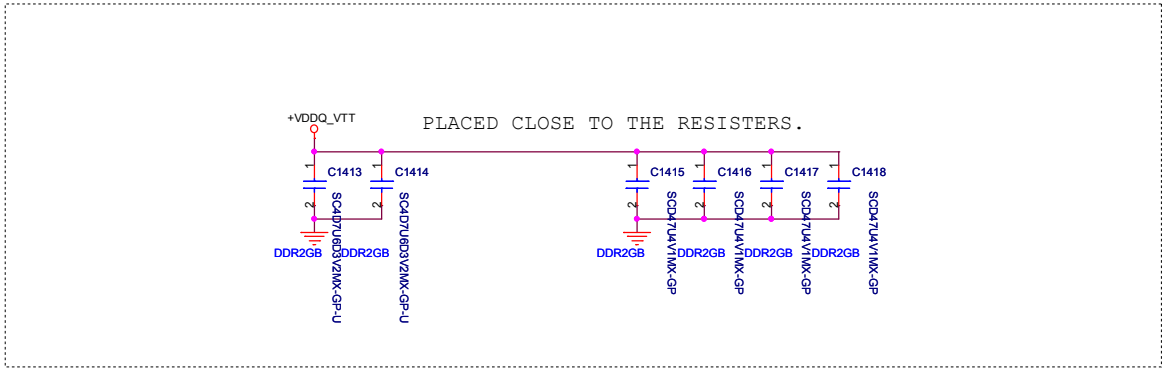
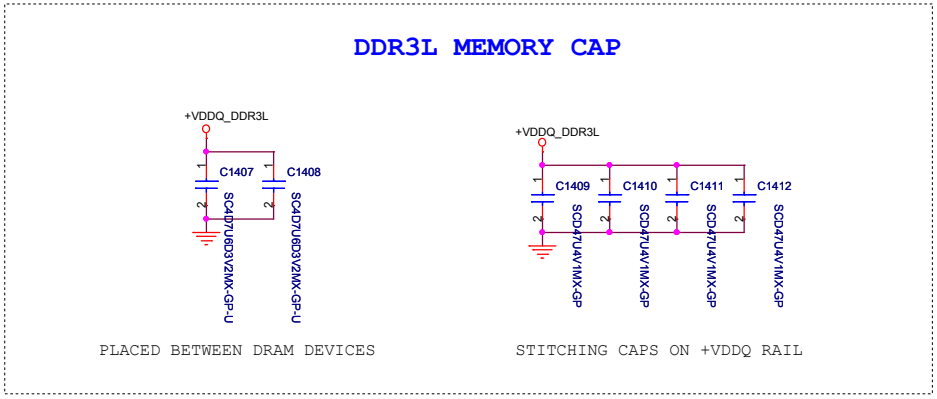
DDR3L TERMINATIONS

DDR3L x64 config LDO

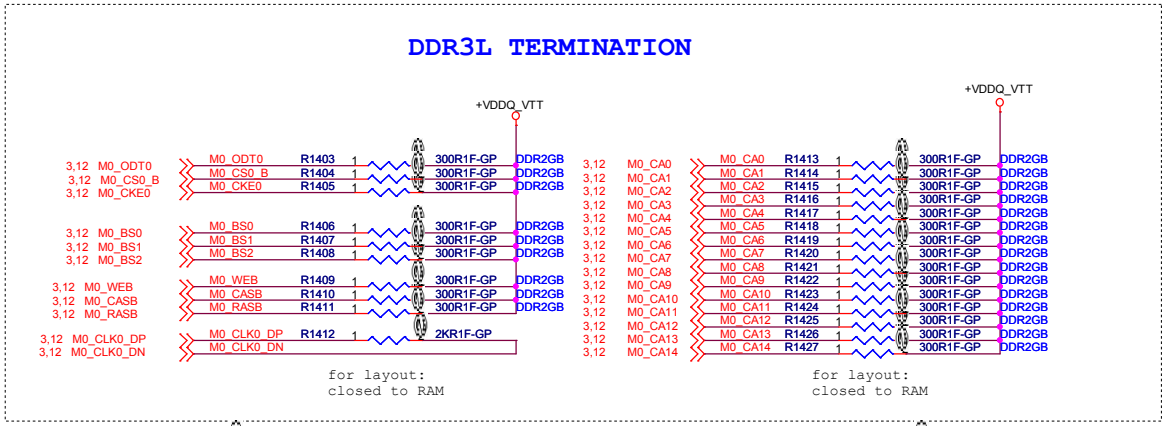


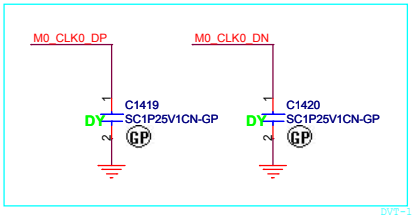


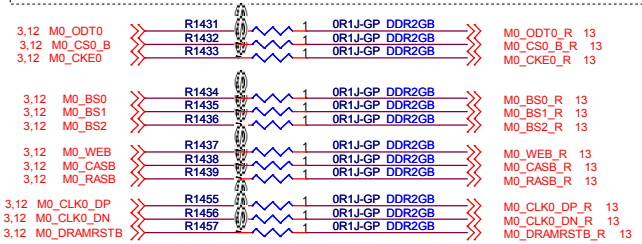
DDR3L MEMORY CAP

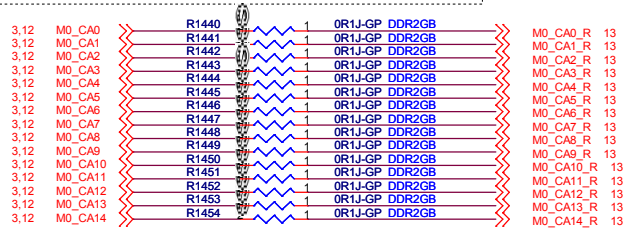


DDR3L TERMINATION









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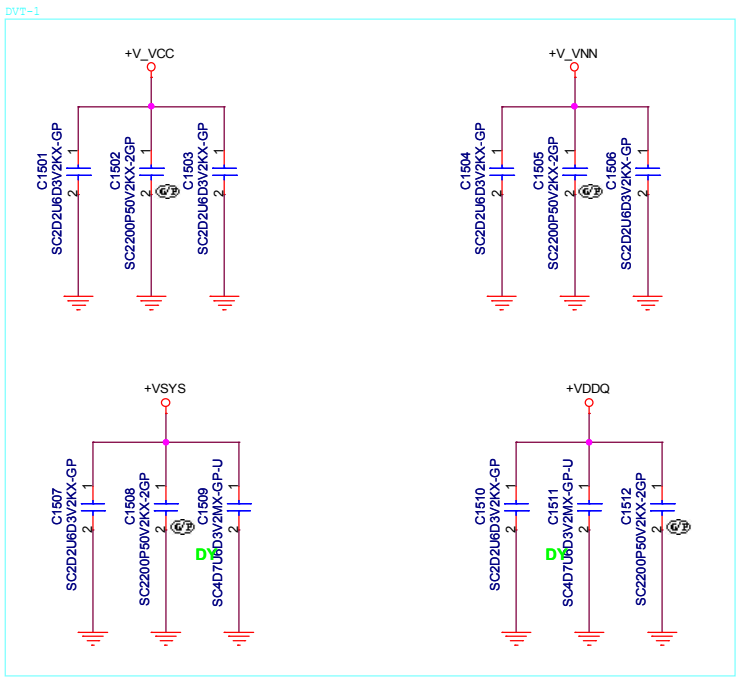
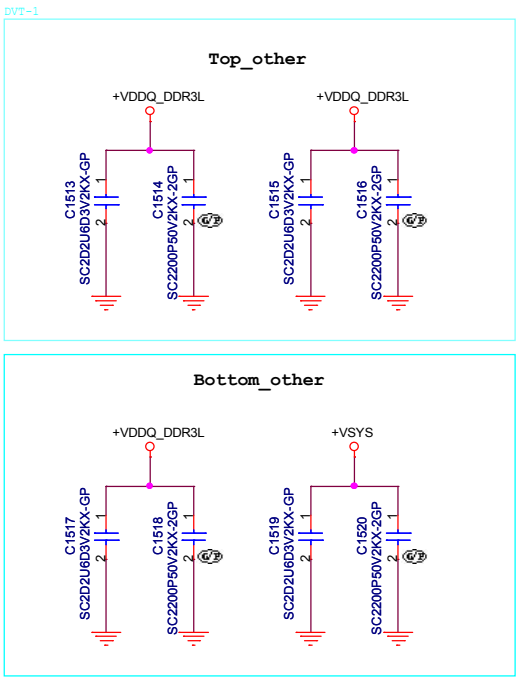
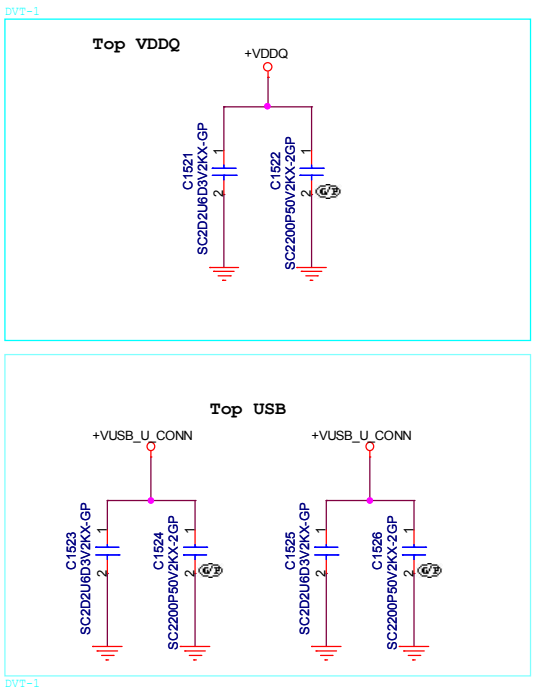
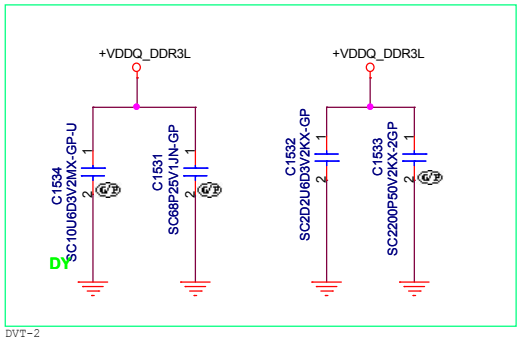
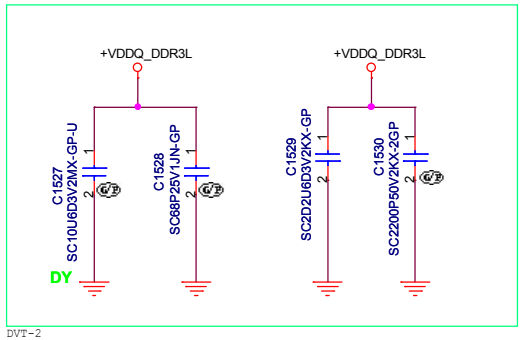
RF_Reserd CAP

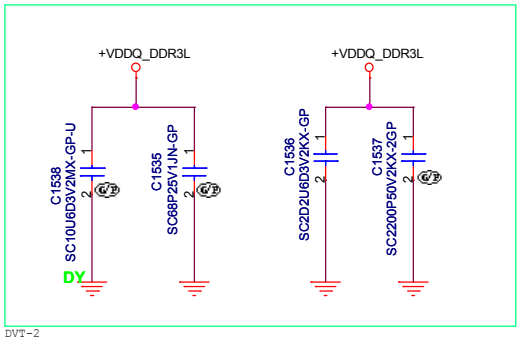












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eMMC

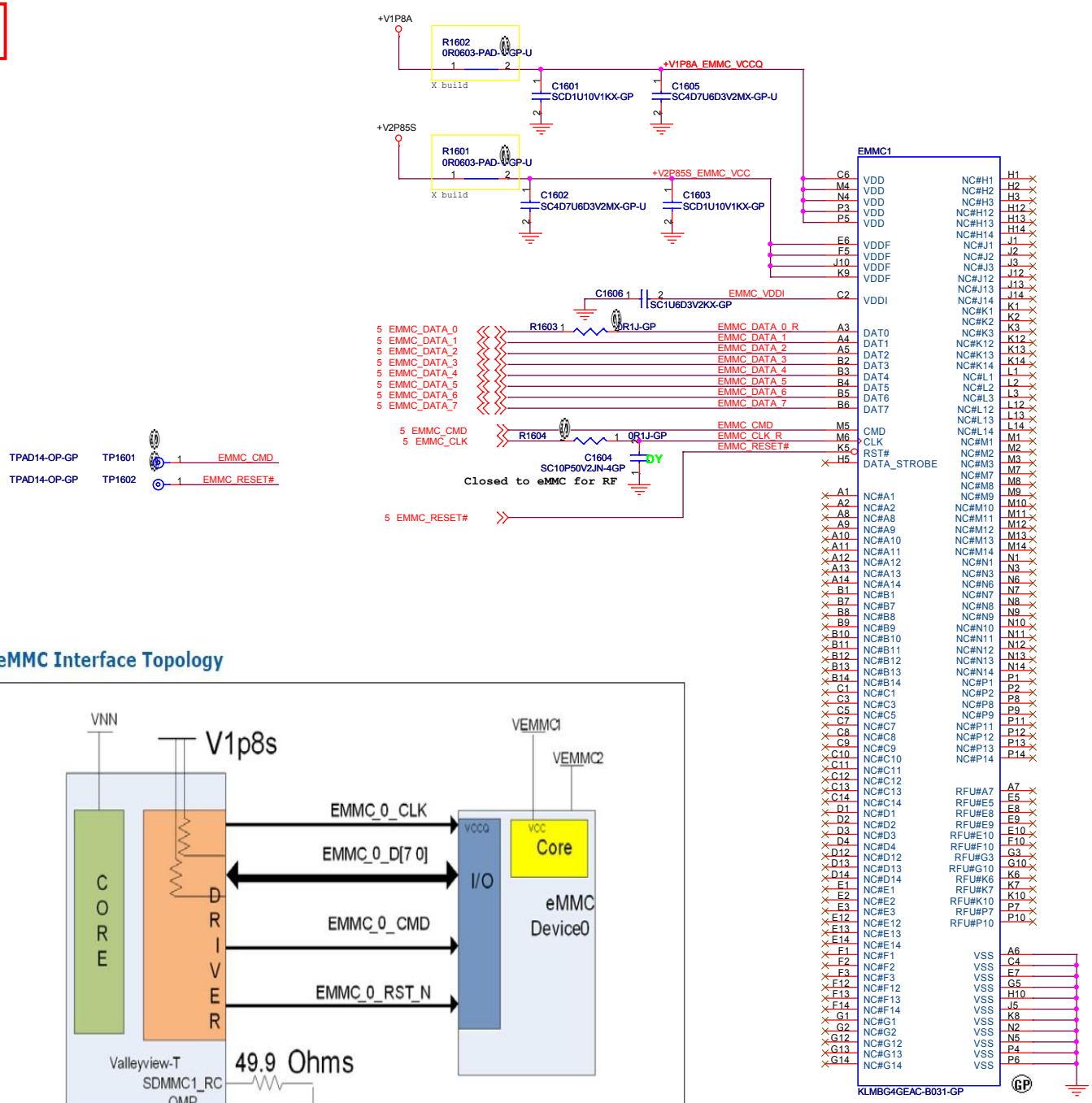
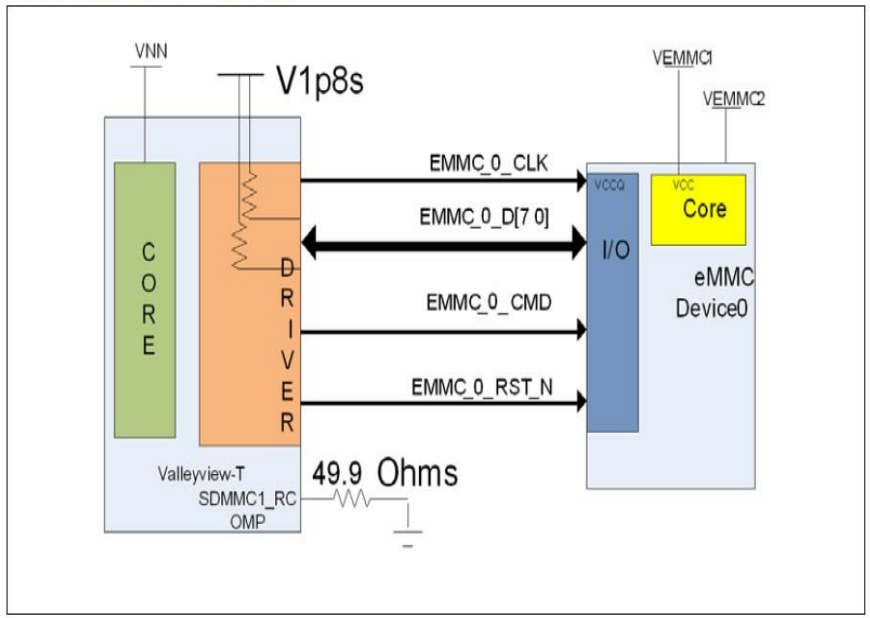


Figure 3-44.eMMC Interface Topology



<Variant Name>

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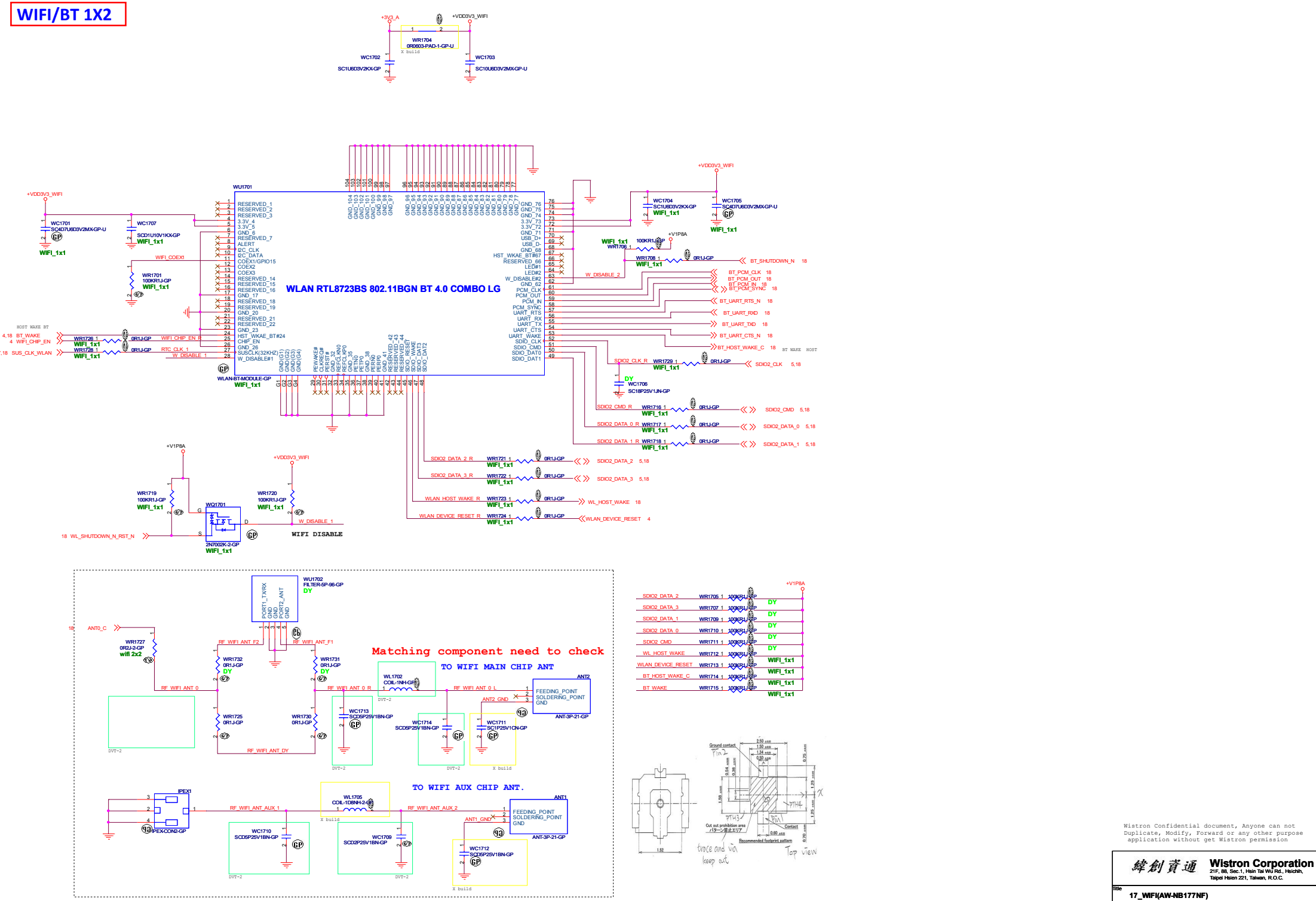
WIFI/BT 1X2



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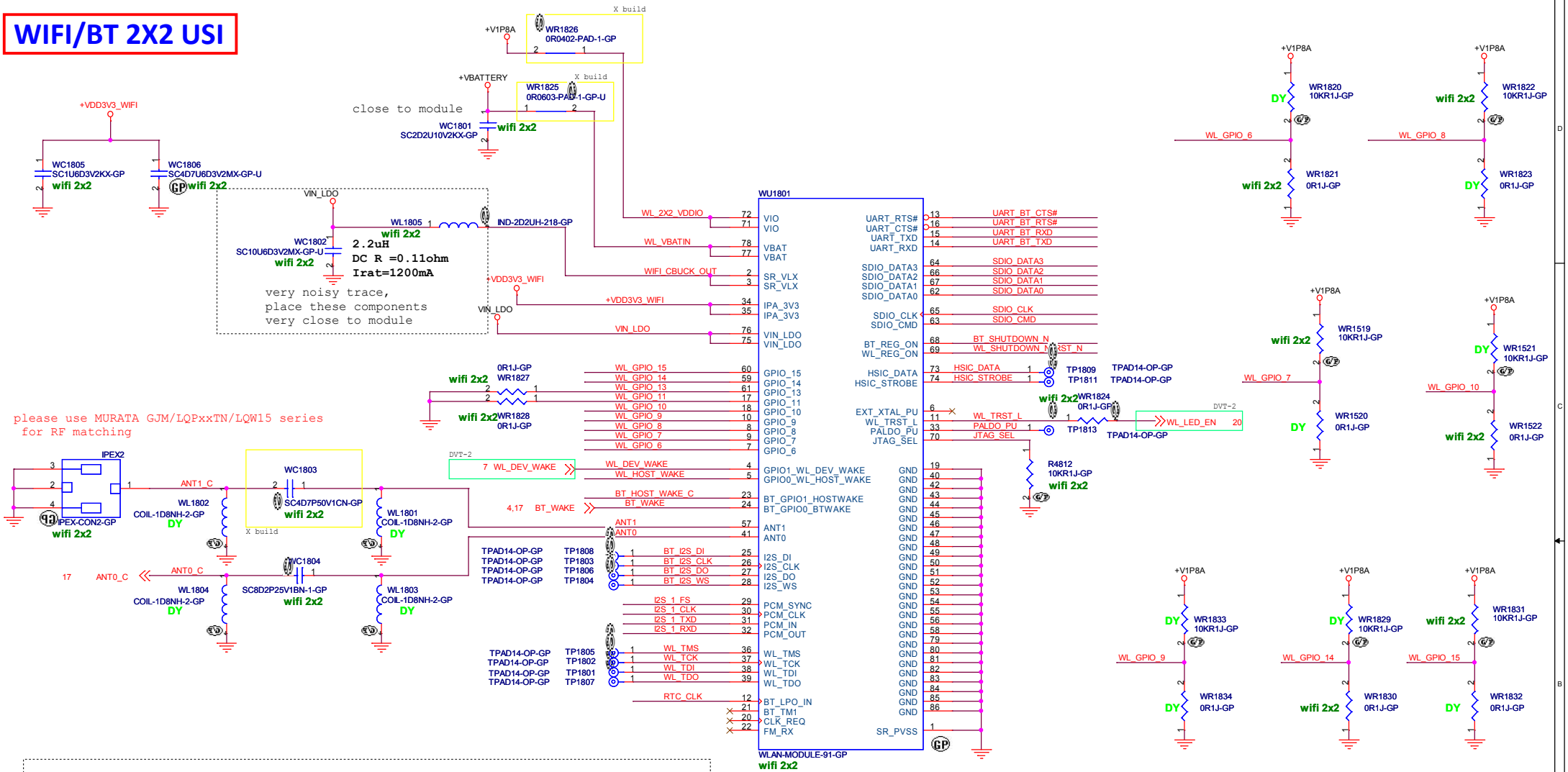
WIFI/BT 2X2 USI



Mode	VIO	GPIO_6	GPIO_8	GPIO_7	GPIO_10	GPIO_14	GPIO_15
HSIC	3.3V	Pu	Pd	Pu	Pd	Pd	Pu
SDIO3.0	1.8V	Pd	Pu				
SDIO2.0	1.8V	Pd	Pu				
SDIO2.0	3.3V	Pd	Pd				

** Pu : 4.7kohm Pulled up to VIO
** Pd : 0ohm Pulled down to GND

Mode	GPIO[6]	SDDIO_DATA2	SDDIO_DATA1
SDIO	0	X	X
gSPI	1	0	X
Normal HSIC	1	1	0
Bootloaderless HSIC	1	1	1

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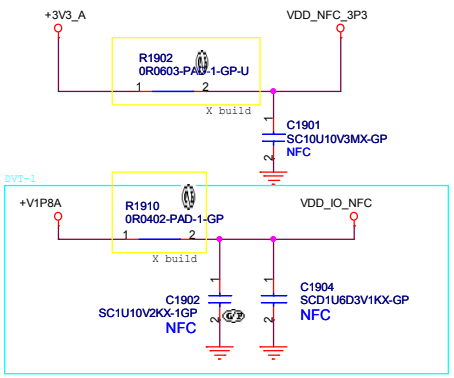
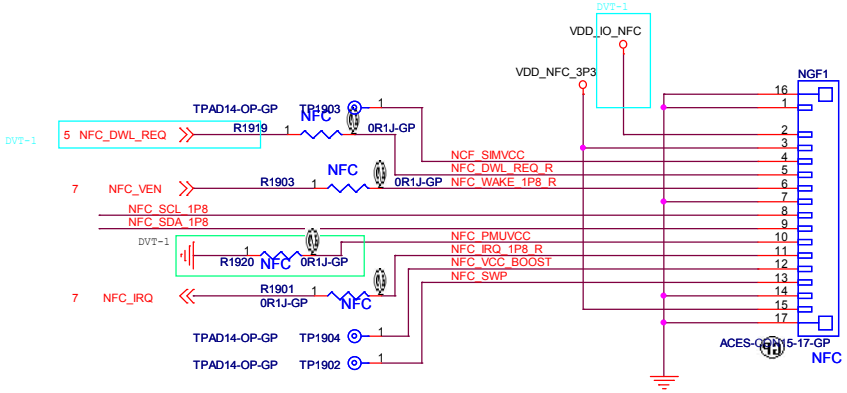
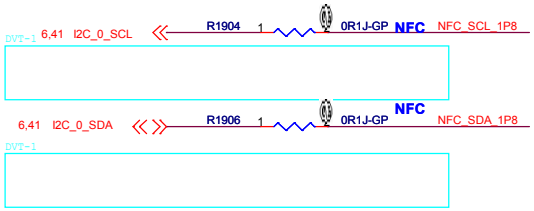
NFC





NFC used Module Type

Pin number	Name
1	MOD_VDD
2	MOD_GND
3	SWP
4	VCC_BOOST
5	IRQ
6	PMUVCC
7	I^2C_SDA
8	I^2C_SCL
9	MOD_GND
10	Reset/Wakeup
11	DWL_REQ
12	SIMVCC
13	MOD_VDD
14	VDD_IO
15	MOD_GND



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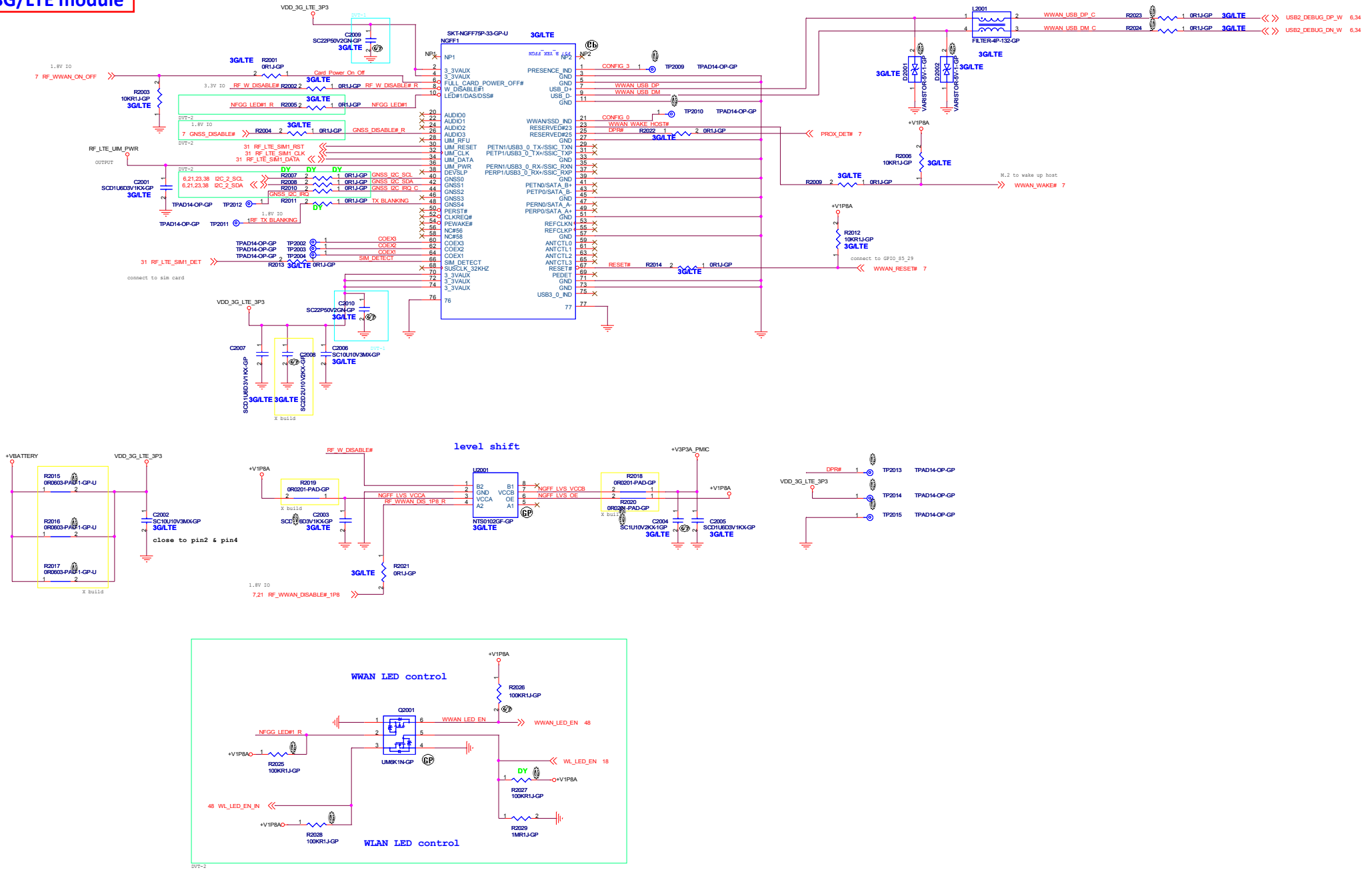
3G/LTE module



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Title	20_3G/LTE
Size	A2
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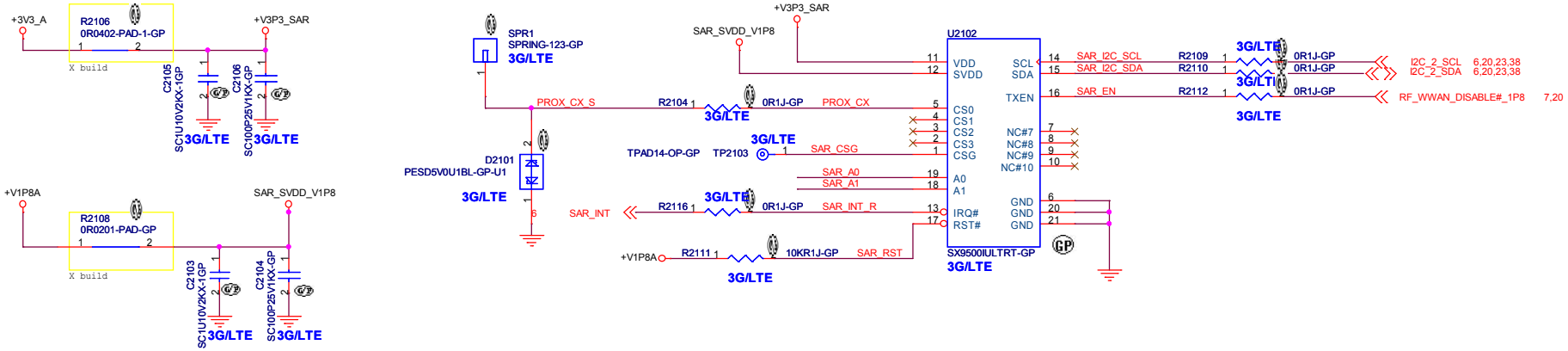
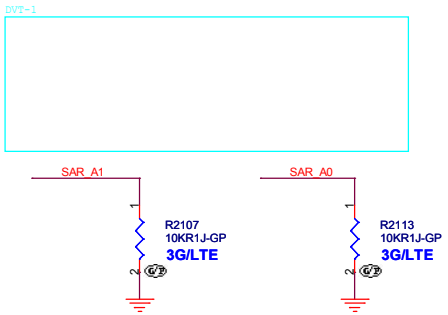
SAR sensor for 3G/LTE



A1	A0	Address
0	0	0x28
0	1	0x29
1	0	0x2A
1	1	0x2B



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Title	21_SAR Sensor	
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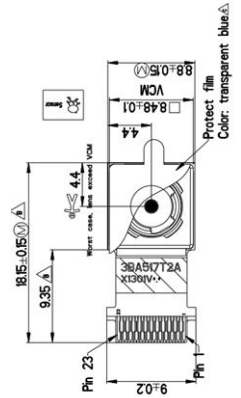
Rear Camera

Rear Camera
OV5693(5M)
13P2BA520(5M)

need to check the connector & pin define

Device	I2C Slave Address
Sensor	0x20(SID=1)
Driver IC	0x18

CN Table	
No.	Signal
1	DGND
2	Data_N_2
3	Data_P_2
4	DGND
5	CLK_N
6	CLK_P
7	DGND
8	Data_N_1
9	Data_P_1
10	DGND
11	VCM_PD
12	SCLK
13	AGND
14	SDATA
15	VCM_VDD
16	VDD
17	CAM_PD
18	MCLK
19	NC
20	AVDD
21	Flash(ID)
22	AGND
23	NC



Front Camera

Front Camera
SOC1040(1.2M)
13P2SF130(1.2M)

need to check the connector & pin define

Connector CN	
1	DGND
2	DATA_P
3	DATA_N
4	DGND
5	CLK_P
6	CLK_N
7	DGND
8	DVDD_1.8V
9	AGND
10	AVDD_2.8V
11	MCLK
12	DGND
13	DOVDD_1.8V
14	SIOC
15	SIOD
16	DGND
17	RESET
18	DGND
19	GND
20	GND
21	GND

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Title	22_CAMERA	
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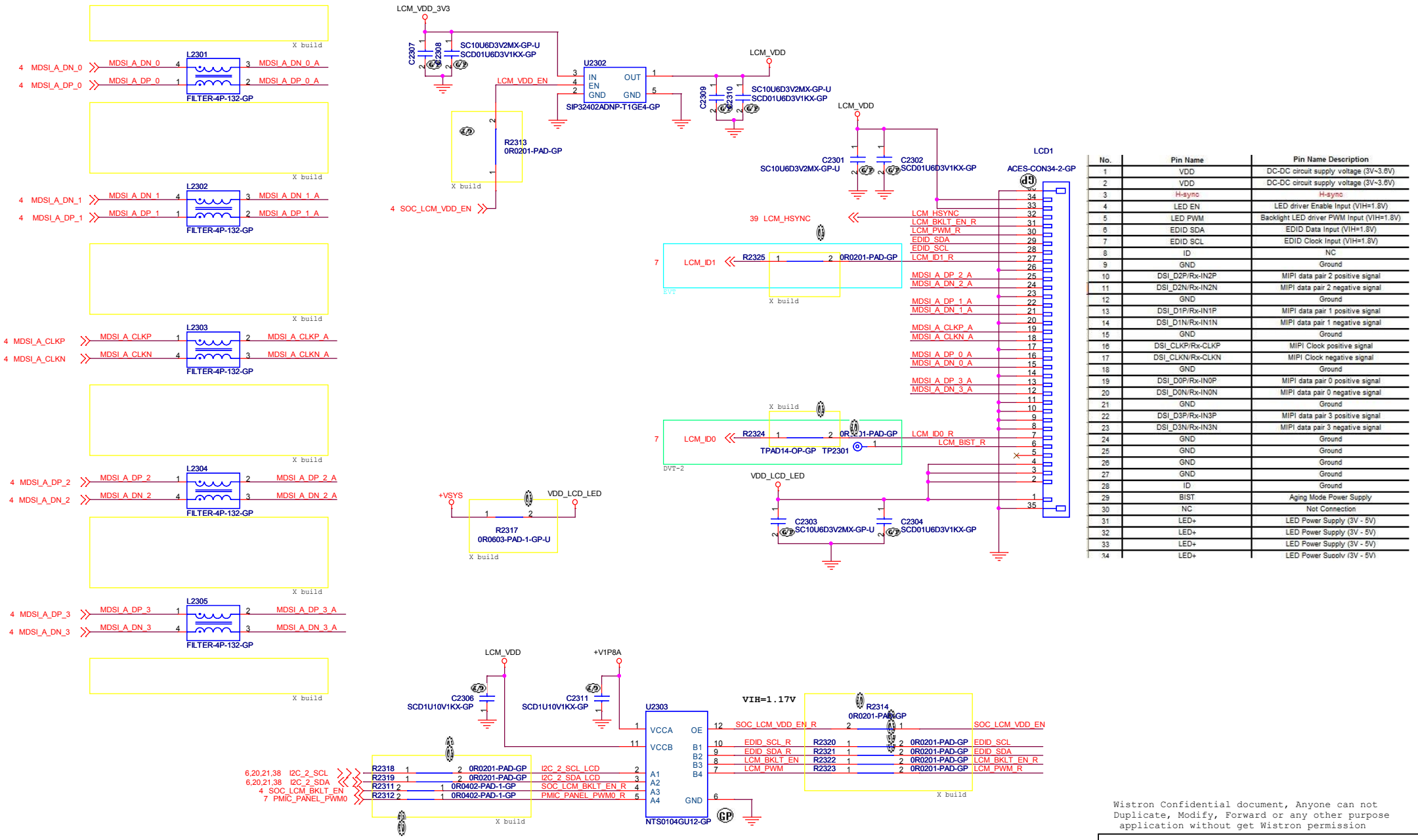
MIPI LCM 19x12



No.	Pin Name	Pin Name Description
1	VDD	DC-DC circuit supply voltage (3V~3.6V)
2	VDD	DC-DC circuit supply voltage (3V~3.6V)
3	H-sync	H-sync
4	LED EN	LED driver Enable Input (VIH=1.8V)
5	LED PWM	Backlight LED driver PWM Input (VIH=1.8V)
6	EDID SDA	EDID Data Input (VIH=1.8V)
7	EDID SCL	EDID Clock Input (VIH=1.8V)
8	ID	NC
9	GND	Ground
10	DSI_D2P/Rx-IN2P	MIPI data pair 2 positive signal
11	DSI_D2N/Rx-IN2N	MIPI data pair 2 negative signal
12	GND	Ground
13	DSI_D1P/Rx-IN1P	MIPI data pair 1 positive signal
14	DSI_D1N/Rx-IN1N	MIPI data pair 1 negative signal
15	GND	Ground
16	DSI_CLKP/Rx-CLKP	MIPI Clock positive signal
17	DSI_CLKN/Rx-CLKN	MIPI Clock negative signal
18	GND	Ground
19	DSI_D0P/Rx-IN0P	MIPI data pair 0 positive signal
20	DSI_D0N/Rx-IN0N	MIPI data pair 0 negative signal
21	GND	Ground
22	DSI_D3P/Rx-IN3P	MIPI data pair 3 positive signal
23	DSI_D3N/Rx-IN3N	MIPI data pair 3 negative signal
24	GND	Ground
25	GND	Ground
26	GND	Ground
27	GND	Ground
28	ID	Ground
29	BIST	Aging Mode Power Supply
30	NC	Not Connection
31	LED+	LED Power Supply (3V - 5V)
32	LED+	LED Power Supply (3V - 5V)
33	LED+	LED Power Supply (3V - 5V)
34	LED+	LED Power Supply (3V - 5V)

Each port I/O has an internal
10 k Ω pull-up resistor to VCC(A)/VCC(B)

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Title	23_MIPI LCM CONN
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MIPI LCM 19x8

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Title	24_MIPI LCM CONN	
Size A	Document Number SILVERTON/SILVEROAK	Rev 0
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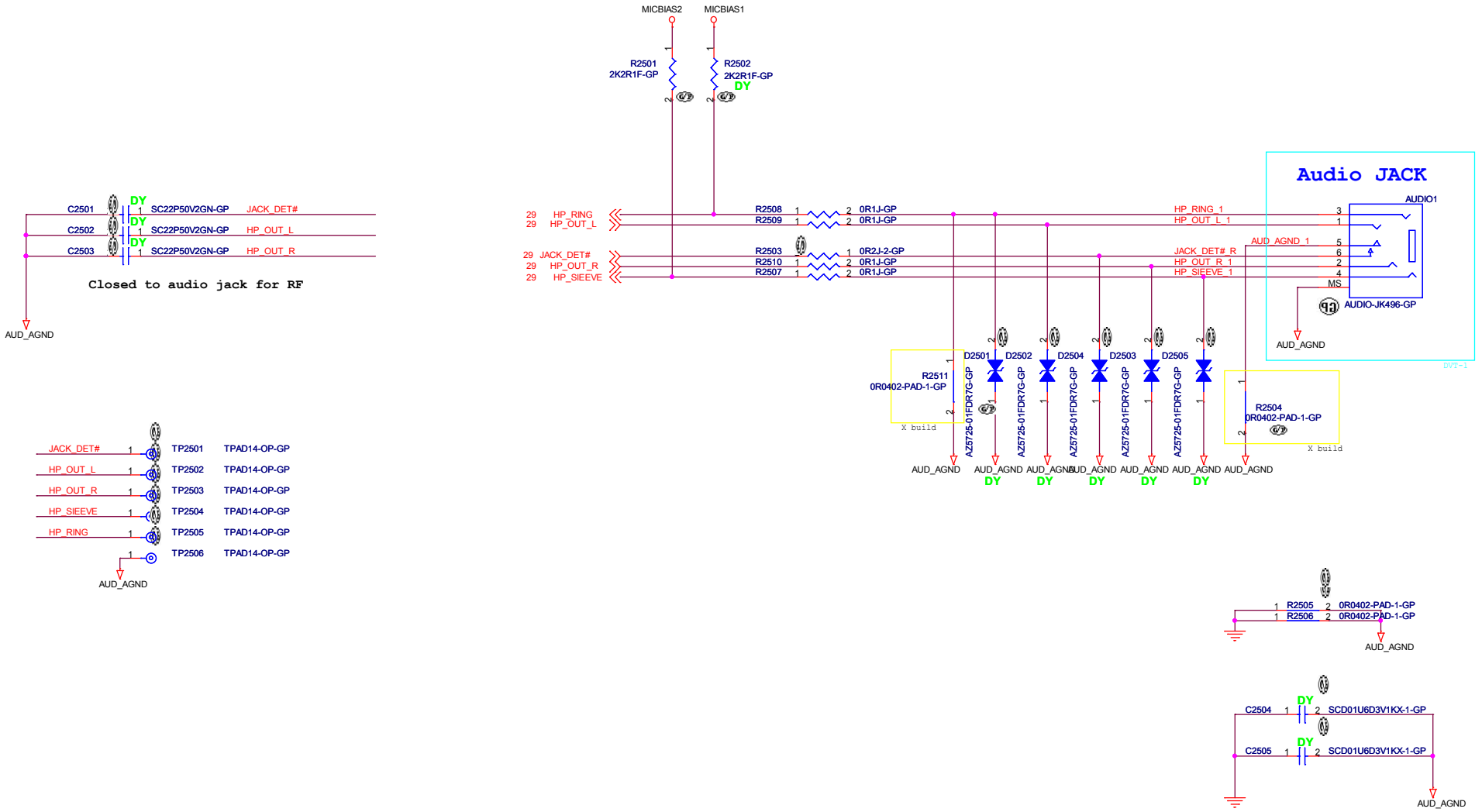
Device :AUDIO JACK



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Title	25_Audio JACK	
Size A3	Document Number SILVERTON/SILVEROAK	Rev 0
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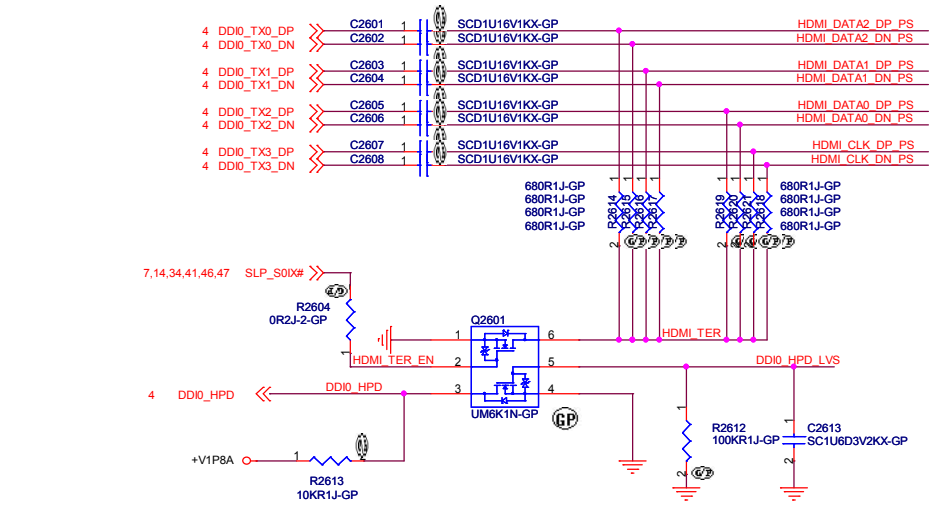
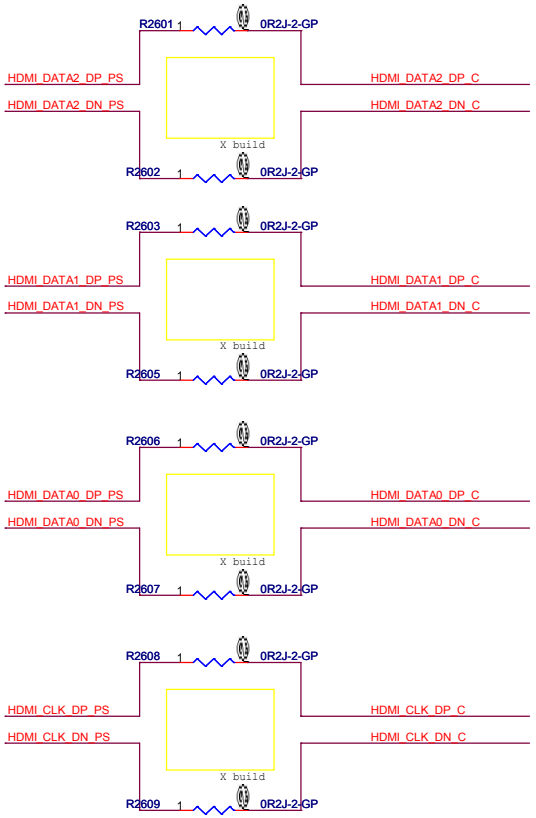
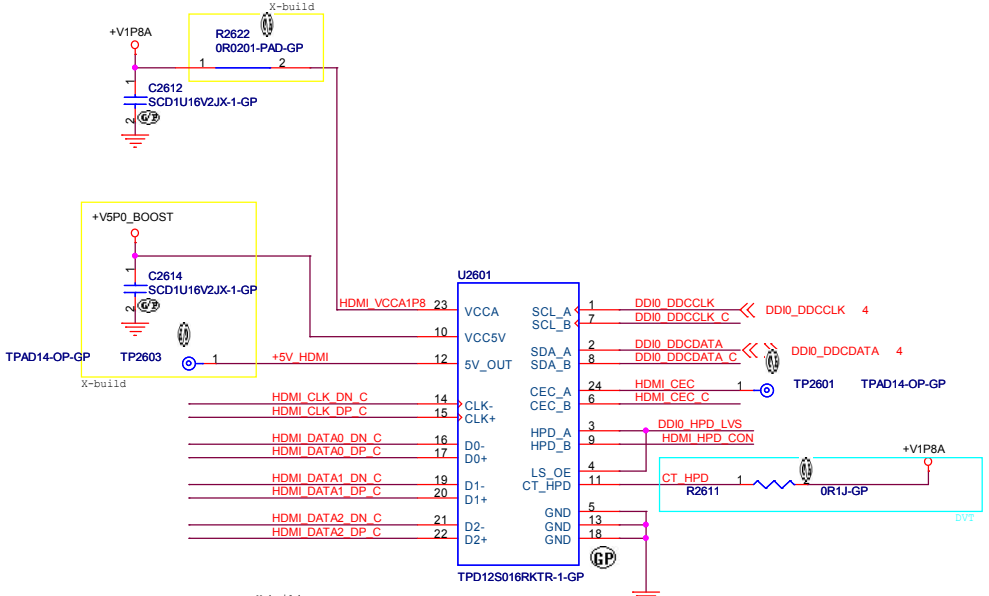
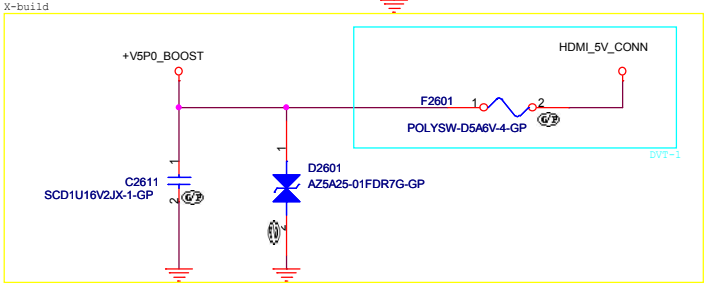
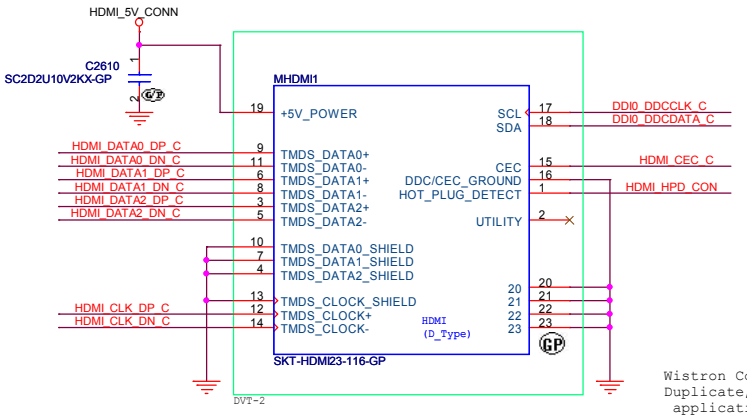
Device :uHDMI











Pin	Pin定義
1	Hot Plug Detect
2	Utility
3	TMDS Data2+
4	TMDS Data2 Shield
5	TMDS Data2-
6	TMDS Data1+
7	TMDS Data1 Shield
8	TMDS Data1-
9	TMDS Data0+
10	TMDS Data0 Shield
11	TMDS Data0-
12	TMDS Clock+
13	TMDS Clock Shield
14	TMDS Clock-
15	CEC
16	DDC/CEC Ground
17	SCL
18	SDA
19	+5V Power

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Title	26_uHDMI CONN	
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Reserved

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Title	27_Reserved	
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Reserved

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Title	**28_Reserved**	
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AUDIO CODEC

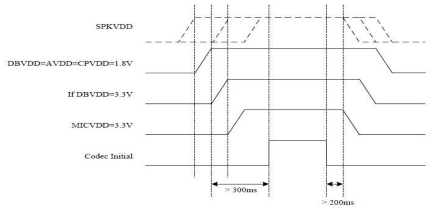
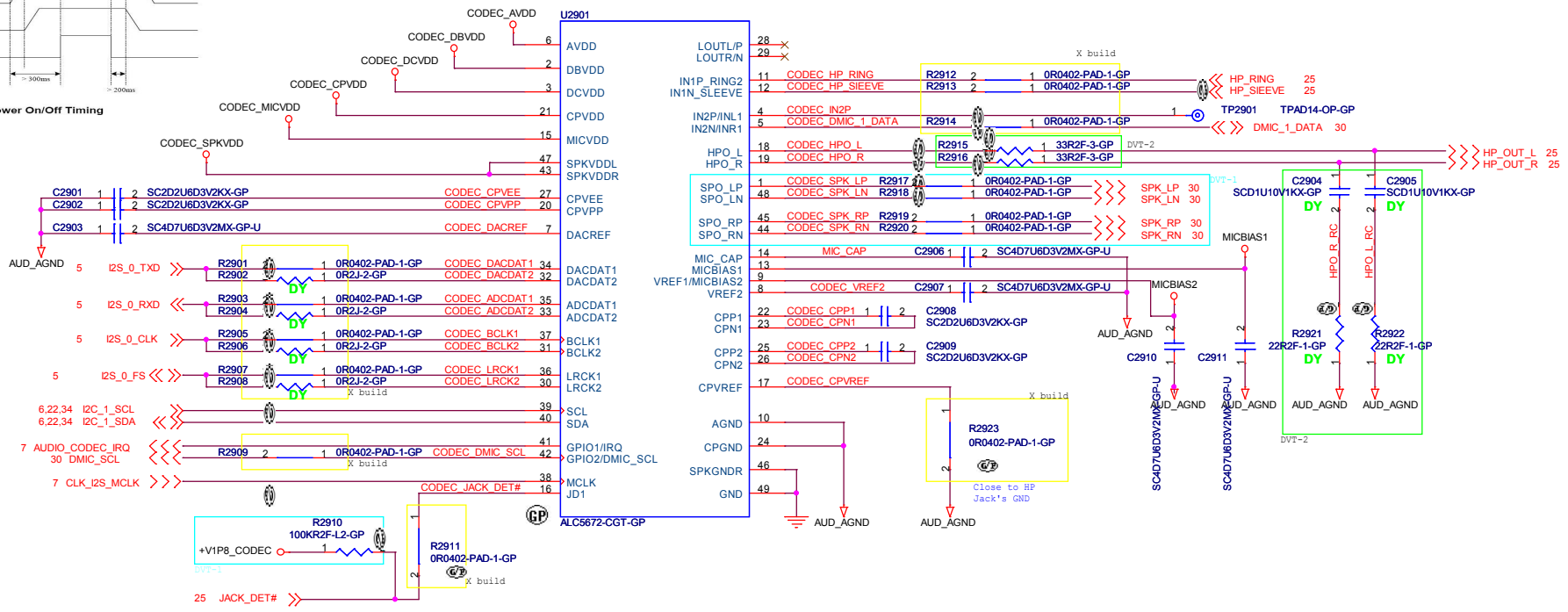
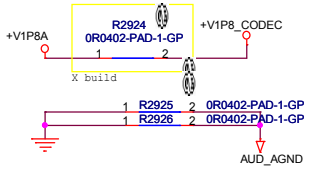
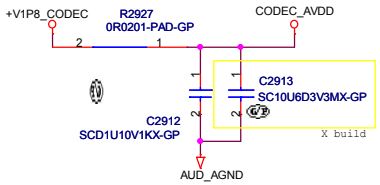
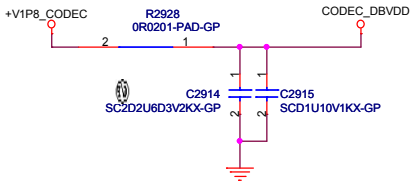


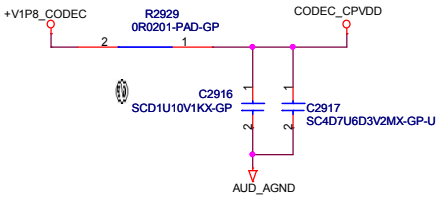
Figure 6. Power On/Off Timing





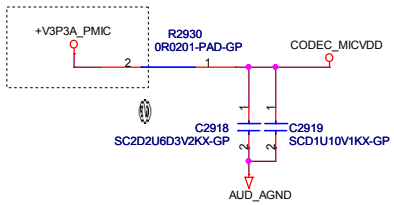


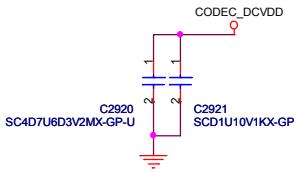


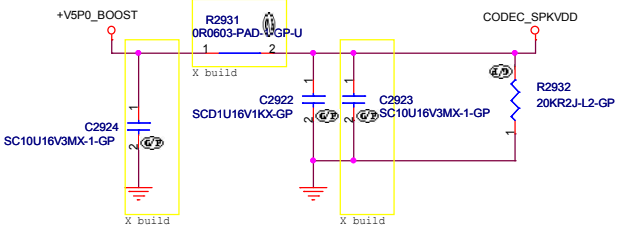


(AVDD+CPVDD+DBVDD)1.8V=200mA(max)
(MICVDD)3.3= 50mA (max)
(SPKVDDL+R) 5V = 2A(max)

20140616







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Title	29_AUDIO CODEC	
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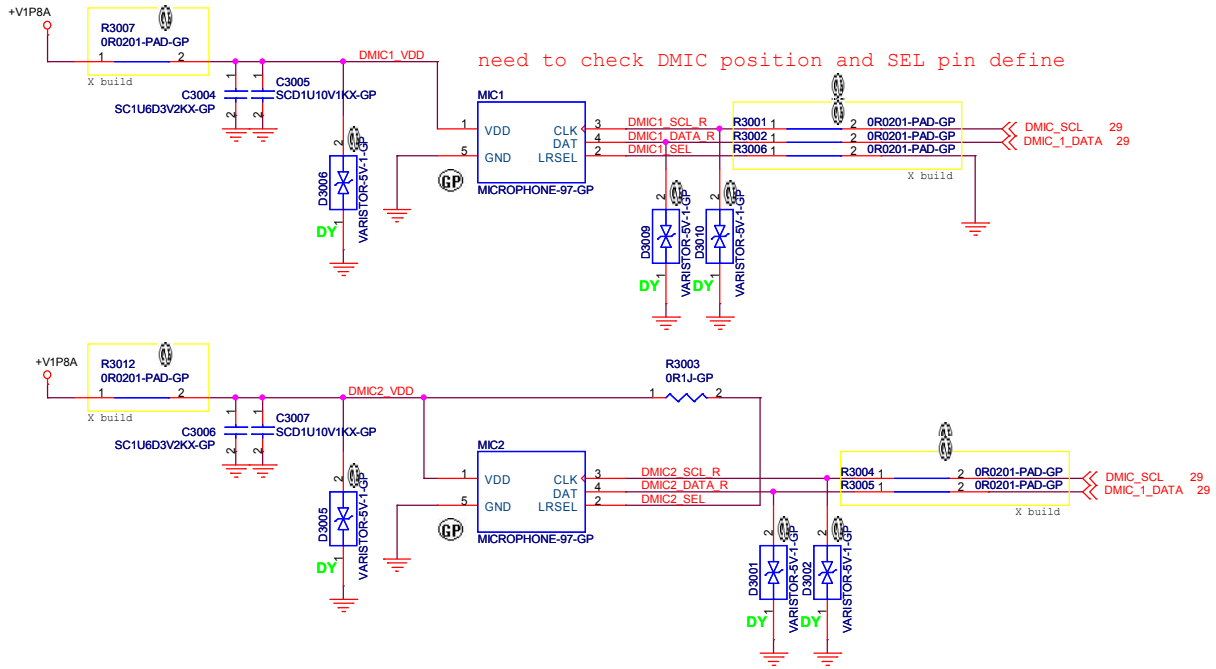
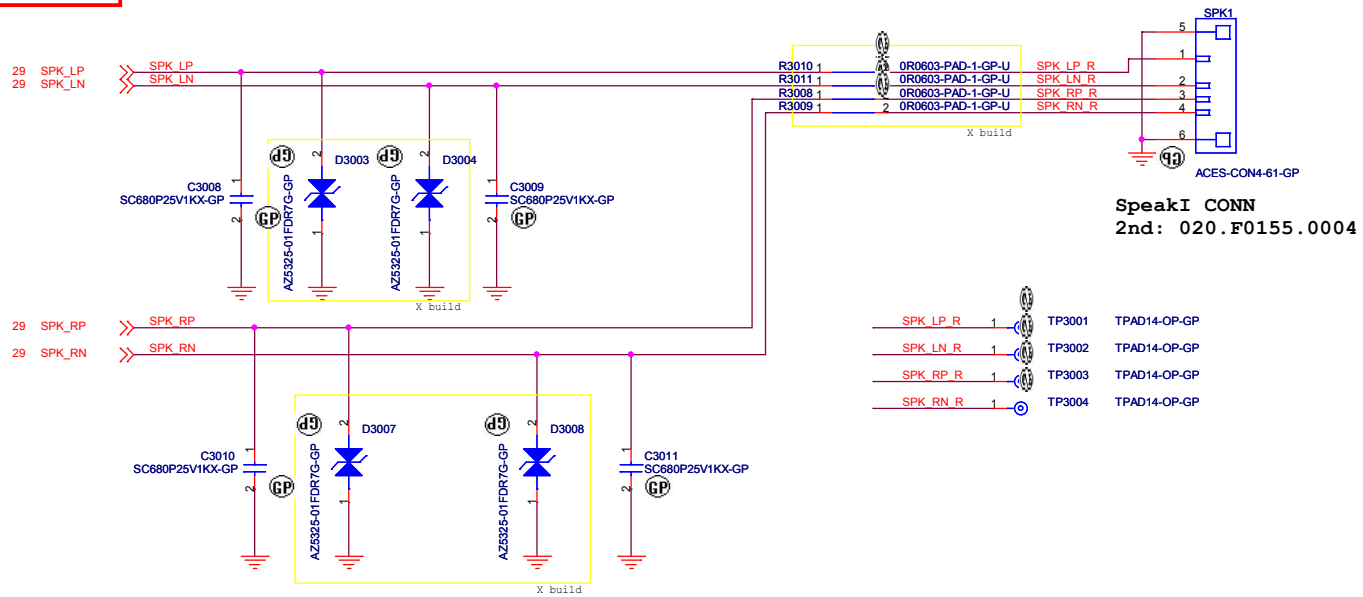
DMIC



SPEAKER



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Title	30_AUDIO DMIC/SPK	
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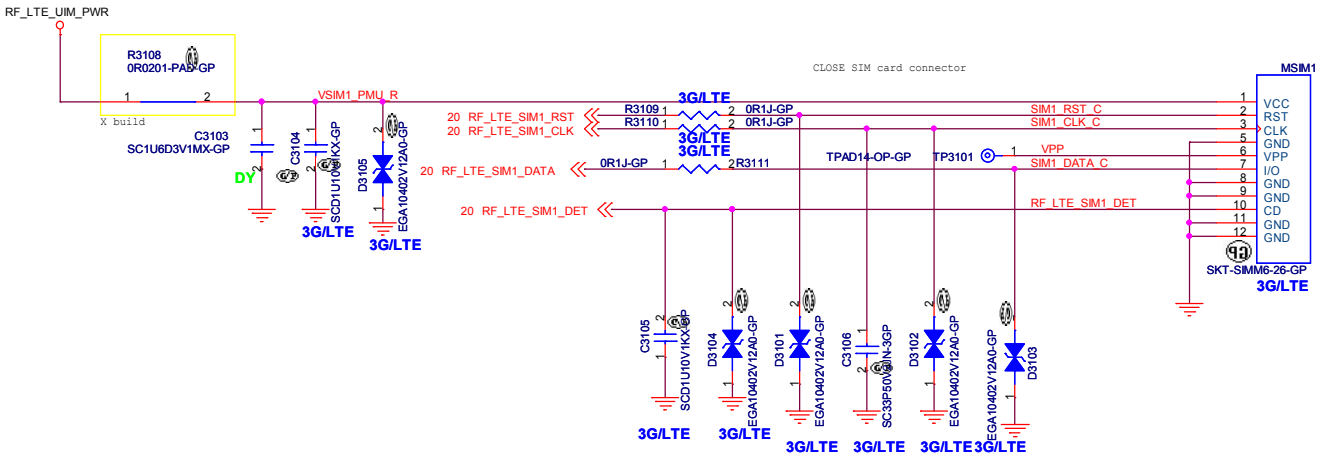
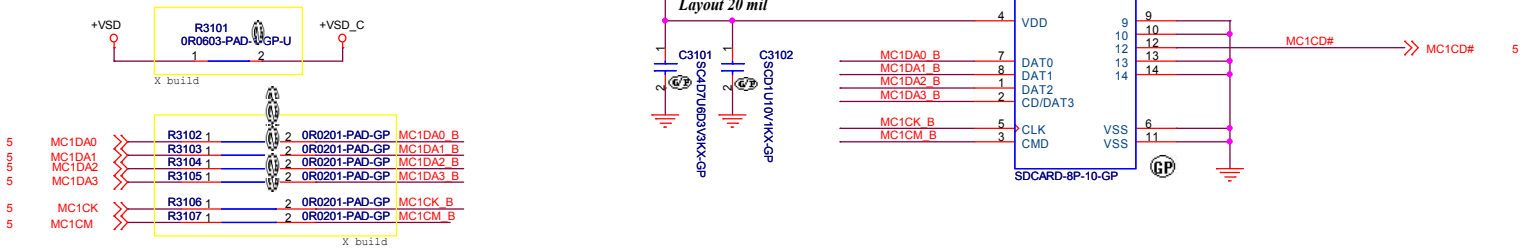
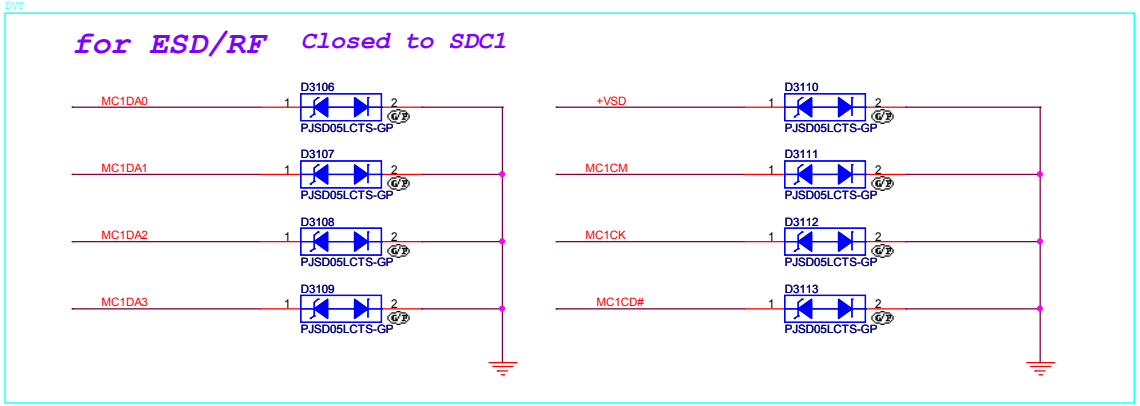
SIM CARD



SD CARD





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Title	31_uSD/SIM Card CONN	
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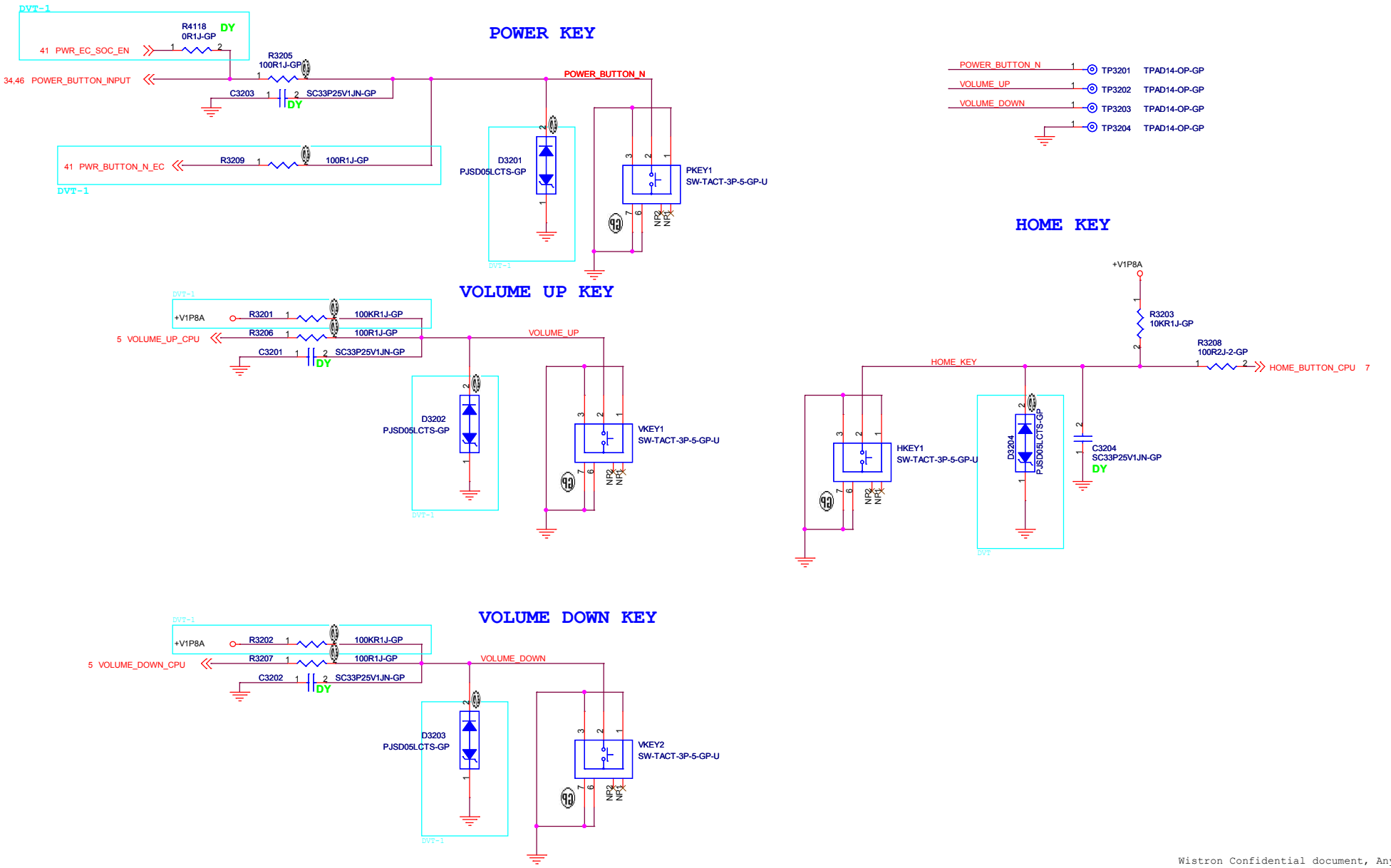
PWR Button / Volum Key / Home key



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Title	32_PWR/Volume/Home Button	
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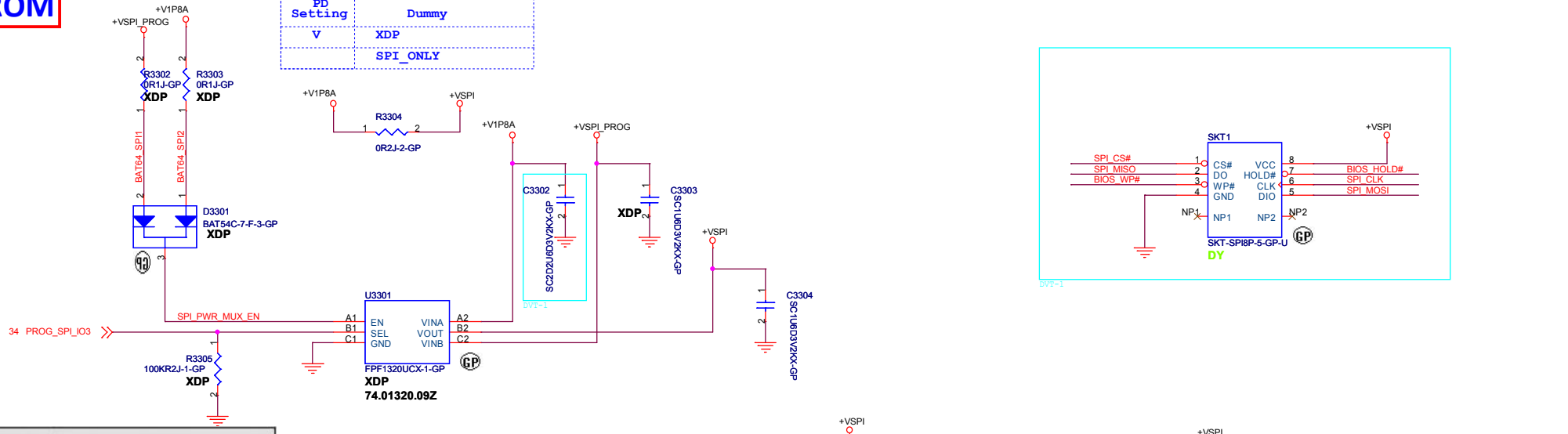
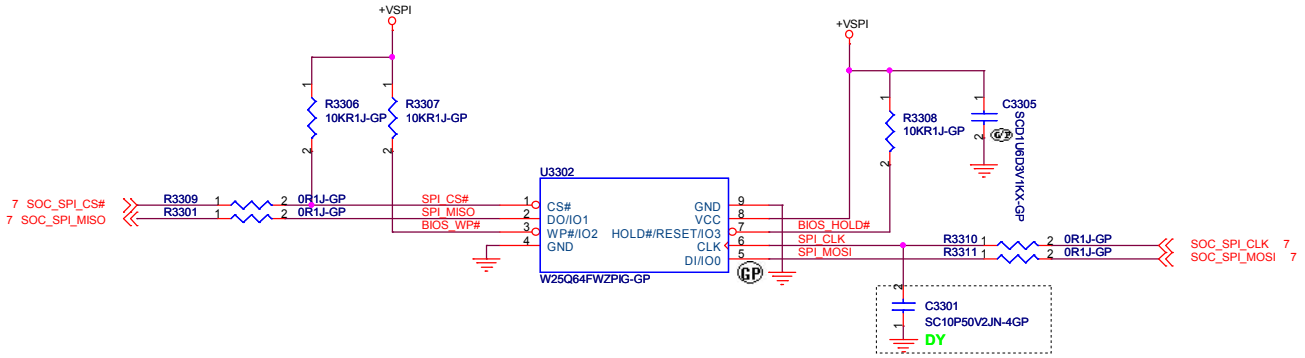
SPI ROM

PD Setting	Dummy
V	XDP
	SPI_ONLY

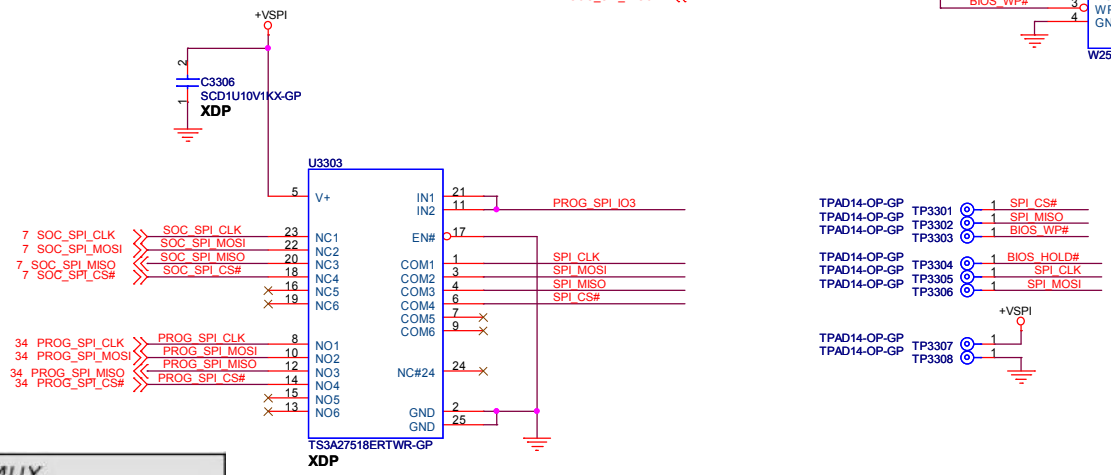


SPI POWER MUX DEFAULT --> LOW	
SEL = 0	+V1P8A from Platfrom
SEL = 1	+VSPI_PROG



for RF

Closed to SPI ROM



SPI MUX DEFAULT --> LOW	
IN1= IN2 = 0	SOC SPI Path
IN1= IN2 = 1	PROGRAMMING Path

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Title: 33_ SPI NOR

Size: A3 | Document Number: SILVERTON/SILVEROAK | Rev: 0

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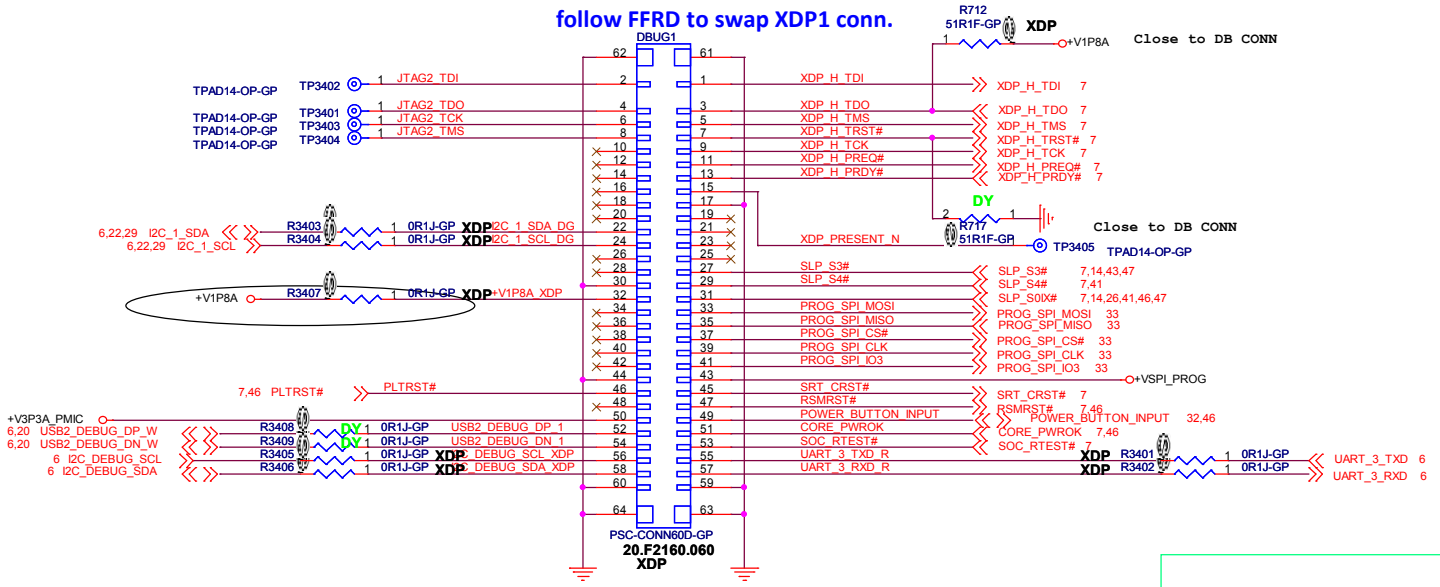
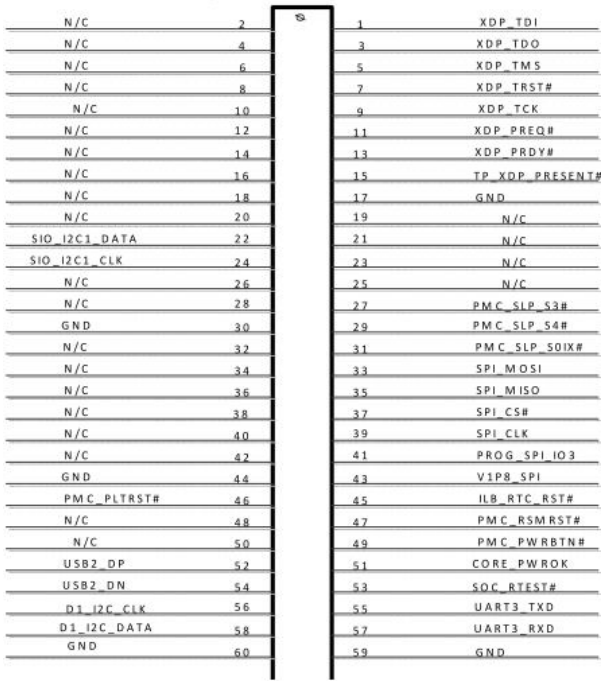
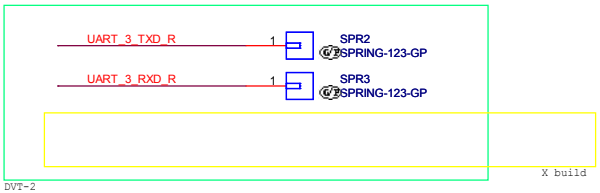
XDP Debug Connector



Debug Connector on board





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Title	34_XDP Connector	
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Reserved

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Title	35_Reserved	
Size A	Document Number SILVERTON/SILVEROAK	Rev 0
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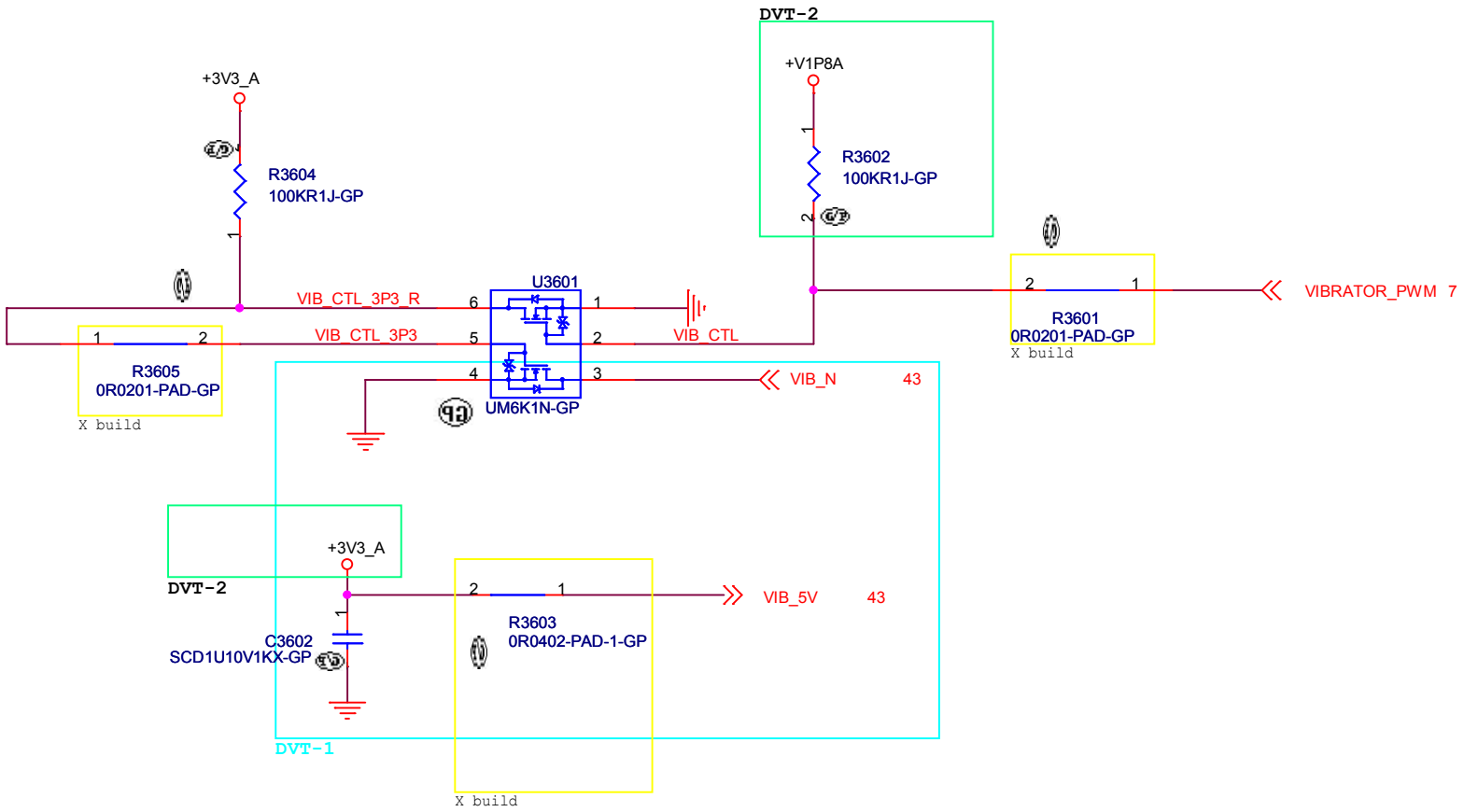
Vibrator



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Title	**36_Vibrator**	
Size A4	Document Number **SILVERTON/SILVEROAK**	Rev 0
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Thermal Protect

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Title	37_Thermal Protect	
Size: A3	Document Number: SILVERTON/SILVEROAK	Rev: 2
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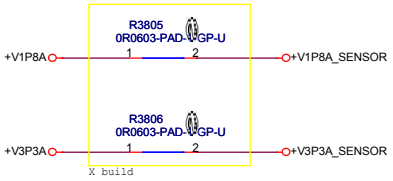
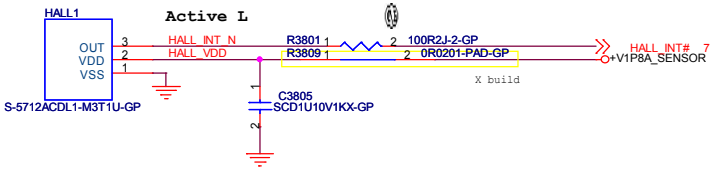
Sensor

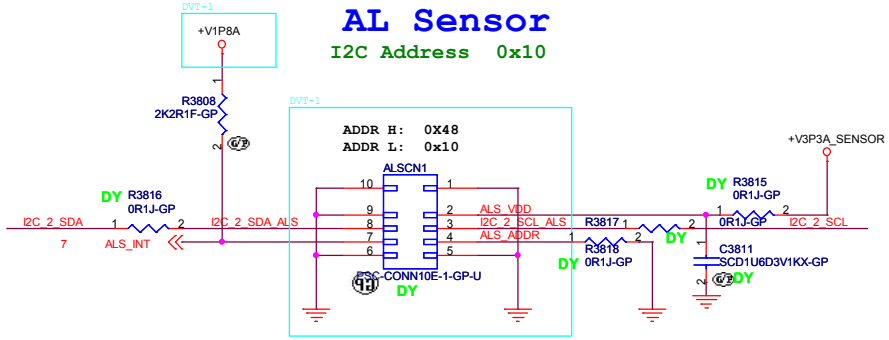


HALL Sensor



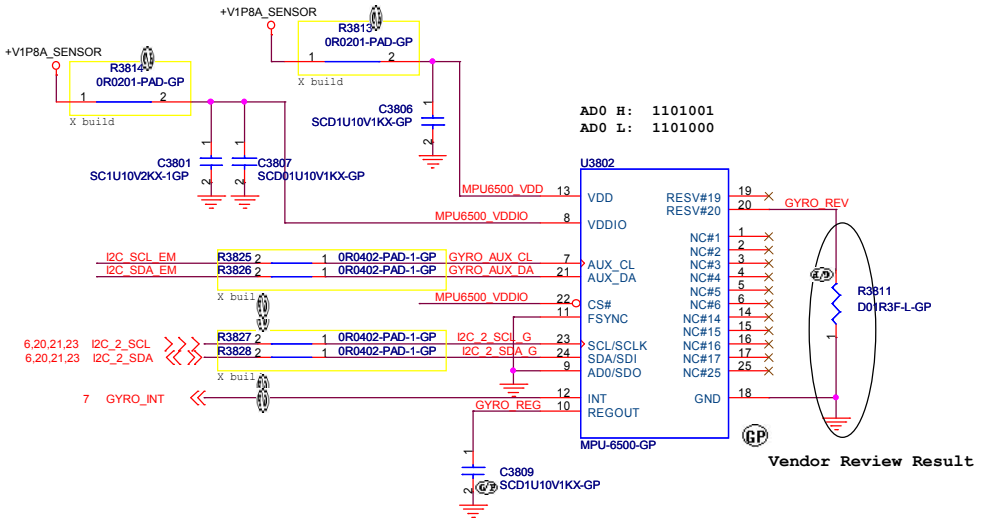
AL Sensor

I2C Address 0x10



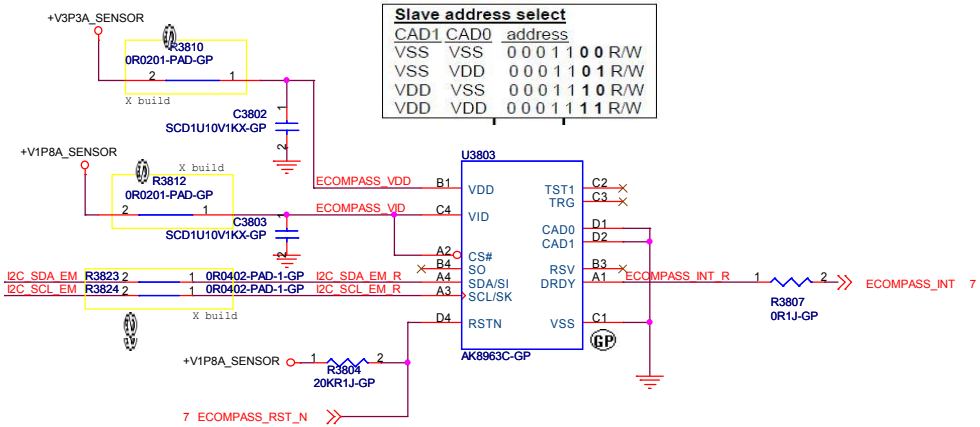
G + Gyro Sensor

I2C Address 1101000



E-Compass

I2C Address 0x0C



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Title	38_Sensor	
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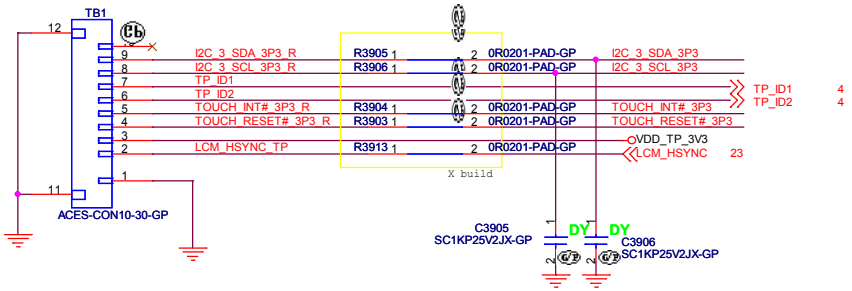
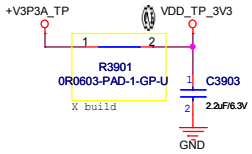
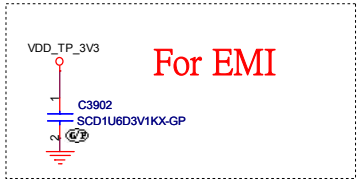
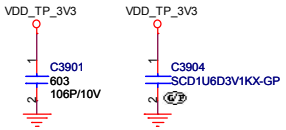
Touch Panel

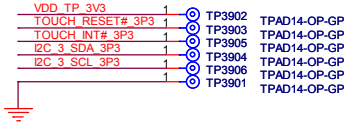
CN1 PIN #	Host 接続時	Description
1	NC	Keep Open
2	SDA	IIC Data Open drain; pull-up resister at Host is needed
3	SCL	IIC Clock Open drain; pull-up resister at Host is needed
4	ID01	Touch Sensor Identification Pin 01
5	ID02	Touch Sensor Identification Pin 02
6	IRQ	IIC Data Ready Output "LOW" when data ready to send Open drain; pull-up resister at Host is needed
7	RESET	RESET Stop operation when pull "LOW" Build-in pull-up resister 100kohm
8	VDD +3.3V	3.3volt power input
9	HSYNC	LCD Hsync input
10	GND	Ground

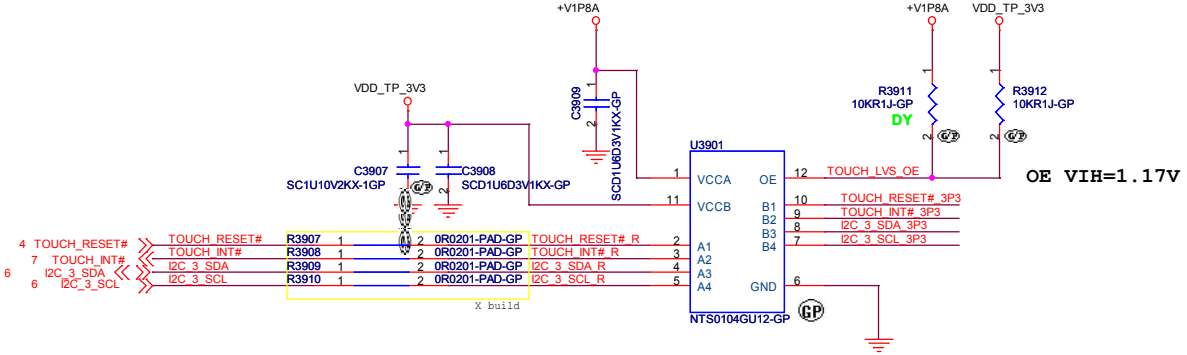




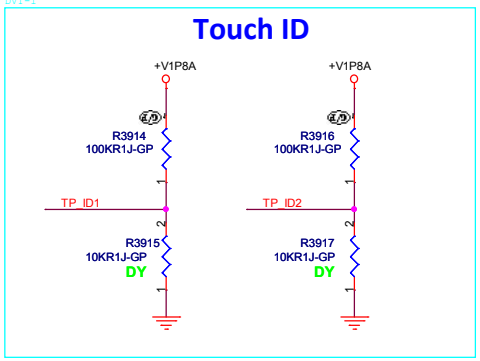








	ID1 (Pin 4)	ID2 (Pin 5)
HH	NC	NC
TPK	NC	GND
O-Film	GND	NC
Option2	GND	GND



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Title	39_Touch Panel	
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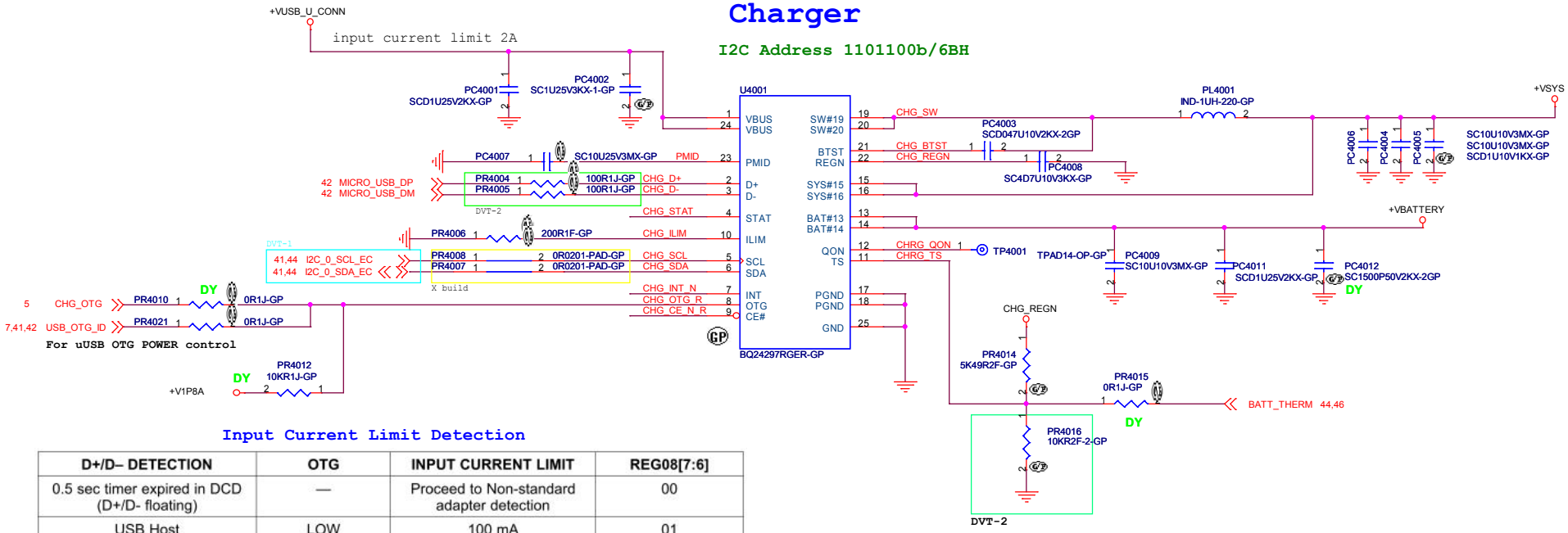
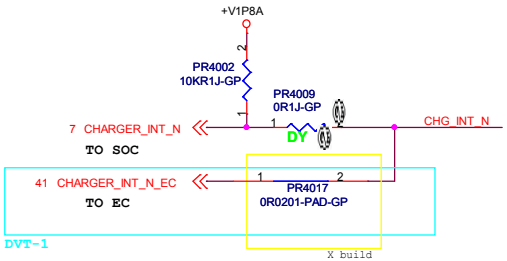
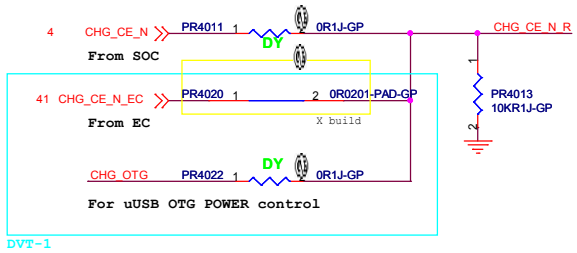
Charger

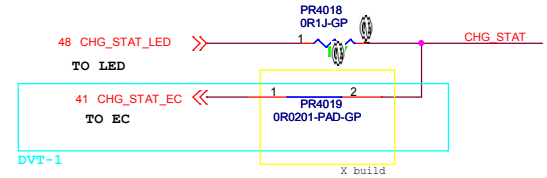


Input Current Limit Detection

D+/D– DETECTION	OTG	INPUT CURRENT LIMIT	REG08[7:6]
0.5 sec timer expired in DCD (D+/D- floating)	—	Proceed to Non-standard adapter detection	00
USB Host	LOW	100 mA	01
USB Host	HIGH	500 mA	01
Charging Port	—	3 A	10







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Title	40_CHARGER	
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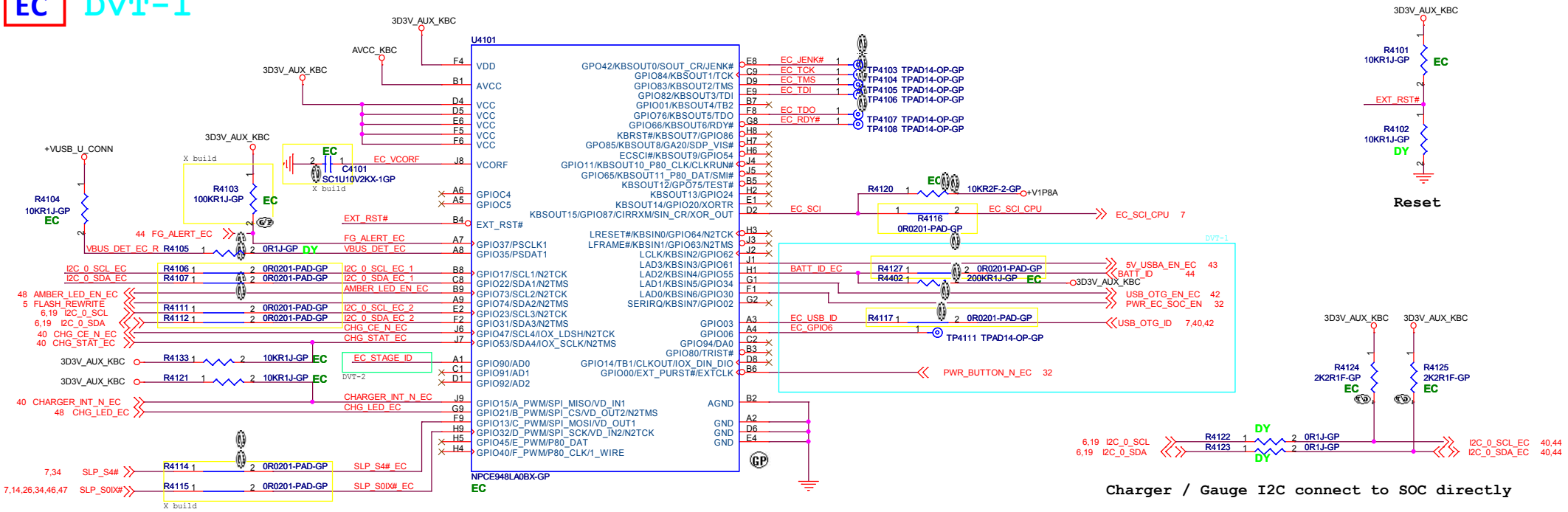
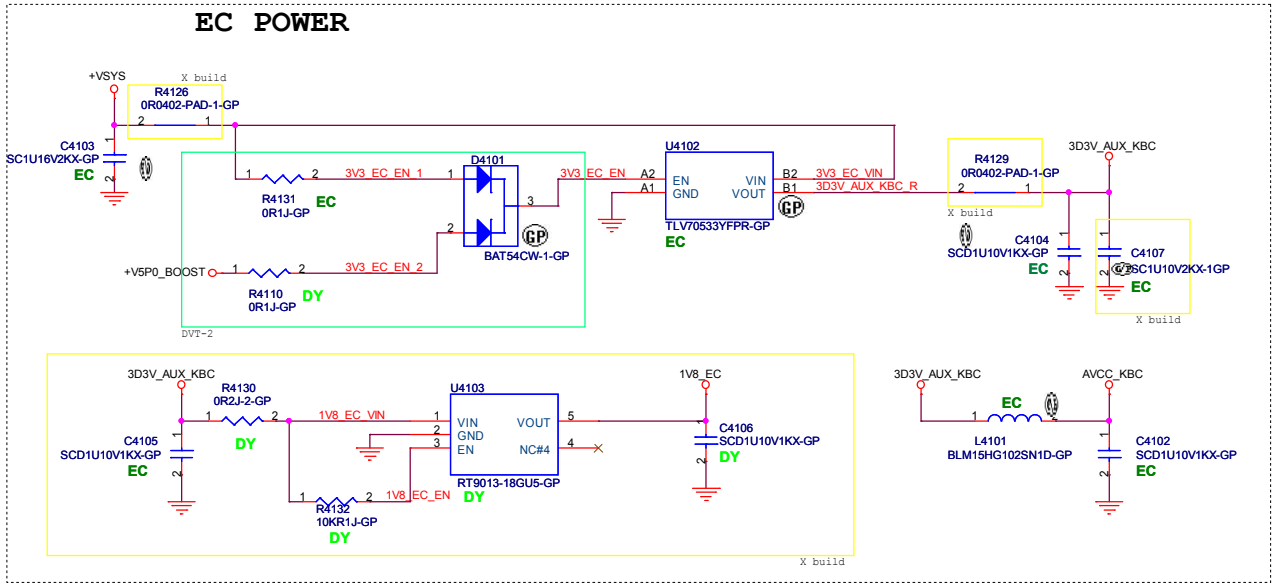
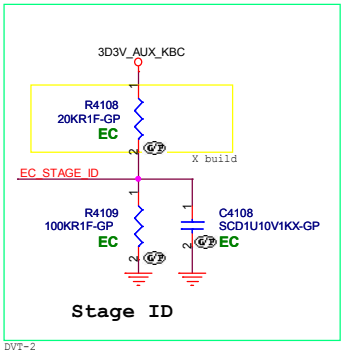
EC DVT-1



EC POWER





PCB_VER_AD	Pull-Low Register	Pull-High Register	Typical Voltage
DVT-2	100.0 K	10.0 K	3.000 V
X-build	100.0 K	20.0 K	2.750 V
Reserved for project use	100.0 K	33.0 K	2.481 V
Reserved for project use	100.0 K	47.0 K	2.245 V
Reserved for project use	100.0 K	64.9 K	2.001 V
Reserved for project use	100.0 K	76.8 K	1.867 V
Reserved for project use	100.0 K	100.0 K	1.650 V
Reserved for project use	100.0 K	143.0 K	1.358 V
Reserved for project use	100.0 K	174.0 K	1.204 V
Reserved for project use	100.0 K	215.0 K	1.048 V

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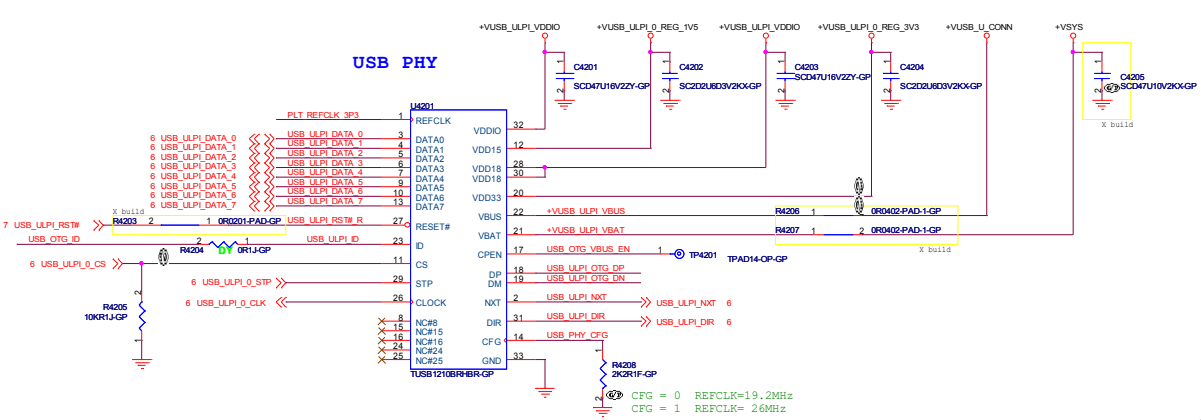
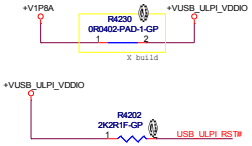
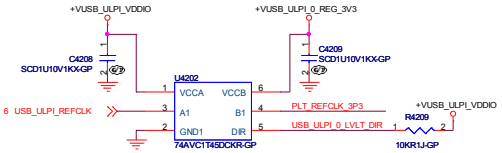
USB PHY

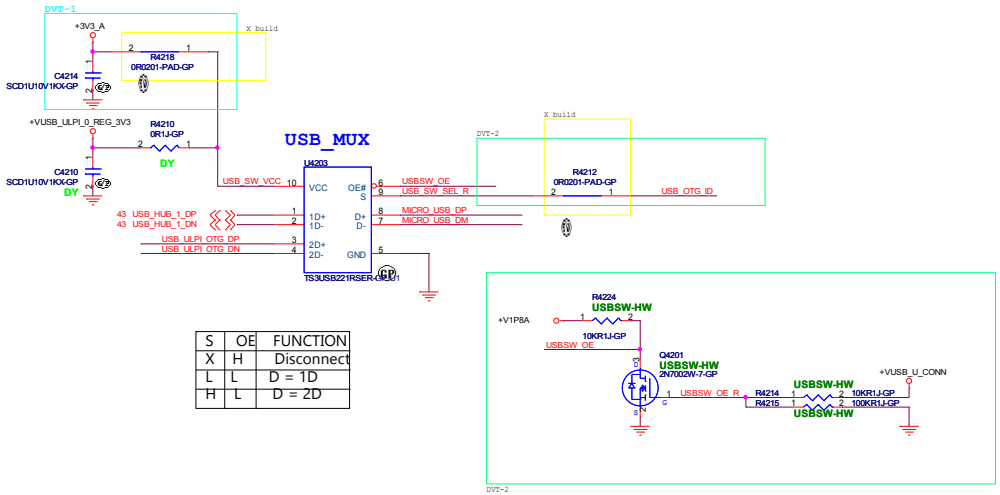




REFCLK LEVEL SHIFT

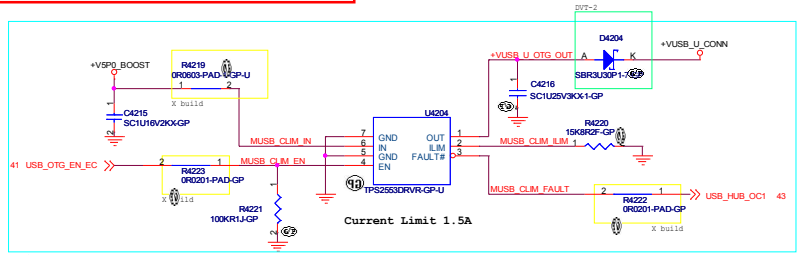


USB MUX

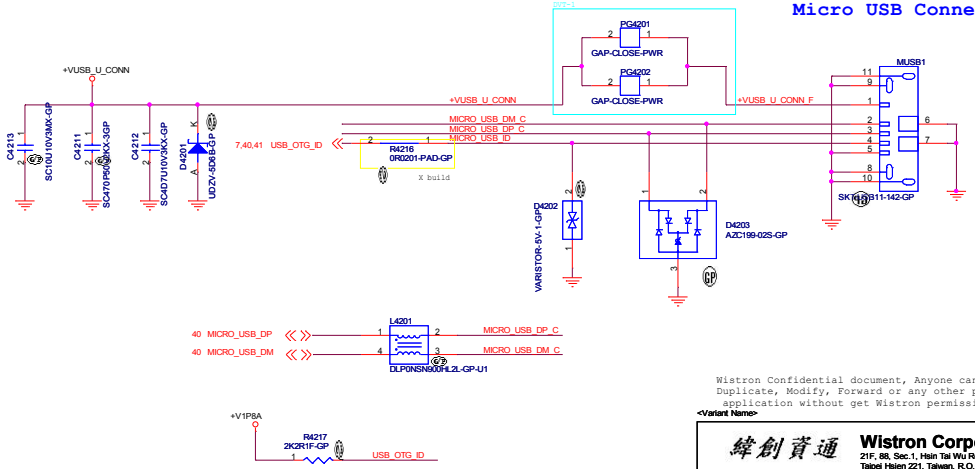


S	OE	FUNCTION
X	H	Disconnect
L	L	D = 1D
H	L	D = 2D

MICRO USB CONN



Micro USB Connector



<Variant Name>

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Title	42_USBPHY/SW/uUSB	
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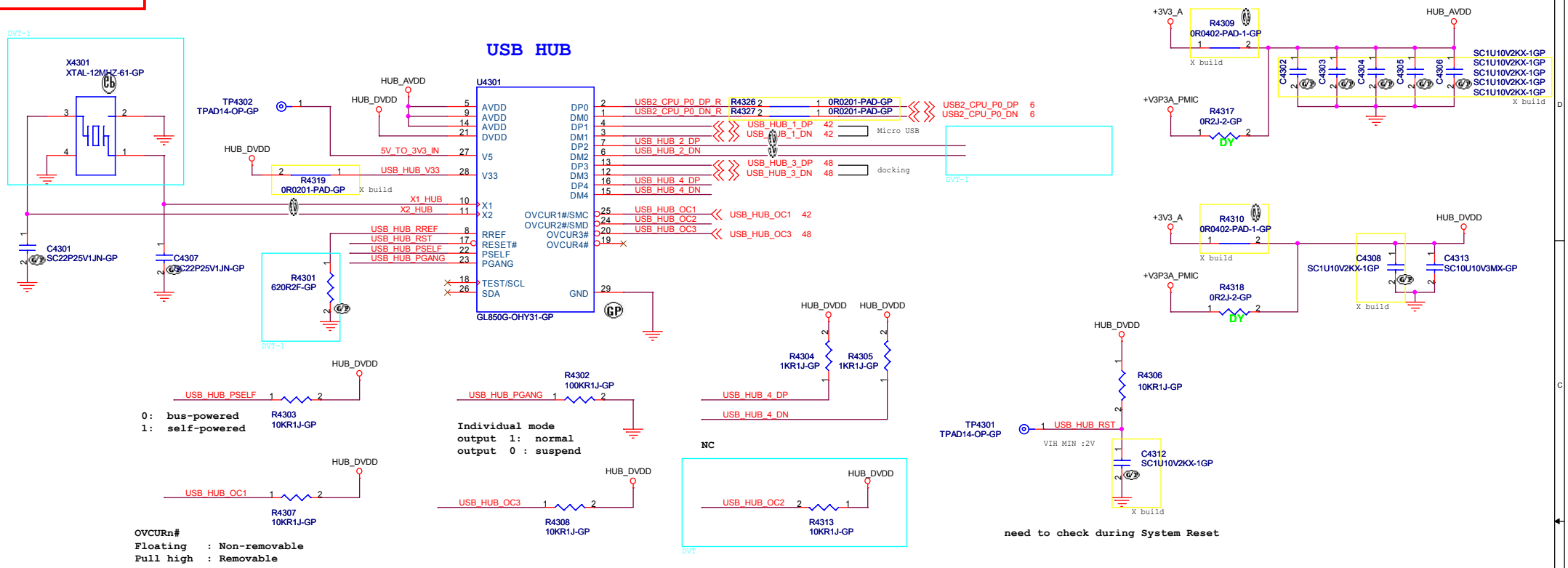
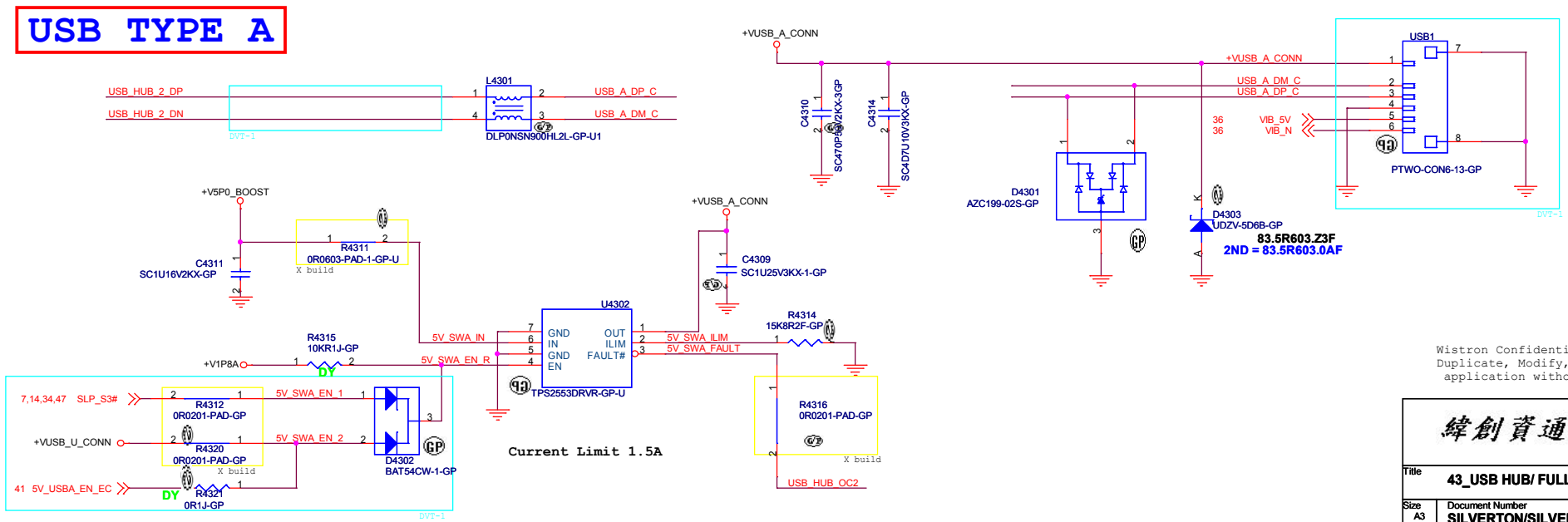
USB HUB



USB TYPE A



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Title	43_USB HUB/ FULL USB CONN	
Size A3	Document Number SILVERTON/SILVEROAK	Rev 0
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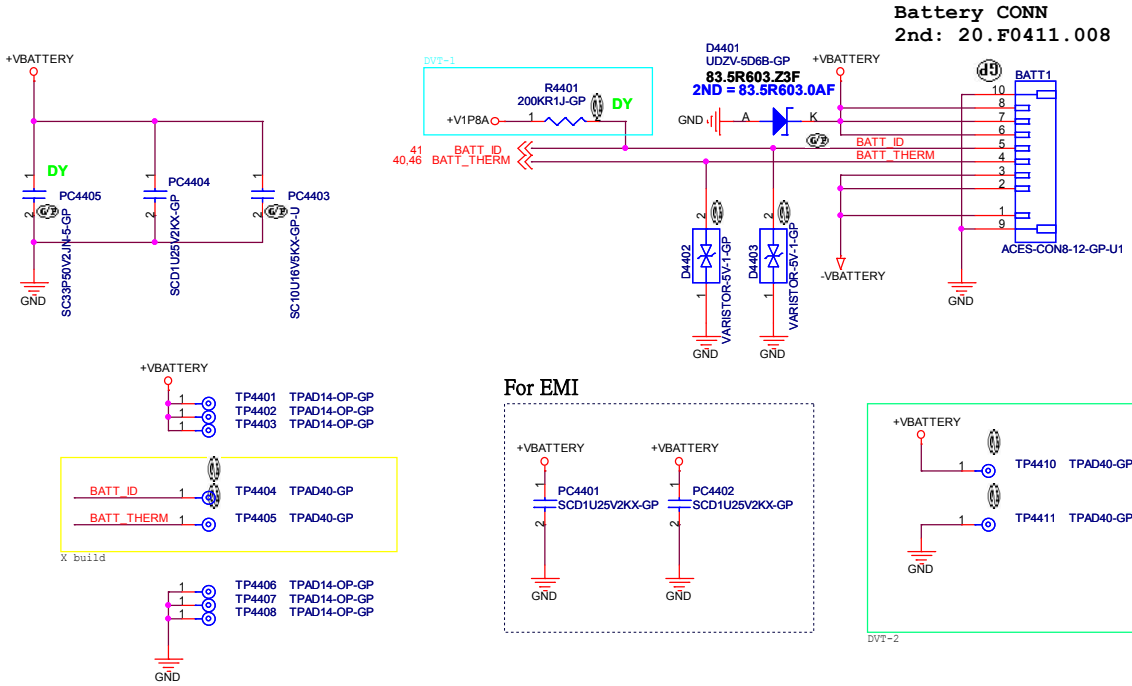
BATTERY CONN

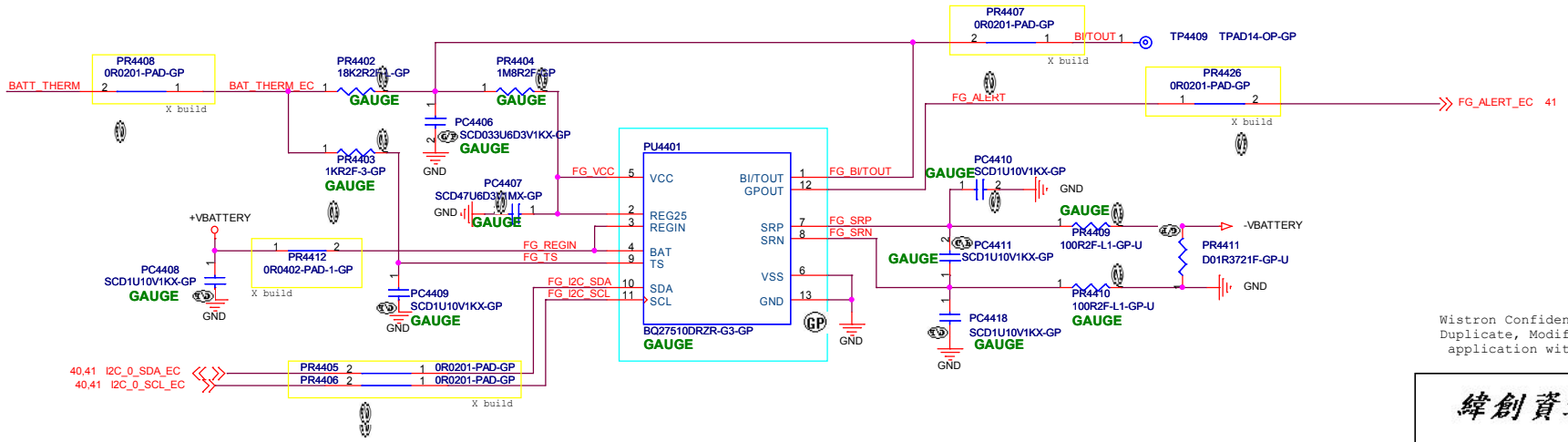


Pin #	Signal	Description/Function	Color
8	BATT+	Power, Batt +, Positive terminal of battery stack	RED
7	BATT+	Power, Batt +, Positive terminal of battery stack	RED
6	BATT+	Power, Batt +, Positive terminal of battery stack	RED
5	ID	Resistance TBD	BLUE
4	TS	Thermistor 103AT to the ground	YELLOW
3	GND	Power, Batt -, Negative terminal of battery stack	BLACK
2	GND	Power, Batt -, Negative terminal of battery stack	BLACK
1	GND	Power, Batt -, Negative terminal of battery stack	BLACK

Battery ID (PU 200K)
vendor 1: floating
vendor 2:PULL LOW with 10K

FUEL GAUGE

DVT-1



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Title	44_BATT CONN	
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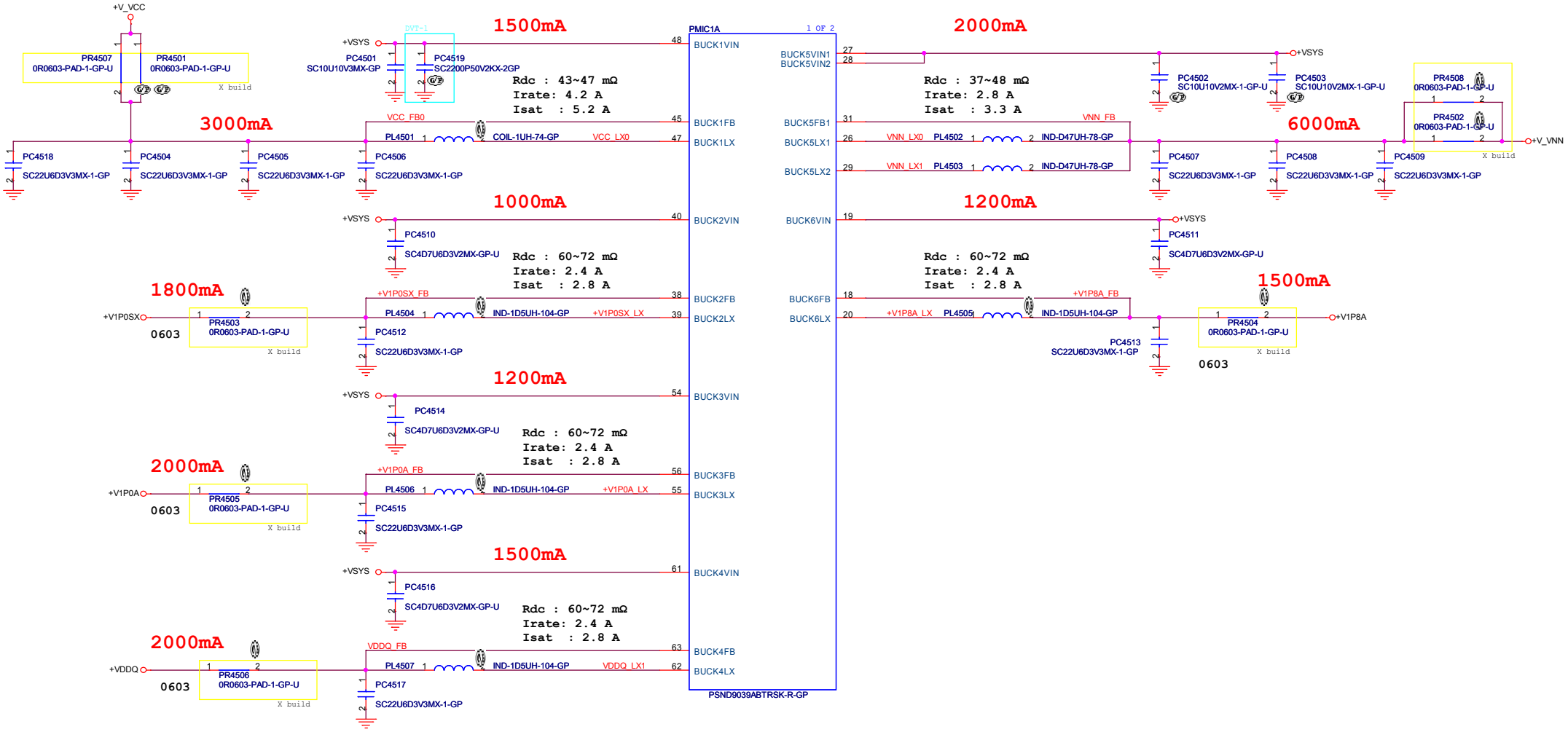
PMIC : BUCK



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Title	45_PMIC(1/2)	
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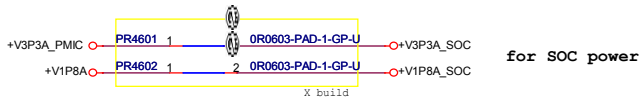
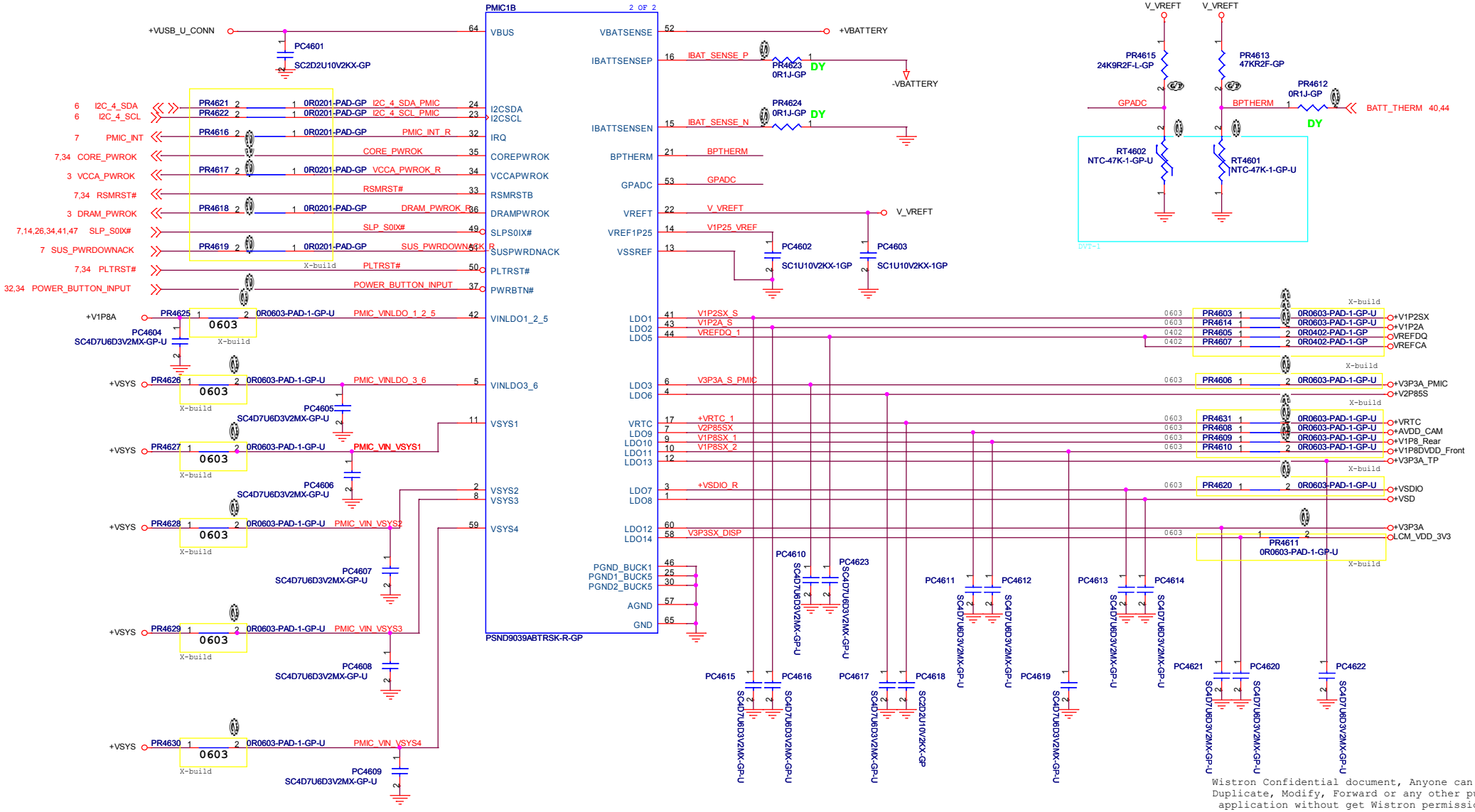
PMIC : CTRL/LDO



for SOC power



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Title	46_PMIC(2/2)	
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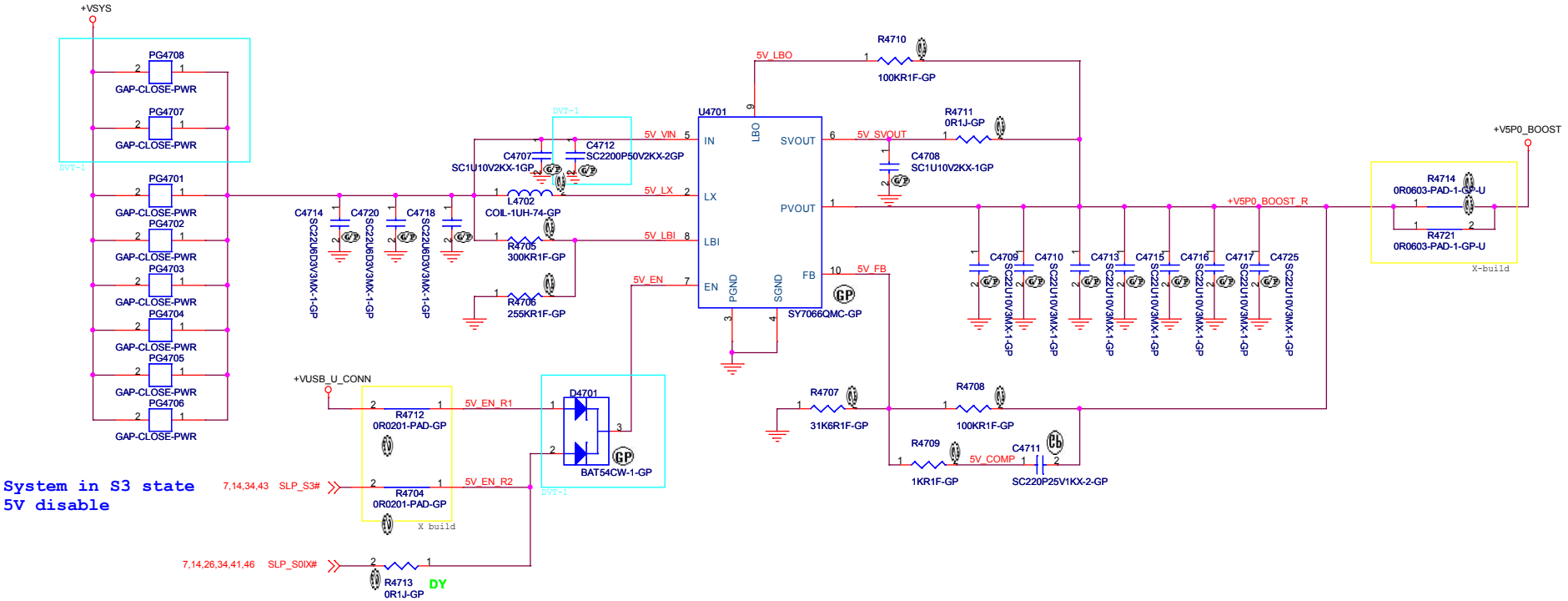
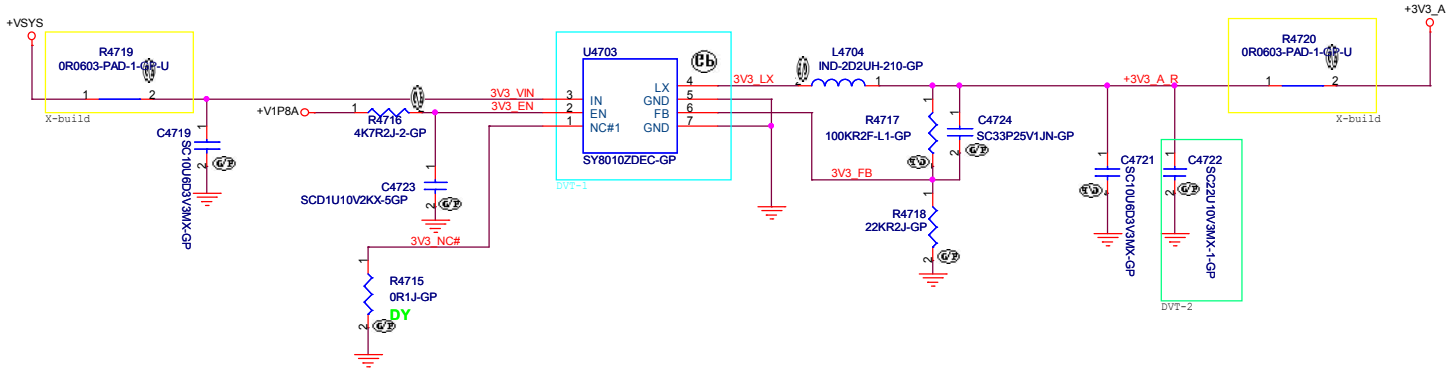
5V BOOST_1 for HDMI / USB / LED /Audio AMP



3V3 BUCK for WIFI



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Title	47_5V_BOOST & 3.3V	
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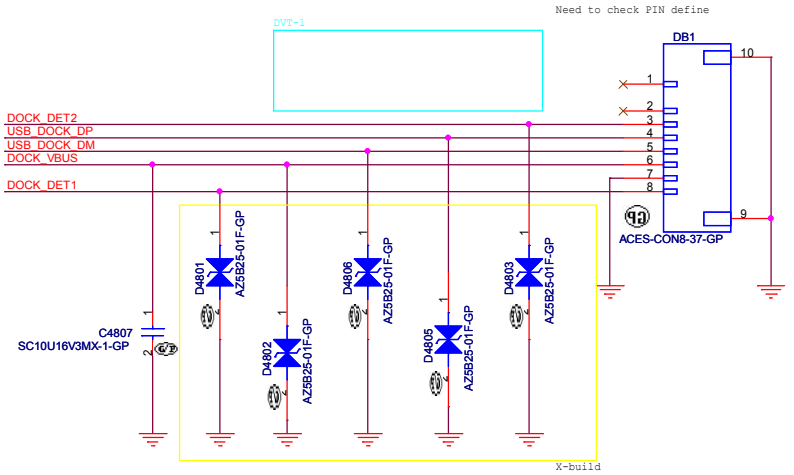
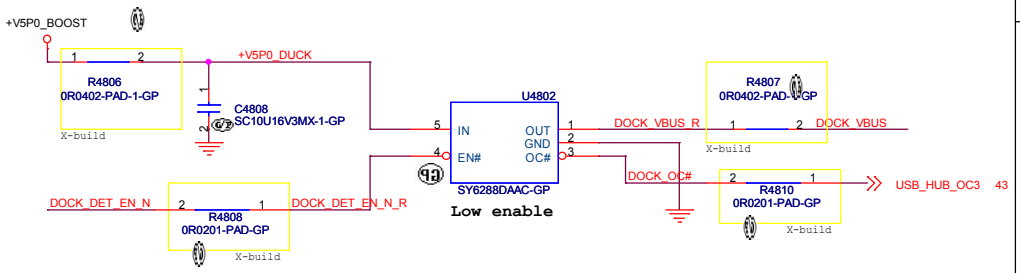
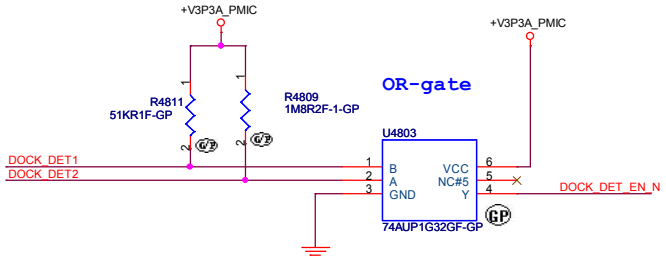
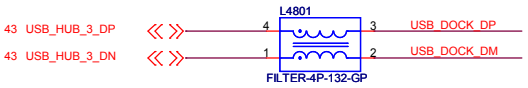
Docking CONN



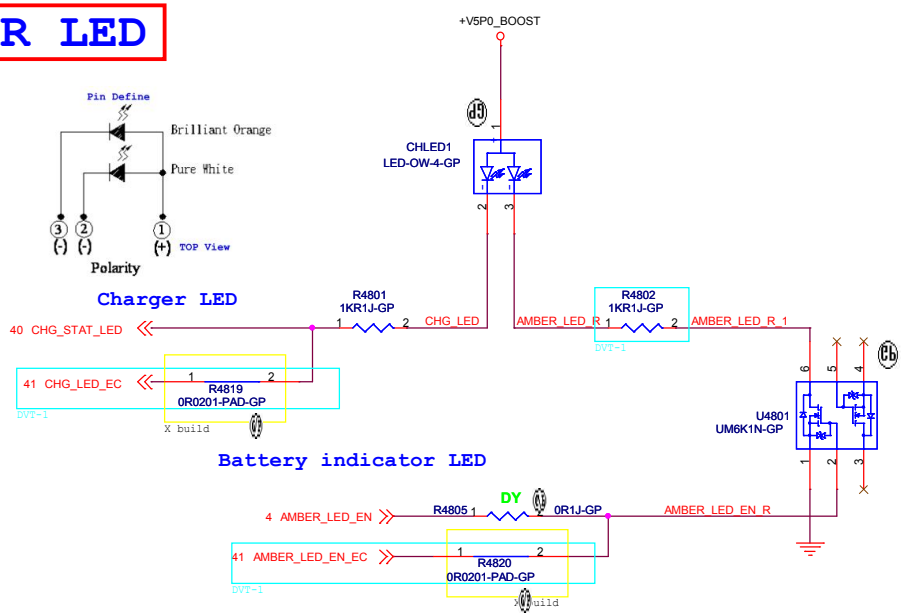




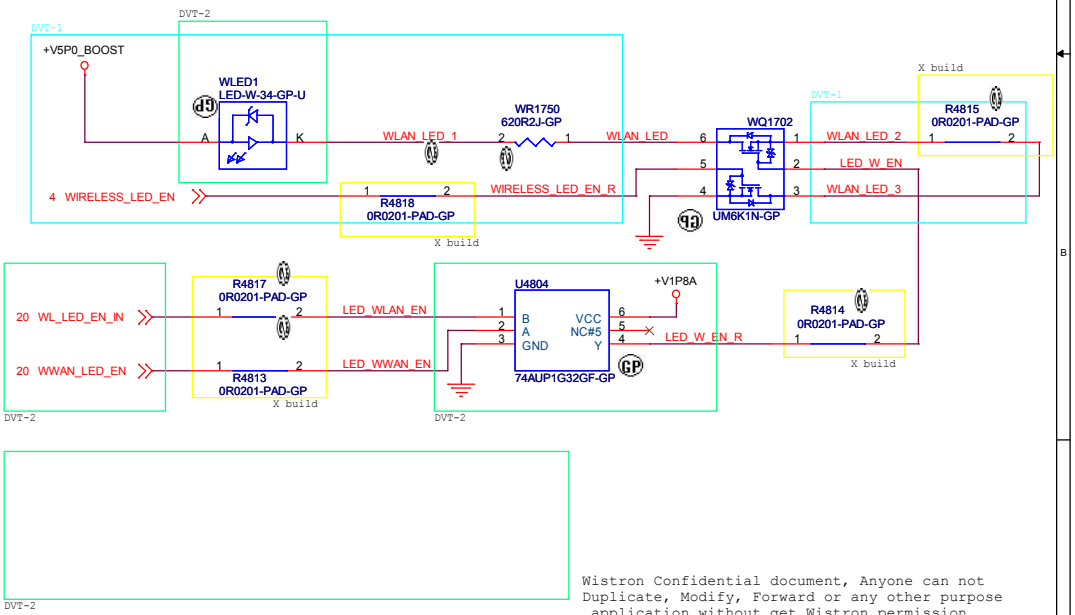
A	B	Y
L	L	L
L	H	H
H	L	H
H	H	H



POWER LED



WIRELESS LED



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Title	48_POWER LED/DOCK CONN	
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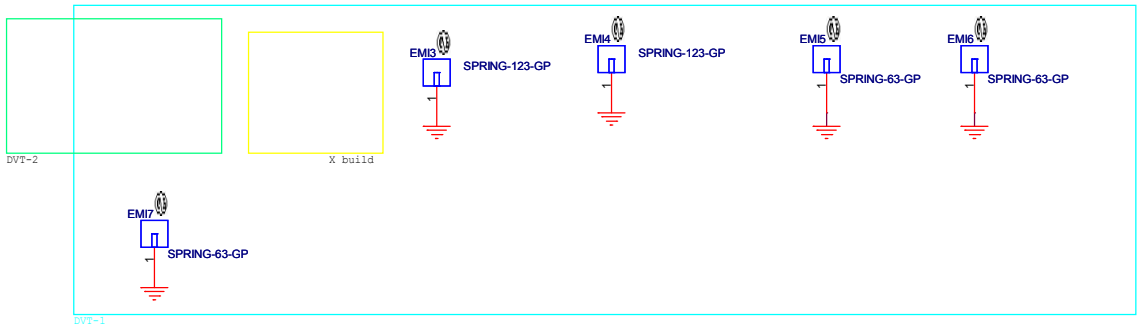
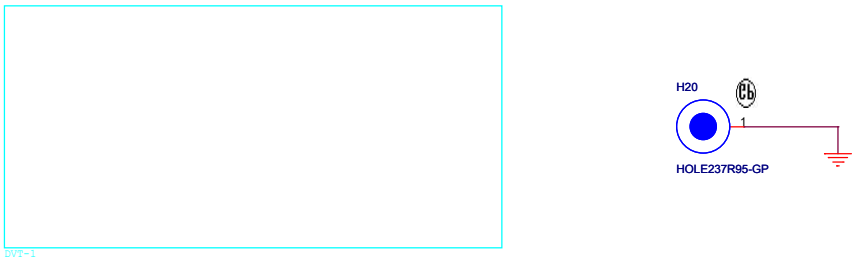
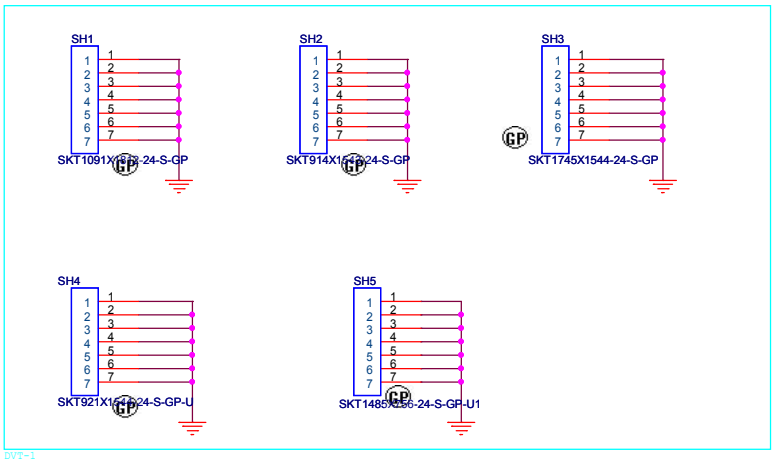
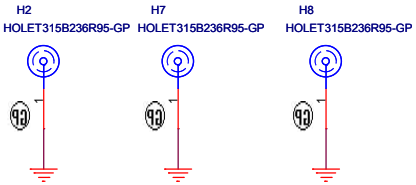
Shielding Can

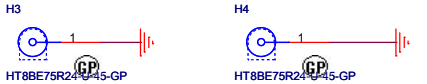


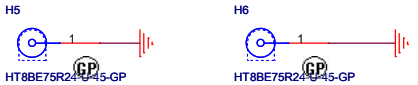


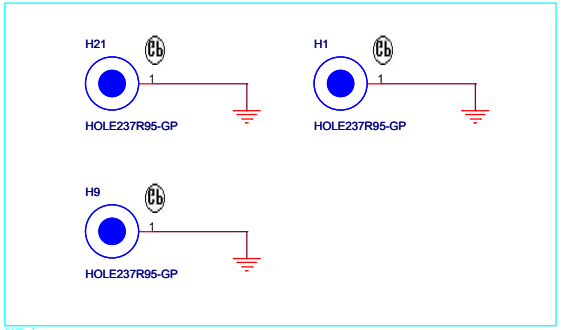


Screw Hole









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Title: 53_ME/EMI		
Size: A3	Document Number: SILVERTON/SILVEROAK	Rev: 0
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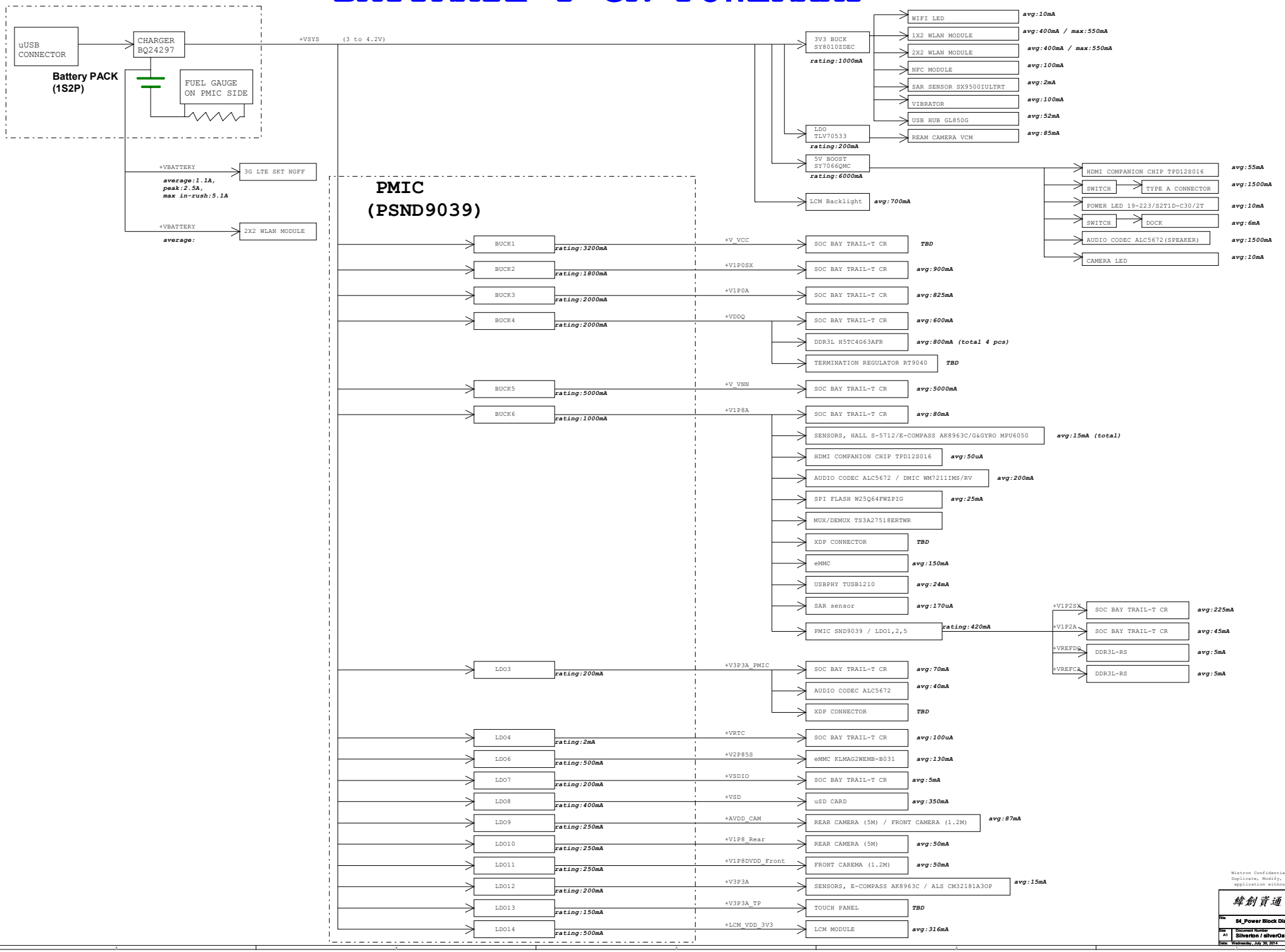
BAYTRAIL T-CR POWERMAP



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Title: 54_Power Block Diagram
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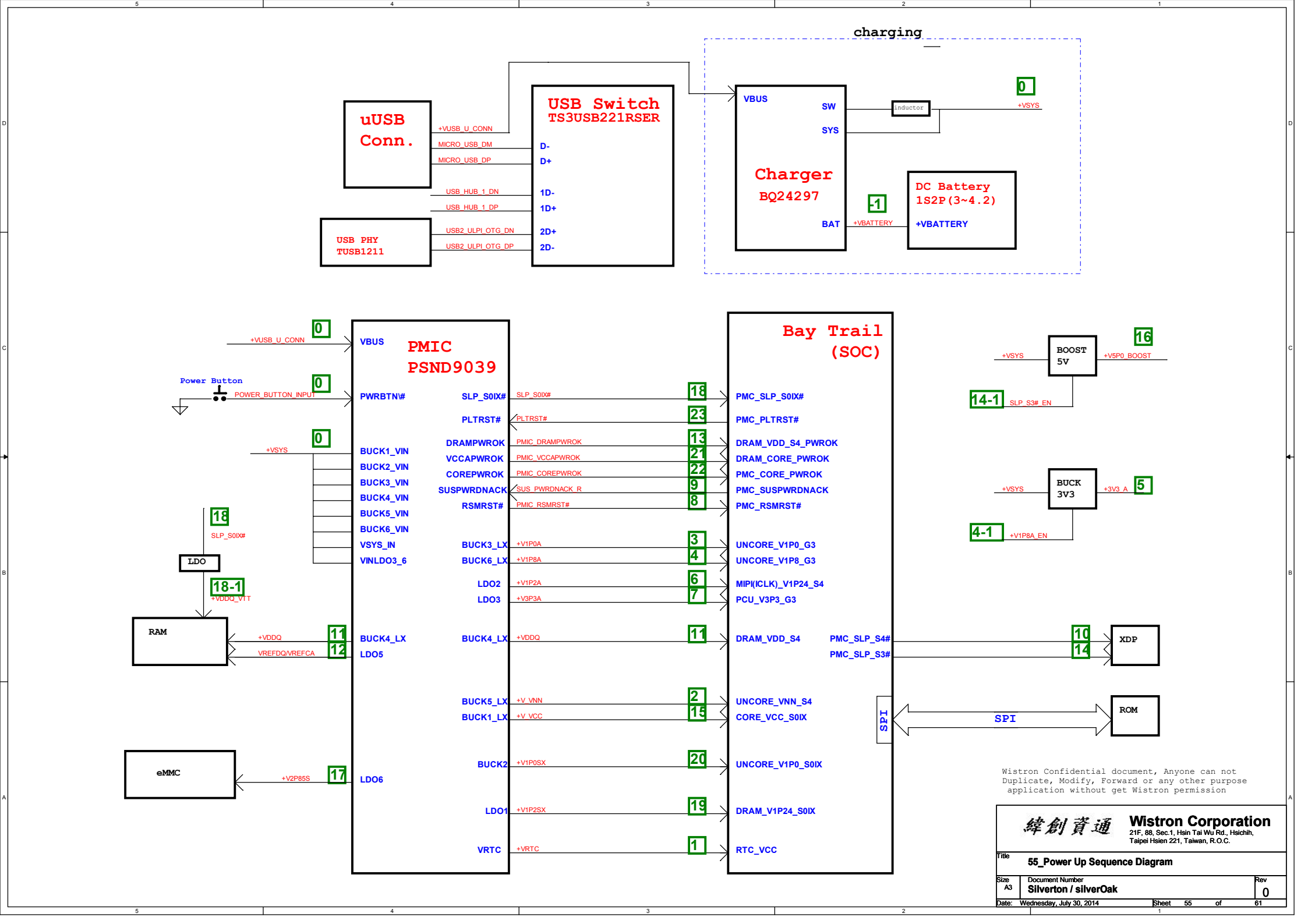
charging
uUSB Conn.
+VUSB_U_CONN
MICRO_USB_DM
MICRO_USB_DP
USB Switch
TS3USB221RSER
D-
D+
USB_HUB_1_DN
USB_HUB_1_DP
1D-
1D+
USB PHY
TUSB1211
USB2_ULPI_OTG_DN
USB2_ULPI_OTG_DP
2D+
2D-
VBUS
SW
SYS
Charger
BQ24297
BAT
inductor
0
+VSYS
-1
+VBATTERY
DC Battery
1S2P(3~4.2)
+VBATTERY
PMIC
PSND9039
Bay Trail
(SOC)
Power Button
POWER_BUTTON_INPUT
PWRBTN#
SLP_S0IX#
PLTRST#
DRAMPWROK
VCCAPWROK
COREPWROK
SUSPWRDNACK
RSMRST#
BUCK1_VIN
BUCK2_VIN
BUCK3_VIN
BUCK4_VIN
BUCK5_VIN
BUCK6_VIN
VSYS_IN
VINLDO3_6
BUCK3_LX
BUCK6_LX
LDO2
LDO3
BUCK4_LX
LDO5
BUCK5_LX
BUCK1_LX
BUCK2
LDO1
VRTC
LDO6
PMC_SLP_S0IX#
PMC_PLTRST#
DRAM_VDD_S4_PWROK
DRAM_CORE_PWROK
PMC_CORE_PWROK
PMC_SUSPWRDNACK
PMC_RSMRST#
UNCORE_V1P0_G3
UNCORE_V1P8_G3
MIPI(ICLK)_V1P24_S4
PCU_V3P3_G3
DRAM_VDD_S4
UNCORE_VNN_S4
CORE_VCC_S0IX
UNCORE_V1P0_S0IX
DRAM_V1P24_S0IX
RTC_VCC
PMC_SLP_S4#
PMC_SLP_S3#
BOOST 5V
+V5P0_BOOST
SLP_S3#_EN
BUCK 3V3
+3V3_A
+V1P8A_EN
LDO
+VDDQ_VTT
RAM
+VDDQ
VREFDQ/VREFCA
eMMC
+V2P85S
XDP
ROM
SPI
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Taipei Hsien 221, Taiwan, R.O.C.
Title
55_Power Up Sequence Diagram
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Rev 0
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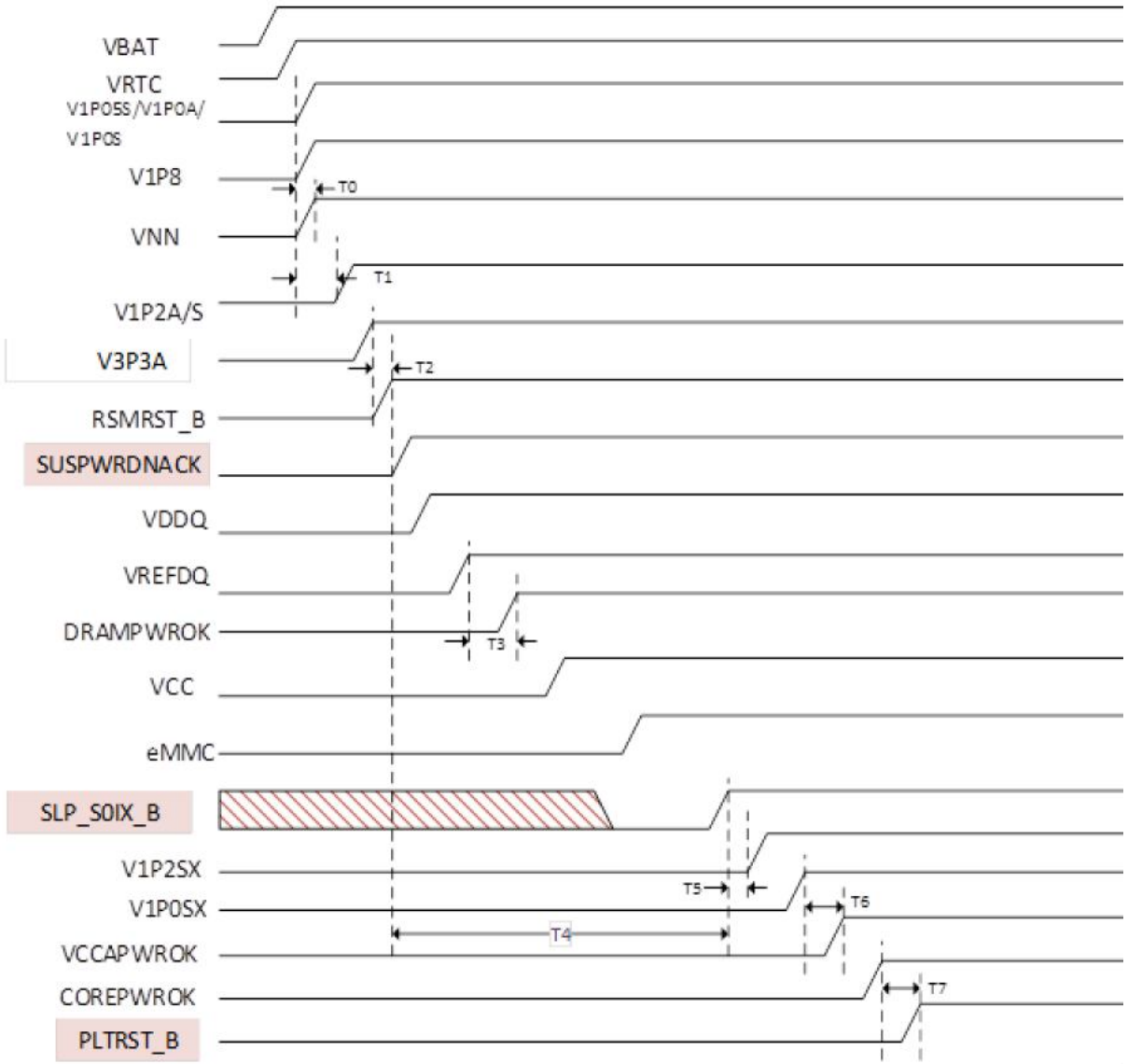

Parameter	Description	Min	Typical	Max	Unit
T0	Rail Ramp-Up Time from 10% to 90% voltage level	0.08	1	2	ms
T1	Rail to Subsequent Rail Turn-On Delay	0.5	1	2.05	ms
T2	V3P3A valid to RSMRST_B de-assertion	0		150	us
T3	VREFDQ valid (within +/-10% of its final normal value) to DRAMPWROK assertion	0		150	us
T4	RSMRST_B de-assertion to SLP_S0IX_B de-assertion	80			us
T5	SLP_S0IX_B de-assertion to first SX rail turn-on delay	0	8	16	ms
T6	Core rails valid to VCCAPWEROK and COREPWROK assertion		1		ms
T7	COREPWROK assertion to PLTRST_B de-assertion	60			us

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Title: 57_Power Sequence Timing

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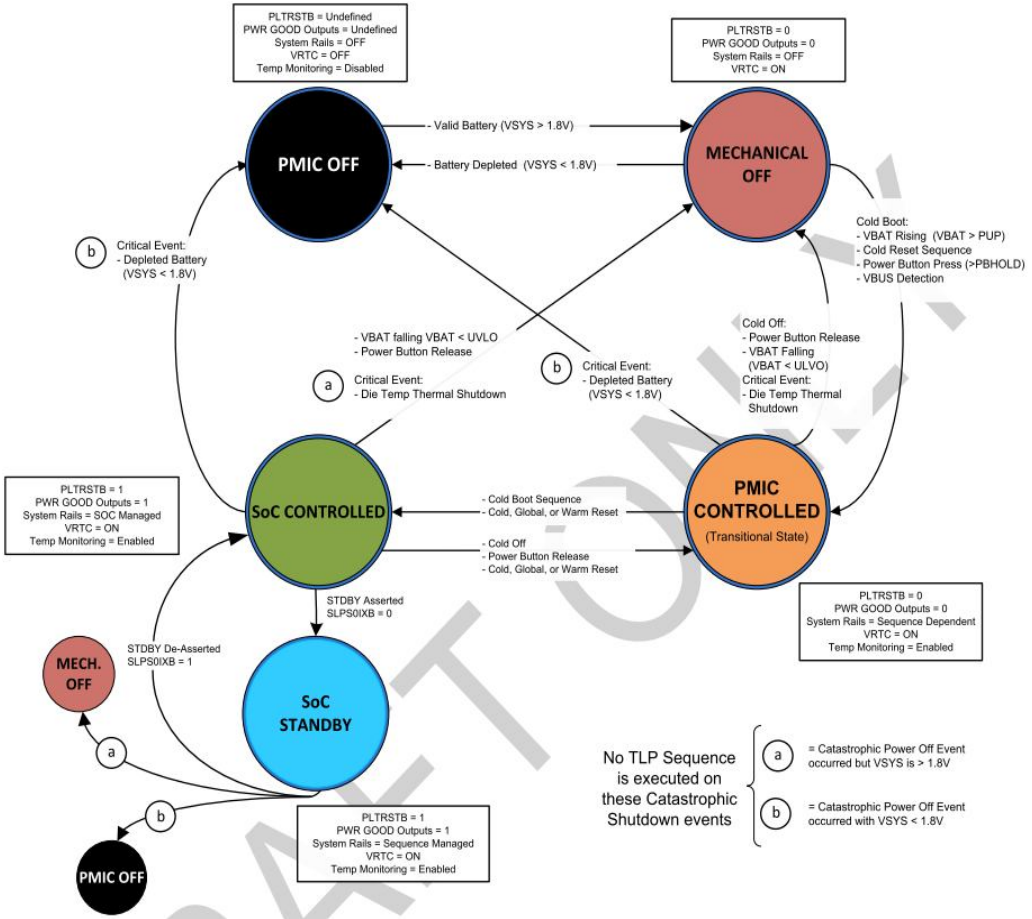

	PART	BUCK1	BUCK2	BUCK3	BUCK4	BUCK5	BUCK6	LDO1	LDO2	LDO3	VRTC LDO4	VREFDQ LDO5	LDO6	LDO7	LDO8	LDO9	LDO10	LDO11	LDO12	LDO13	LDO14	Comment
PMIC OFF	BYT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
	CHT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
Mechanical Off	BYT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
	CHT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	
SoC Controlled	BYT	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	Disabled by default. SoC can enable/disable according to system activity								VREFT can be turned ond and off for thermistor and GPADC biasing
	CHT	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON	Disabled by default. SoC can enable/disable according to system activity								
SoC Stand-by	BYT	OFF	OFF	ON V_{SLEEP}	ON	ON V_{SLEEP}	ON	OFF	ON	ON	ON	ON	ON	Will keep whatever state had before entering standby								I2C is operational VREFT can be turned ond and off for thermistor and GPADC biasing
	CHT	OFF	ON V_{SLEEP}	ON V_{SLEEP}	ON	OFF	ON	ON	ON	ON	ON	ON	ON	Will keep whatever state had before entering standby								

LDO7-LDO14 will keep whatever state before entering standby , it's up to the user whether to enable/disable. State machine won't enforce the behavior in this case.

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Title: 57_Power State

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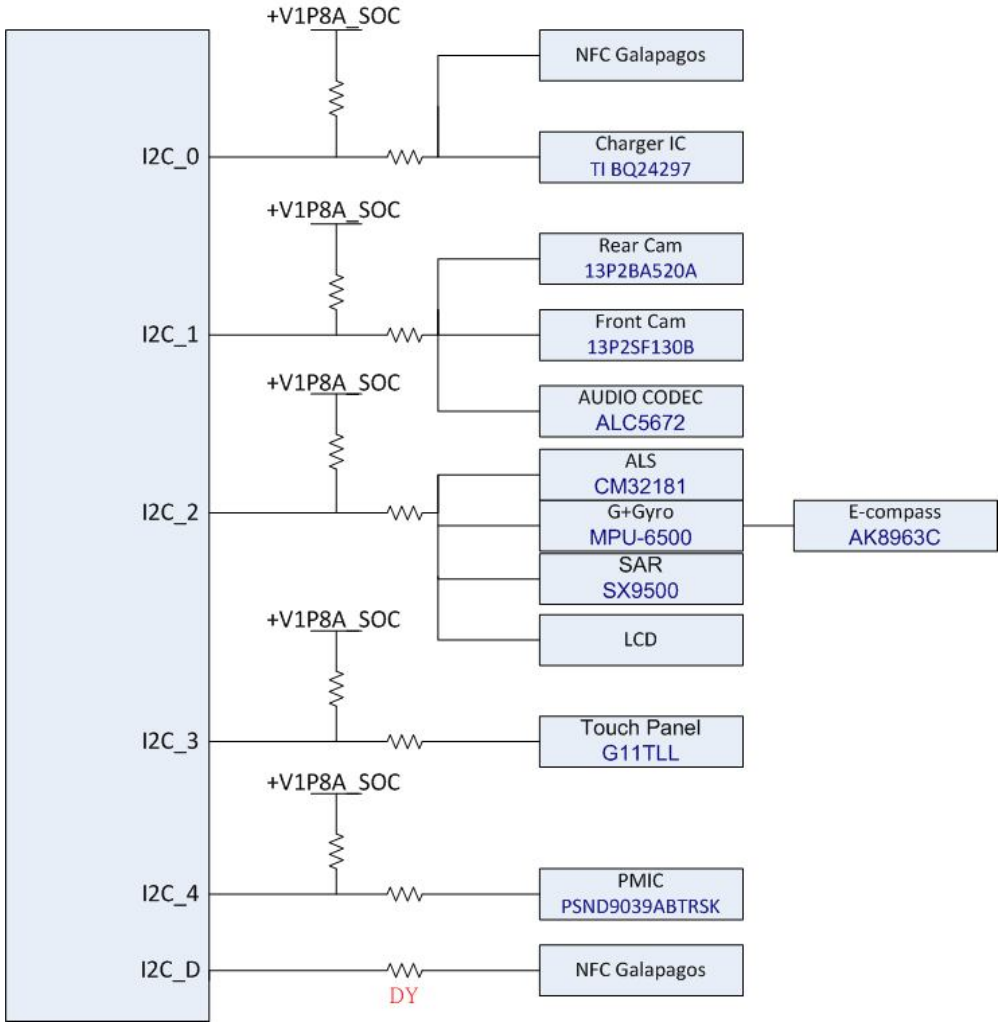
I2C Block Diagram



I2C	Function	Device	address (7-bits)
0	Charger IC	BQ24297	6BH
	NFC	Galapagos	29H
1	Audio Codec	ALC5672	1CH
	Front Cam	MI1040	48H
	Rear Cam	OV5693	10H
	Rear Cam VCM	AD5823BCDZ	18H
2	LCD		
	ALS	CM32181	10H
	E-compass	AK8963C	0CH
	G+Gyro	MPU-6500	68H
	GNSS		
	SAR	SX9500	28H
3	Touch IC	G11TLL	
4	PMIC	PSND9039	05E
D1	NFC	Galapagos	29H

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Title: 58_I2C BLOCK DIAGRAM

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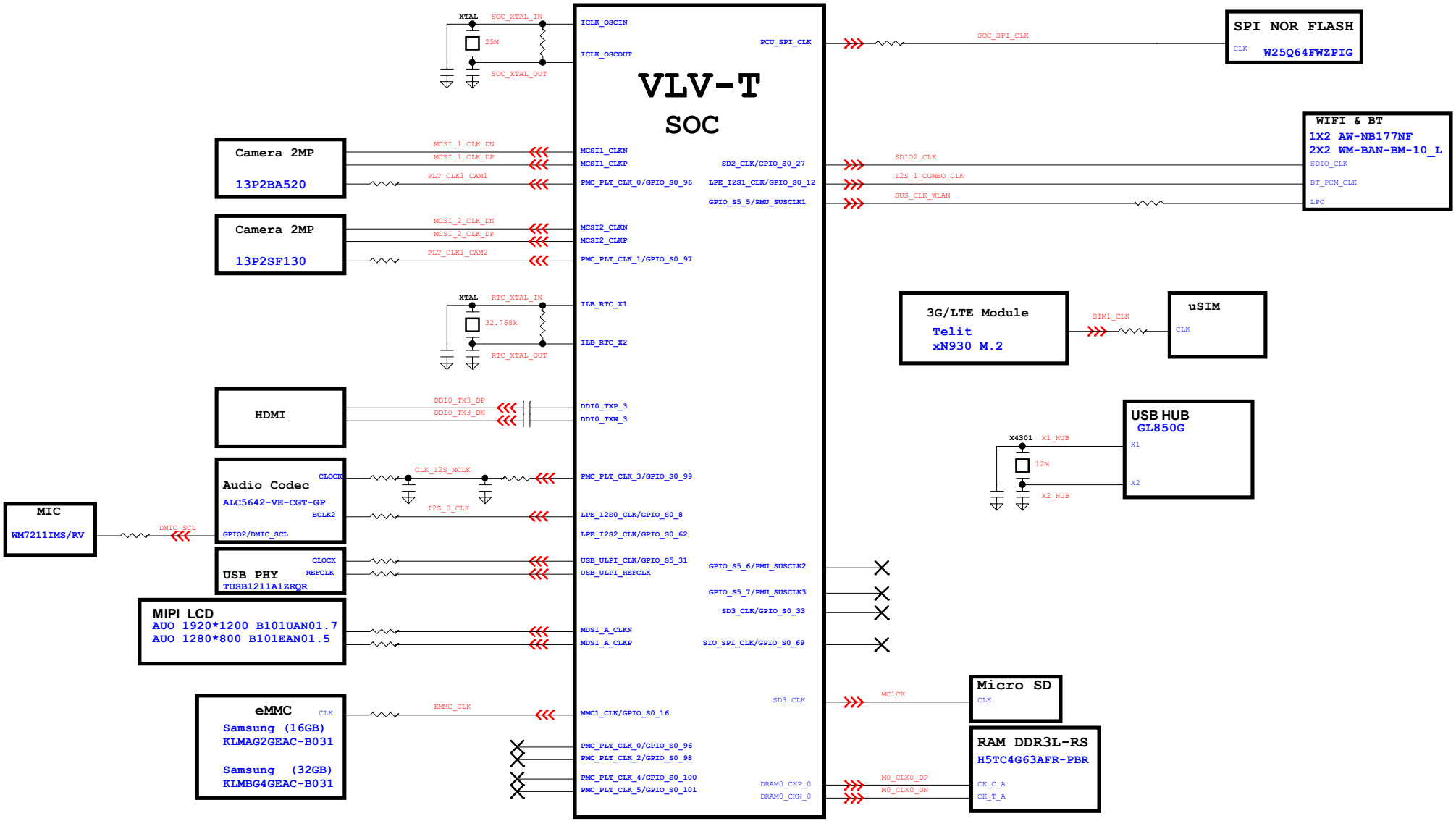
CLOCK Block Diagram



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Title: 59_CLK BLOCK DIAGRAM		
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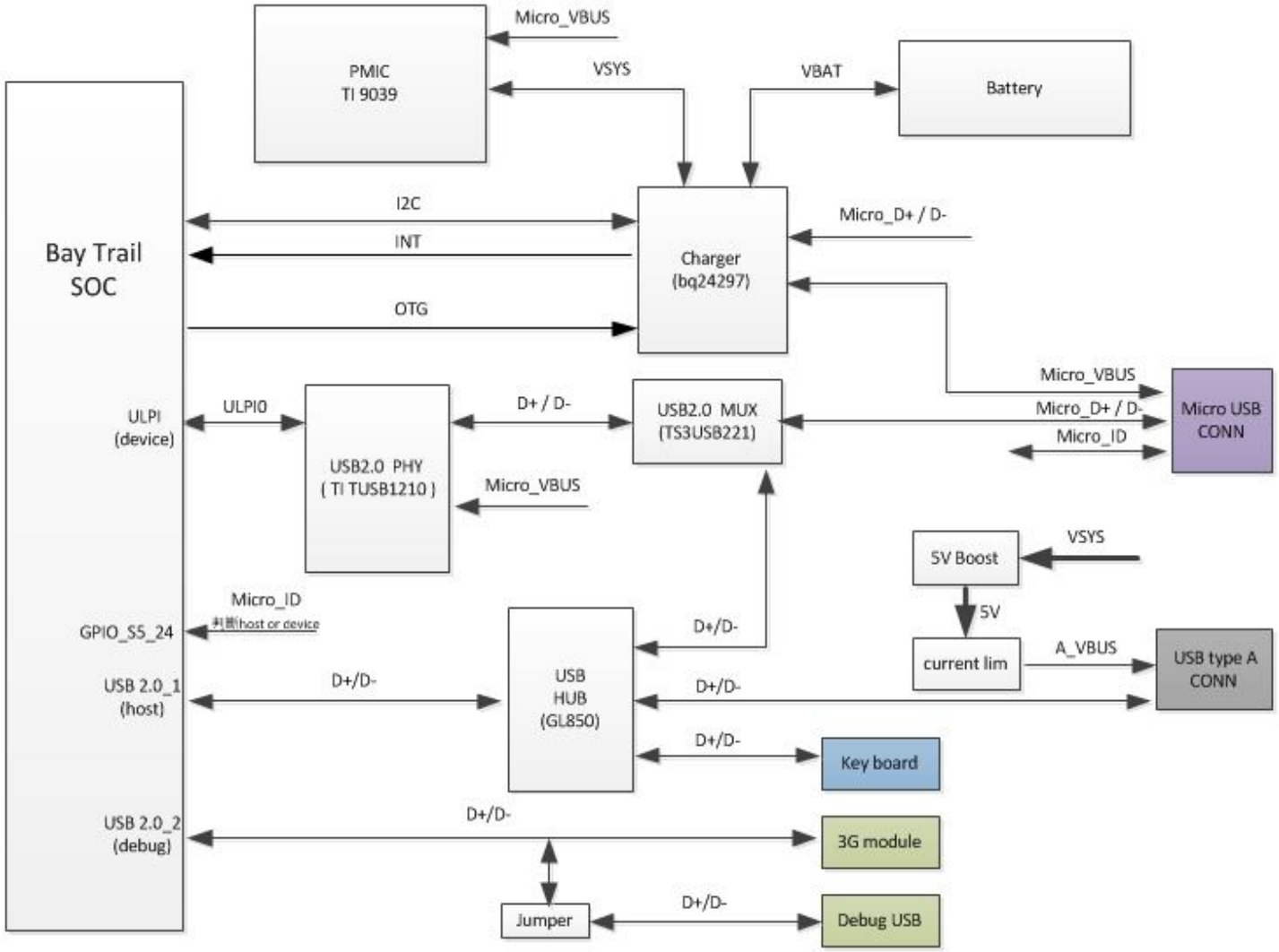

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Title	**60_USB IO BLOCK DIAGRAM**	
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Reversion History

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Title	**61_Change History**	
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