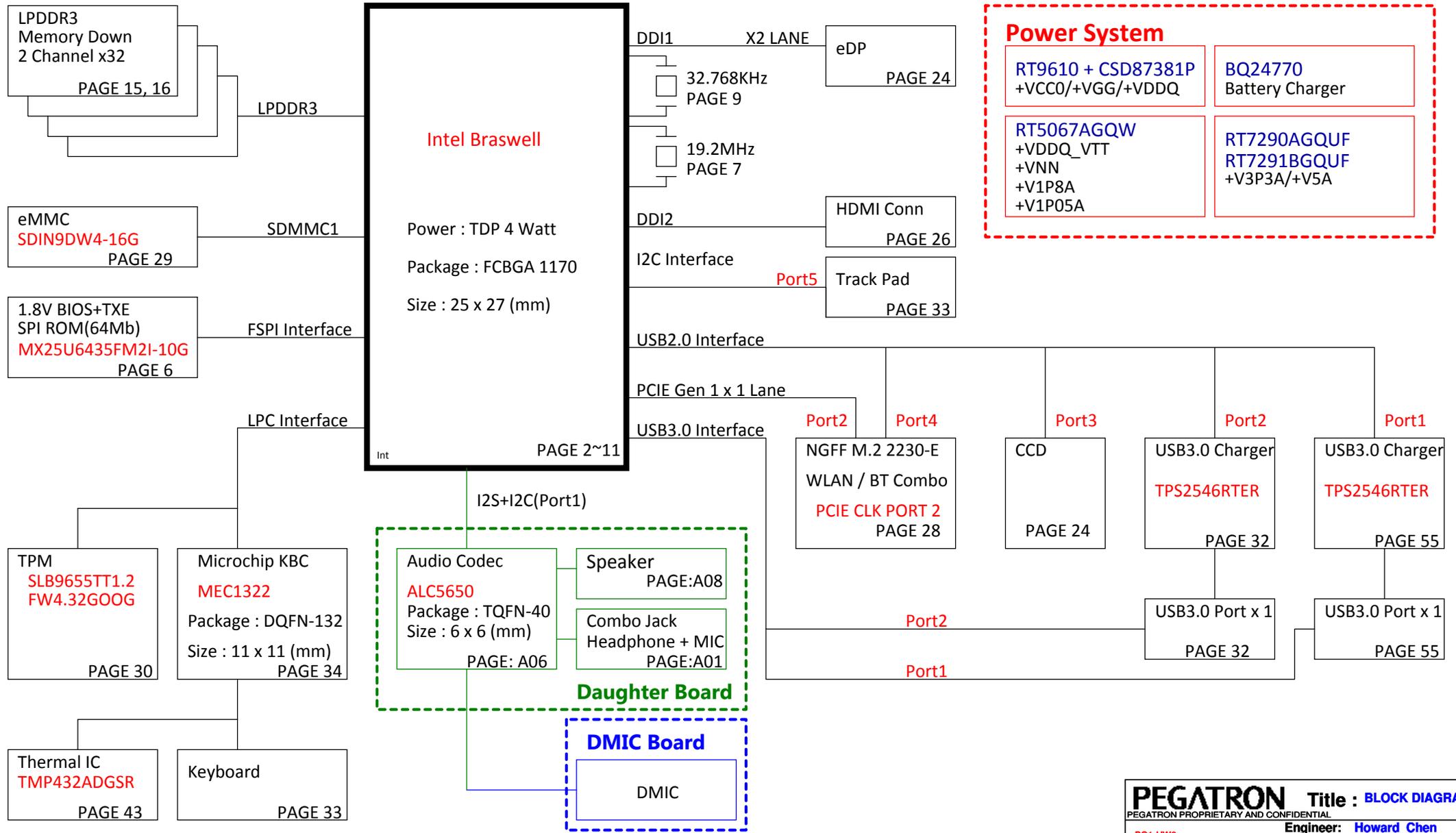


Intel Braswell Platform Block Diagram



Braswell GPIO

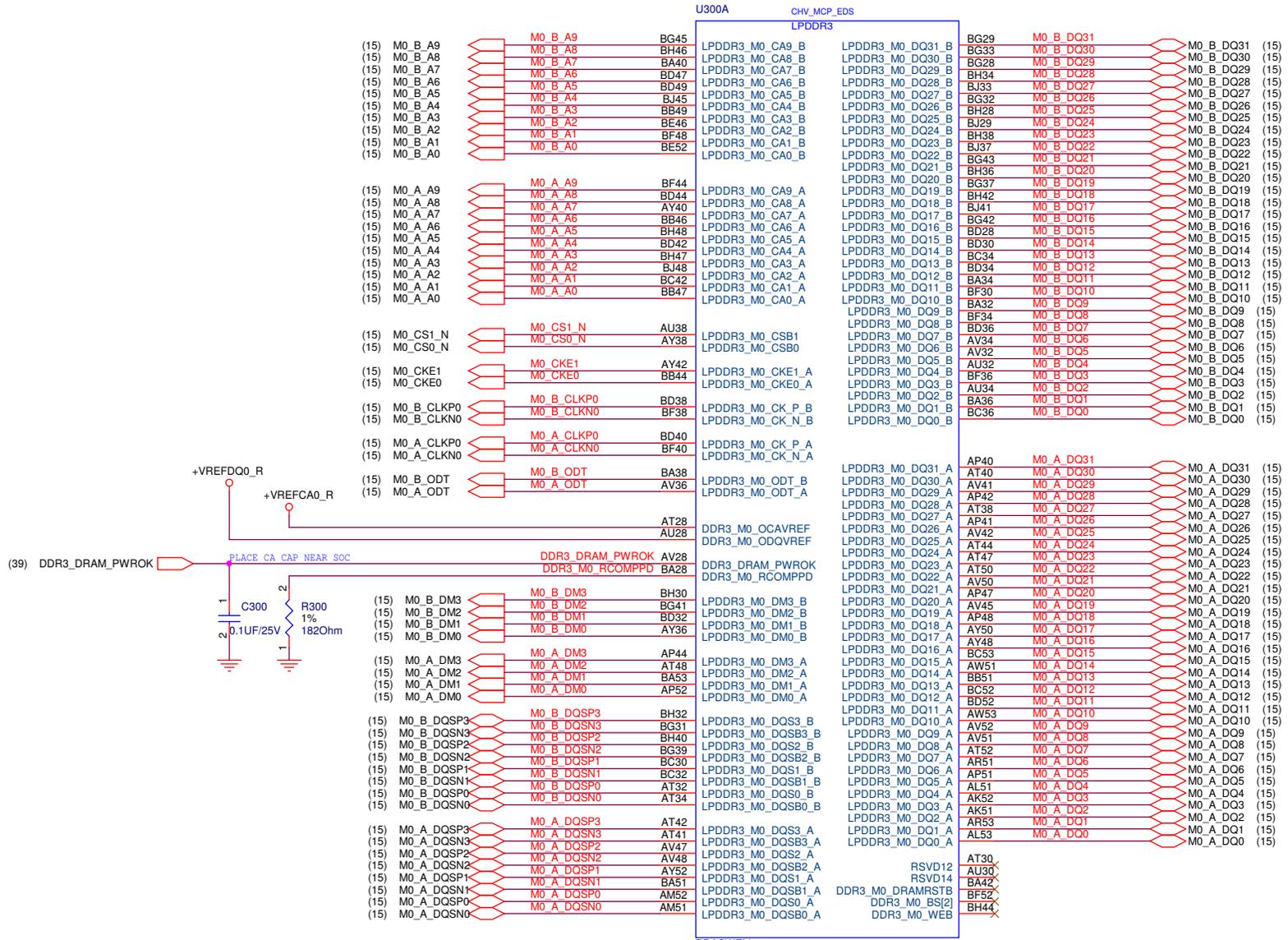
CFIO Name	Use As	Signal Name	Internal Pull-up/down	External Pull-up/down	Power
GP_CAMERASB00	Native	XDP	20K PD		1.8VA
GP_CAMERASB01	Native	XP	20K PD		1.8VA
GP_CAMERASB10	Native	NC	20K PD		1.8VA
GP_CAMERASB11	Native	HW SETTING	20K PD		1.8VA
GP_CAMERASB02	Native	XDP	20K PD		1.8VA
GP_CAMERASB03	Native	XDP	20K PD		1.8VA
GP_CAMERASB04	Native	XDP	20K PD		1.8VA
GP_CAMERASB05	Native	XDP	20K PD		1.8VA
GP_CAMERASB06	Native	XDP	20K PD		1.8VA
GP_CAMERASB07	Native	XDP	20K PD		1.8VA
GP_CAMERASB08	Native	XDP	20K PD		1.8VA
GP_CAMERASB09	Native	HW SETTING	20K PD		1.8VA
HV_DDIO_HPD	Native	XDP	20K PD		1.8VA
HV_DDIO_DDC_SCL	Native	NC	20K PU		1.8VA
HV_DDIO_DDC_SDA	Native	NC	20K PU		1.8VA
PANEL0_BKLTCTL	NC	0			1.8VA
PANEL0_BKLTEN	NC	0			1.8VA
PANEL0_VDDEN	NC	0			1.8VA
HV_DDII_HPD	Native	EDP_HPD_L	20K PD		1.8VA
PANEL1_BKLTCTL	Native	EDP_BKLTCTL	0		1.8VA
PANEL1_BKLTEN	Native	EDP_BKLTEN	0		1.8VA
PANEL1_VDDEN	Native	EDP_VDDEN	0		1.8VA
HV_DDII_HPD	Native	INT_HDMI_HPD	20K PD		1.8VA
HV_DDII_DDC_SCL	Native	HDMI_DDCCLK_SW	20K PU		1.8VA
HV_DDII_DDC_SDA	Native	HDMI_DDCDATA_SW	20K PU		1.8VA
SDMMC1_CLK	Native	EMMC_CLK	0(20K PD)		1.8VA
SDMMC1_CMD	Native	EMMC_CMD	2(20K PU)		1.8VA
SDMMC1_D0	Native	EMMC_D0	2(20K PU)		1.8VA
SDMMC1_D1	Native	EMMC_D1	2(20K PU)		1.8VA
SDMMC1_D2	Native	EMMC_D2	2(20K PU)		1.8VA
SDMMC1_D3_CD_N	Native	EMMC_D3	2(20K PU)		1.8VA
MMC1_D4_SD_WE	Native	EMMC_D4	2(20K PU)		1.8VA
SDMMC1_D5	Native	EMMC_D5	2(20K PU)		1.8VA
SDMMC1_D6	Native	EMMC_D6	2(20K PU)		1.8VA
SDMMC1_D7	Native	EMMC_D7	2(20K PU)		1.8VA
SDMMC1_RCLK	Native	EMMC_RCLK_R	2(20K PU)		1.8VA
FST_SPI_CLK	Native	FAST_SPI_CLK	OUTPUT*		1.8VA
FST_SPI_CS0_N	Native	FAST_SPI_CS0	OUTPUT*		1.8VA
FST_SPI_CS1_N	NC	0			1.8VA
FST_SPI_CS2_N	GPO	LTE_DISABLE#	OUTPUT*		1.8VA
FST_SPI_D0	Native	FAST_SPI_D0	20K PU		1.8VA
FST_SPI_D1	Native	FAST_SPI_D1	20K PU		1.8VA
FST_SPI_D2	NC	0			1.8VA
FST_SPI_D3	NC	0			1.8VA
GPI0_DFX0	Native	XDP	20K PD		1.8VA
GPI0_DFX1	Native	XDP	20K PD		1.8VA
GPI0_DFX2	Native	XDP	20K PD		1.8VA
GPI0_DFX3	Native	XDP	20K PD		1.8VA
GPI0_DFX4	Native	XDP	20K PD		1.8VA
GPI0_DFX5	Native	XDP	20K PU		1.8VA
GPI0_DFX6	Native	XDP	20K PU		1.8VA
GPI0_DFX7	Native	XDP	20K PU		1.8VA
GPI0_DFX8	Native	XDP	20K PU		1.8VA
GPI0_SUS0	Native	HW SETTING	20K PD		1.8VA
GPI0_SUS1	Native	HW SETTING	20K PD		1.8VA
GPI0_SUS2	Native	HW SETTING	20K PU		1.8VA
GPI0_SUS3	Native	HW SETTING	20K PD		1.8VA
GPI0_SUS4	Native	HW SETTING	20K PU		1.8VA
GPI0_SUS5	Native	HW SETTING	20K PD		1.8VA
GPI0_SUS6	Native	HW SETTING	20K PU		1.8VA
GPI0_SUS7	Native	HW SETTING	20K PU		1.8VA
SEC_GPI0_SUS8	Native	HW SETTING	20K PU		1.8VA
SEC_GPI0_SUS9	Native	HW SETTING	20K PD		1.8VA
SEC_GPI0_SUS10	Native	HW SETTING	20K PD		1.8VA
SEC_GPI0_SUS11	GPI	SIM_DET_C	0(20K PD)		1.8VA
MF_HDA_CLK	NC	0	0(20K PD)		1.8VA/1.5VA
MF_HDA_DOCKEN_N	GPI	MIC_PRESENT_L_SOC	20K PD		1.8VA/1.5VA
MF_HDA_DOCKRST_N	GPO	AUDIO_SWITCH_INT_N	0(20K PD)		1.8VA/1.5VA
MF_HDA_RST_N	NC	0	20K PD		1.8VA/1.5VA
MF_HDA_SDIO	NC	0	20K PD		1.8VA/1.5VA
MF_HDA_SDIO1	NC	0	20K PD		1.8VA/1.5VA
MF_HDA_SDO	NC	0	20K PD		1.8VA/1.5VA
MF_HDA_SYNC	NC	0	20K PD		1.8VA/1.5VA
UART1_CTS_N	NC	0	20K PU		1.8VA
UART1_RTS_N	NC	0	1(20K PU)		1.8VA
UART1_RXD	Native	SOC_UART_RX	20K PU		1.8VA
UART1_TXD	Native	SOC_UART_TX	1(20K PU)		1.8VA
UART2_CTS_N	NC	0	20K PU		1.8VA
UART2_RTS_N	NC	0	1(20K PU)		1.8VA
UART2_RXD	NC	0	20K PU		1.8VA
UART2_TXD	NC	0	1(20K PU)		1.8VA
GPI0_ALERT	Native	AJACK_PRESENT_SOC	0(20K PU)*		1.8VA
I2C0_SCL	Native	I2C_0_SCL	2(1K PU,OD)		1.8VA
I2C0_SDA	Native	I2C_0_SDA	2(1K PU,OD)		1.8VA
I2C1_SCL	Native	I2C_1_SCL	2(20K PU,OD)		1.8VA
I2C1_SDA	Native	I2C_1_SDA	2(20K PU,OD)		1.8VA
I2C2_SCL	Native	I2C_NFC_SCL	2(20K PU,OD)		1.8VA
I2C2_SDA	Native	I2C_NFC_SDA	2(20K PU,OD)		1.8VA
I2C3_SCL	GPI	RAM_ID1	2(20K PU,OD)		1.8VA
I2C3_SDA	GPI	RAM_ID1	2(20K PU,OD)		1.8VA
I2C4_SCL	NC	0	2(20K PU,OD)		1.8VA
I2C4_SDA	NC	0	2(20K PU,OD)		1.8VA
I2C5_SCL	Native	I2C_5_SCL	2(20K PU,OD)		1.8VA
I2C5_SDA	Native	I2C_5_SDA	2(20K PU,OD)		1.8VA

CFIO Name	Use As	Signal Name	Internal Pull-up/down	External Pull-up/down	Power
I2C6_SCL	Native	I2C_6_SCL	2(20K PU,OD)		1.8VA
I2C6_SDA	Native	I2C_6_SDA	2(20K PU,OD)		1.8VA
MF_ISH_GPIO_0	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_1	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_2	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_3	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_4	GPI	PCR_SPI_WP_D	2(20K PU)*		1.8VA
MF_ISH_GPIO_5	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_6	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_7	NC	0	2(20K PU)*		1.8VA
MF_ISH_GPIO_8	NC	0	2(20K PU,OD)		1.8VA
MF_ISH_GPIO_9	NC	0	2(20K PU,OD)		1.8VA
MF_ISH_I2C1_SDA	Native	I2C_1_SDA	2(20K PU,OD)		1.8VA
MF_ISH_I2C1_SCL	Native	I2C_1_SCL	2(20K PU,OD)		1.8VA
CX_PFDY_N	Native	XDP	2(5K PU,OD)		1.8VA
CX_FREQ_N	Native	XDP	5K PU,OD		1.8VA
TCK	Native	XDP	5K PD		1.8VA
TDI	Native	XDP	5K PU		1.8VA
TDO	Native	XDP	Z		1.8VA
TMS	Native	XDP	5K PU		1.8VA
UART0_TXD	Native	XDP	20K PU		1.8VA
ILB_SERIRQ	Native	ILB_SERIRQ	20K PU		1.8VA
MF_LPC_CLKOUT0	Native	CLK_PC1_EC_SOC	SLP*		3.3VA/1.8VA
MF_LPC_CLKOUT1	NC	0	20K PD		3.3VA/1.8VA
MF_LPC_ADD0	Native	LPC_ADD	20K PU		3.3VA/1.8VA
MF_LPC_AD1	Native	LPC_AD1	20K PU		3.3VA/1.8VA
MF_LPC_AD2	Native	LPC_AD2	20K PU		3.3VA/1.8VA
MF_LPC_AD3	Native	LPC_AD3	20K PU		3.3VA/1.8VA
LPC_CLKRUN_N	Native	LPC_CLKRUN_L	20K PU		3.3VA/1.8VA
LPC_FRAME_N	Native	LPC_LPBFRAME#	1(20K PU)		3.3VA/1.8VA
GP_SSP_2_CLK	Native	I2S_BCLK_R	20K PD		1.8VA
GP_SSP_2_FS	Native	I2S_LRCLK_R	20K PD		1.8VA
GP_SSP_2_RXD	Native	I2S_DIN_R	20K PD		1.8VA
GP_SSP_2_TXD	Native	I2S_DOUF_R	0(20K PD)		1.8VA
PCIE_CLKREQ0_N	Native	PCIE_CLKREQ_IMAGES#	20K PU		1.8VA
PCIE_CLKREQ1_N	Native	LTE_WAKE#	20K PU		1.8VA
PCIE_CLKREQ2_N	Native	PCIE_CLKREQ_WLAN#	20K PU		1.8VA
PCIE_CLKREQ3_N	Native	AUDIO_CODEC_IRQ	20K PU		1.8VA
MF_PLT_CLK0	Native	I2S_MCLK_R	CLK(20K PD)		1.8VA
MF_PLT_CLK1	GPI	RAM_ID2	CLK(20K PD)		1.8VA
MF_PLT_CLK2	NC	0	CLK(20K PD)		1.8VA
MF_PLT_CLK3	NC	0	CLK(20K PD)		1.8VA
MF_PLT_CLK4	NC	0	CLK(20K PD)		1.8VA
MF_PLT_CLK5	NC	0	CLK(20K PD)		1.8VA
PMU_AC_PRESENT	Native	ACPRESENT	20K PU		1.8VA
PMU_BATLOW_N	Native	PMC_BATLOW#	20K PU		1.8VA
PMU_PLTRST_N	Native	SOC_PLTRST#	1(20K PU)*		1.8VA
PMU_PWRBTN_N	Native	SOC_PWRBTN#	20K PU		1.8VA
PMU_RESETBUTTON	Native	SOC_RST_BTN#	20K PU		1.8VA
PMU_SLP_LAN_N	NC	0	0*		1.8VA
PMU_SLP_SOIX_N	Native	SLP_SOIX#	1*		1.8VA
PMU_SLP_S3_N	Native	SLP_S3#	1*		1.8VA
PMU_SLP_S4_N	Native	SLP_S4#	1*		1.8VA
PMU_SUSCLK	Native	PMC_SUSCLK0	CLK		1.8VA
PMU_WAKE_N	Native	PCH_WAKE_L	20K PU		1.8VA
PMU_WAKE_LAN_N	NC	0	20K PU		1.8VA
SUS_STAT_N	Native	PMC_SUS_STAT#	1*		1.8VA
SUSPWRDNACK	Native	PMC_SUSPWRDNACK	0(20K PD)		1.8VA
PWM0	NC	0	0(20K PD)		1.8VA
PWM1	NC	0	0(20K PD)		1.8VA
SATA_GPO	GPO	WIFI_DISABLE#	20K PD		1.8VA
SATA_GP1	GPI	TS_INT1#	20K PD		1.8VA
SATA_GP2	Native	SATA_DEVSUP_C	0(20K PD)		1.8VA
SATA_GP3	GPI	RAM_ID0	0(20K PD)		1.8VA
SATA_LEDN	GPI	EC_IN_RW_0	PRG*		1.8VA
SDMMC3_IP8_EN	Native	SDMMC3_IP8_EN	0(20K PD)		1.8VA
SDMMC3_CD_N	Native	SD3_CD#	20K PU		1.8VA
SDMMC3_CLK	Native	SD3_CLK	0(20K PD)		3.3VA/1.8VA
SDMMC3_CMD	Native	SD3_CMD	2(20K PU)		3.3VA/1.8VA
SDMMC3_D0	Native	SD3_D0	2(20K PU)		3.3VA/1.8VA
SDMMC3_D1	Native	SD3_D1	2(20K PU)		3.3VA/1.8VA
SDMMC3_D2	Native	SD3_D2	2(20K PU)		3.3VA/1.8VA
SDMMC3_D3	Native	SD3_D3	2(20K PU)		3.3VA/1.8VA
SDMMC3_PWR_EN_N	Native	SDMMC3_PWR_EN_N	1*		1.8VA
SMBC2_CLK	NC	0	0(20K PD)		1.8VA
SDMMC2_CMD	NC	0	2(20K PU)		1.8VA
SDMMC2_D1	NC	0	2(20K PU)		1.8VA
SDMMC2_D2	NC	0	2(20K PU)		1.8VA
SDMMC2_D3	NC	0	2(20K PU)		1.8VA
MF_SMB_ALERT_N	NC	0	20K PU		1.8VA
MF_SMB_CLK	Native	SMB_SOC_CLK	20K PU		1.8VA
MF_SMB_DATA	Native	SMB_SOC_DATA	20K PU		1.8VA
SPKR	NC	0	PRG		1.8VA
SP11_CLK	Native	SOC_SPI_CLK	0*		1.8VA
SP11_CS0_N	Native	SOC_SPI_CS#	1		1.8VA
SP11_CS1_N	NC	0	1		1.8VA
SP11_MISO	Native	SOC_SPI_MISO	20K PU*		1.8VA
SP11_MOSI	Native	SOC_SPI_MOSI	0*		1.8VA
SVIDD_ALERT_N	Native	SVID_ALERT#	1		1.8VA
SVIDD_CLK	Native	SVID_CLK	2(20K PU,OD)		1.8VA
SVIDD_DATA	Native	SVID_DATA	2(20K PU,OD)		1.8VA
USB_OC0_N	Native	USB_OC0#	20K PU		1.8VA
USB_OC1_N	Native	USB_OC1#	20K PU		1.8VA

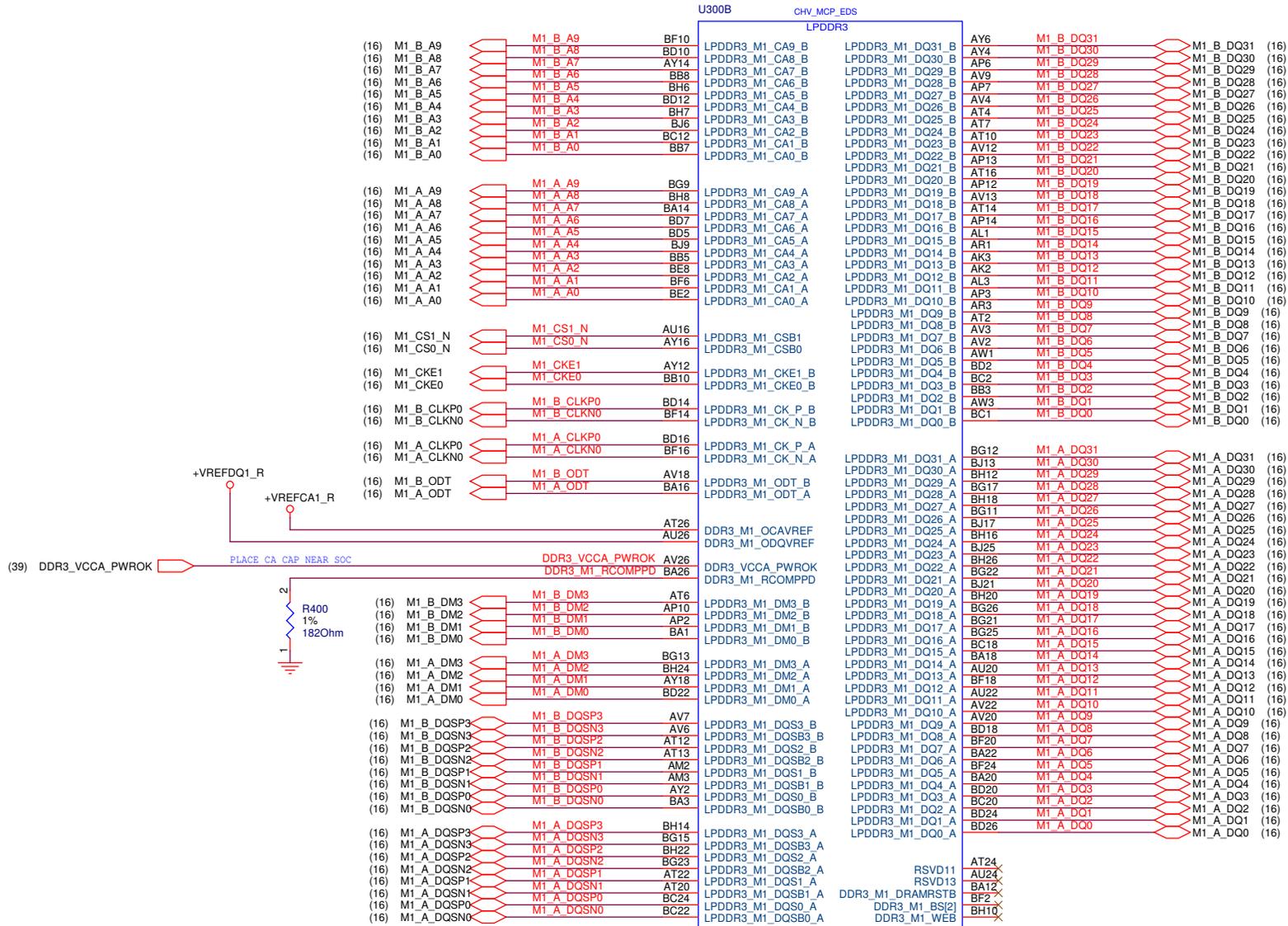
MEC1322

EC GPIO	Signal Name
GP12	LPC_LAD0
GP14	LPC_LAD1
GP13	LPC_LAD2
GP11	LPC_LAD3
GP17	CLK_PCI_EC
GP120	LPC_LBFRAME#
GP116	PLTRST#
GP014	LPC_CLKRUN_L
GP125	KB_COL00
GP126	KB_COL01
GP144	KB_COL02
GP032	KB_COL03
GP142	KB_COL04
GP040	KB_COL05
GP042	KB_COL06
GP043	KB_COL07
GP000	EC_JTAG_TCK
GP100	EC_JTAG_TMS
GP101	EC_JTAG_TDO
GP102	EC_JTAG_TDI
GP103	KB_ROW00
GP104	KB_ROW01
GP001	KB_ROW02
GP002	KB_ROW03
GP003	KB_ROW04
GP106	KB_ROW05
GP004	KB_ROW06
GP107	KB_ROW07
GP005	KB_ROW08
GP006	KB_ROW09
GP007	KB_ROW10
GP010	KB_ROW11
GP011	KB_ROW12
GP012	USBPD_BOOT0_EC (TP)
GP115	IRO_SERIRQ
GP094	EC_SMI_SF3_L
GP026	EC_SOC_WAKE_SCI_N
GP121	VCCI_RST#
GP131	EC_RST#
GP143	PCR_RSMRST_L
GP063	RSMRST_N_PWRGD
GP162	EC_UART0_RX
GP165	EC_UART0_TX
GP046	DP_USB_C_HPD_0 (TP)
GP047	USB_PD_EC_INT (TP)
GP050	OTG_SW_EN (TP)
GP065	DELAY_ALL_SYS_PWRGD
GP051	PCH_SUS_STAT_L
GP052	EC_ACDET_CTRL (TP)
GP053	TRACKPAD_PWREN
GP152	EC_RBD_IRQ#
GP127	WAKE_INT (TP)
GP130	ALL_SYS_PWRGD
GP132	EC_PLUG_DETECT
GP133	EC_PWM0
GP135	USBPD_MCU_RST (TP)
GP136	EC_PWM1
GP140	THERMAL_PROBE_EN_L
GP141	EC_PWM3
GP145	EC_RBD_ALERT
GP147	ALS_INT# (TP)

EC GPIO	Signal Name
GP013	USB_ILIM_SEL
GP027	LID_OPEN_OUT1_R
GP030	EC_ACIN
GP031	VOLUME_UP (TP)
GP033	EC_SPI_WP_MEM#
GP034	VOLUME_DOWN (TP)
GP035	SMC_ONOFF_N
GP036	USB2_PWR_EN
GP041	EC_ENTERING_RW
GP045	USB_OC1_L
GP056	EC_TEMP_SENSOR_1
GP057	EC_TEMP_SENSOR_2
GP060	EC_PWMN
GP061	EC_ADC0
GP062	EC_TEMP_SENSOR_3
GP066	PCH_WAKE_EC_L
GP105	USB_CTL1
GP110	EC_REST_L
GP067	USB3_PWR_EN
GP055	USB_OC0_L
GP210	SUSPWRDNACK_SOC_EC
GP211	PCH_SLP_SX_L
GP200	PCH_SLP_S4_L
GP015	SMB_BC_CLK
GP016	SMB_BC_DATA
GP134	BOARD_ID1
GP017	BOARD_ID2
GP022	EC_SENSOR_I2C1_SCL (TP)
GP023	EC_SENSOR_I2C1_SDA (TP)
GP020	EC_I2C_USBPD_SCL_R (TP)
GP021	EC_I2C_USBPD_SDA_R (TP)
GP02	



PEGATRON Title: CPU(1)_MEM_LPDDR3_C
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer: Howard_Chen
 BG1-HW3
 Size: B Project Name: Sanance Rev: 1.1
 Date: Friday, February 19, 2016 Sheet: 3 of 68



BRASWELL

PEGATRON Title: CPU(2)_MEM_LPDDR3_CHB
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer: Howard_Chen
 BG1-HW3
 Size B Project Name Sanance Rev
 Date: Friday, February 19, 2016 Sheet 4 of 68 1.1

DISPLAY MAPPING	
DDI0	DP - type C
DDI1	eDP
DDI2	HDMI

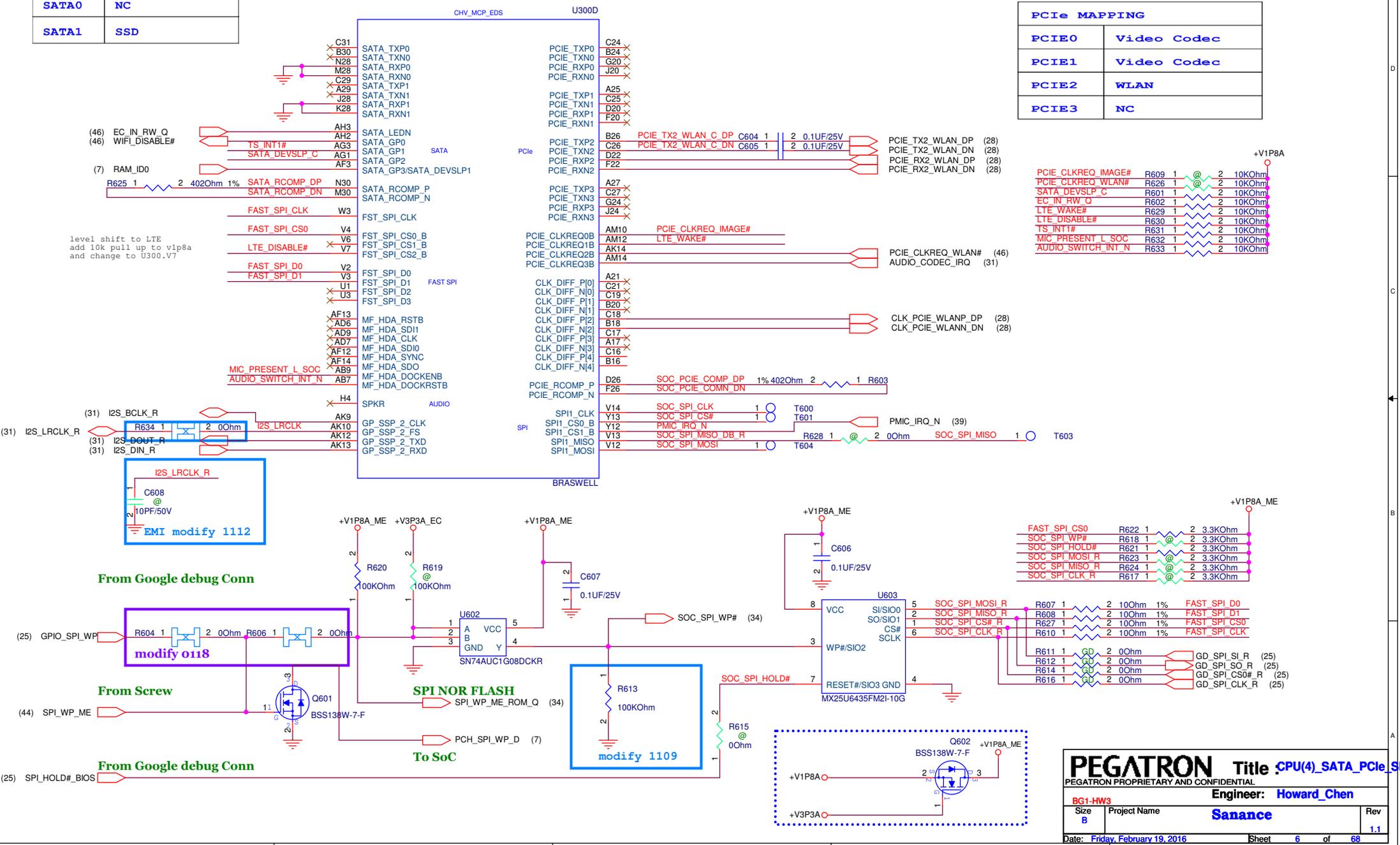
DISPLAY, XDP, EMMC, SD

SD MAPPING	
SDMMC1	EMMC
SDMMC2	NC
SDMMC3	SD card



SATA MAPPING	
SATA0	NC
SATA1	SSD

PCIe MAPPING	
PCIE0	Video Codec
PCIE1	Video Codec
PCIE2	WLAN
PCIE3	NC



level shift to LTE
add 10k pull up to v1p8a
and change to U300.V7

PCIE_CLKREQ_IMAGE#	R609	1	@	2	10KOhm
PCIE_CLKREQ_WLAN#	R626	1	@	2	10KOhm
SATA_DEVSLP_C	R601	1	@	2	10KOhm
EC_IN_RW_Q	R602	1	@	2	10KOhm
LTE_WAKE#	R629	1	@	2	10KOhm
LTE_DISABLE#	R630	1	@	2	10KOhm
TS_INT1#	R631	1	@	2	10KOhm
MIC_PRESENT_L_SOC	R632	1	@	2	10KOhm
AUDIO_SWITCH_INT_N	R633	1	@	2	10KOhm

FAST_SPI_CS0	R622	1	@	2	3.3KOhm
SOC_SPI_WP#	R618	1	@	2	3.3KOhm
SOC_SPI_HOLD#	R621	1	@	2	3.3KOhm
SOC_SPI_MOST#	R623	1	@	2	3.3KOhm
SOC_SPI_MISO#	R624	1	@	2	3.3KOhm
SOC_SPI_CLK#	R617	1	@	2	3.3KOhm

PEGATRON Title: CPU(4)_SATA_Pcie_SPI

PEGATRON PROPRIETARY AND CONFIDENTIAL

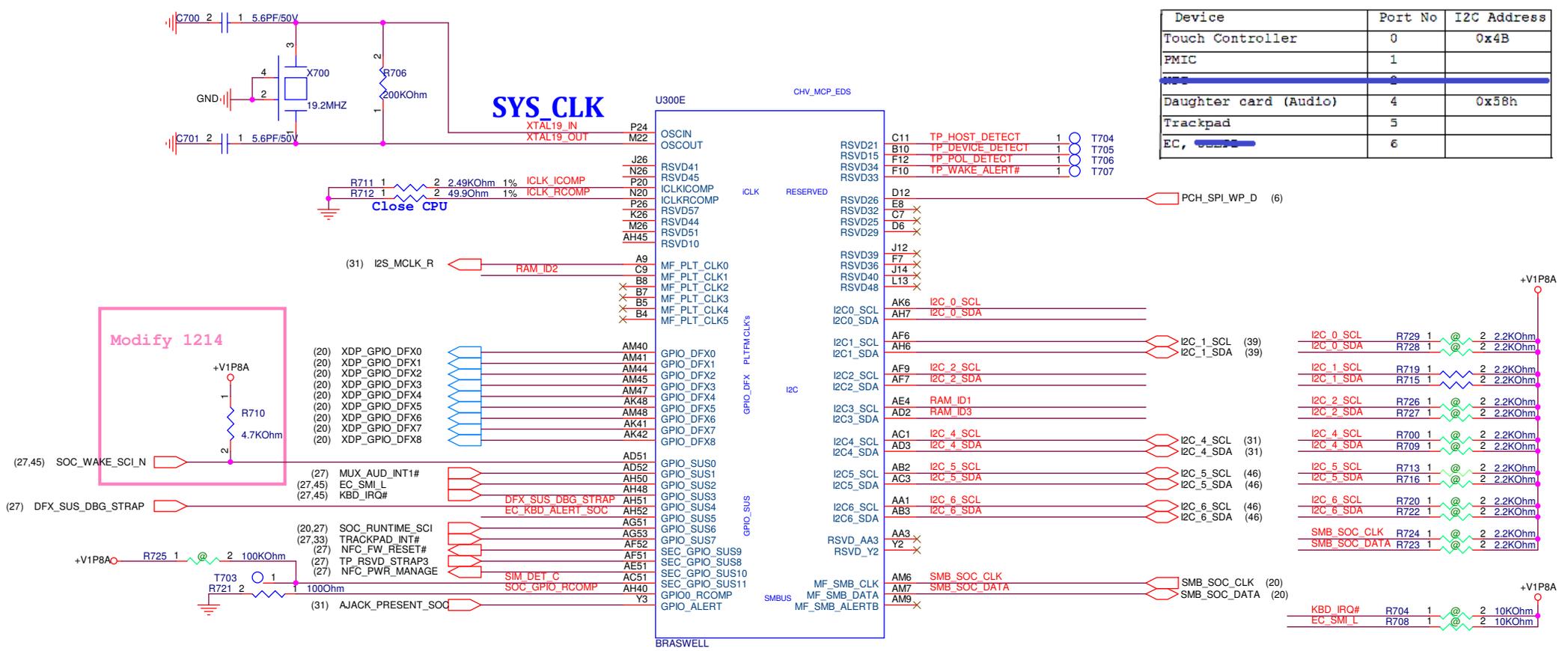
Engineer: **Howard Chen**

Size	Project Name	Rev
B	Sanance	1.1

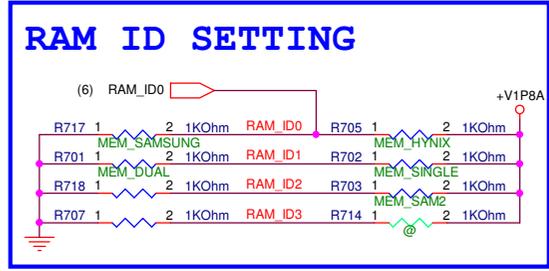
Date: Friday, February 19, 2016 Sheet 6 of 68

I2C PORT MAPPING

Device	Port No	I2C Address
Touch Controller	0	0x4B
PMIC	1	
Daughter card (Audio)	4	0x58h
Trackpad	5	
EC, xxxx	6	



RAM_ID3	RAM_ID2	RAM_ID1	RAM_ID0	VENDOR	PEGA P/N	Note
0	0	0	0	SAMSUNG/K4E8E304EE-EGCE	0315-01960PB	4pcs -> 4GB
0	0	0	1	SK HYNIX/H9CCNNN8JTBLAR-NUD	0315-01GROPB	4pcs -> 4GB
0	0	1	0	SAMSUNG/K4E8E304EE-EGCE	0315-01960PB	2pcs -> 2GB
0	0	1	1	SK HYNIX/H9CCNNN8JTBLAR-NUD	0315-01GROPB	2pcs -> 2GB
0	1	0	0	SAMSUNG/K4E8E324EB-EGCF	0315-01M90PB	4pcs -> 4GB
0	1	0	1			
0	1	1	0	SAMSUNG/K4E8E324EB-EGCF	0315-01M90PB	2pcs -> 2GB



PEGATRON Title: CPU(5)_I2C_XDP_SM BUS

PEGATRON PROPRIETARY AND CONFIDENTIAL

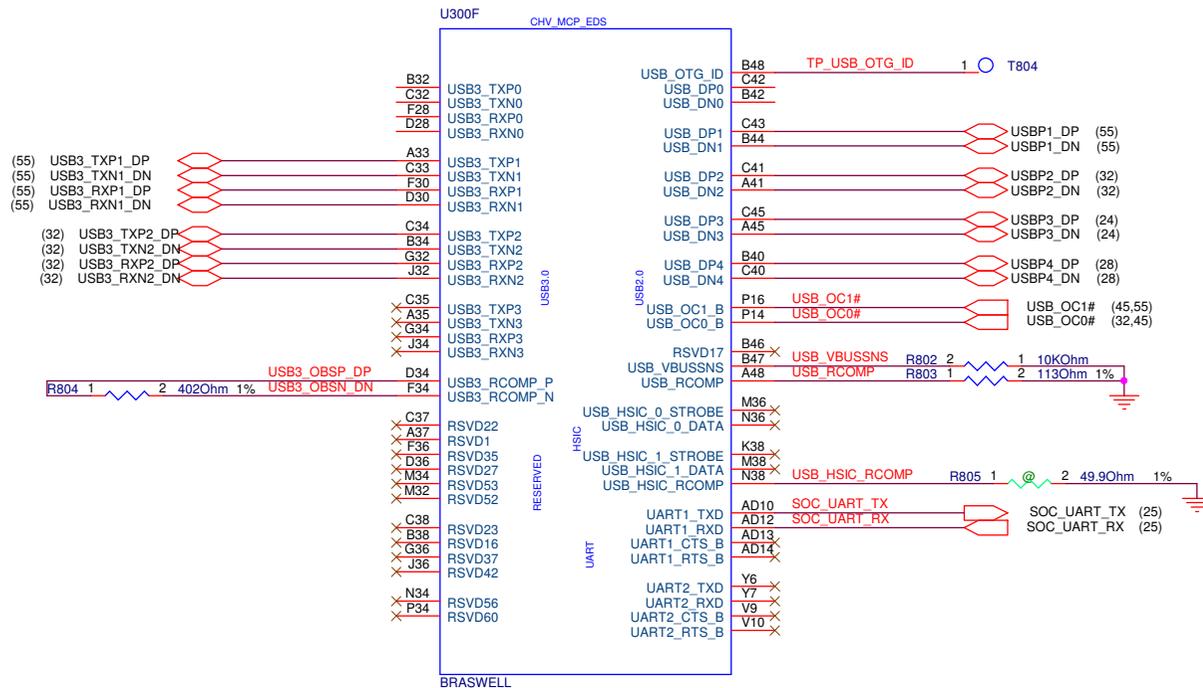
Engineer: **Howard_Chen**

Project Name: **Sanance**

Date: **Friday, February 19, 2016**

Sheet: **7** of **68**

Rev: **1.1**



I/O Connector

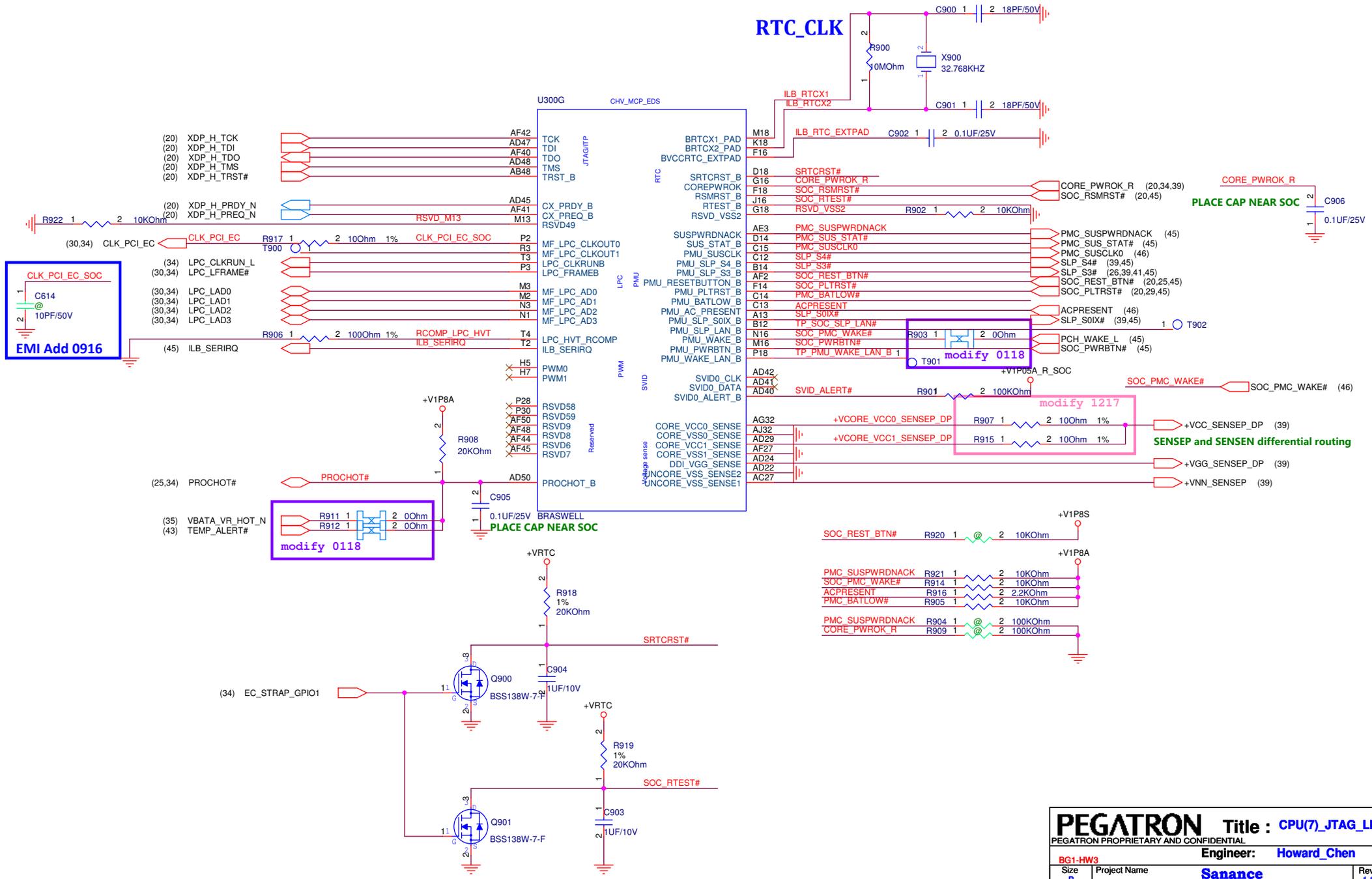
USB 30 Port

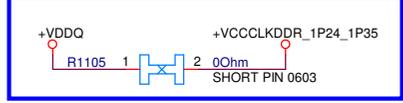
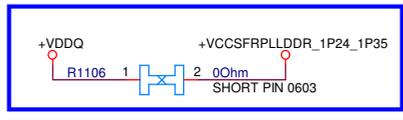
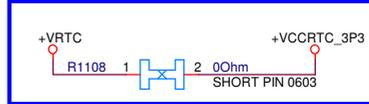
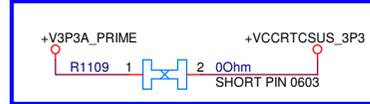
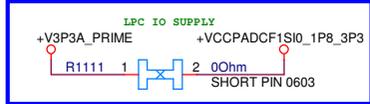
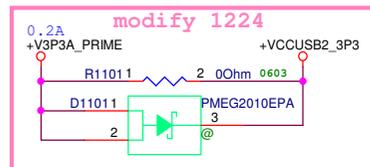
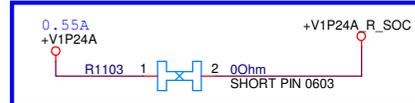
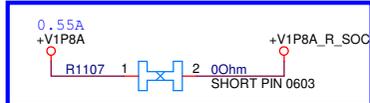
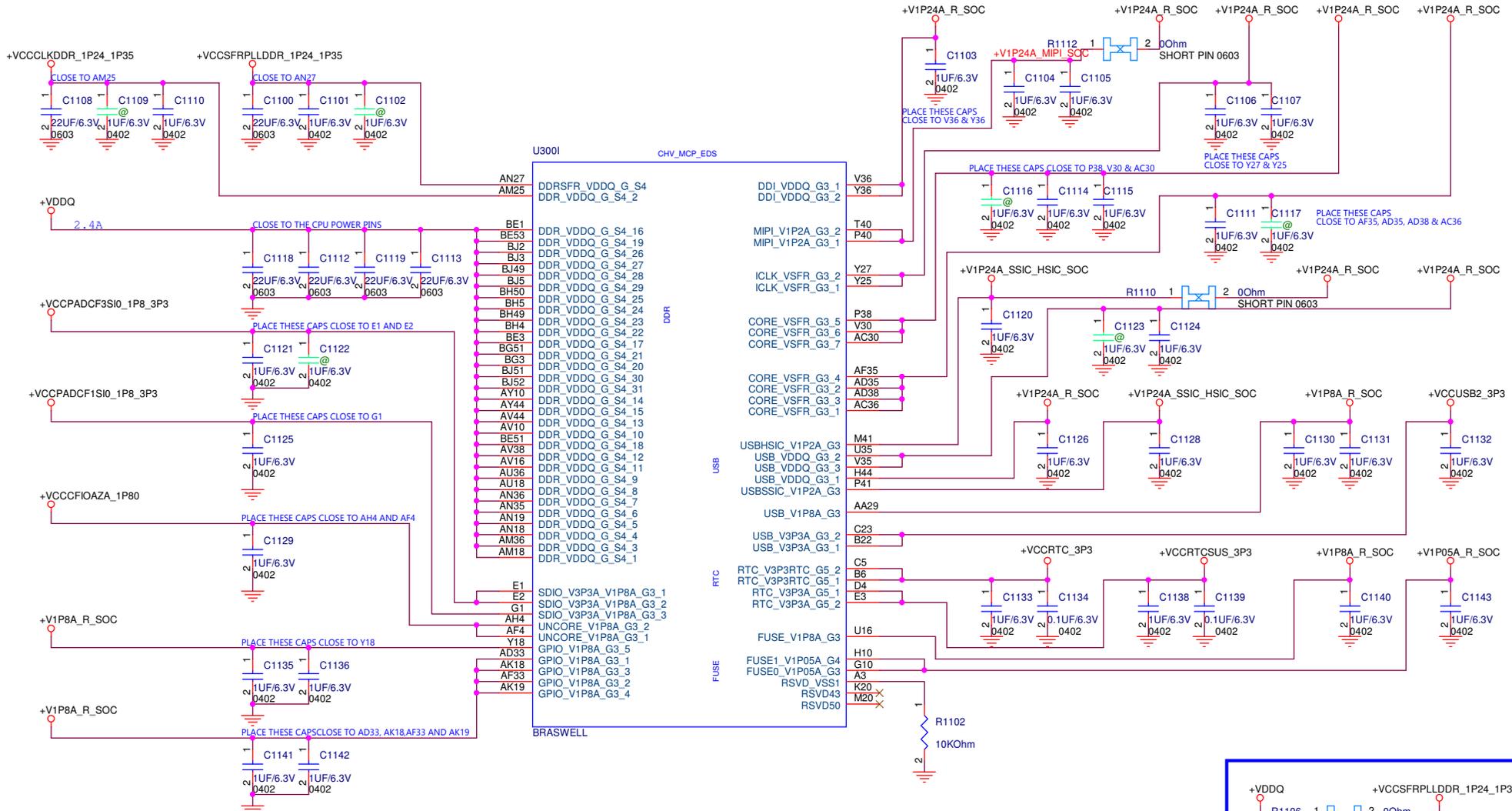
Camera

BT



SOC_UART_TX R810 2 @ 1 0Ohm SOC_UART_RX
Un-Stuff for Test Only





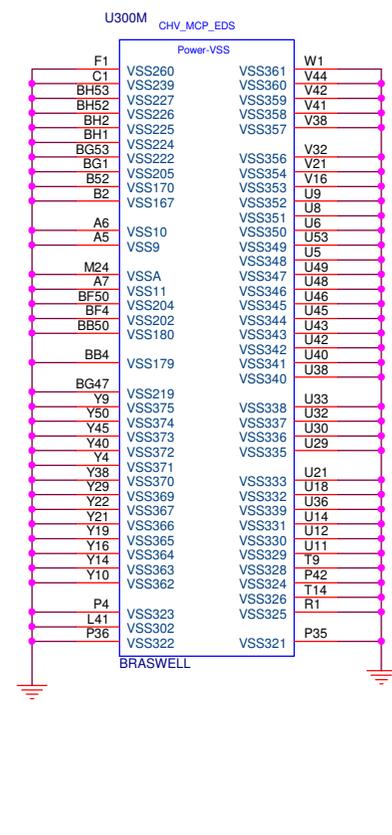
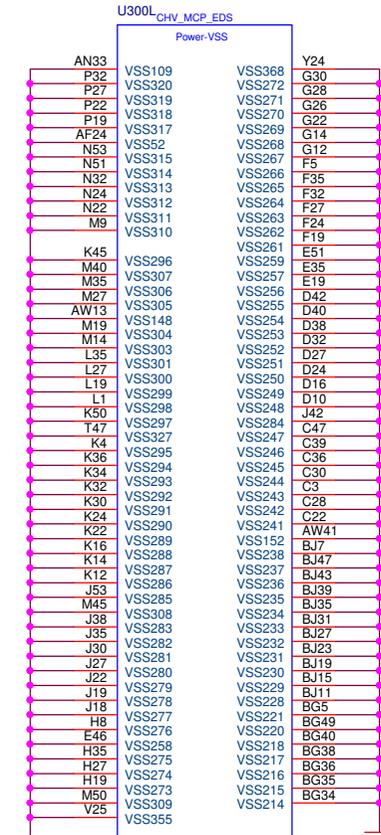
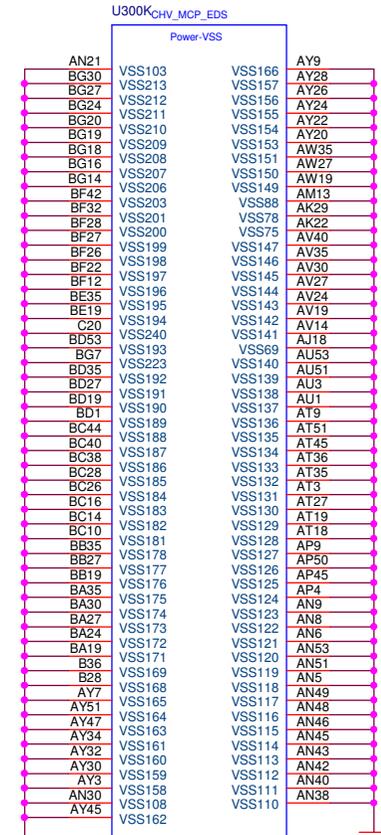
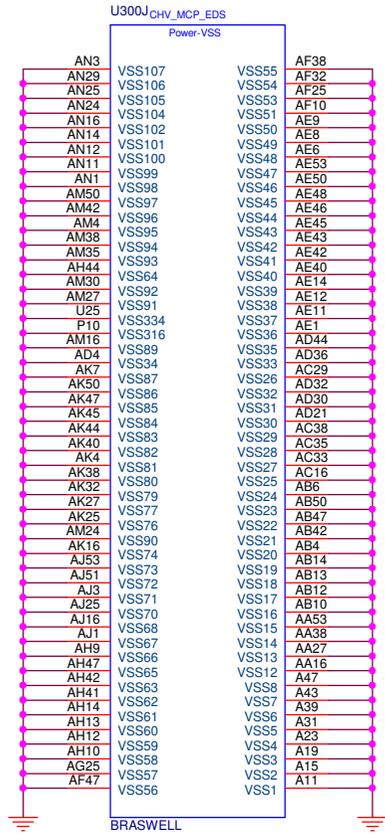
PEGATRON Title : CPU(9)_POWER_RAIL_0

PEGATRON PROPRIETARY AND CONFIDENTIAL

Engineer: Howard_Chen

Size B	Project Name	Rev
	Sanance	1.1

Date: Friday, February 19, 2016 Sheet 11 of 68



PEGATRON Title :CPU(10)_CPU_GROUND
PEGATRON PROPRIETARY AND CONFIDENTIAL
Engineer: Howard_Chen

Size B	Project Name	Sanance	Rev 1.1
Date: Friday, February 19, 2016		Sheet 12 of 68	

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date:	Friday, February 19, 2016	Sheet 13 of 68

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
Engineer:		
BG1-HW3	Sanance	
Size A	Project Name	Rev 1.1
Date:	Friday, February 19, 2016	Sheet 14 of 68

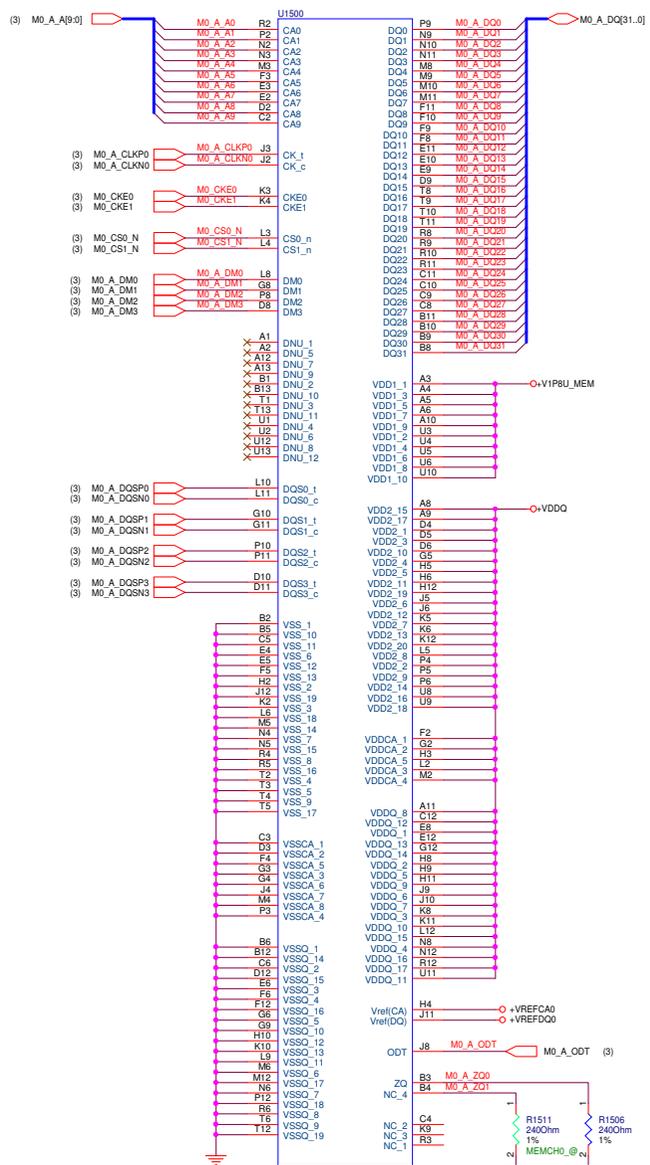
5

4

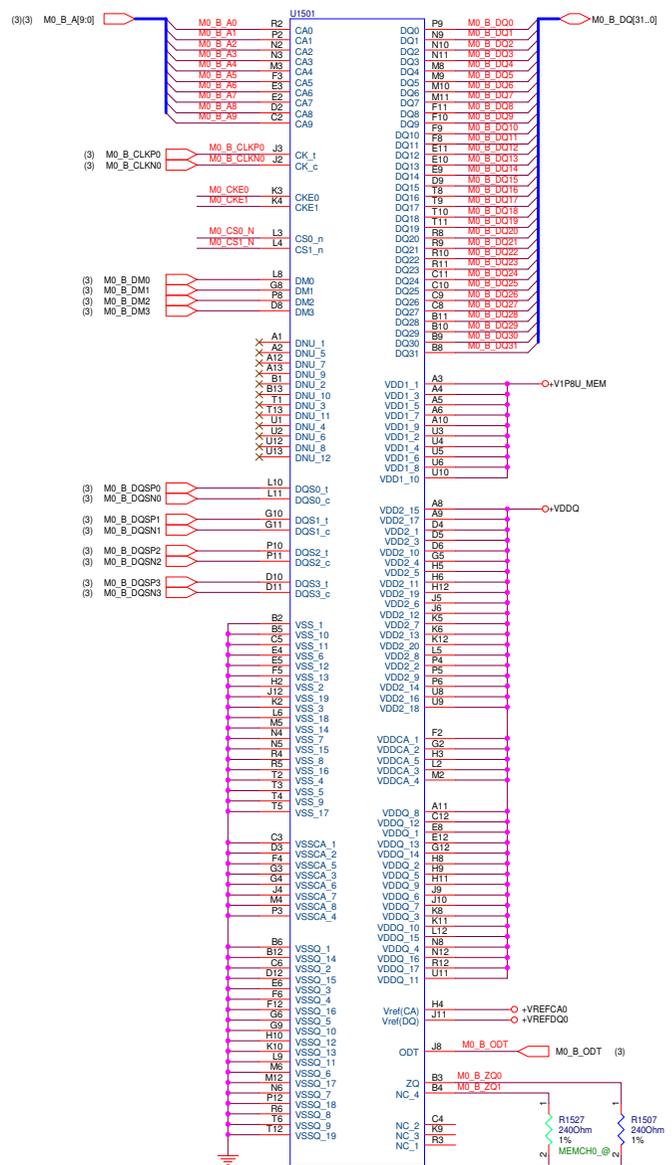
3

2

1

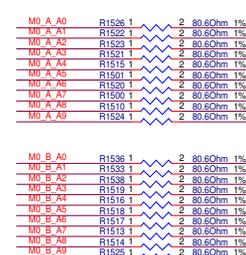


K4E8E304EE-EGCE
03V15000082



K4E8E304EE-EGCE
03V15000082

Terminal Resistor Part 1



Terminal Resistor Part 2



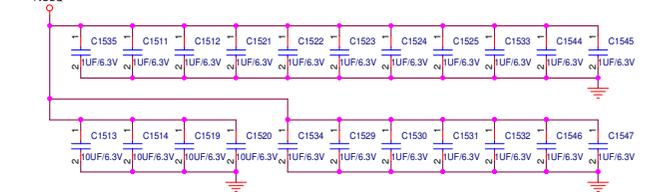
Terminal Resistor Part 3



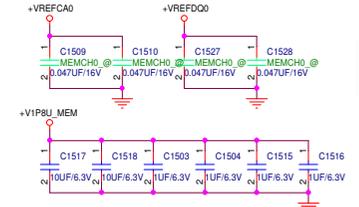
Terminal Resistor Part 4



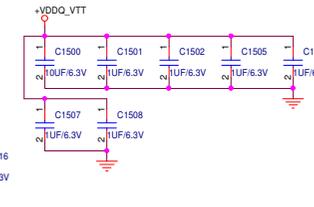
U1201/U1202 Power Decouple



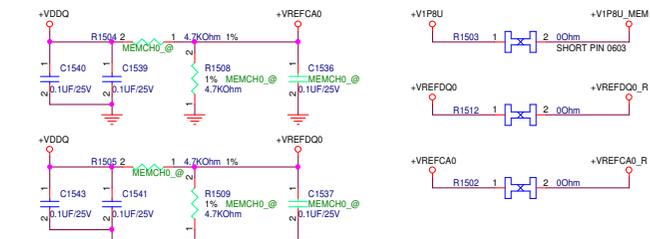
Reference Power

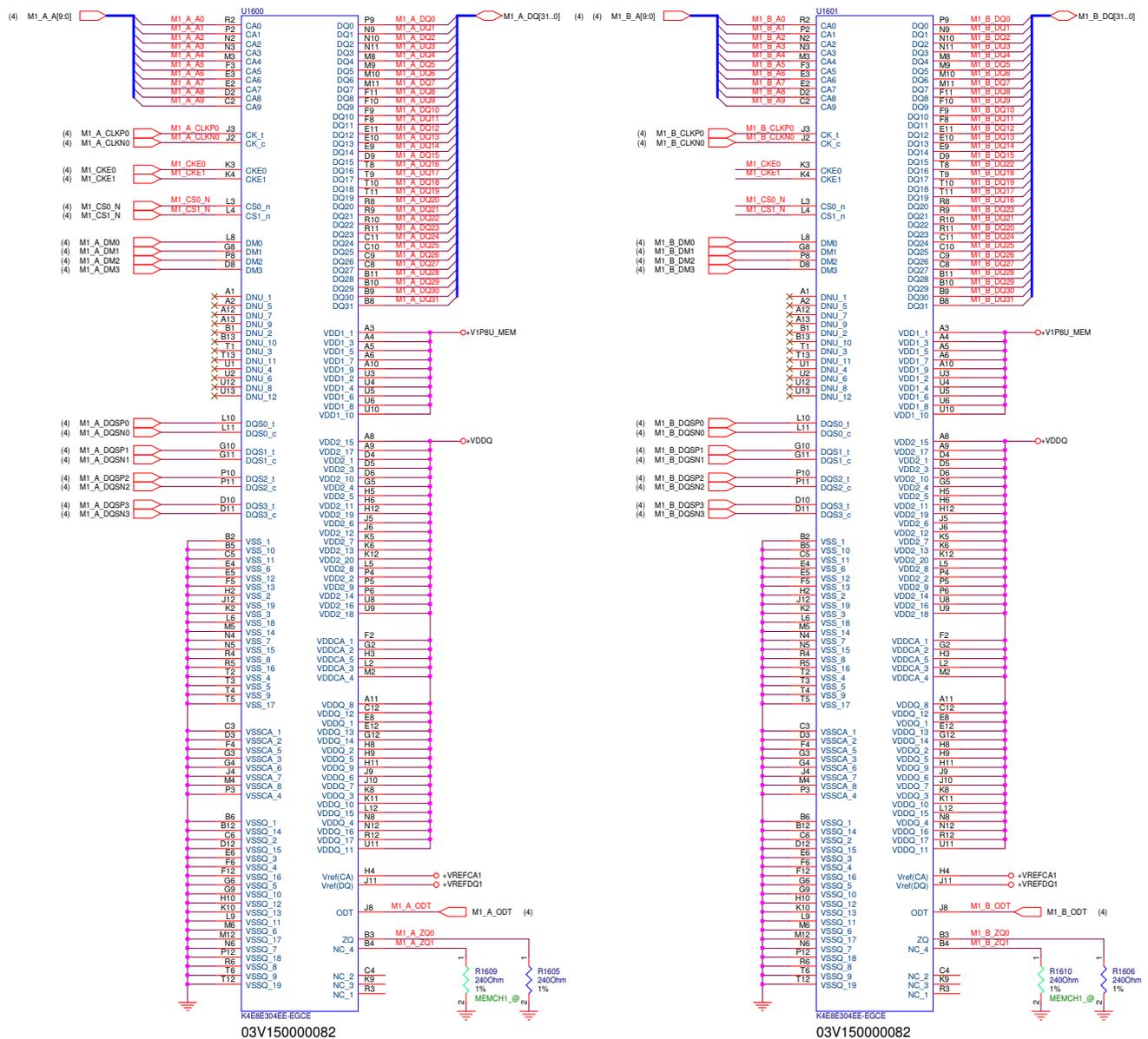


VTT Power Decouple



Branch Power

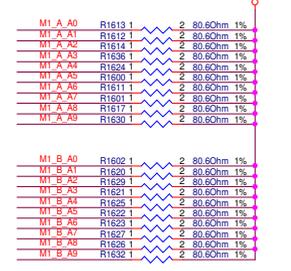




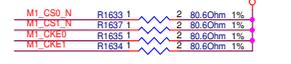
K4E8E304EE-EGCE
03V15000082

K4E8E304EE-EGCE
03V15000082

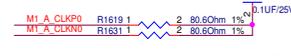
Terminal Resistor Part1



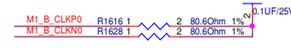
Terminal Resistor Part2



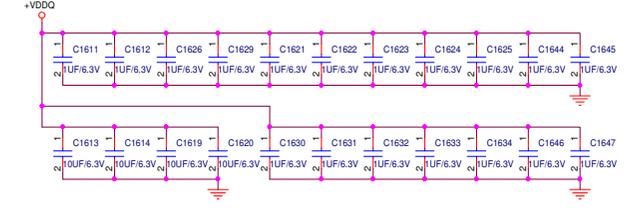
Terminal Resistor Part3



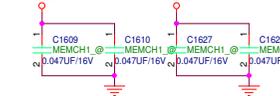
Terminal Resistor Part4



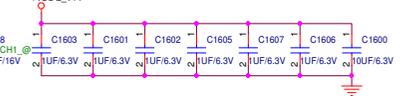
U1600/U1601 Power Decouple



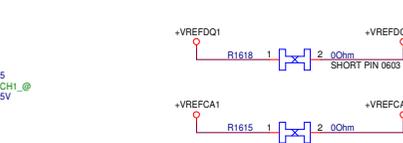
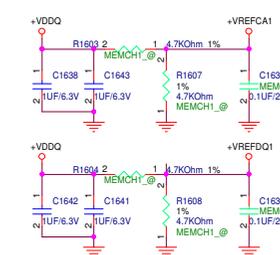
Reference Power



VTT Power Decouple



Reference Power



5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON			Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL					
BG1-HW3			Engineer:		
Size A	Project Name Sanance				Rev 1.1
Date:	Friday, February 19, 2016	Sheet	17	of	68

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 18 of 68	

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 19 of 68	

5

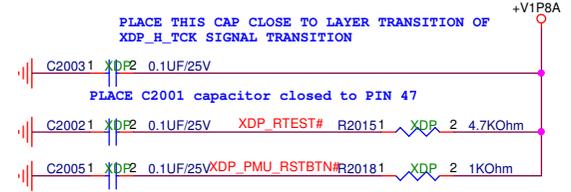
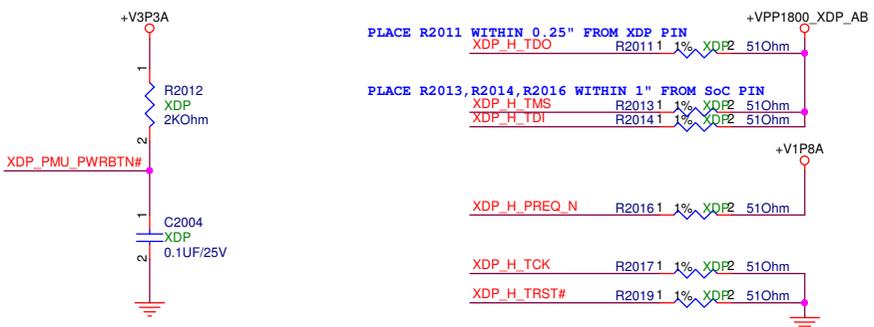
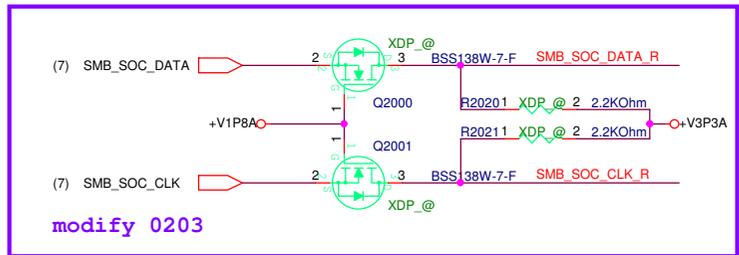
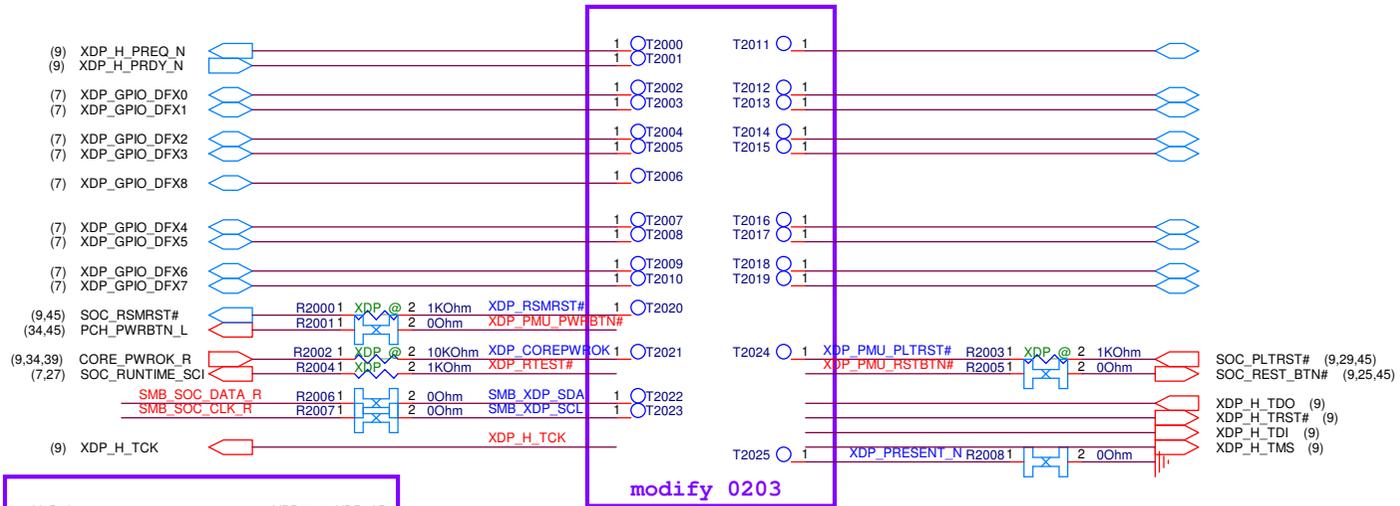
4

3

2

1

INTEL Debug Port (CPU)



PEGATRON		Title : INTEL XDP CONN	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size B	Project Name	Sanance	
Date:	Friday, February 19, 2016	Sheet	20 of 68
			Rev 1.1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON			Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL					
BG1-HW3			Engineer:		
Size A	Project Name Sanance				Rev 1.1
Date:	Friday, February 19, 2016	Sheet	21	of	68

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 22 of 68	

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 23 of 68	

5

4

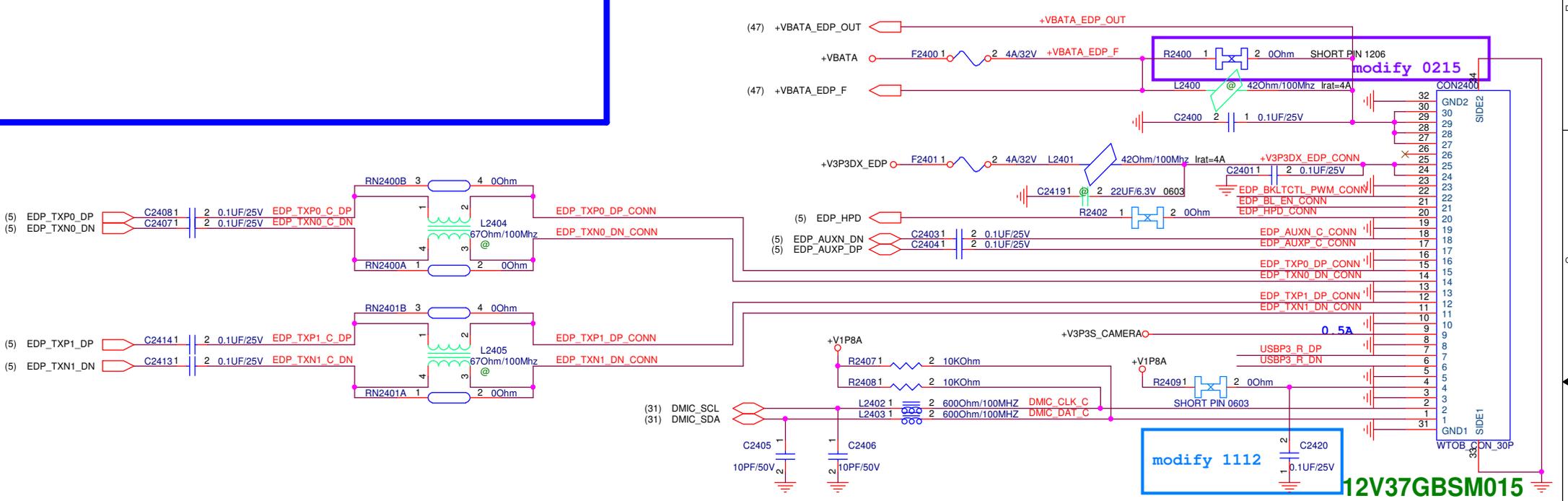
3

2

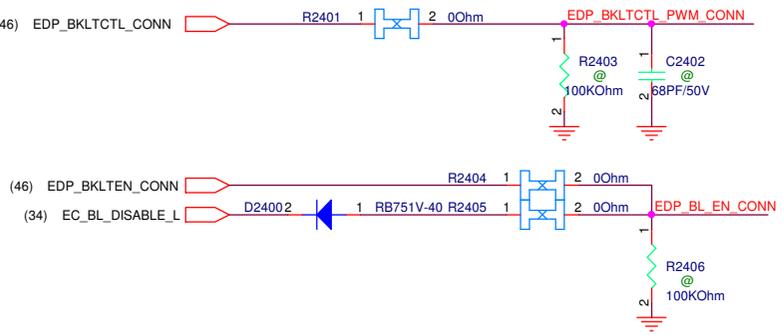
1

Touch Screen(TSN)

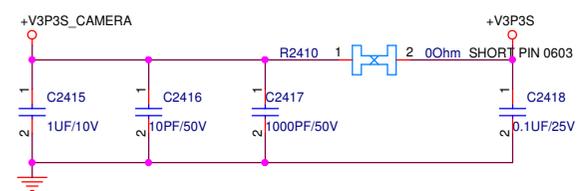
EDP Conn



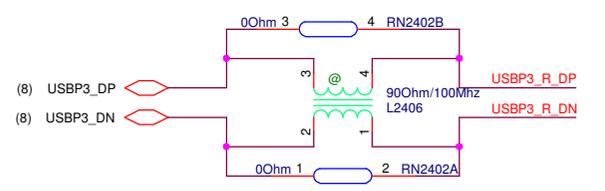
LCD Panel Control



CCD power(FCM)

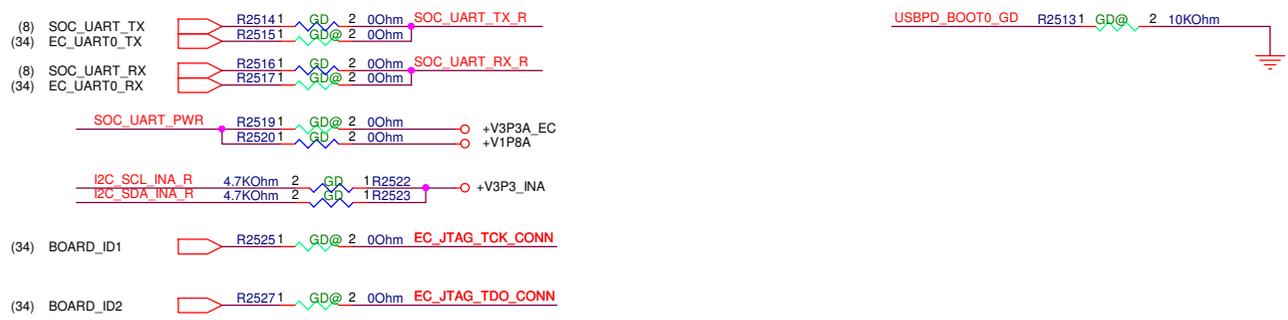
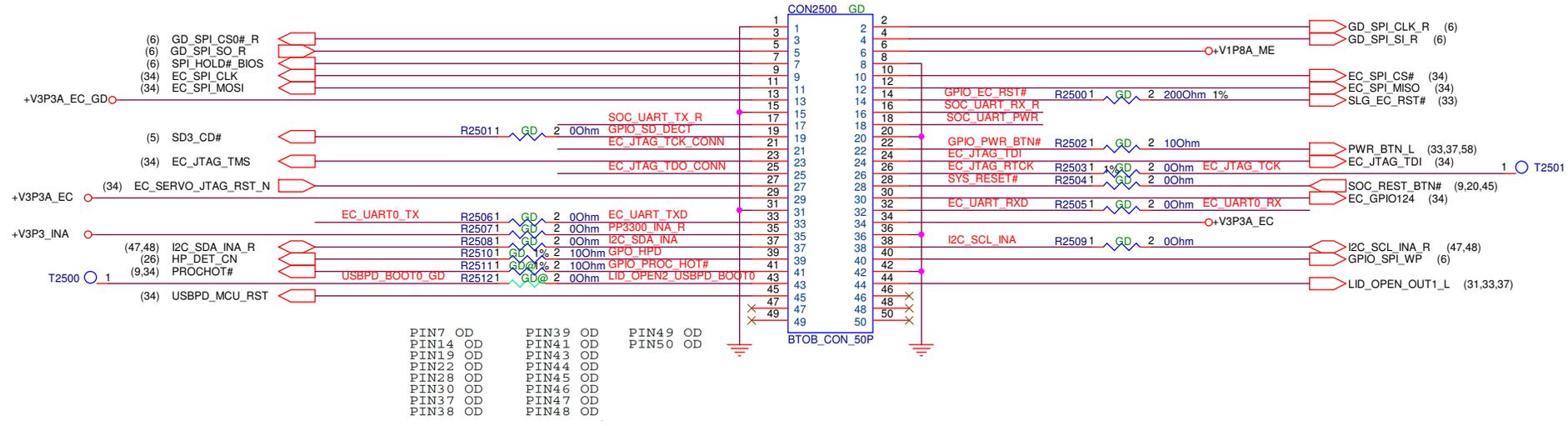


CCD USB(FCM)



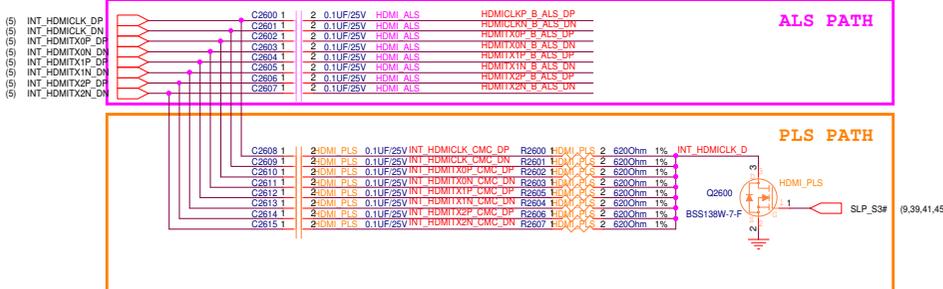
PEGATRON Title : EDP_CAMERA_DMIC
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer: Howard_Chen
 BG1-HW3
 Size B Project Name Sanace Rev 1.1
 Date: Friday, February 19, 2016 Sheet 24 of 68

Google Debug Connector

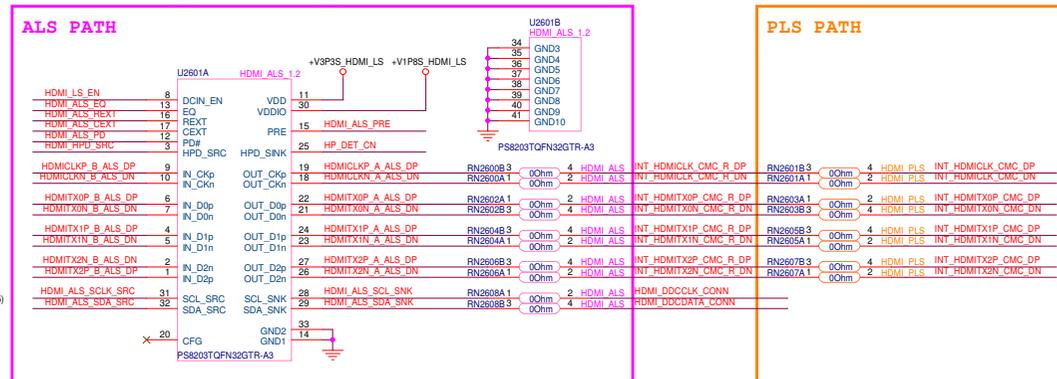


PEGATRON		Title: GOOGLE_DEBUG_CONN	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size B	Project Name Sanance	Rev 1.1	
Date: Friday, February 19, 2016		Sheet 25 of 68	

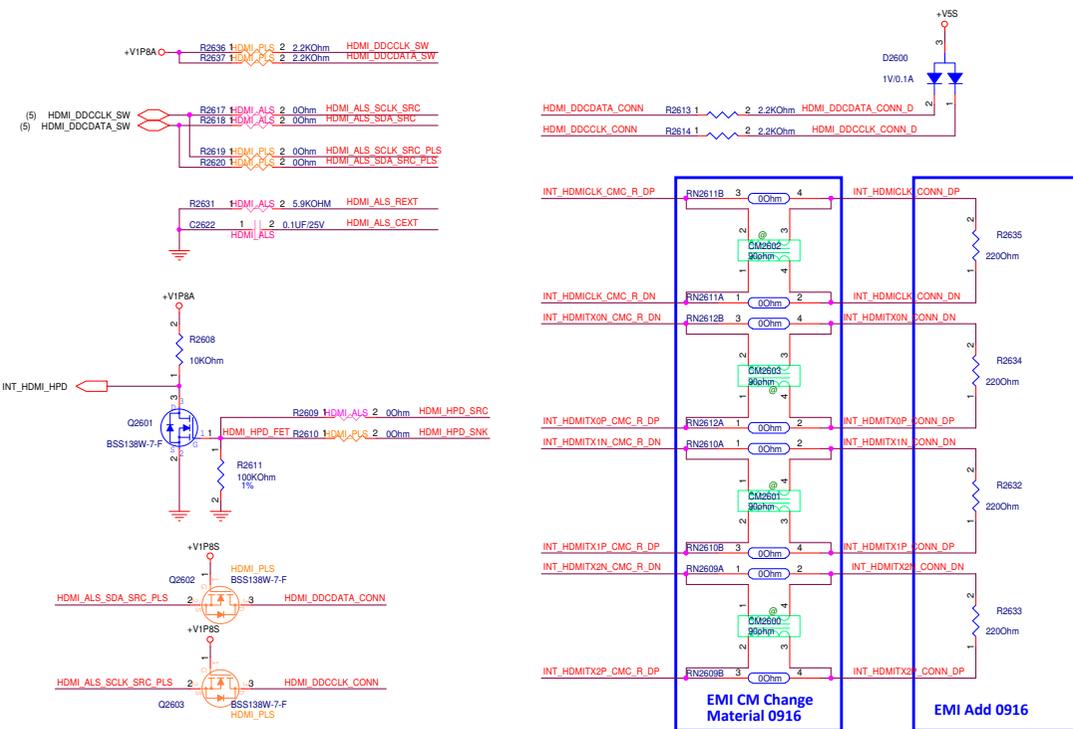
HDMI Cost Reduced level shift (HDM)



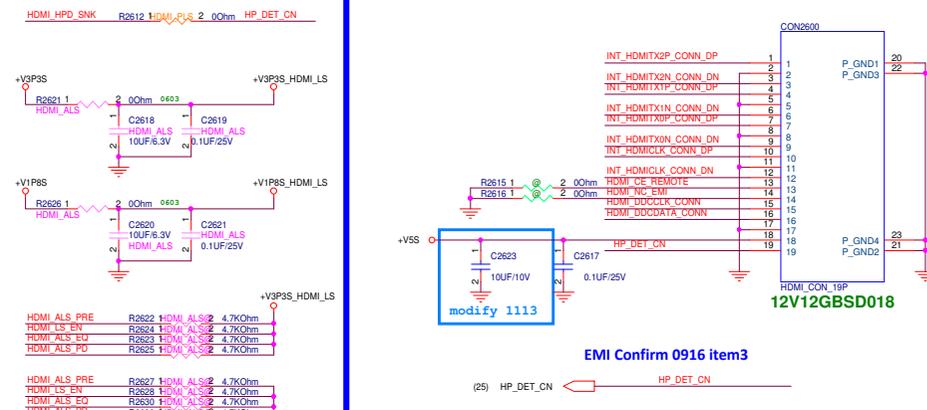
HDMI Repeater Optional



PULL-UPS, PULL-DOWNS, CMC AND LEVEL TRANSLATOR

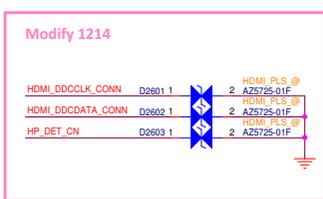


HDMI- CONNECTOR

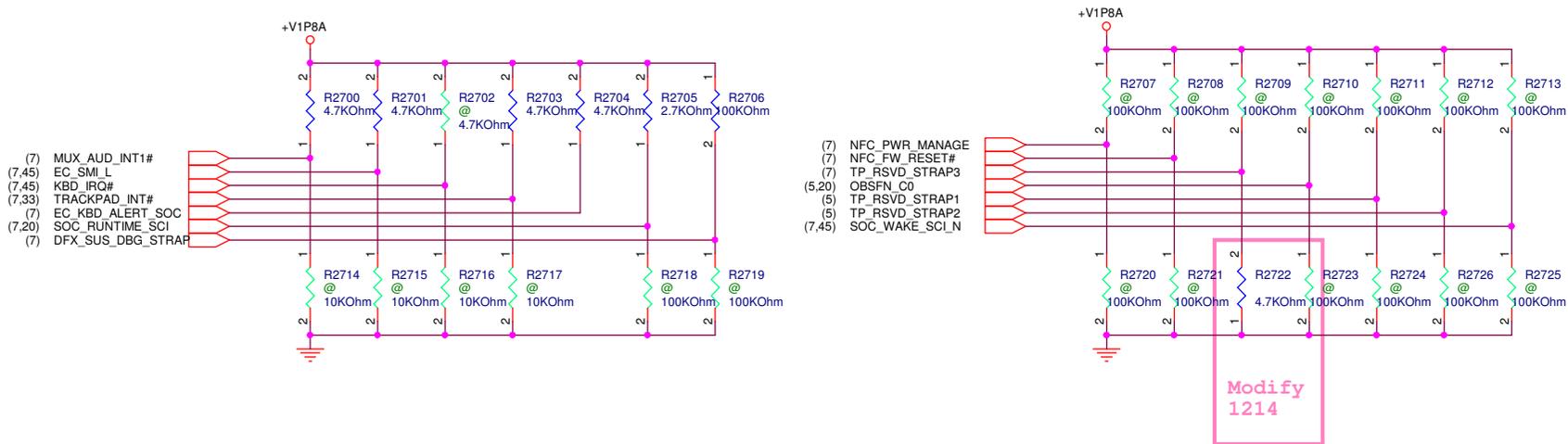


NOTE:
 WHEN USING ACTIVE LEVEL SHIFTER - ESD DIODES are in-built in PS8203.
 WHEN USING PASSIVE LEVEL SHIFTER - It is recommended to add external ESD DIODES on board for the below signals

- HDMI_DDCCLK_CONN
- HDMI_DDCDATA_CONN
- HP_DET_CN



Straps -- strap detect @ RSMRST# assertion				
Purpose	Pin Name	Pull-Up/Pull Down	Polarity	Default State on board?
DDIO Detected	GPIO_SUS0	Weak internal pull down	When '1'-Port DDIO is Detected When '0'- PortB is not detected (could be overwritten by BIOS in case it used as GPIO)	High
DDI1 Detected	GPIO_SUS1	Weak internal pull down	When '1'-Port DDI1 is Detected When '0'- PortC is not detected (could be overwritten by BIOS in case it used as GPIO)	High
A16 swap override	GPIO_SUS2	Weak internal pull up	A16 override if sampled low. (Changes bootloader address)	High
DSI Display Detected	GPIO_SUS3	Weak internal pull down	When '1' DSI Port is Detected (could be overwritten by BIOS in case it used as GPIO)	Low
Boot BIOS Strap BBS	GPIO_SUS4	Weak internal pull up	Boot BIOS from LPC if sampled low	High
Flash Descriptor Security Override	GPIO_SUS5	Weak internal pull up	Security measures defined in the Flash Descriptor is overridden if sampled low	High
DFX Boot Halt Strap & VISA Early POSM Debug Enable	GPIO_SUS6	Weak Internal Pull Up	0 = Halt Boot and Early POSM Debug 1 = Normal operation.	High
DFX Sus Debug Strap	GPIO_SUS7	Weak Internal Pull Up	0 = SUS Debug 1 = No SUS Debug	High
ICLK, USB2, DDI SFR Supply Select-	SEC_GPIO_SUS8	Weak Internal Pull Up	0: supply is 1.25V; 1: supply is 1.35V	Low
ICLK SFR Bypass	SEC_GPIO_SUS9	Weak internal Pull Down	0- no bypass; 1: bypass with 1.05V	Low
POSM Select	SEC_GPIO_SUS10	Weak internal Pull Down	Selects which POSM will be observed at time 0. 0 = Fuse Controller 1 = BMC	Don't care, if GPIO_SUS6 is pulled high.
ICLK Xtal OSC Bypass	GP_CAMERASB08	Weak internal Pull Down	0- no bypass; 1: bypass	Low
CCU SUS RO Bypass	GP_CAMERASB09	Weak internal Pull Down	0- no bypass; 1: bypass	Low
RTC OSC Bypass	GP_CAMERASB11	Weak internal Pull Down	0- no bypass; 1: bypass	Low

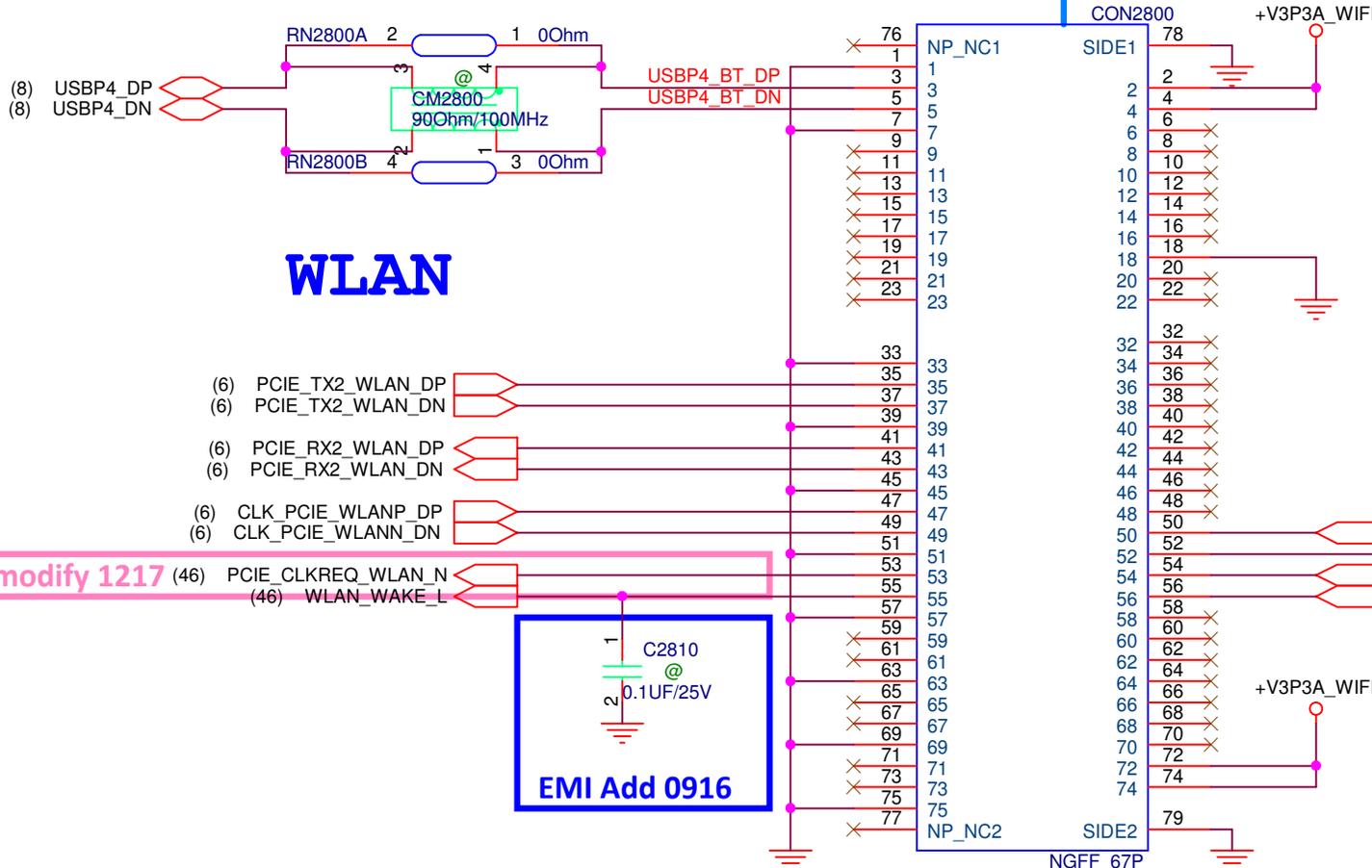


PEGATRON Title :STRAP_SETTINGS
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 BG1-HW3 Engineer: Howard_Chen
 Size B Project Name Sanance Rev
 Date: Friday, February 19, 2016 Sheet 27 of 68 1.1

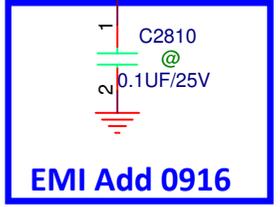
WIFI/BT COMBO (NGFF E KEY)

BT

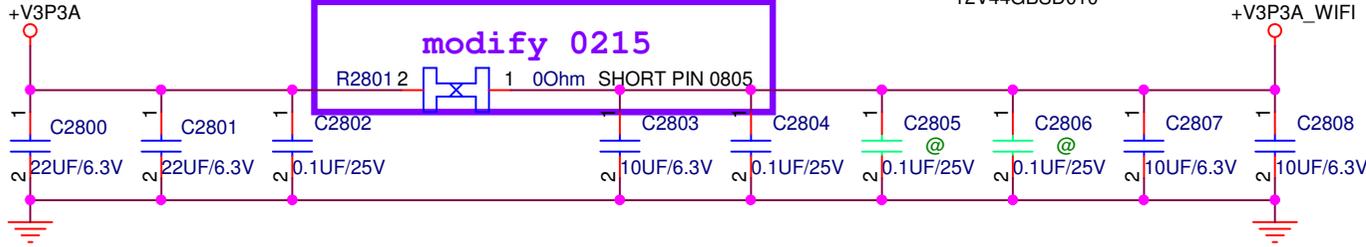
PQC modify 1113



modify 1217

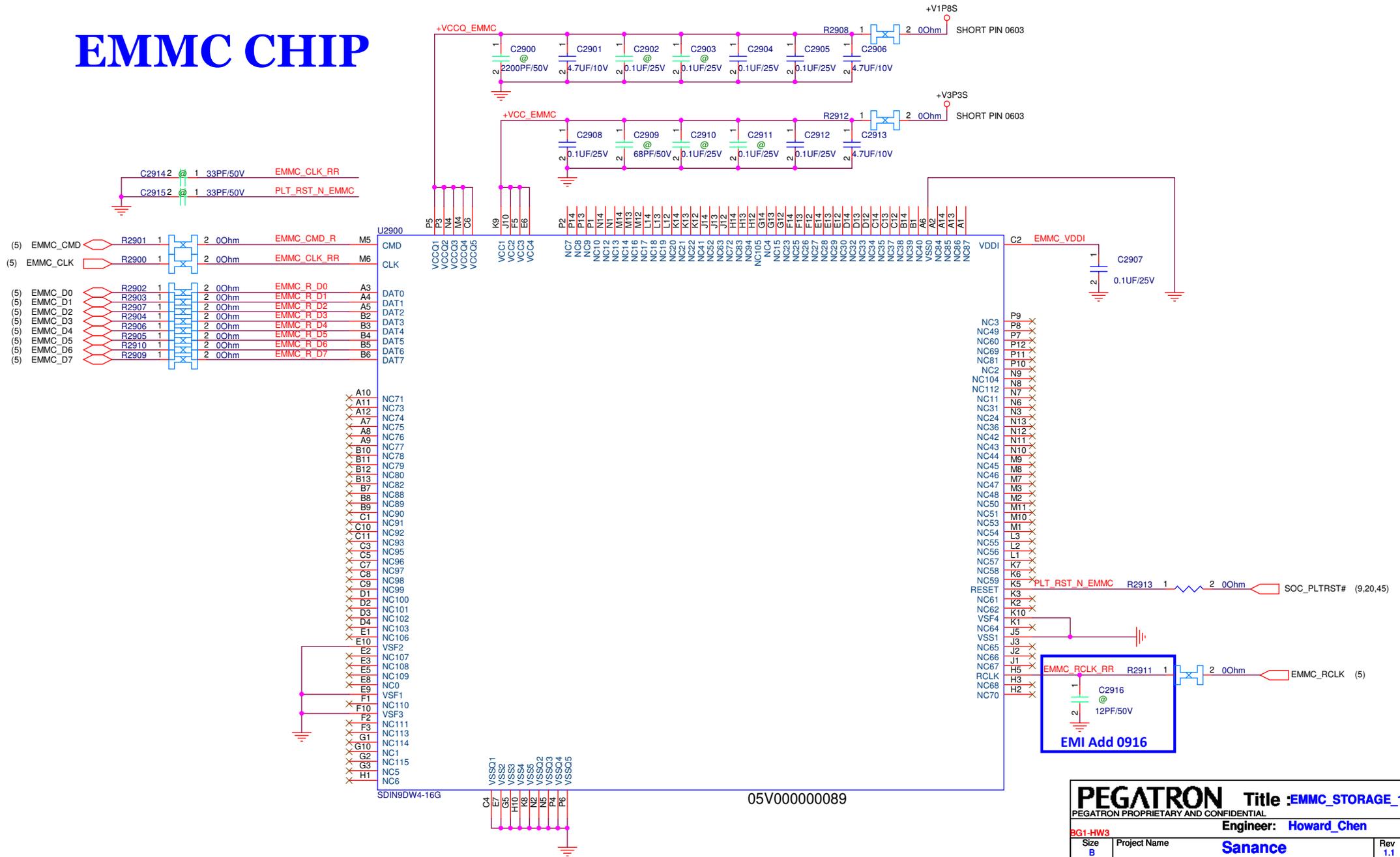


modify 0215

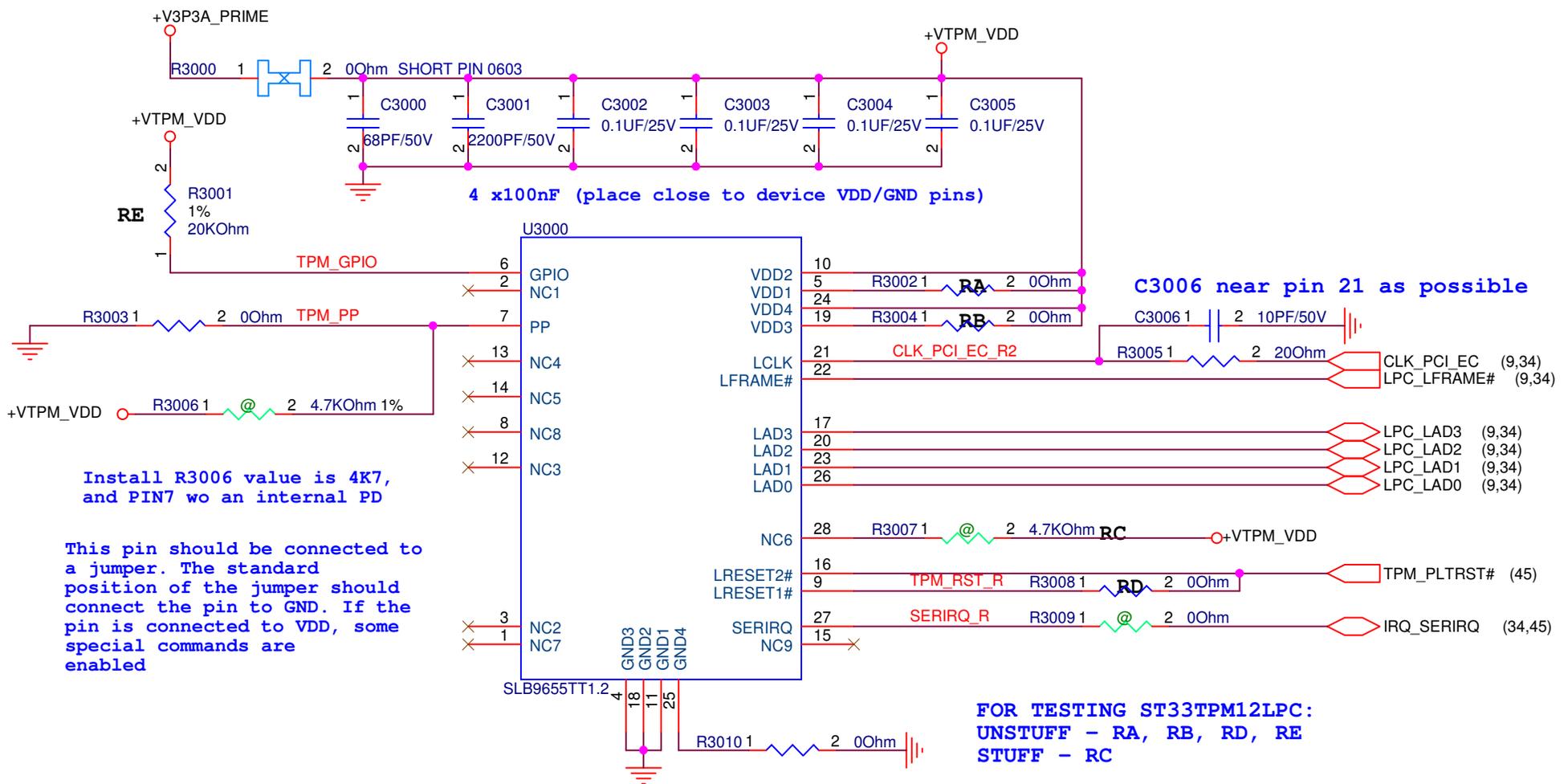


PEGATRON		Title : NGFF_WLAN/BT_CONN	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size A	Project Name	Sanance	
Date: Friday, February 19, 2016	Sheet	28	of 68
Rev	1.1		

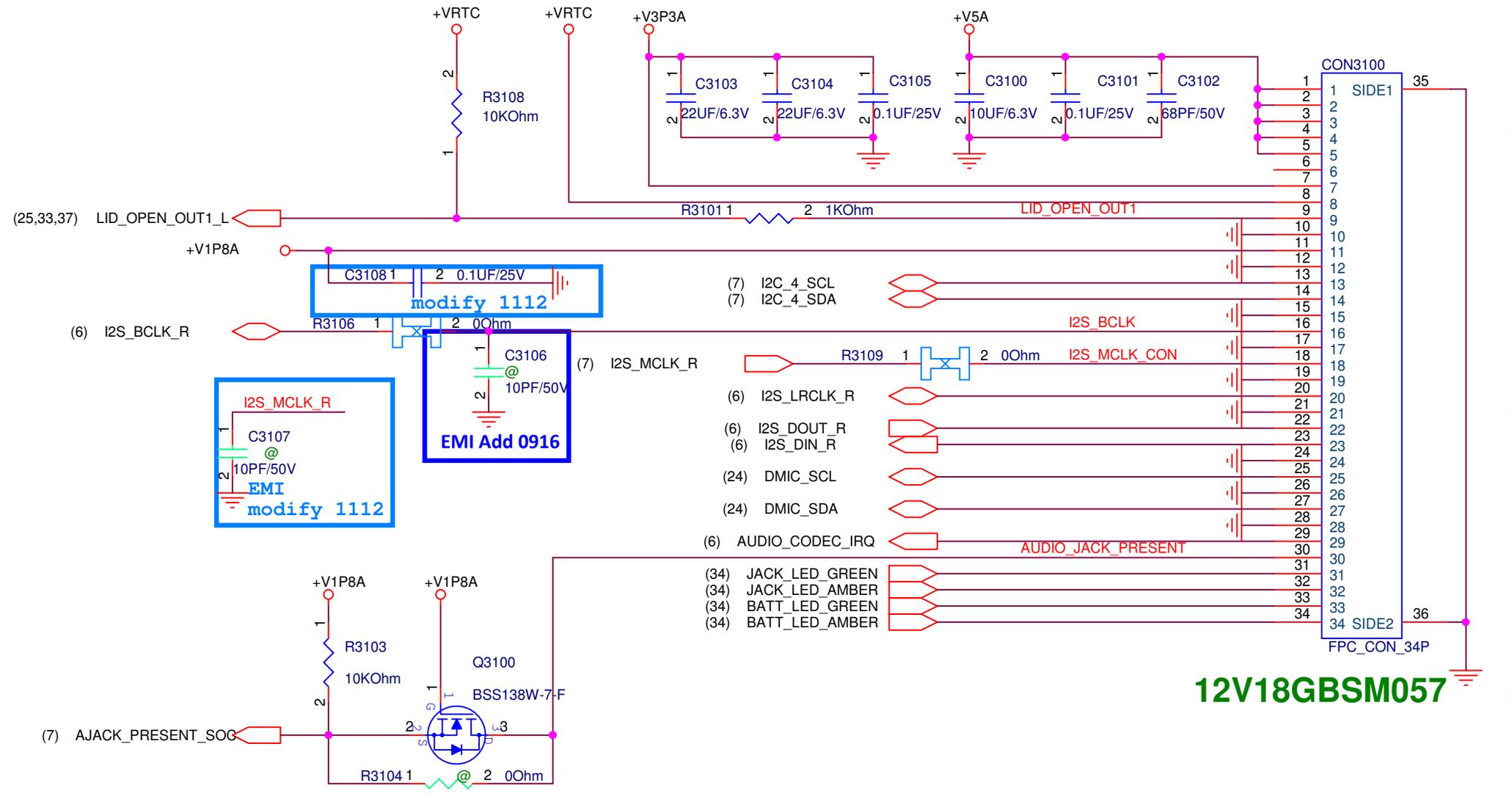
EMMC CHIP



PEGATRON Title :EMMC_STORAGE_16G
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer: Howard_Chen
 BG1-HW3
 Size B Project Name Sanance Rev 1.1
 Date: Friday, February 19, 2016 Sheet 29 of 68



IO_BOARD_CONN

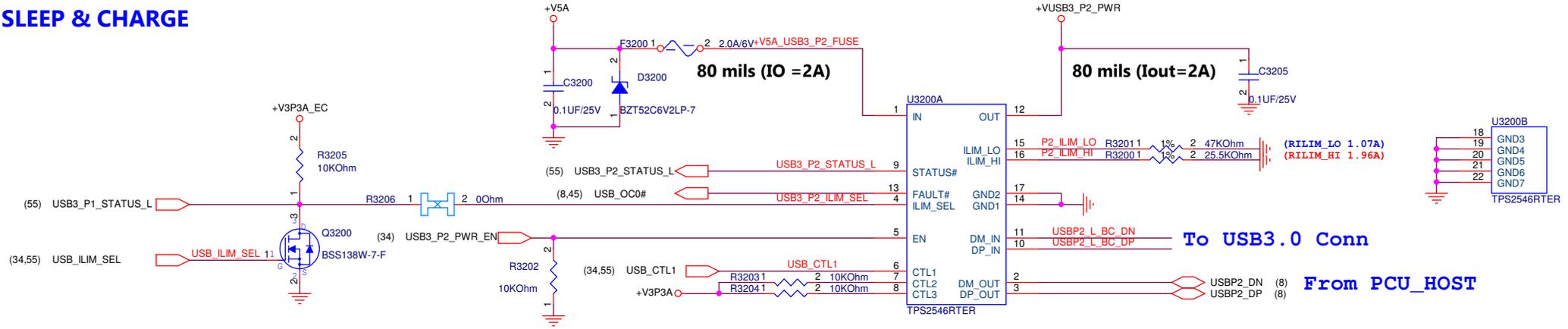


12V18GBSM057

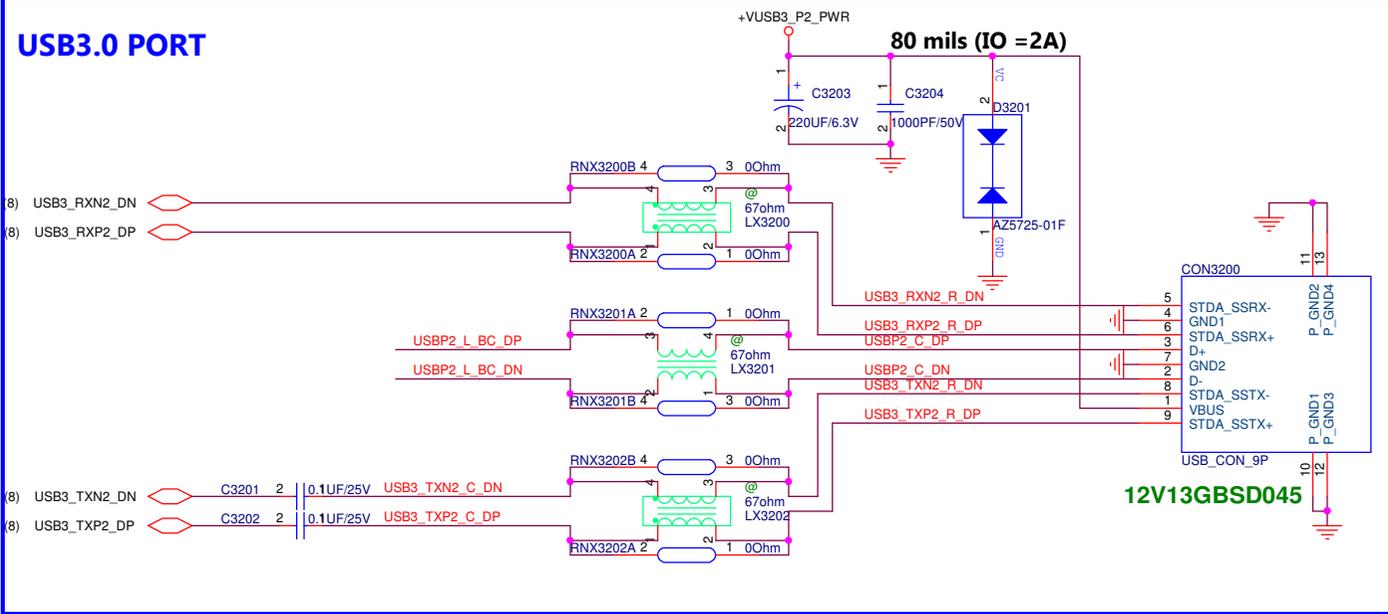
PEGATRON		Title : IO_DB_CONN_(MB)	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size A	Project Name Sanance		Rev 1.1
Date: Friday, February 19, 2016		Sheet 31 of 68	

USB 3.0 PORT2 and CHARGER(MB)

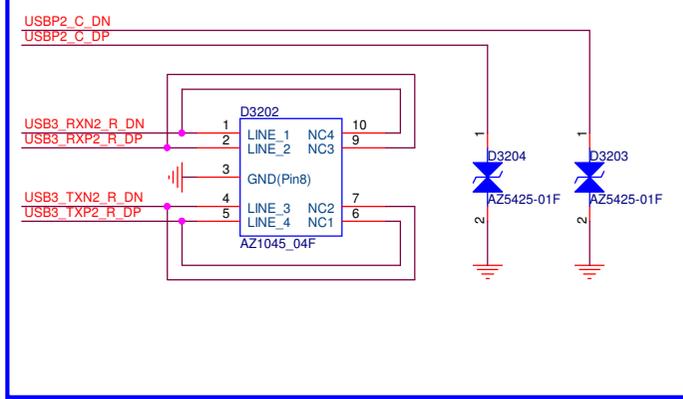
SLEEP & CHARGE



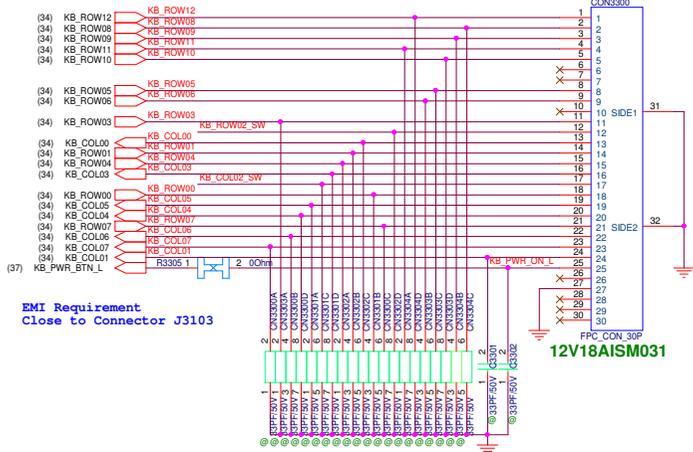
USB3.0 PORT



ESD CHIP



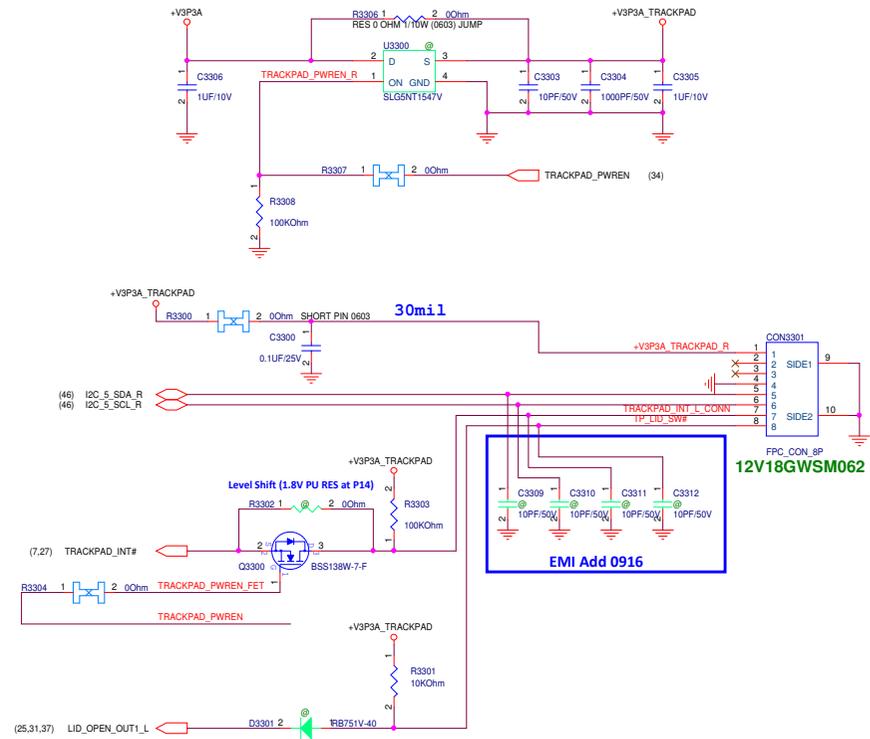
Keyboard Conn



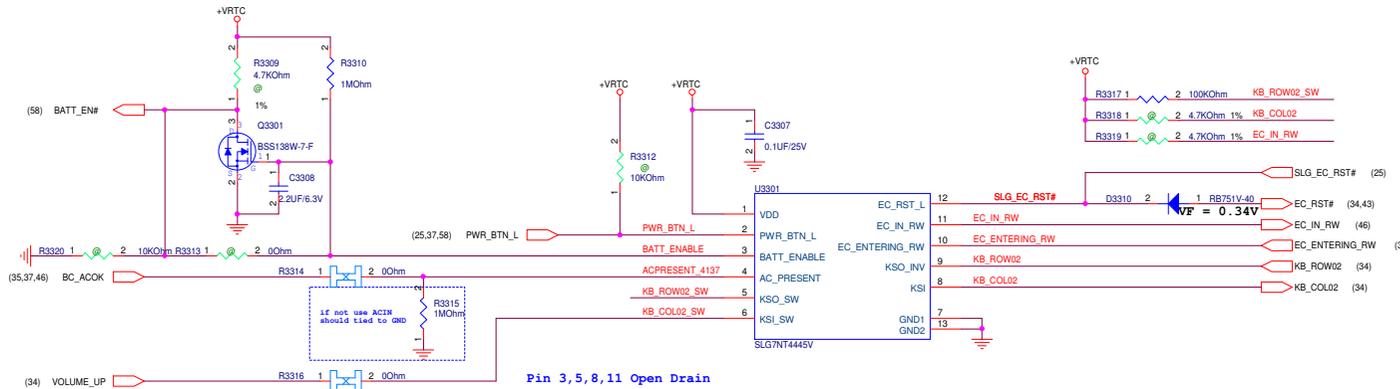
EMI Requirement
Close to Connector J3103

EMI Remove 0916

Track PAD BOARD CONN (TPD)



HOLELESS RESET 2-CHIP(KBC)



Connect to EC reset pin
Connect to GPIO on CPU
with PU to GPIO power
well
Connect to EC pin C5 (must
be low when EC IN RESET)

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON		Title : *****	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size B	Project Name Sanance	Rev 1.1	
Date: Friday, February 19, 2016	Sheet	36	of 68

5

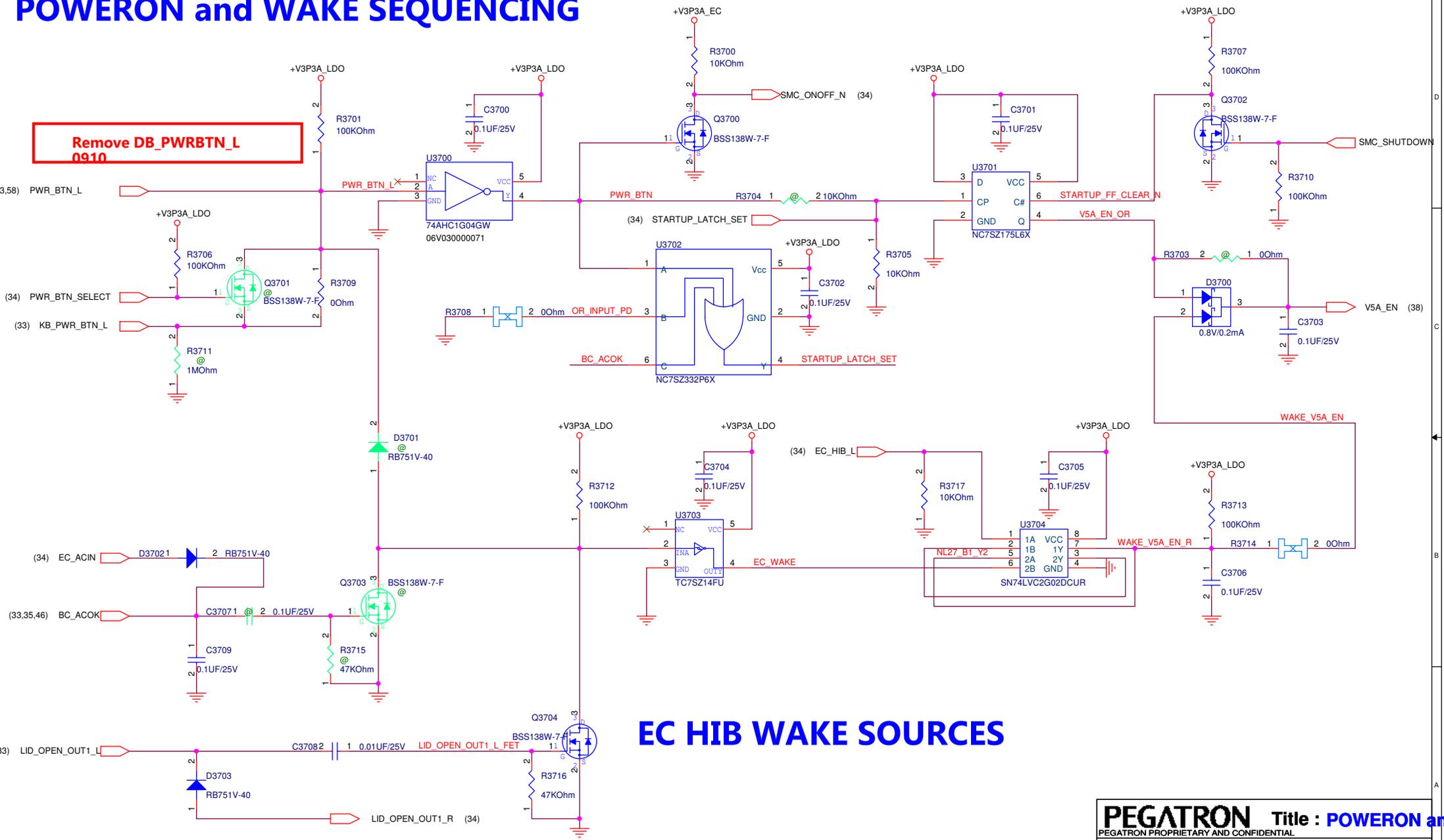
4

3

2

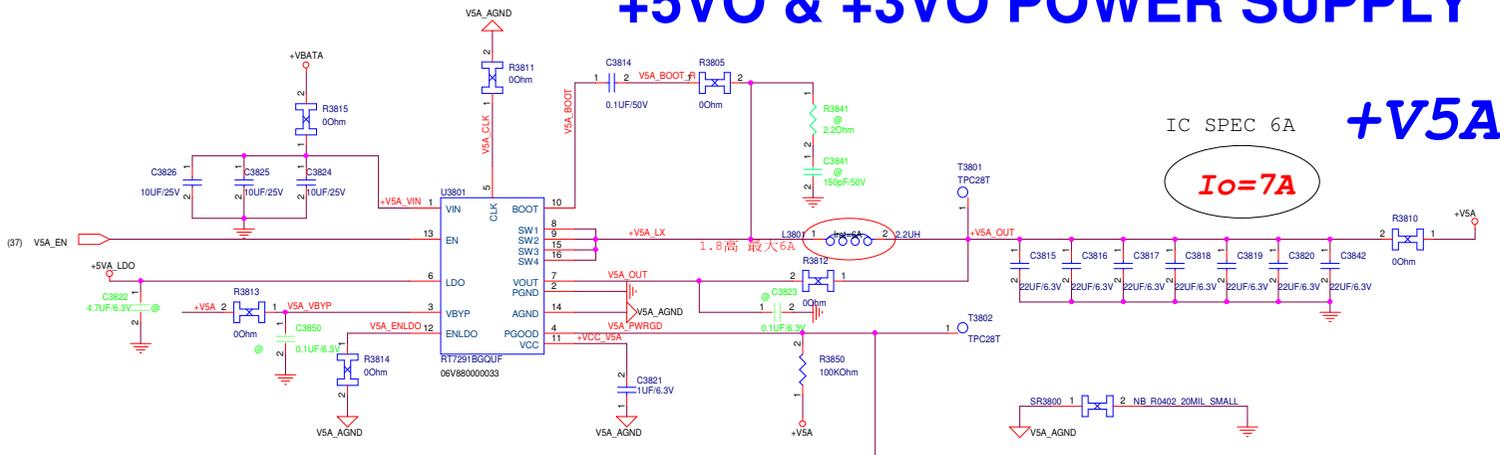
1

POWERON and WAKE SEQUENCING



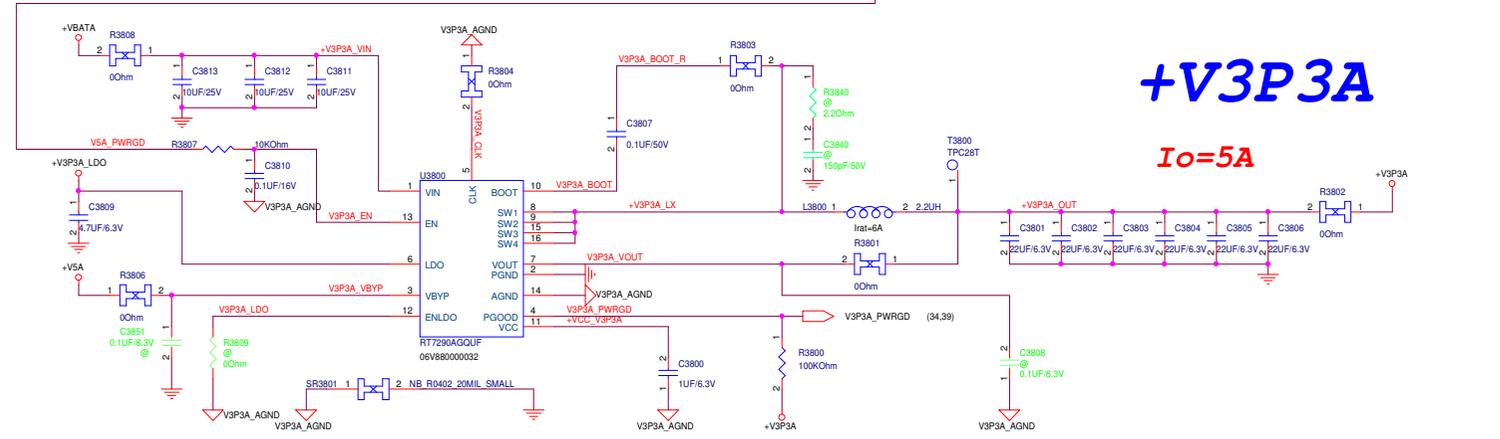
PEGATRON		Title : POWERON and	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard Chen	
Size B	Project Name	Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 37	of 68	

+5VO & +3VO POWER SUPPLY



IC SPEC 6A **+V5A**

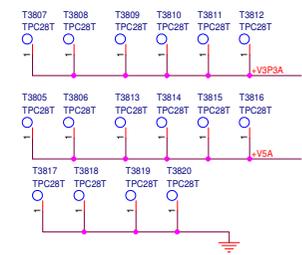
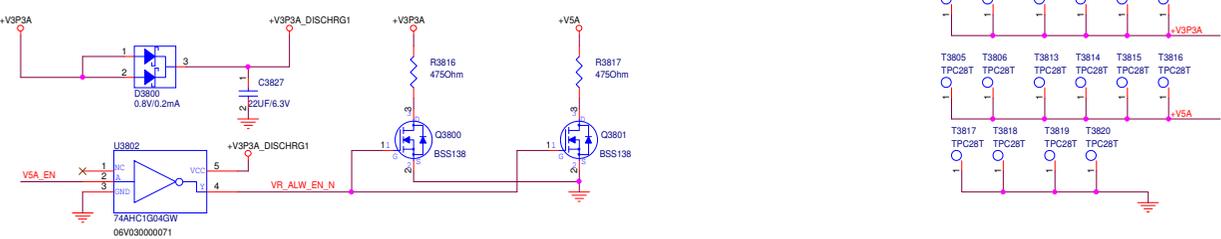
$I_o = 7A$



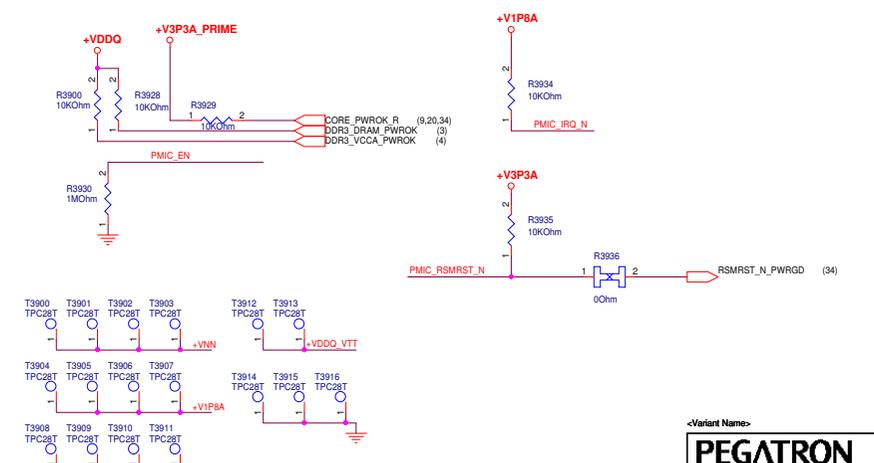
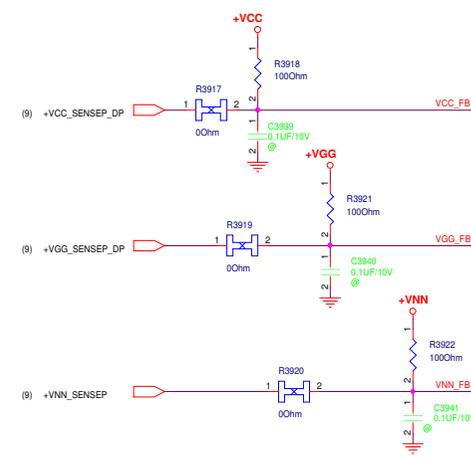
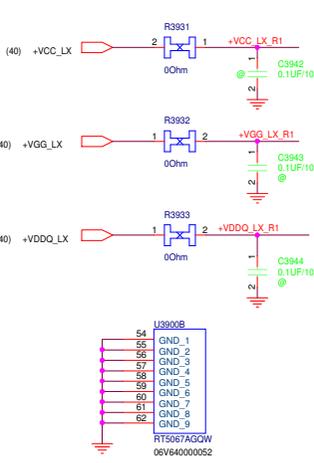
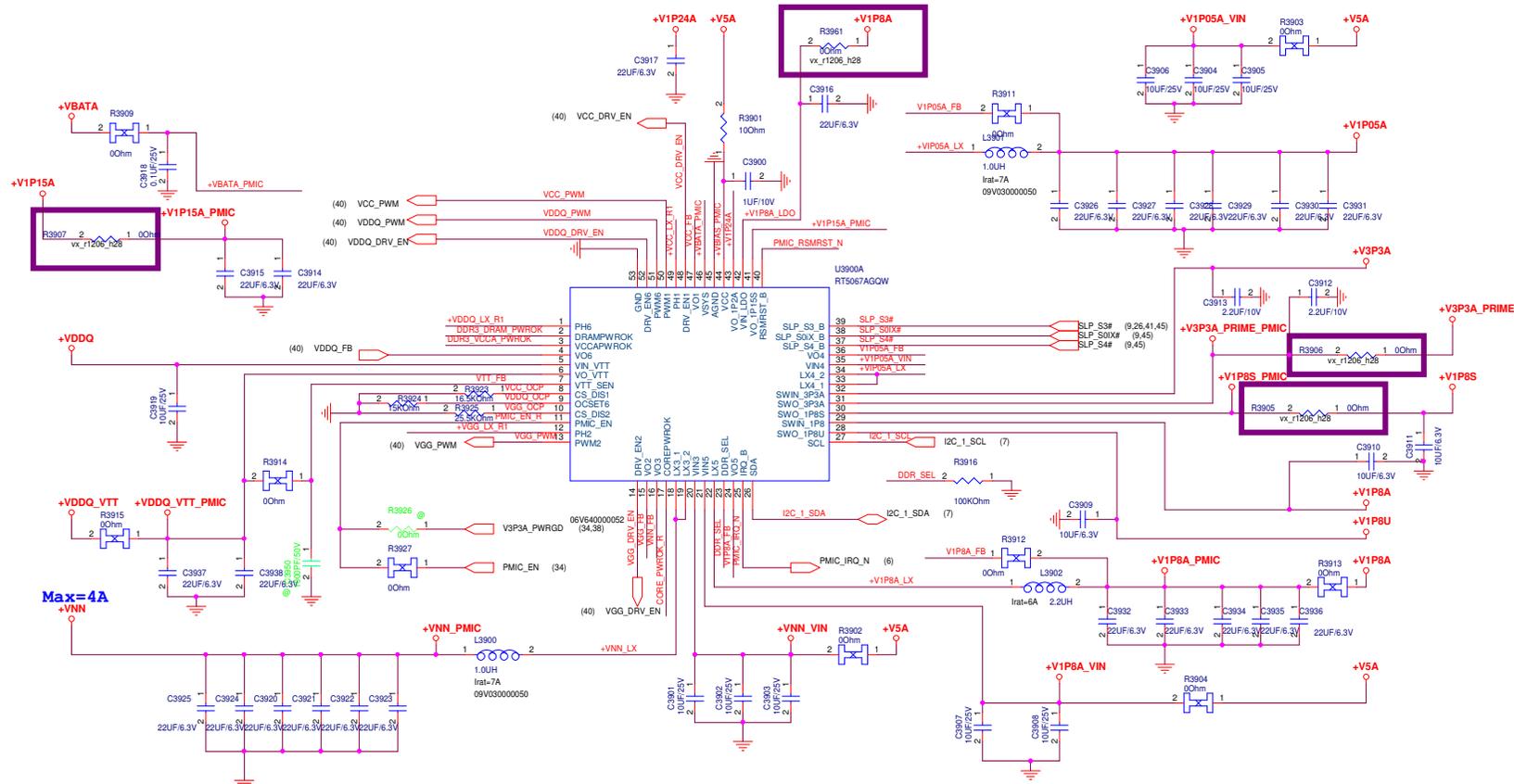
+V3P3A

$I_o = 5A$

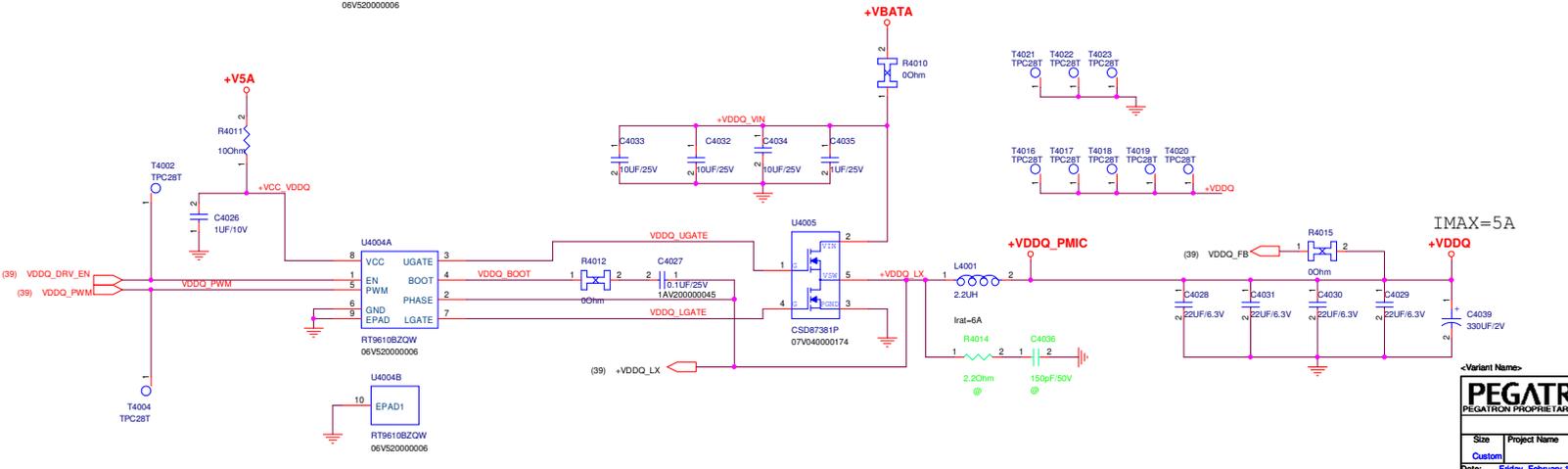
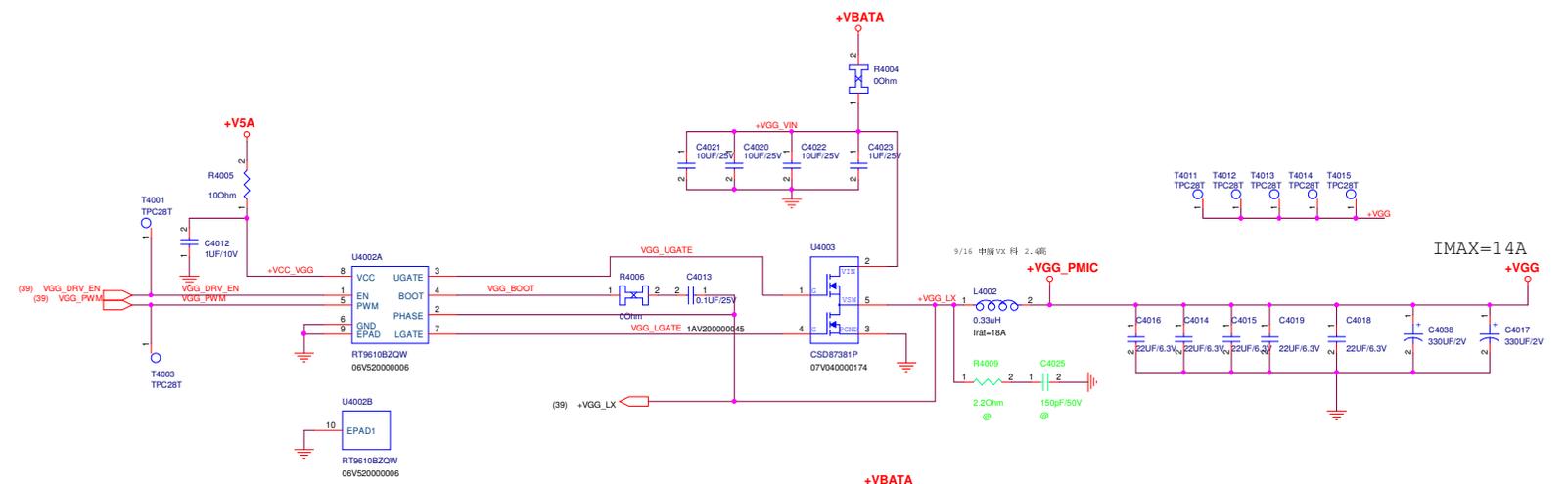
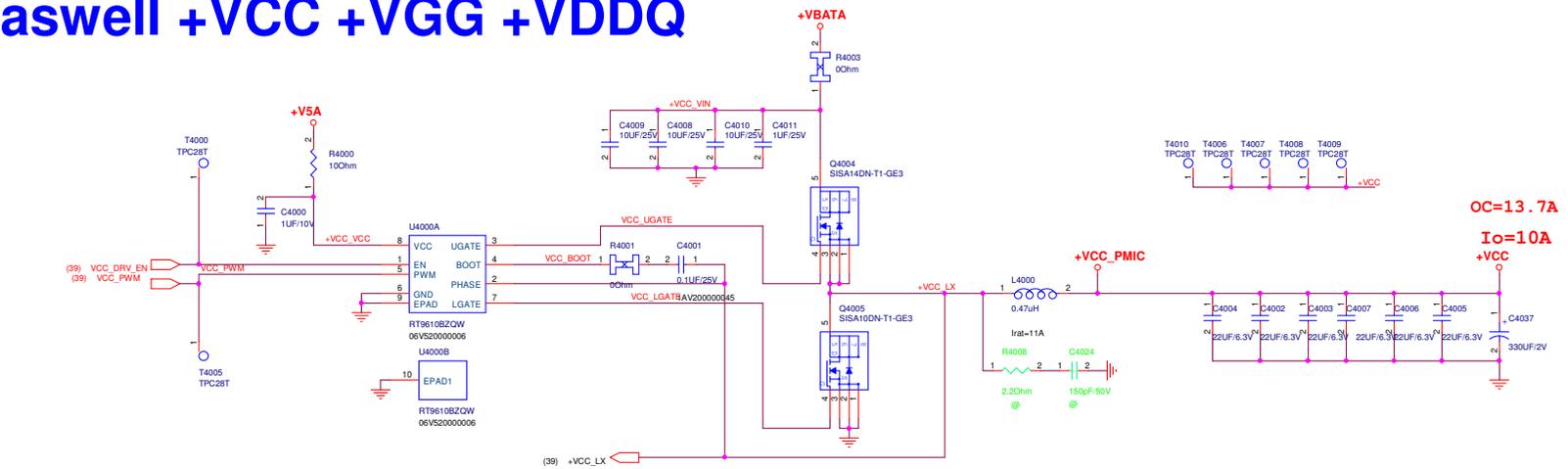
DISCHARGE CKT



PMIC



Braswell +VCC +VGG +VDDQ

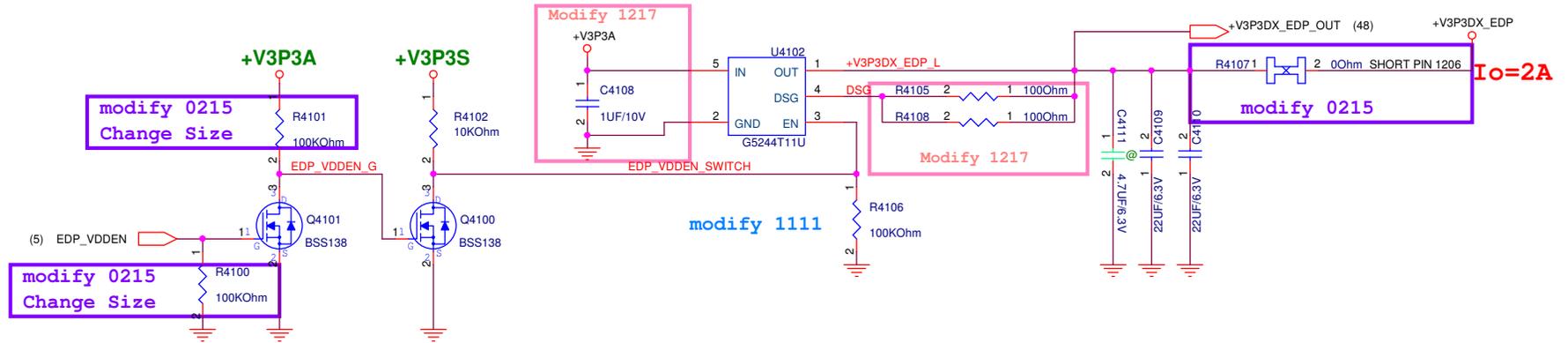


<Variant Name>

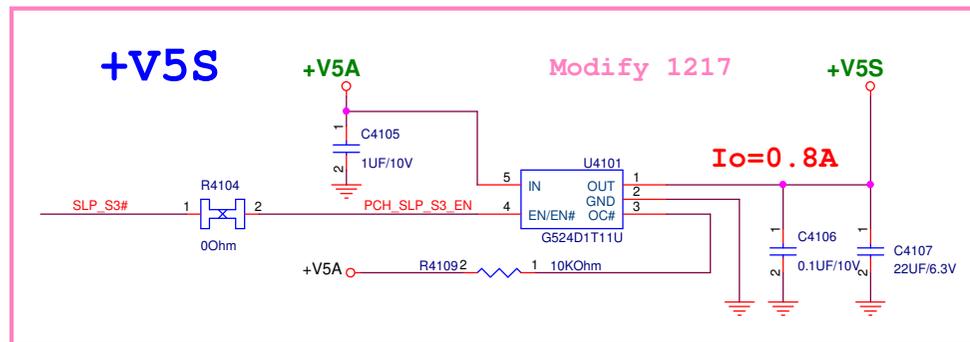
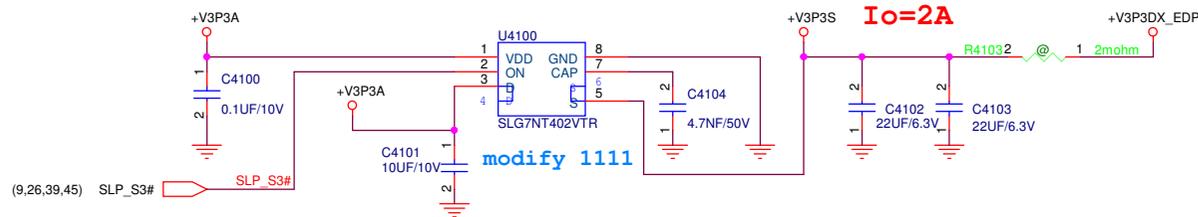
PEGATRON Title: +VCC_+VGG_+VDDQ	
PEGATRON PROPRIETARY AND CONFIDENTIAL	
Engineer: Remiel	
Size	Project Name
Custom	BRASWELL_CHROME
Date: Feb, February 19, 2016	Rev 1.1
Sheet 40	of 88

POWER GATE

+V3P3DX_EDP



+V3P3S



PEGATRON Title : POWER GATE		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer: Remiel
Size	Project Name	Rev
B	BRASWELL_CHROME	1.1
Date: Friday, February 19, 2016	Sheet	41 of 68

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date:	Friday, February 19, 2016	Sheet 42 of 68

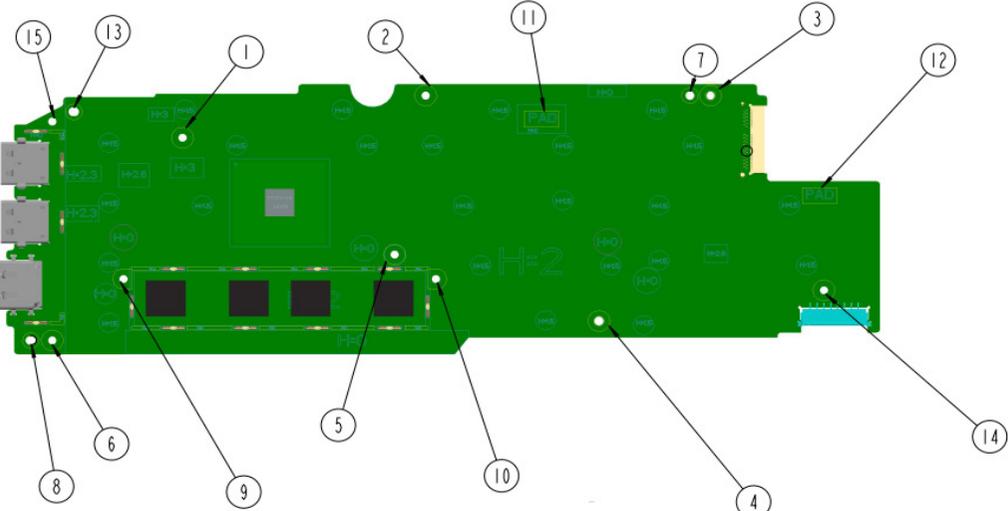
5

4

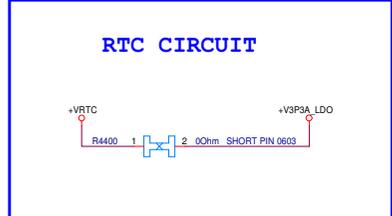
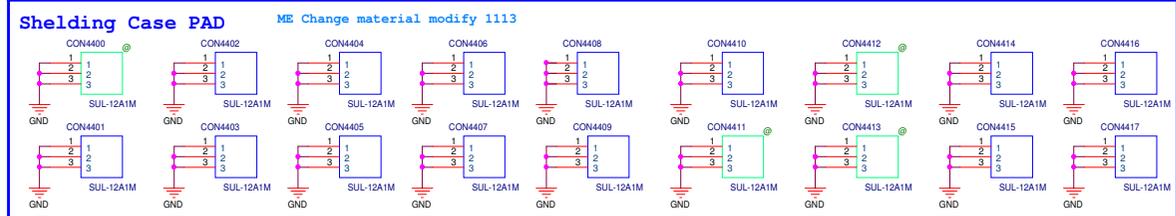
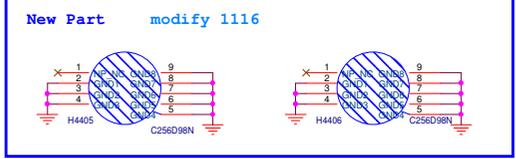
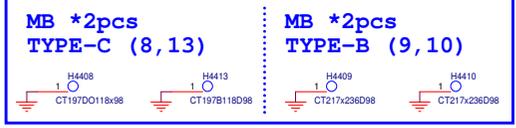
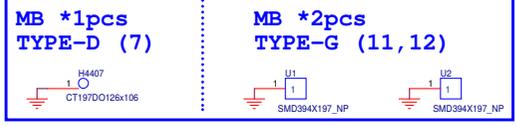
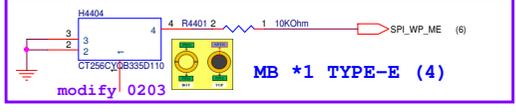
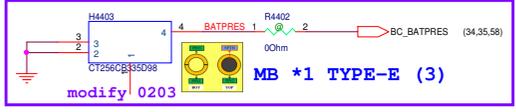
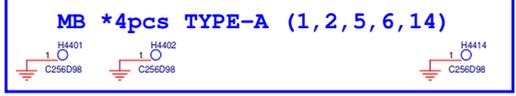
3

2

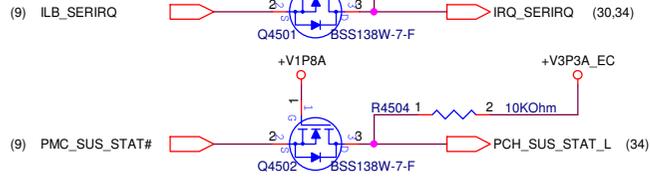
1



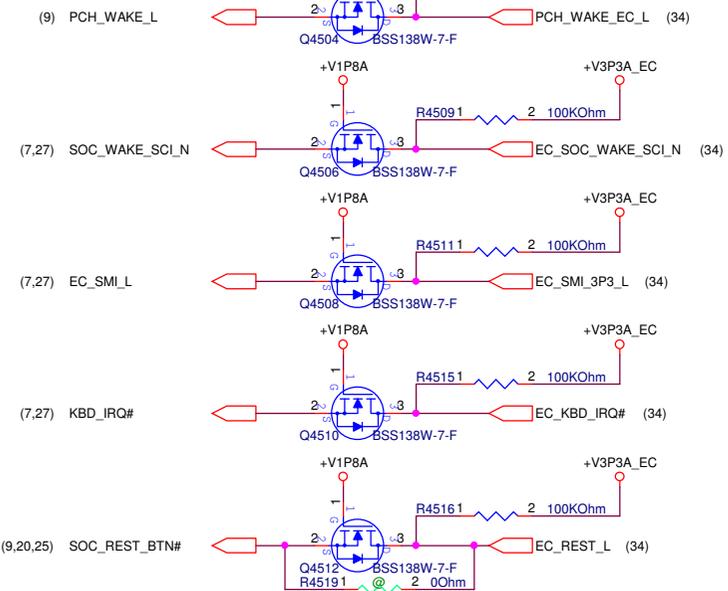
	PTH/NPTH	Ø	TOP PAD	BTM_PAD	
1	PTH	2.5	6.5	6.5	
2	PTH	2.5	6.5	6.5	
3	PTH	2.5	3.2/6.5	See No.3	
4	PTH	2.8	3.2/6.5	See No.4	
5	PTH	2.5	6.5	6.5	
6	PTH	2.5	6.5	6.5	
7	PTH	2.5	5.0	3.0	
8	PTH	2.7 L3.2	5.0	N/A	
9	PTH	2.5	See No.9	N/A	
10	PTH	2.5	See No.10	N/A	
11			See No.11		
12			See No.11		
13	PTH	2.7 L3.2	5.0	N/A	
14	PTH	2.5	6.5	6.5	
15	NPTH	2.5	N/A	N/A	



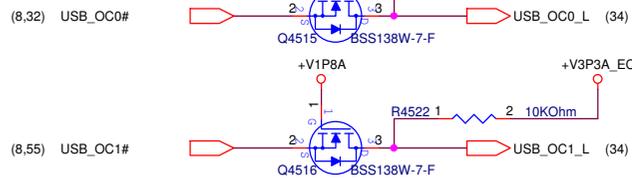
PWR ON SEQUENCE



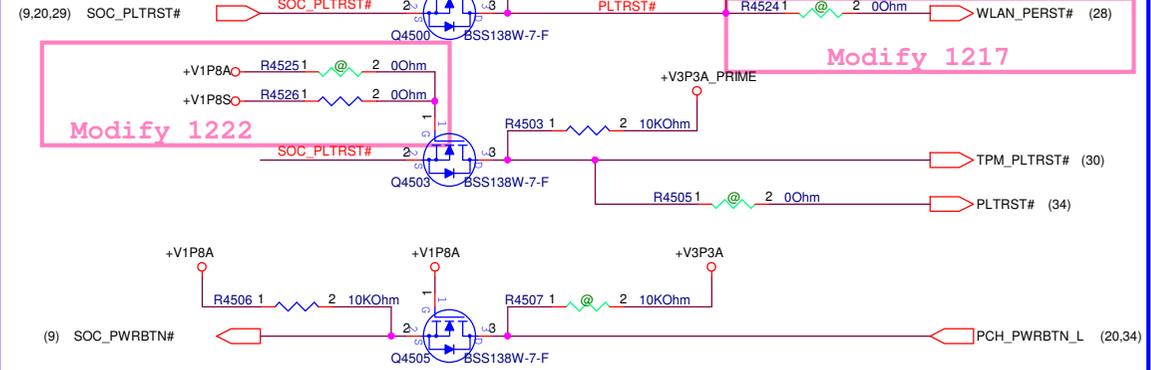
PWR ON SEQUENCE



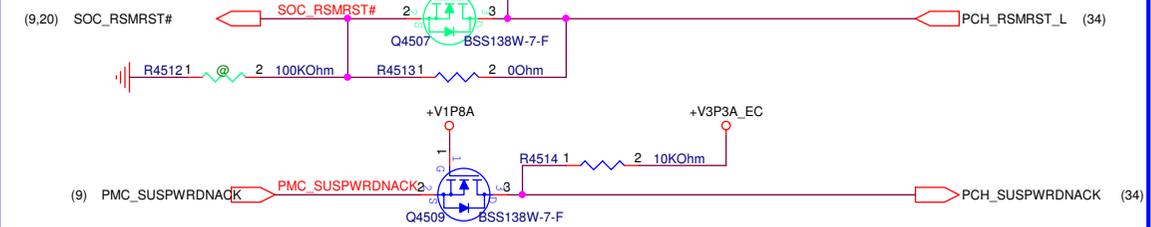
USB OC



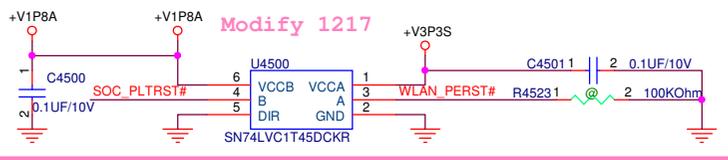
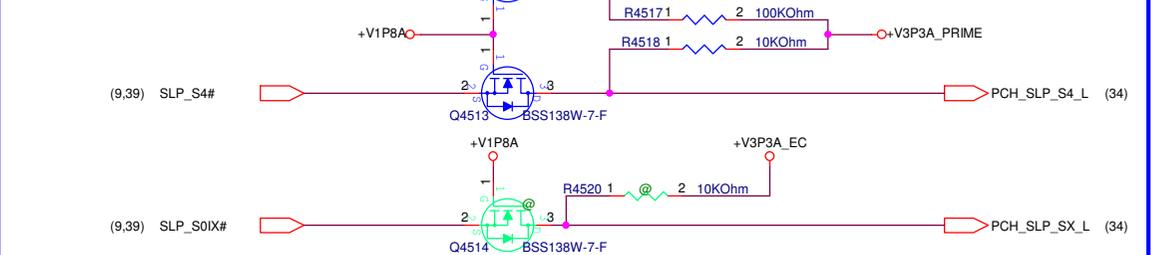
PWR ON SEQUENCE



PWR ON SEQUENCE



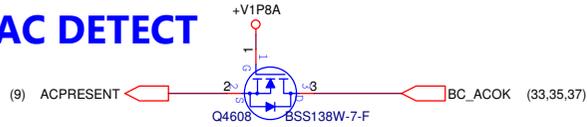
PWR ON SEQUENCE



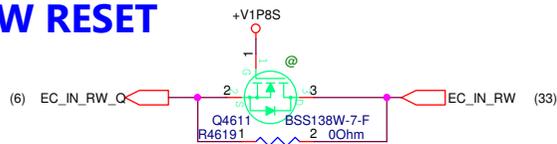
PEGATRON Title : LEVEL SHIFT (1)
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer: Howard_Chen
 BG1-HW3
 Size B Project Name Sanance Rev 1.1
 Date: Friday, February 19, 2016 Sheet 45 of 68

LTE

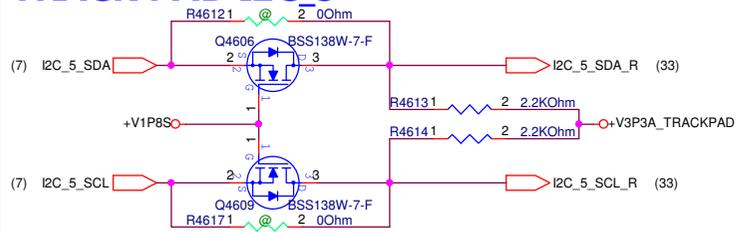
AC DETECT



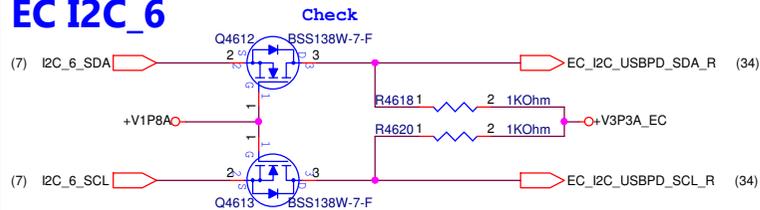
HW RESET



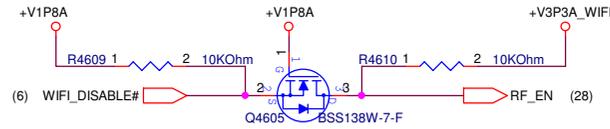
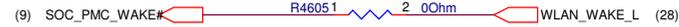
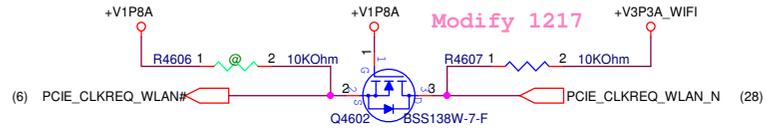
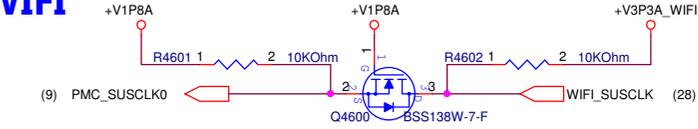
TRACK PAD I2C_5



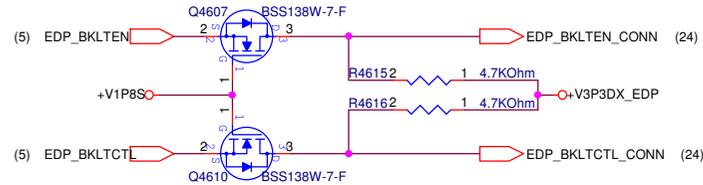
EC I2C_6



WIFI

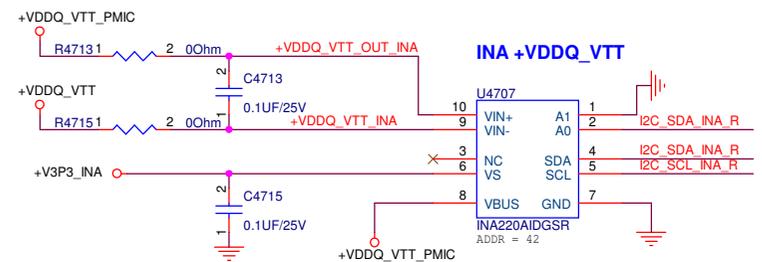
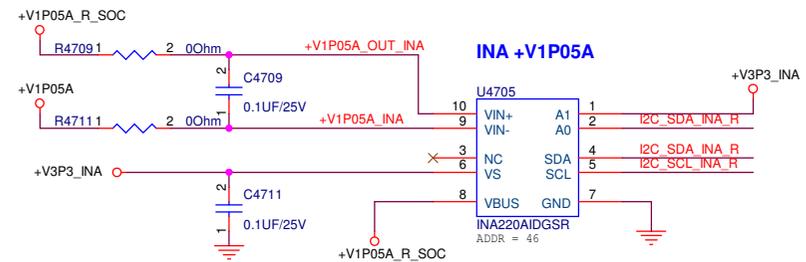
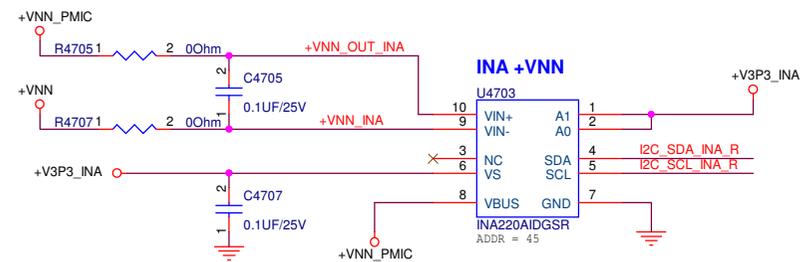
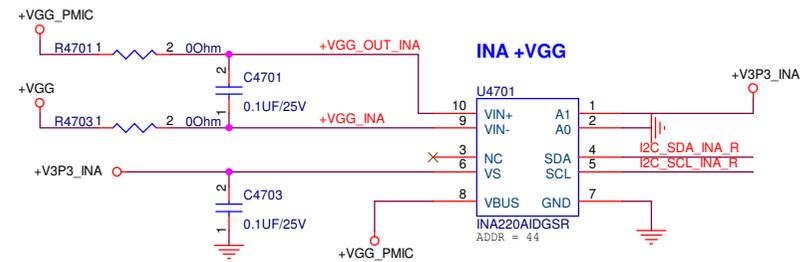
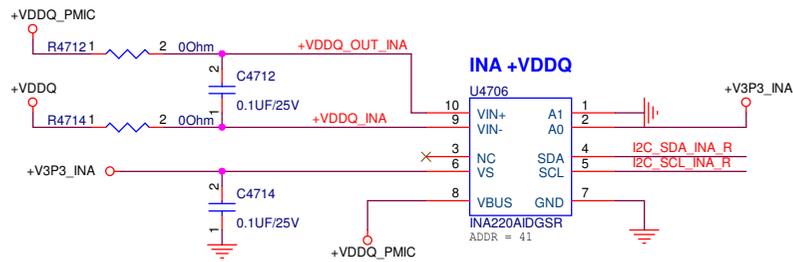
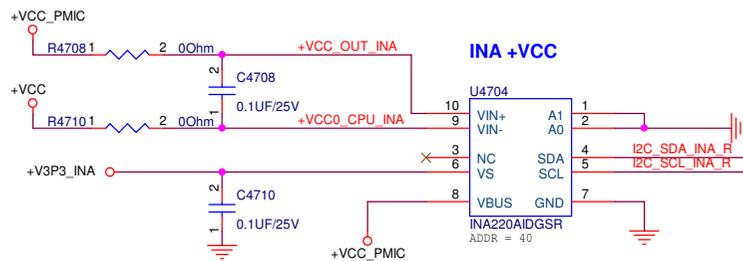
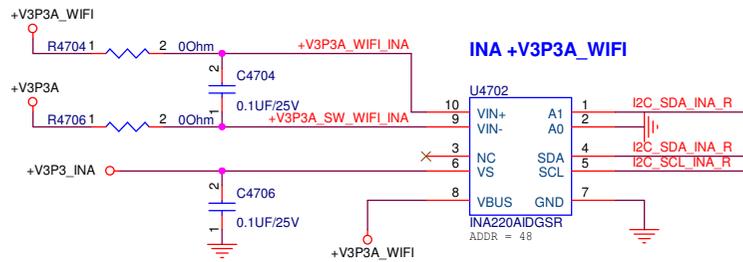
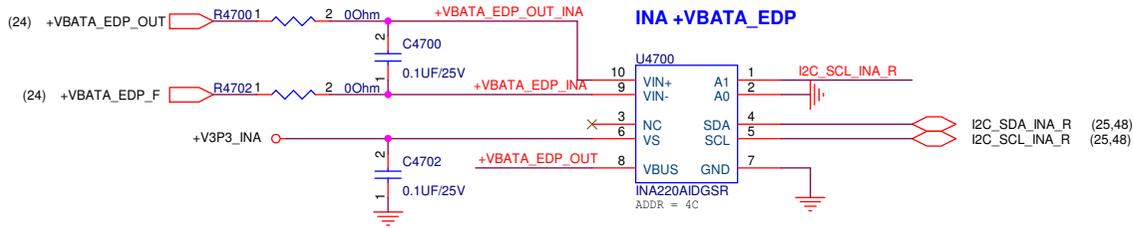


eDP CONTROL PIN



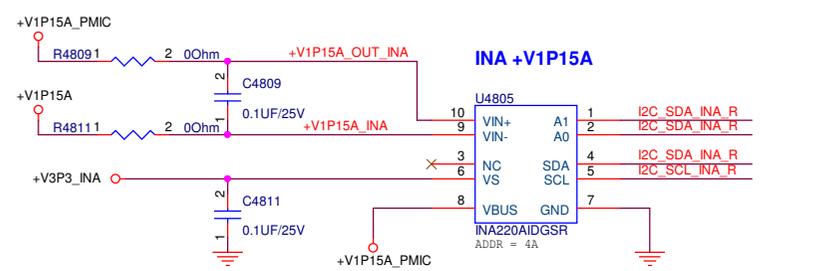
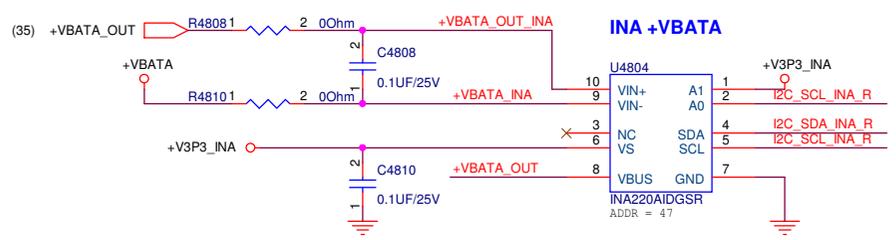
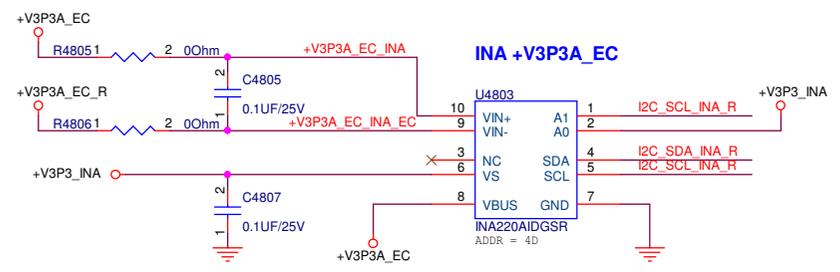
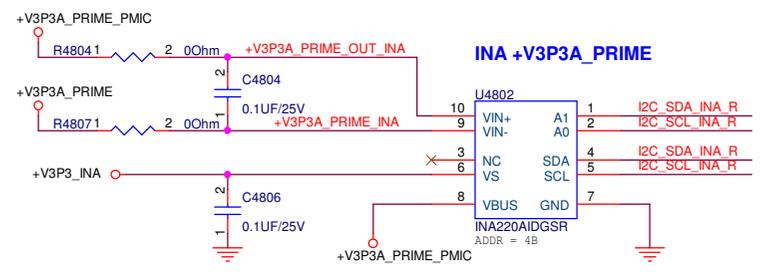
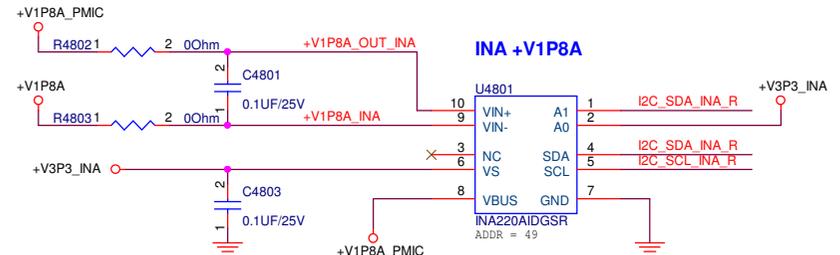
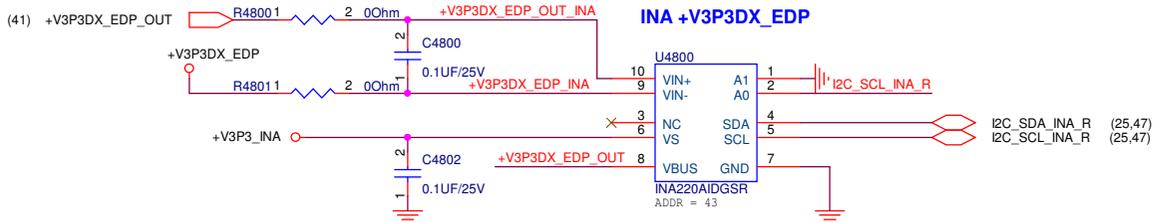
TOUCH SCREEN I2C_0

INA DEVICES 1



PEGATRON		Title : INA DEVICES 1	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size B	Project Name Sanance		Rev 1.1
Date:	Friday, February 19, 2016	Sheet	47 of 68

INA DEVICES 2



Howard Chen
PEGATRON Title : **INA DEVICES 2**
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 Engineer:
BG1-HW3
 Size B Project Name **Sanance** Rev 1.1
 Date: Friday, February 19, 2016 Sheet 48 of 68

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 49 of 68	

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 50 of 68	

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 51 of 68	

5

4

3

2

1

KEPLER

PEGATRON		Title : KEPLER	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
		Engineer: Howard_Chen	
Size A	Project Name Sanance		Rev 1.1
Date: Friday, February 19, 2016	Sheet	52	of 68

	5	4	3	2	1
D					
C					
B					
A					

PEGATRON		Title: VIDEO CODEC	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:	Friday, February 19, 2016	Sheet	53 of 68

R2.0 modify List

update dsn 0203 1000 modify Page20,remove CON2000 (Joe Lo) [2016/02/03 上午 09:56:24]

update dsn 0203 1130 Q4300,4301換Symbol page20 測點 (Joe Lo) [2016/02/03 上午 11:46:03]

update dsn 0203 1300 update dsn 0203 1300 (Joe Lo) [2016/02/03 下午 01:14:32]

PEGATRON		Title : LIST	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size A	Project Name Sanance		Rev 1.1
Date:	Friday, February 19, 2016	Sheet	54 of 68

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date: Friday, February 19, 2016	Sheet 56 of 68	

5

4

3

2

1

5

4

3

2

1

D

D

C

C

B

B

A

A

PEGATRON Title : *****		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HW3		Engineer:
Size A	Project Name Sanance	Rev 1.1
Date:	Friday, February 19, 2016	Sheet 57 of 68

5

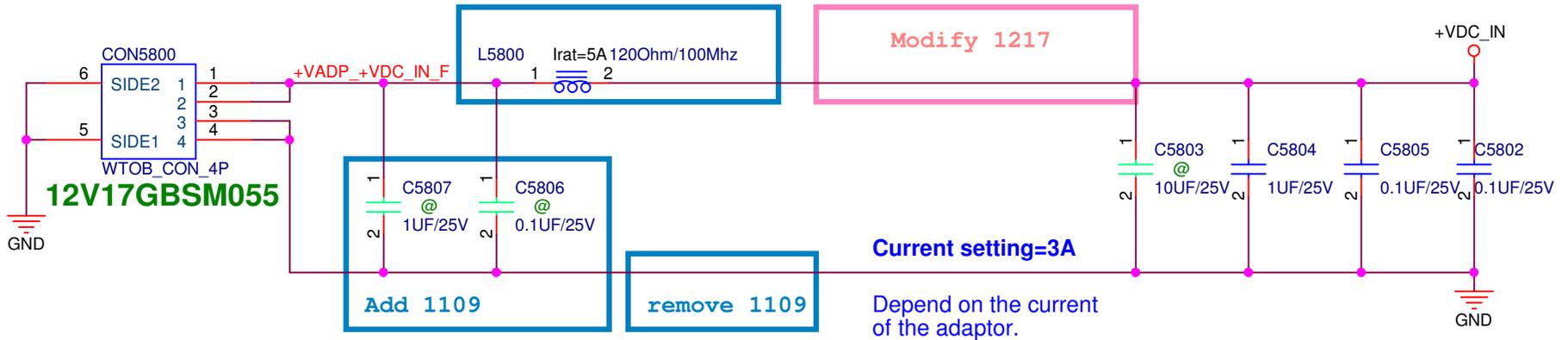
4

3

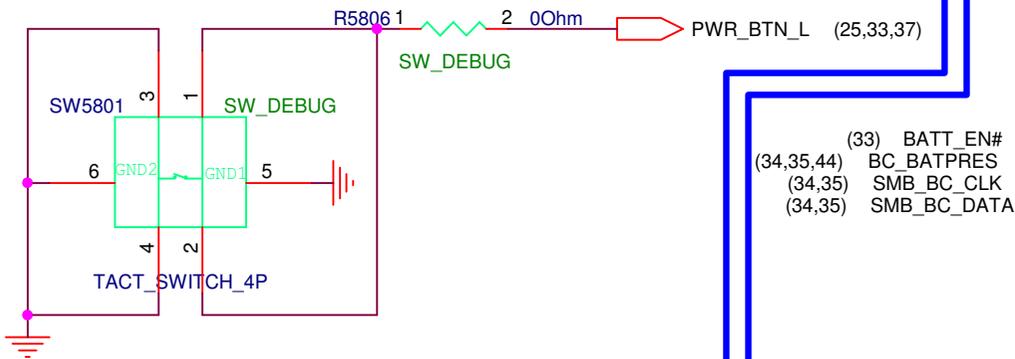
2

1

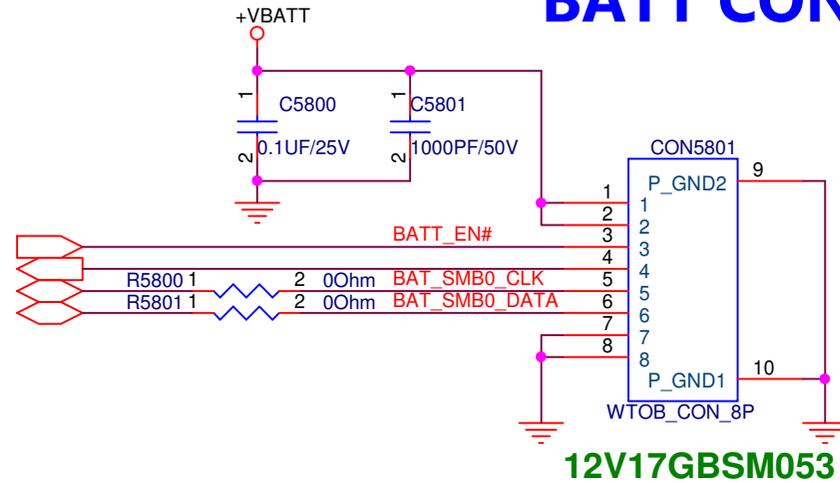
DC Jack CONN



PWR BTM (Without KB)

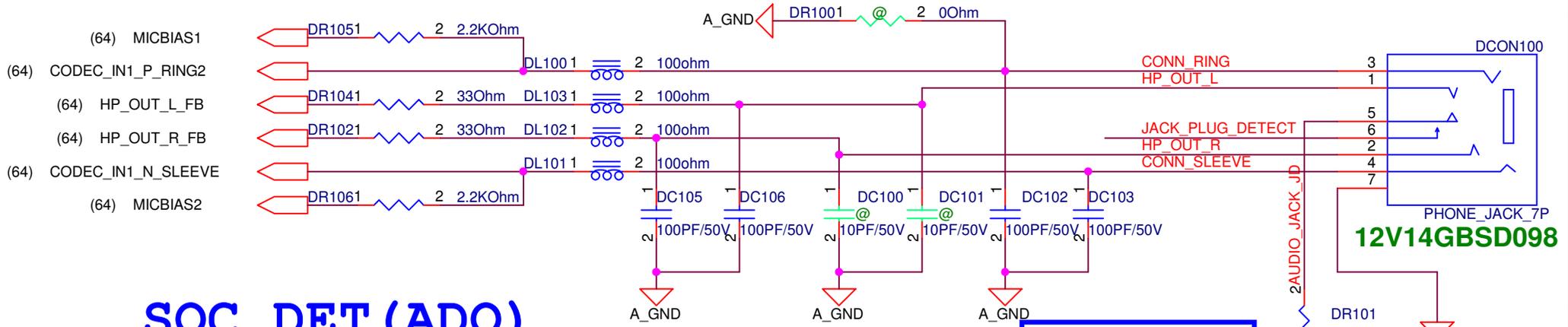
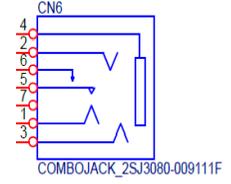


BATT CONN

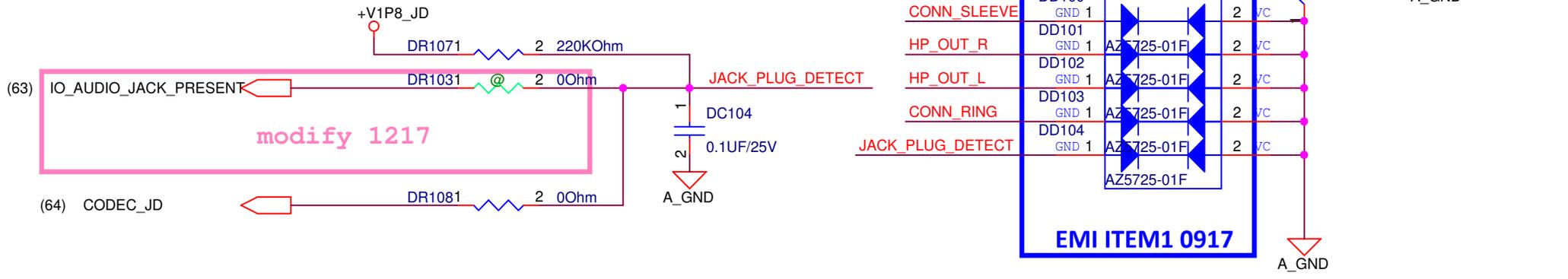


HEADPHONE/Mic combo (ADO)

combo jack
 Normal open
 P/N: DFTJ06FR652
 PIN1 ---> L?
 PIN2 ---> R?
 PIN3 ---> GND/MIC?
 PIN4 ---> MIC/GND?
 PIN5 ---> JD?
 PIN6 ---> GND?
 PIN7 ---> Shielding?



SOC DET (ADO)

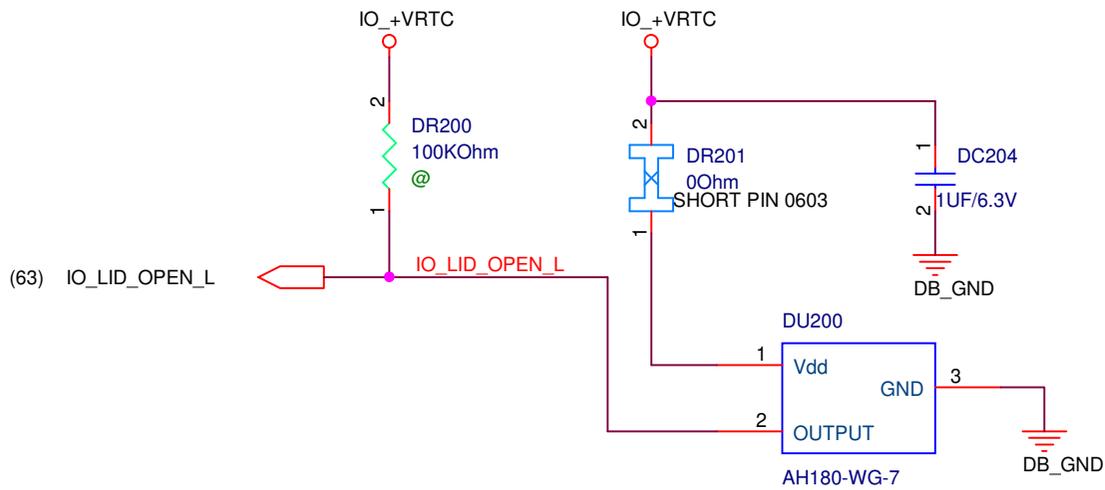


PEGATRON Title : **AUDIO JACK**
 PEGATRON PROPRIETARY AND CONFIDENTIAL
 BGI-HWS
 Engineer: **Howard_Chen**

Size A	Project Name Sanance Friday, February 19, 2016	Rev 1.1
-----------	---	------------

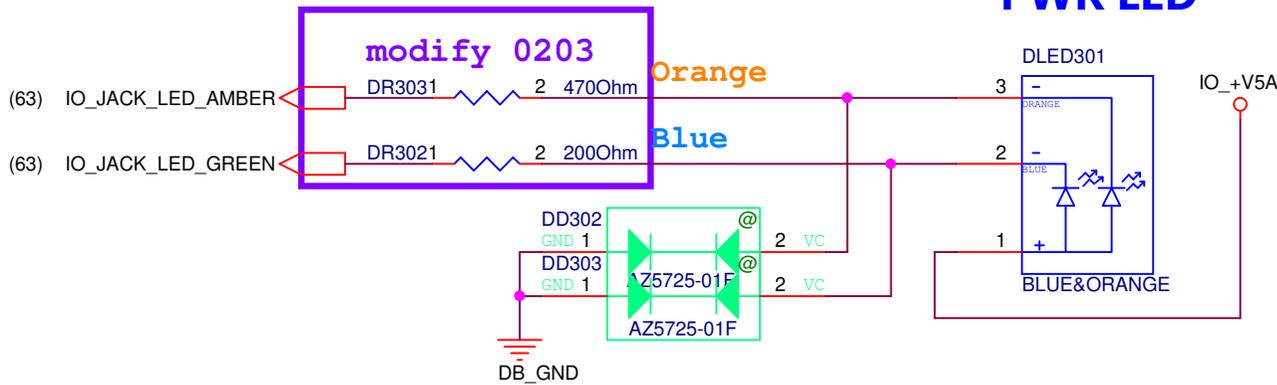
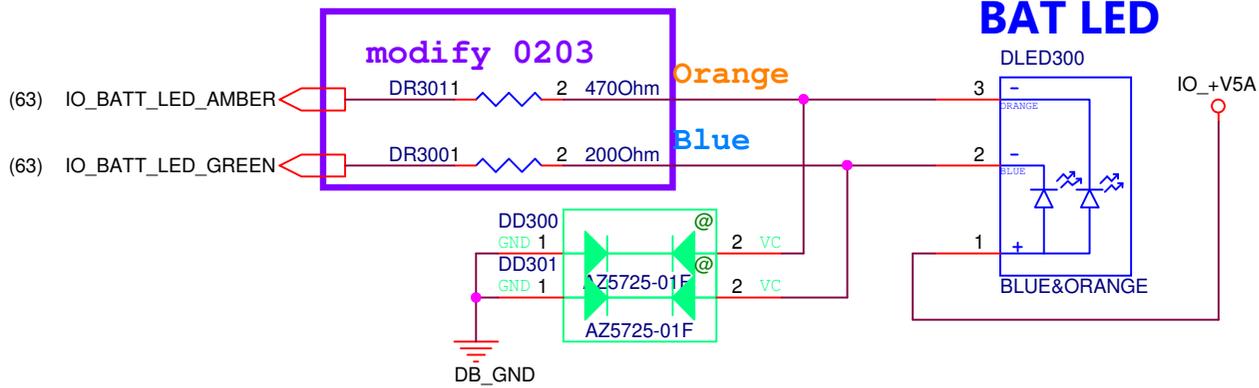
Date: _____ Sheet **59** of **68**

LID Switch

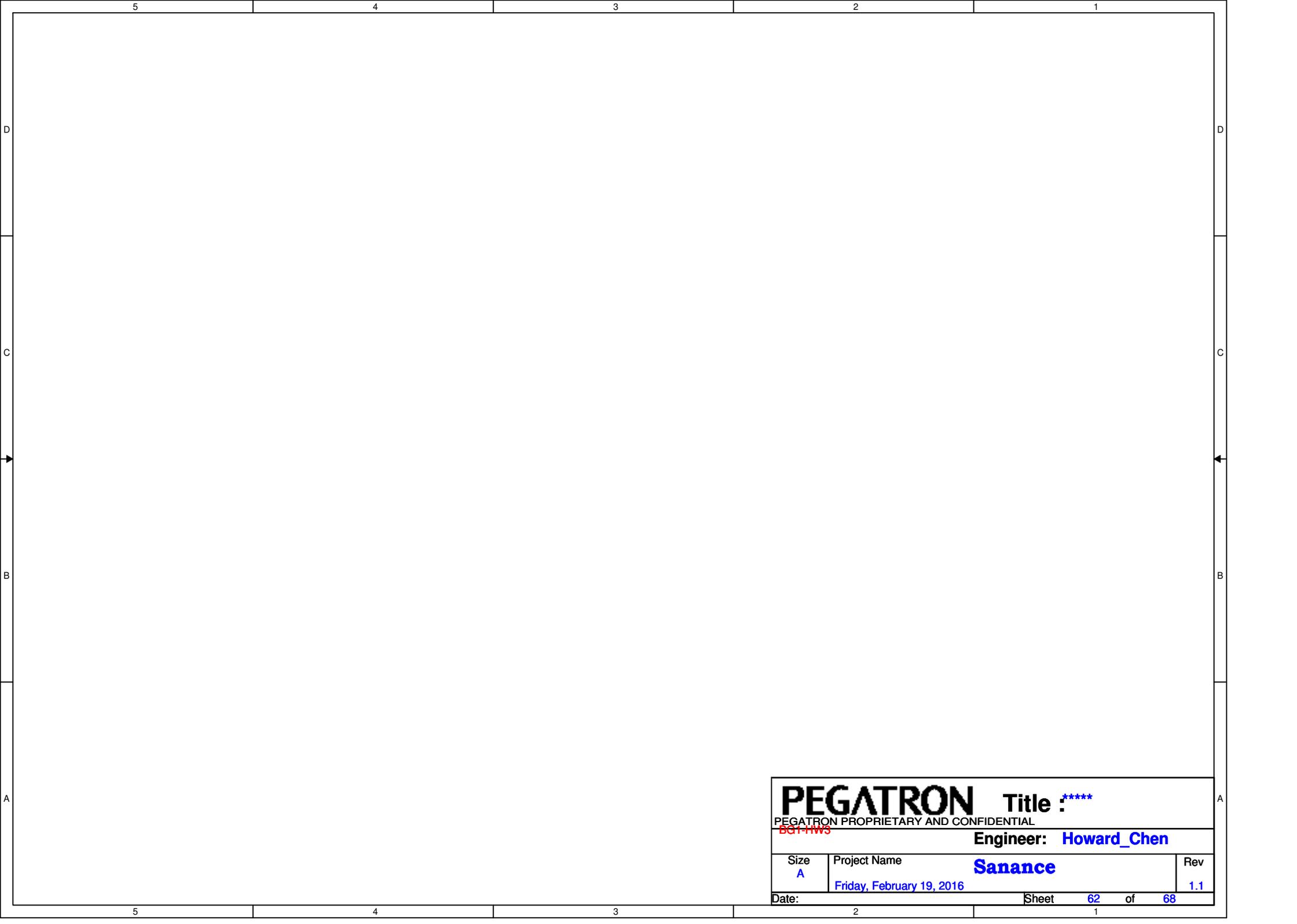


PEGATRON		Title: LID	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HW3		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:	Friday, February 19, 2016	Sheet	60 of 68

LED Display

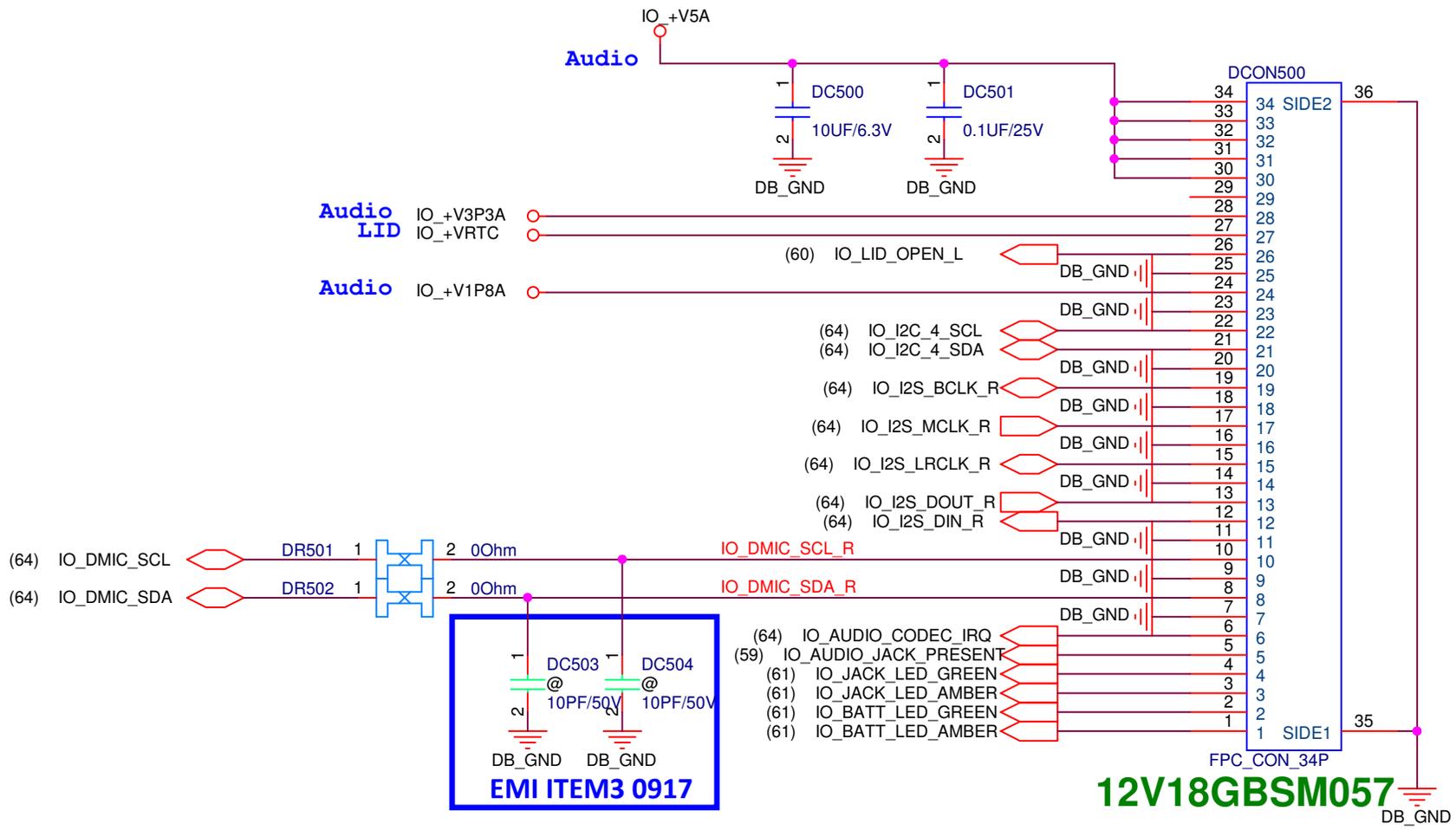


PEGATRON Title: LED		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
BG1-HWS		
Engineer: Howard_Chen		
Size A	Project Name: Sanance	Rev: 1.1
Date:	Friday, February 19, 2016	
Sheet 61 of 68		



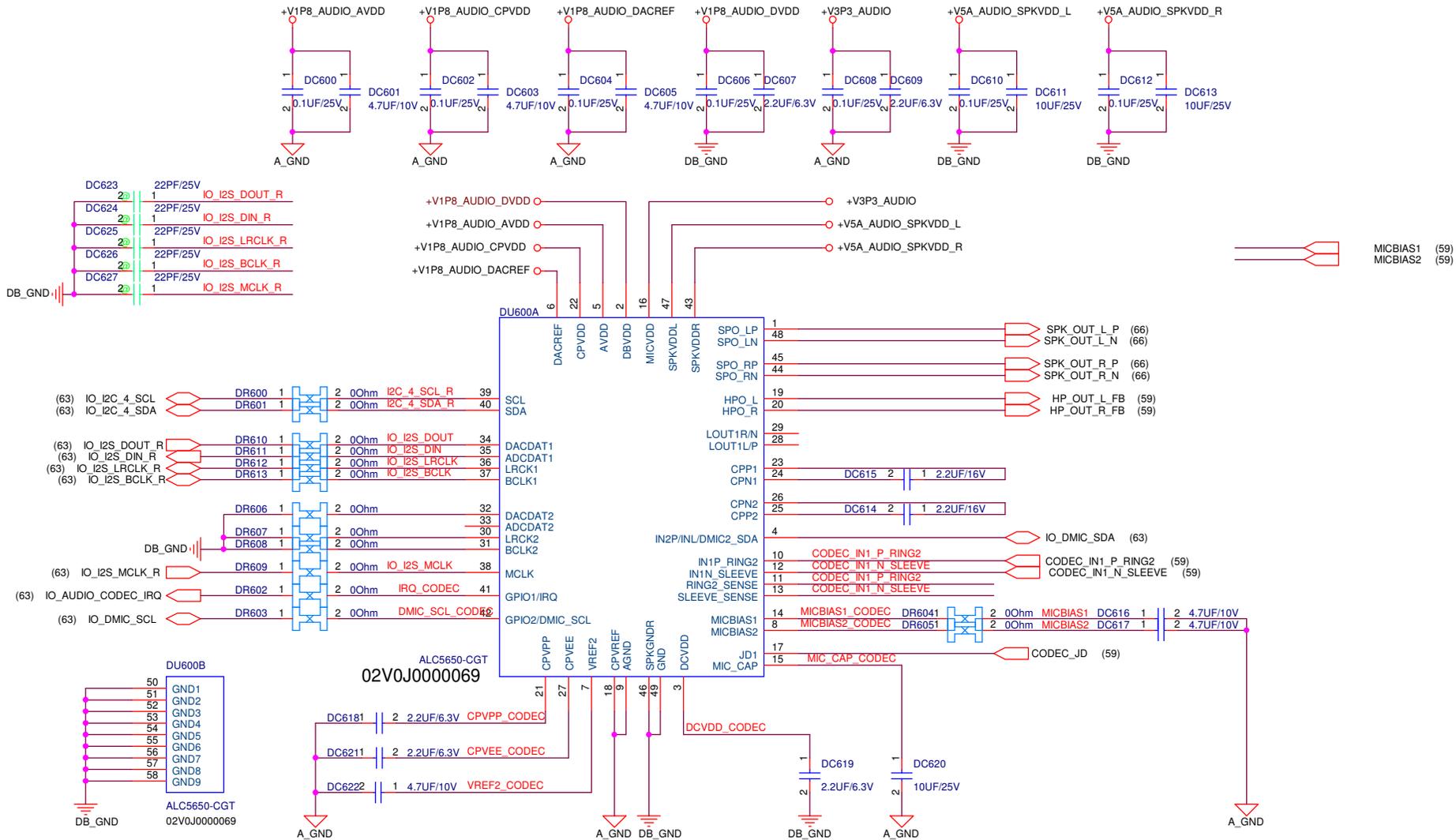
PEGATRON		Title : *****	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BGT-HWS		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:	Friday, February 19, 2016	Sheet	62 of 68

IO CONN (DB)

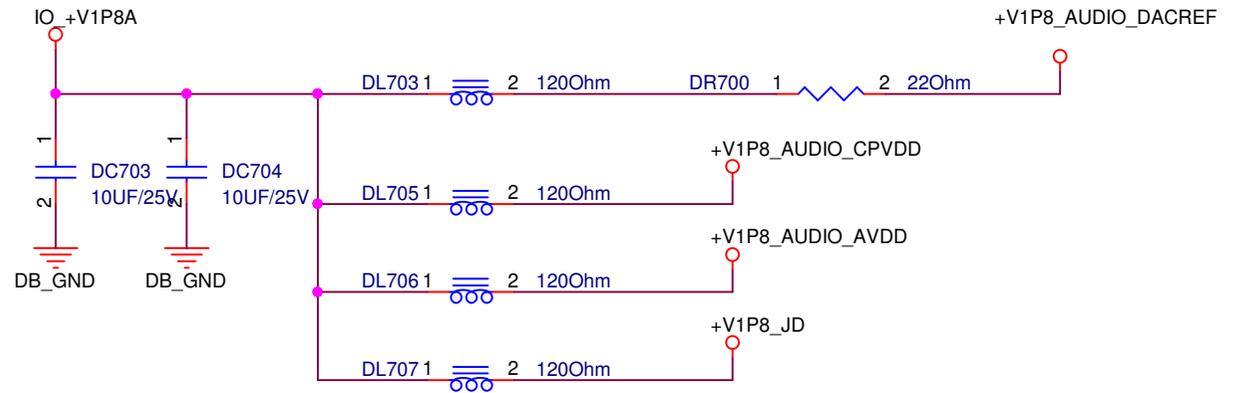
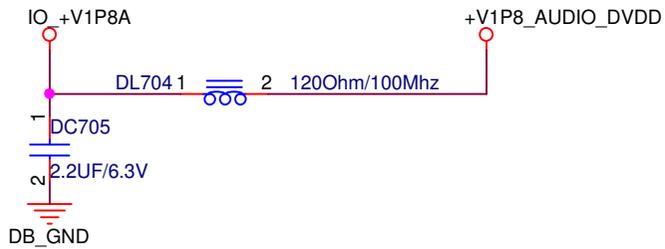
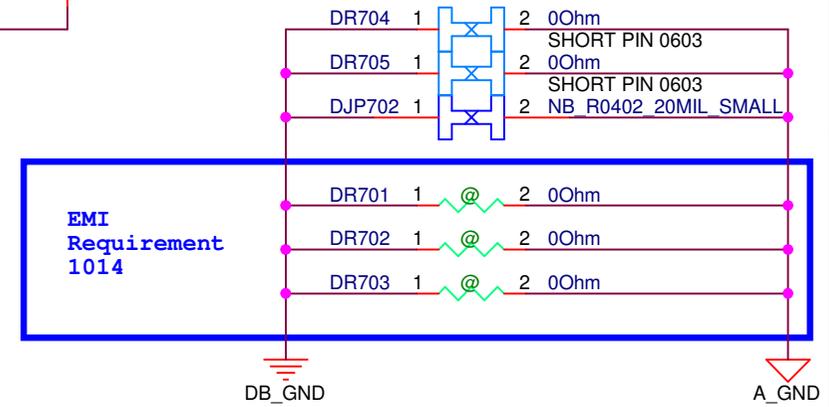
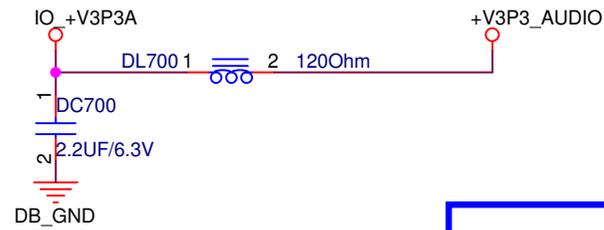
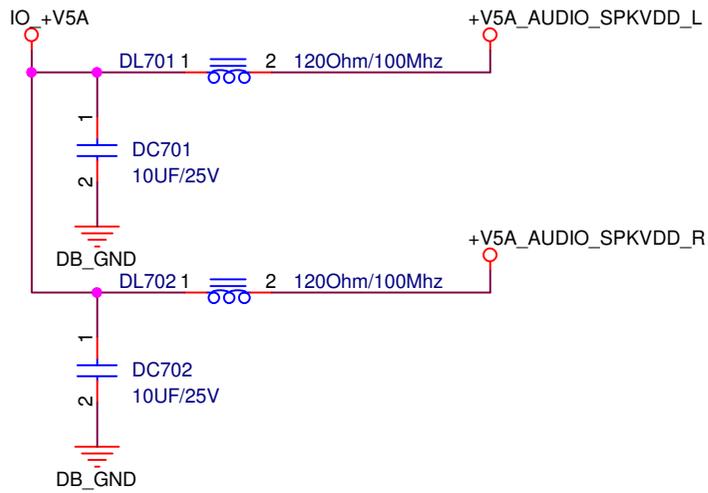


12V18GBSM057

PEGATRON		Title: IO BD CONN	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
Engineer: Howard_Chen		Rev: 1.1	
Size: A	Project Name: Sanance	Date: Friday, February 19, 2016	
Date: Friday, February 19, 2016		Sheet: 63	of 68

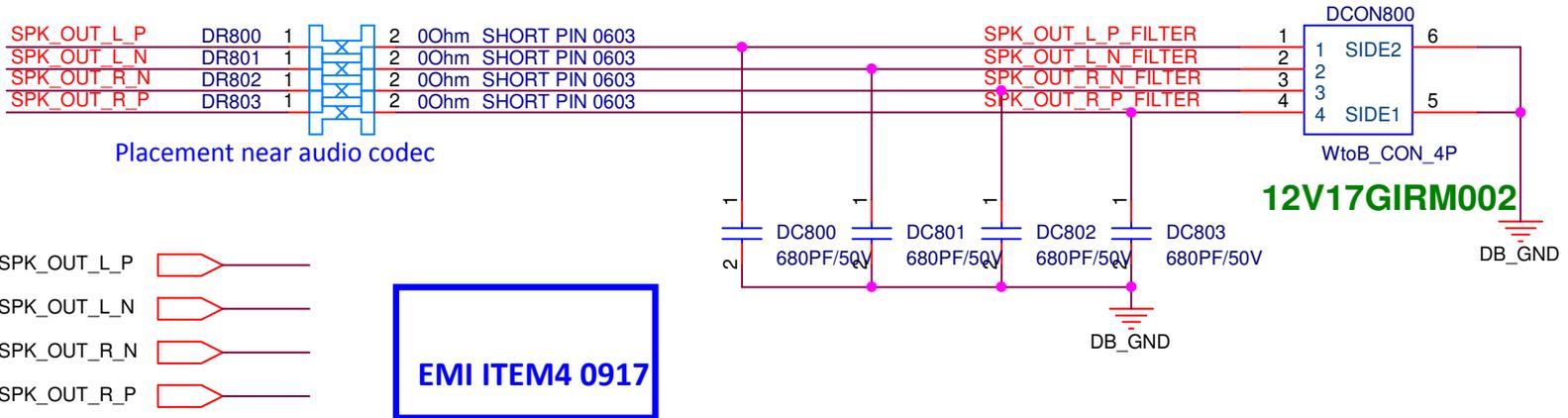


Codec PWR



PEGATRON		Title : AUDIO POWER	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-HWS		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:	Friday, February 19, 2016	Sheet	65 of 68

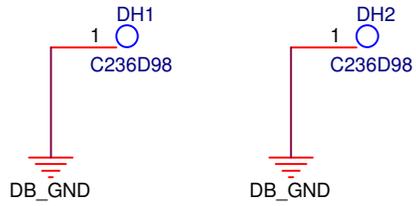
Internal Speaker (ADO) -- > (2W)



- (64) SPK_OUT_L_P
- (64) SPK_OUT_L_N
- (64) SPK_OUT_R_N
- (64) SPK_OUT_R_P

PEGATRON		Title: SPEAKER	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BGT-HWS		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:	Friday, February 19, 2016	Sheet 66 of 68	

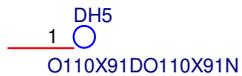
SB *2pcs TYPE-A (1, 2)



SB *2pcs TYPE-B (3, 4)



SB *1pcs TYPE-C (5)



PEGATRON		Title: SCREW HOLE	
PEGATRON PROPRIETARY AND CONFIDENTIAL			
BG1-1116		Engineer: Howard_Chen	
Size A	Project Name Sanance	Rev 1.1	
Date:		Sheet	67 of 68

A --> B Build

11/09.

- (1) Change Symbol Q3405 to dual MOS symbol to do Level for SPI write protect.
- (2) Change net name from SLP_S3# to PCH_SLP_S3_L .
- (3) Modify DC-IN Circuit , remove L5801 ; add C5806 ,C5807 ; Change 5800 Bead material current to 5 Amp ; Set C5803 un-staff.
- (4) Update Board ID for B Build stage (001)

PEGATRON Title :		
PEGATRON PROPRIETARY AND CONFIDENTIAL		
History		Engineer:
Size C	Project Name Sennance	Rev 1.1
Date:	Friday, February 19, 2016	Sheet 66 of 68