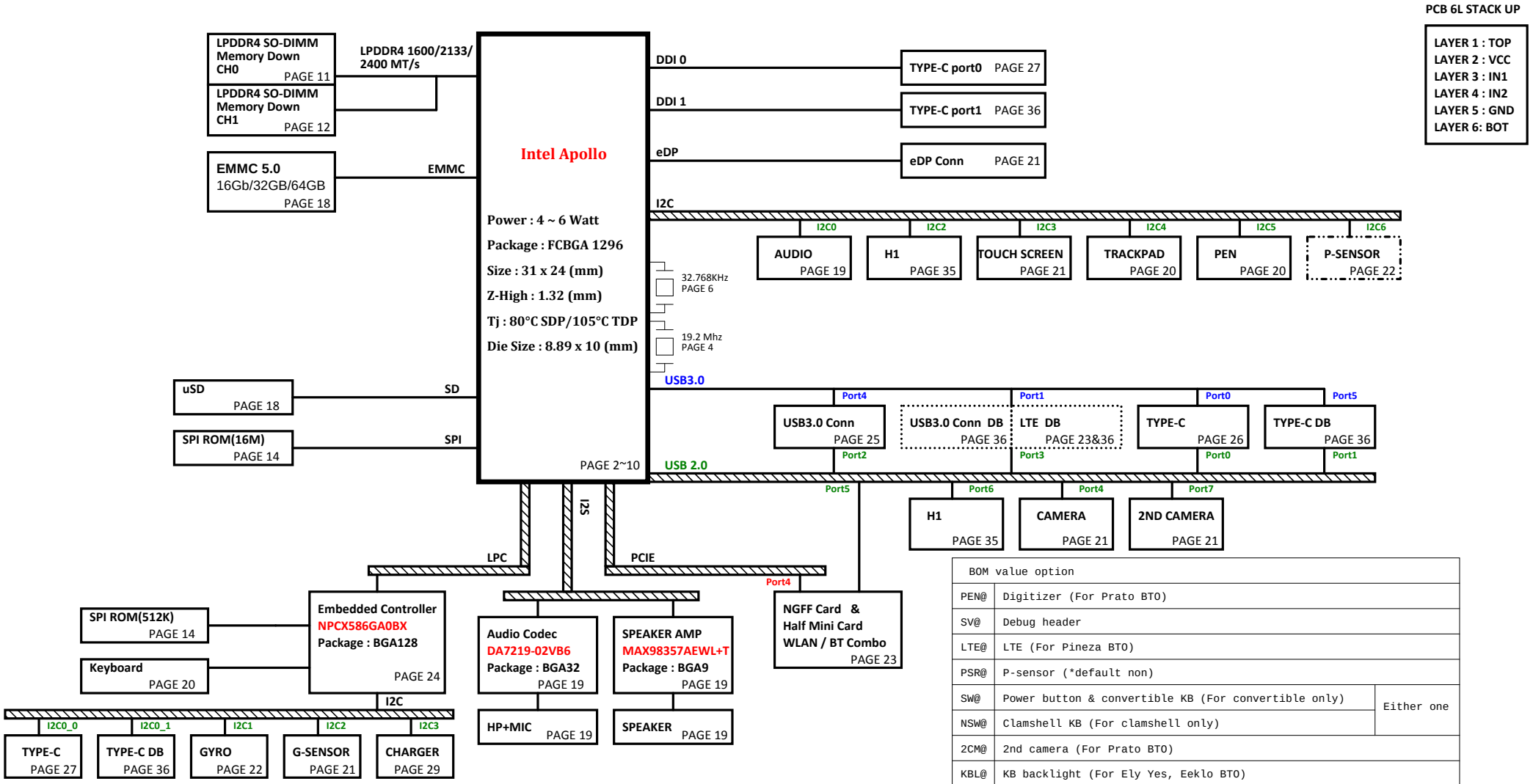
Intel Apollo Platform Block Diagram



BOM value option		
PEN@	Digitizer (For Prato BTO)	
SV@	Debug header	
LTE@	LTE (For Pineza BTO)	
PSR@	P-sensor (*default non)	
SW@	Power button & convertible KB (For convertible only)	Either one
NSW@	Clamshell KB (For clamshell only)	
2CM@	2nd camera (For Prato BTO)	
KBL@	KB backlight (For Ely Yes, Eeklo BTO)	
GS@	G-sensor (For convertible only)	
TN@	Touchscreen (For convertible Yes, clamshell BTO)	
GY@	Gyro (For convertible only)	
ZAL@	For Astronaut only (acoustic noise)	

*11" and 15" USB3 TYPE-A connector and audio jack are different

Quanta Computer Inc.
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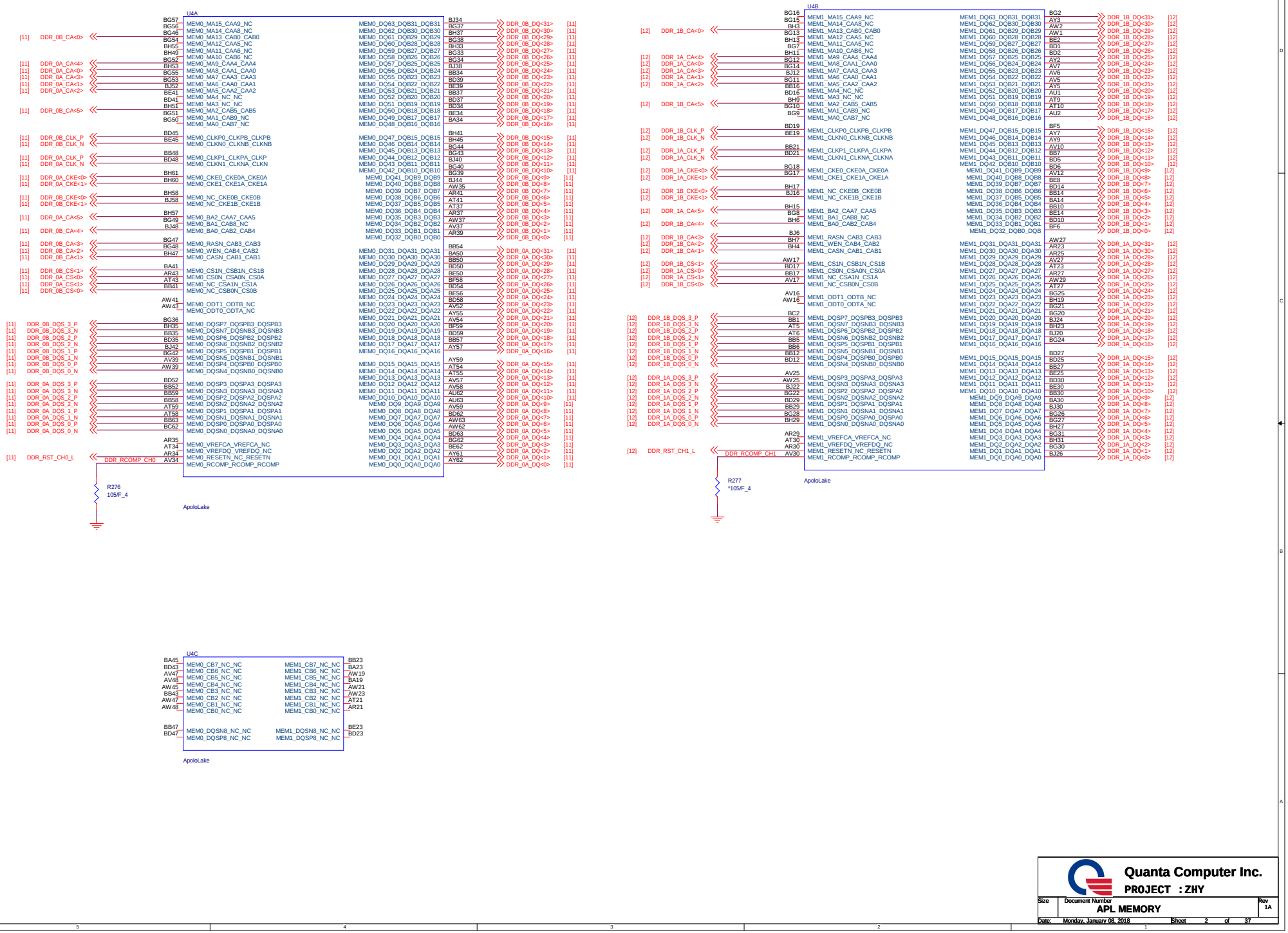
U4A
U4B
U4C
ApoloLake
R276
105/F_4
R277
*105/F_4
DDR_RCOMP_CH0
DDR_RCOMP_CH1
DDR_RST_CH0_L
DDR_RST_CH1_L
Quanta Computer Inc.
PROJECT : ZHY
Size
Document Number
APL MEMORY
Rev
1A
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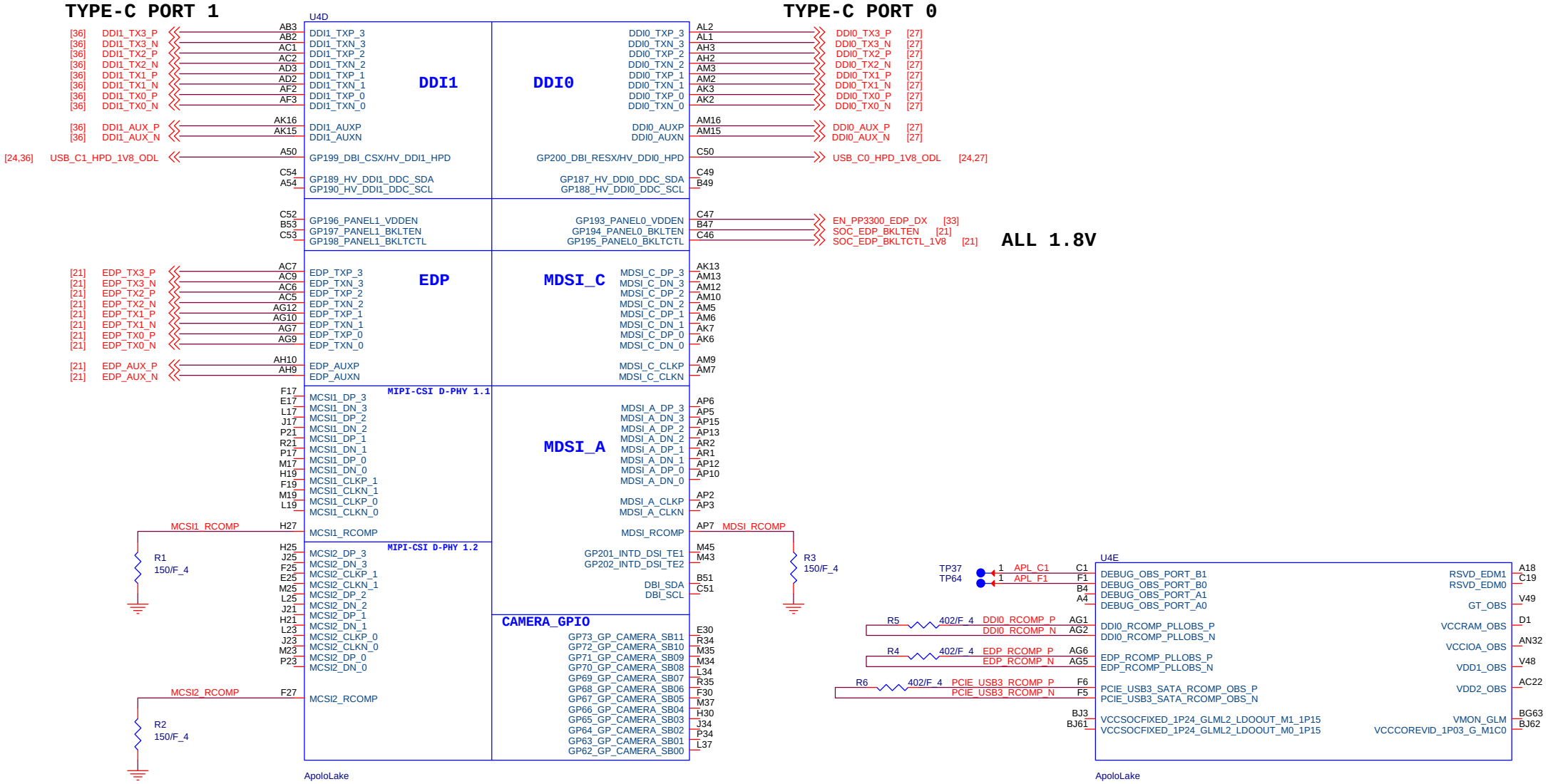

Quanta Computer Inc.	PROJECT : ZHY
Size	Document Number: APL eDP/RCOMP — Rev: 1A
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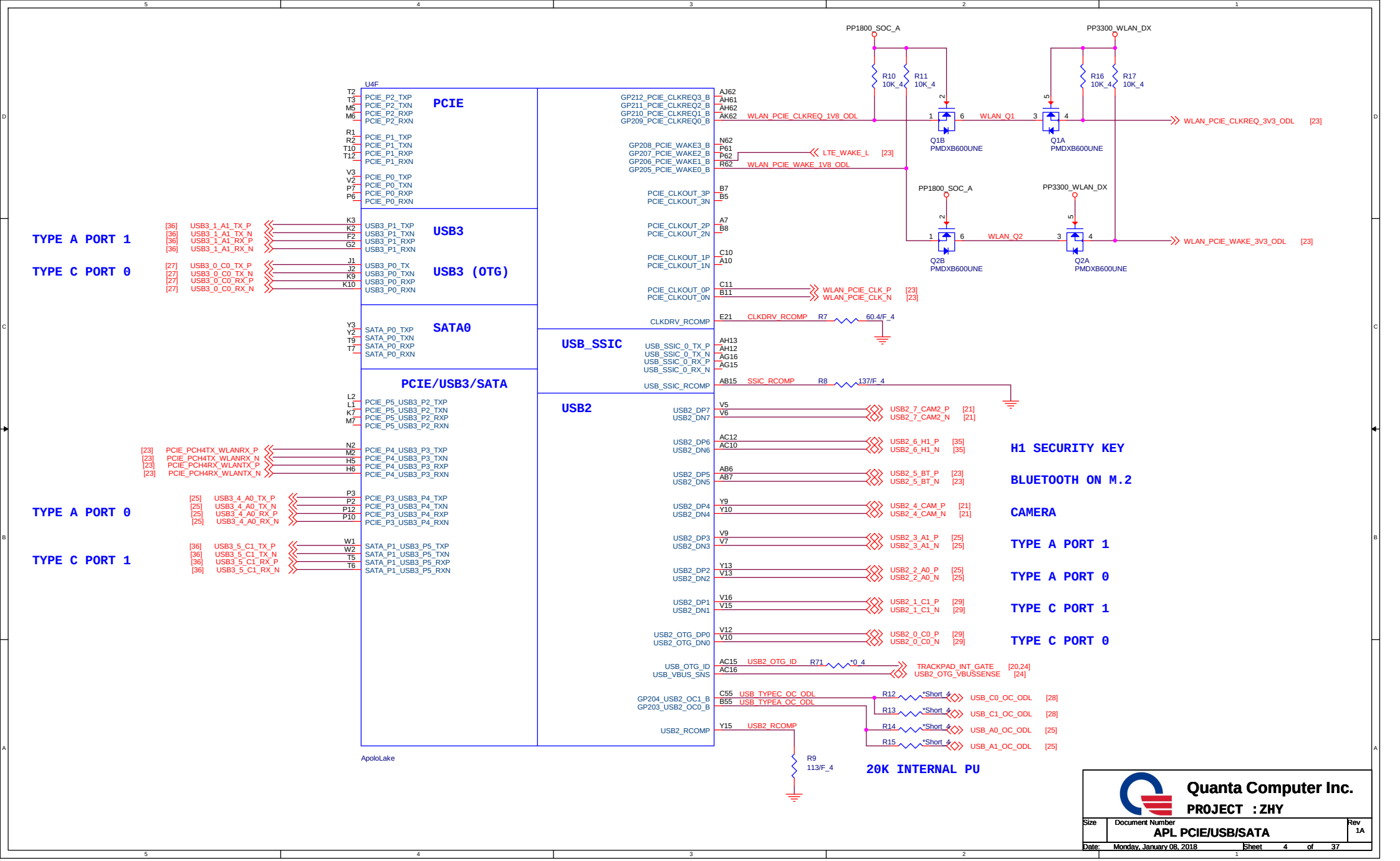
U4F
PCIE
USB3
USB3 (OTG)
SATA0
PCIE/USB3/SATA
USB_SSIC
USB2
ApoloLake
PCIE_P2_TXP
PCIE_P2_TXN
PCIE_P2_RXP
PCIE_P2_RXN
PCIE_P1_TXP
PCIE_P1_TXN
PCIE_P1_RXP
PCIE_P1_RXN
PCIE_P0_TXP
PCIE_P0_TXN
PCIE_P0_RXP
PCIE_P0_RXN
USB3_P1_TXP
USB3_P1_TXN
USB3_P1_RXP
USB3_P1_RXN
USB3_P0_TX
USB3_P0_TXN
USB3_P0_RXP
USB3_P0_RXN
SATA_P0_TXP
SATA_P0_TXN
SATA_P0_RXP
SATA_P0_RXN
PCIE_P5_USB3_P2_TXP
PCIE_P5_USB3_P2_TXN
PCIE_P5_USB3_P2_RXP
PCIE_P5_USB3_P2_RXN
PCIE_P4_USB3_P3_TXP
PCIE_P4_USB3_P3_TXN
PCIE_P4_USB3_P3_RXP
PCIE_P4_USB3_P3_RXN
PCIE_P3_USB3_P4_TXP
PCIE_P3_USB3_P4_TXN
PCIE_P3_USB3_P4_RXP
PCIE_P3_USB3_P4_RXN
SATA_P1_USB3_P5_TXP
SATA_P1_USB3_P5_TXN
SATA_P1_USB3_P5_RXP
SATA_P1_USB3_P5_RXN
GP212_PCIE_CLKREQ3_B
GP211_PCIE_CLKREQ2_B
GP210_PCIE_CLKREQ1_B
GP209_PCIE_CLKREQ0_B
WLAN_PCIE_CLKREQ_1V8_ODL
GP208_PCIE_WAKE3_B
GP207_PCIE_WAKE2_B
GP206_PCIE_WAKE1_B
GP205_PCIE_WAKE0_B
LTE_WAKE_L [23]
WLAN_PCIE_WAKE_1V8_ODL
PCIE_CLKOUT_3P
PCIE_CLKOUT_3N
PCIE_CLKOUT_2P
PCIE_CLKOUT_2N
PCIE_CLKOUT_1P
PCIE_CLKOUT_1N
PCIE_CLKOUT_0P
PCIE_CLKOUT_0N
WLAN_PCIE_CLK_P [23]
WLAN_PCIE_CLK_N [23]
CLKDRV_RCOMP
CLKDRV_RCOMP R7 60.4/F_4
USB_SSIC_0_TX_P
USB_SSIC_0_TX_N
USB_SSIC_0_RX_P
USB_SSIC_0_RX_N
USB_SSIC_RCOMP
SSIC_RCOMP R8 137/F_4
USB2_DP7
USB2_DN7
USB2_DP6
USB2_DN6
USB2_DP5
USB2_DN5
USB2_DP4
USB2_DN4
USB2_DP3
USB2_DN3
USB2_DP2
USB2_DN2
USB2_DP1
USB2_DN1
USB2_OTG_DP0
USB2_OTG_DN0
USB_OTG_ID
USB_VBUS_SNS
USB2_OTG_ID R71 *0_4
TRACKPAD_INT_GATE [20,24]
USB2_OTG_VBUSSENSE [24]
GP204_USB2_OC1_B
GP203_USB2_OC0_B
USB_TYPEC_OC_ODL
USB_TYPEA_OC_ODL
USB2_RCOMP
USB2_RCOMP
R9
113/F_4
20K INTERNAL PU
PP1800_SOC_A
PP3300_WLAN_DX
R10 10K_4
R11 10K_4
R16 10K_4
R17 10K_4
Q1B PMDXB600UNE
Q1A PMDXB600UNE
Q2B PMDXB600UNE
Q2A PMDXB600UNE
WLAN_Q1
WLAN_Q2
WLAN_PCIE_CLKREQ_3V3_ODL [23]
WLAN_PCIE_WAKE_3V3_ODL [23]
R12 *Short_4
R13 *Short_4
R14 *Short_4
R15 *Short_4
USB_C0_OC_ODL [28]
USB_C1_OC_ODL [28]
USB_A0_OC_ODL [25]
USB_A1_OC_ODL [25]
TYPE A PORT 1
TYPE C PORT 0
TYPE A PORT 0
TYPE C PORT 1
H1 SECURITY KEY
BLUETOOTH ON M.2
CAMERA
TYPE A PORT 1
TYPE A PORT 0
TYPE C PORT 1
TYPE C PORT 0
USB3_1_A1_TX_P [36]
USB3_1_A1_TX_N [36]
USB3_1_A1_RX_P [36]
USB3_1_A1_RX_N [36]
USB3_0_C0_TX_P [27]
USB3_0_C0_TX_N [27]
USB3_0_C0_RX_P [27]
USB3_0_C0_RX_N [27]
PCIE_PCH4TX_WLANRX_P [23]
PCIE_PCH4TX_WLANRX_N [23]
PCIE_PCH4RX_WLANTX_P [23]
PCIE_PCH4RX_WLANTX_N [23]
USB3_4_A0_TX_P [25]
USB3_4_A0_TX_N [25]
USB3_4_A0_RX_P [25]
USB3_4_A0_RX_N [25]
USB3_5_C1_TX_P [36]
USB3_5_C1_TX_N [36]
USB3_5_C1_RX_P [36]
USB3_5_C1_RX_N [36]
USB2_7_CAM2_P [21]
USB2_7_CAM2_N [21]
USB2_6_H1_P [35]
USB2_6_H1_N [35]
USB2_5_BT_P [23]
USB2_5_BT_N [23]
USB2_4_CAM_P [21]
USB2_4_CAM_N [21]
USB2_3_A1_P [25]
USB2_3_A1_N [25]
USB2_2_A0_P [25]
USB2_2_A0_N [25]
USB2_1_C1_P [29]
USB2_1_C1_N [29]
USB2_0_C0_P [29]
USB2_0_C0_N [29]
Quanta Computer Inc.
PROJECT : ZHY
Size
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APL PCIE/USB/SATA
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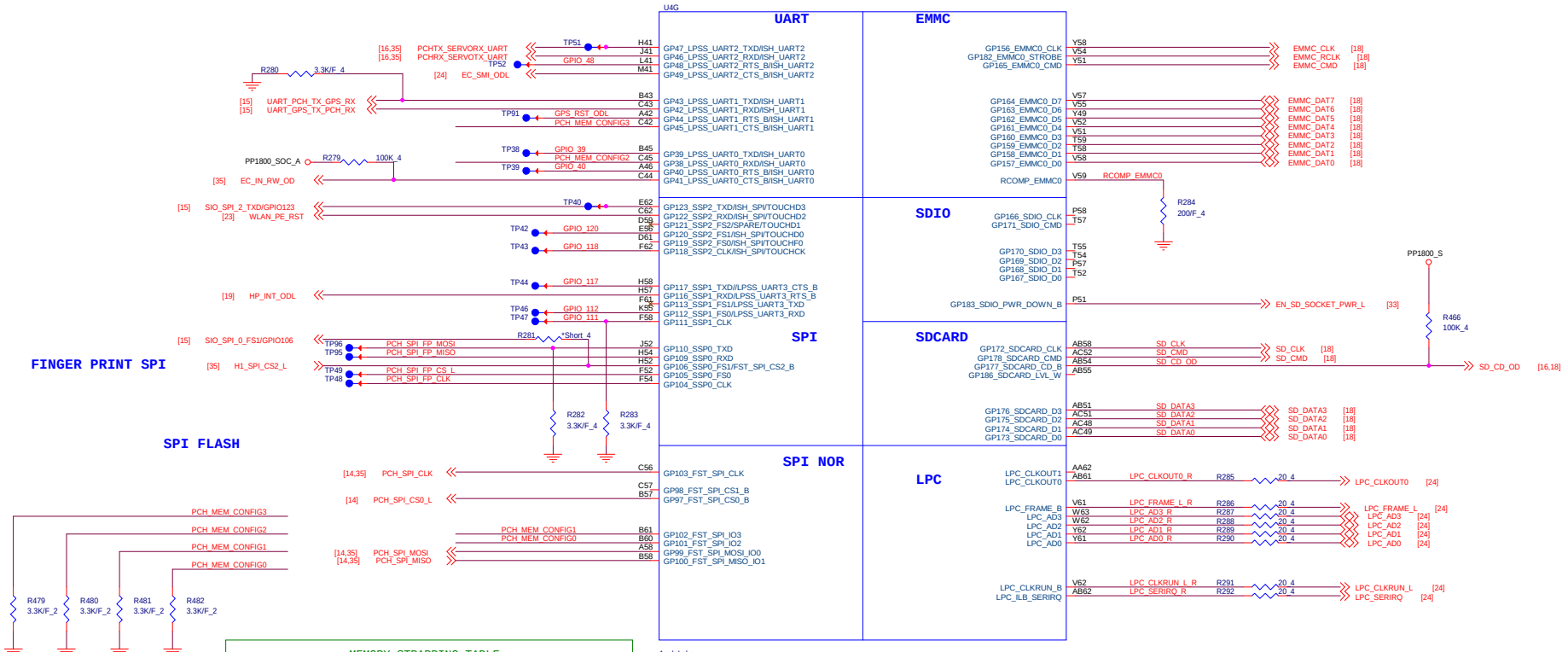

MEMORY STRAPPING TABLE				
CONFIG PIN	3	2	1	0
SAMSUNG 8GB K4F6E304HB	0	0	0	0
SAMSUNG 4GB K4F8E304HB	0	0	0	1
MICRON 8GB MT53B512M32D2NP-062WT:C	0	0	1	0
MICRON 4GB MT53B256M32D1NP-062 WT:C	0	0	1	1
HYNIX 8GB H9HCNNNBPUMLHR	0	1	0	0
HYNIX 4GB H9HCNNN8KUMLHR	0	1	0	1

HARDWARE STRAPS (* = SYSTEM STRAP SELECTION)				
GPIO_39: INTERNAL 20K PD *DISABLE CSE ROM BYPASS: 0 ENABLE CSE ROM BYPASS: 1	GPIO_47: INTERNAL 20K PD *DON'T FORCE DNX FW LOAD: 0 FORCE DNX FW LOAD: 1	GPIO_106: INTERNAL 20K PU *MUST BE HIGH WHEN RSM_RST_N DEASSERTS	GPIO_117: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_120: INTERNAL 20K PD *TOP SWAP OVERRIDE DISABLE: 0 TOP SWAP OVERRIDE ENABLE: 1
GPIO_40: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_48: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_111: INTERNAL 20K PU DO NOT BOOT FROM SPI: 1 *BOOT FROM SPI: 0	GPIO_123: INTERNAL 20K PU MUST BE HIGH WHEN RSM_RST_N DEASSERTS	GPIO_121: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS
GPIO_43: INTERNAL 20K PU ENABLE BOOT FROM EMMC: 1 *DISABLE BOOT FROM EMMC: 0	GPIO_104: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_118: INTERNAL 20K PD *NO FLASH DESCRIPTOR OVERRIDE: 0 OVERRIDE FLASH DESCRIPTOR: 1	GPIO_112: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	
GPIO_44: INTERNAL 20K PU *ENABLE BOOT FROM SPI: 1 DISABLE BOOT FROM SPI: 0	GPIO_105: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	GPIO_110: INTERNAL 20K PU LPC BUFFERS AT 1.8V: 1 *LPC BUFFERS AT 3.3V: 0	GPIO_113: INTERNAL 20K PD *MUST BE LOW WHEN RSM_RST_N DEASSERTS	

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	APL UART/SPI/EMMC/SD/LPC	1A

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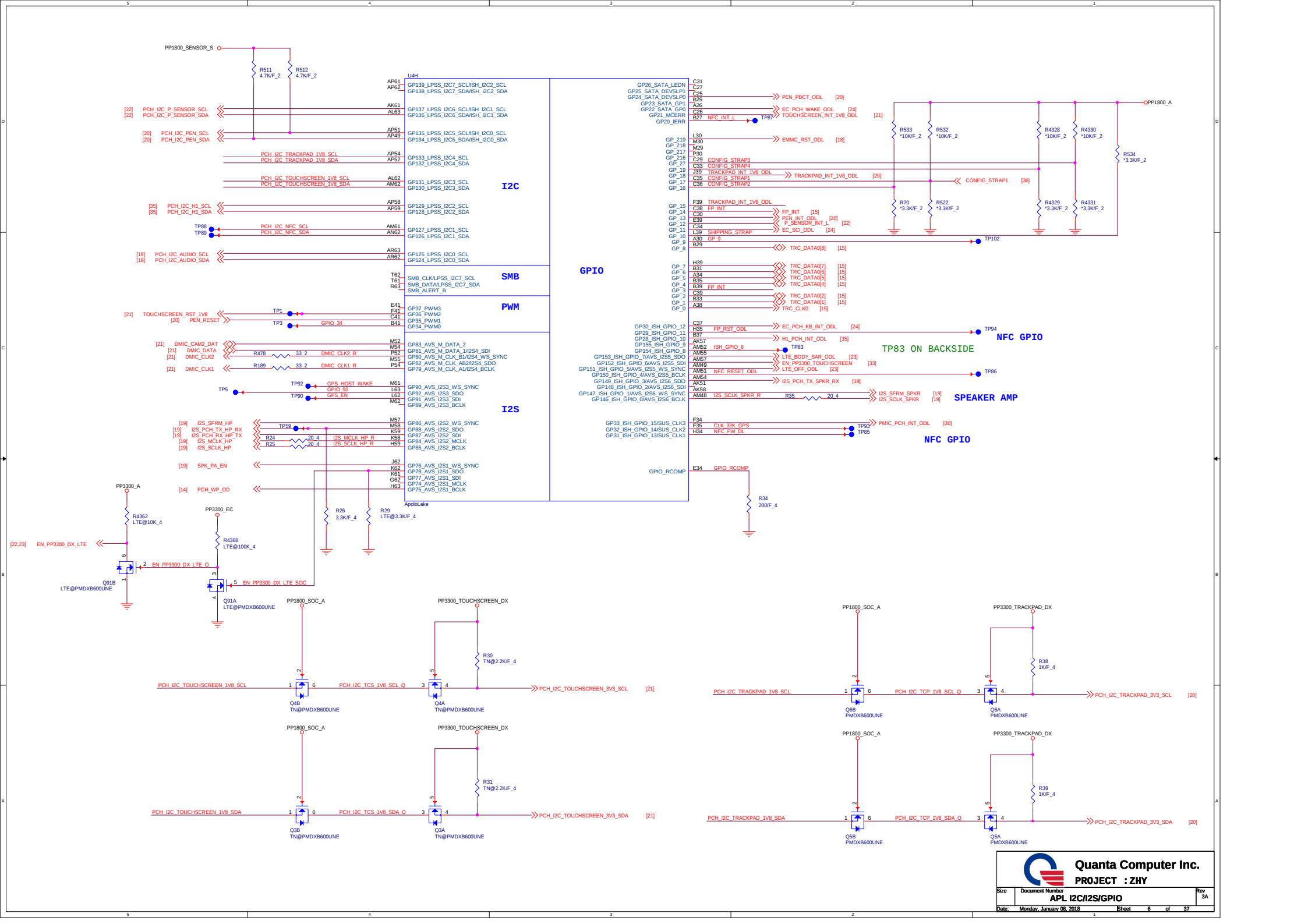
PP1800_SENSOR_S
R511 4.7K/F_2
R512 4.7K/F_2
U4H
I2C
SMB
PWM
I2S
GPIO
ApoloLake
PCH_I2C_P_SENSOR_SCL
PCH_I2C_P_SENSOR_SDA
PCH_I2C_PEN_SCL
PCH_I2C_PEN_SDA
PCH_I2C_TRACKPAD_1V8_SCL
PCH_I2C_TRACKPAD_1V8_SDA
PCH_I2C_TOUCHSCREEN_1V8_SCL
PCH_I2C_TOUCHSCREEN_1V8_SDA
PCH_I2C_H1_SCL
PCH_I2C_H1_SDA
PCH_I2C_NFC_SCL
PCH_I2C_NFC_SDA
PCH_I2C_AUDIO_SCL
PCH_I2C_AUDIO_SDA
TOUCHSCREEN_RST_1V8
PEN_RESET
GPIO_34
DMIC_CAM2_DAT
DMIC_DATA
DMIC_CLK2
DMIC_CLK1
I2S_SFRM_HP
I2S_PCH_TX_HP_RX
I2S_PCH_RX_HP_TX
I2S_MCLK_HP
I2S_SCLK_HP
SPK_PA_EN
PCH_WP_OD
GPS_HOST_WAKE
GPIO_92
GPS_EN
PEN_PDCT_ODL
EC_PCH_WAKE_ODL
TOUCHSCREEN_INT_1V8_ODL
NFC_INT_L
EMMC_RST_ODL
CONFIG_STRAP3
CONFIG_STRAP4
TRACKPAD_INT_1V8_ODL
CONFIG_STRAP1
CONFIG_STRAP2
FP_INT
P_SENSOR_INT_L
EC_SCI_ODL
SHIPPING_STRAP
GP_9
TRC_DATA0[8]
TRC_DATA0[7]
TRC_DATA0[6]
TRC_DATA0[5]
TRC_DATA0[4]
TRC_DATA0[2]
TRC_DATA0[1]
TRC_CLK0
EC_PCH_KB_INT_ODL
FP_RST_ODL
H1_PCH_INT_ODL
ISH_GPIO_8
LTE_BODY_SAR_ODL
EN_PP3300_TOUCHSCREEN
LTE_OFF_ODL
NFC_RESET_ODL
I2S_PCH_TX_SPKR_RX
I2S_SCLK_SPKR_R
I2S_SFRM_SPKR
I2S_SCLK_SPKR
PMIC_PCH_INT_ODL
CLK_32K_GPS
NFC_FW_DL
GPIO_RCOMP
R34 200/F_4
NFC GPIO
TP83 ON BACKSIDE
SPEAKER AMP
PP3300_A
PP3300_EC
R4362 LTE@10K_4
R4368 LTE@100K_4
EN_PP3300_DX_LTE
EN_PP3300_DX_LTE_Q
EN_PP3300_DX_LTE_SOC
Q91B LTE@PMDXB600UNE
Q91A LTE@PMDXB600UNE
R26 3.3K/F_4
R29 LTE@3.3K/F_4
PP1800_SOC_A
PP3300_TOUCHSCREEN_DX
PCH_I2C_TOUCHSCREEN_1V8_SCL
PCH_I2C_TCS_1V8_SCL_Q
PCH_I2C_TOUCHSCREEN_3V3_SCL
R30 TN@2.2K/F_4
Q4B TN@PMDXB600UNE
Q4A TN@PMDXB600UNE
PCH_I2C_TOUCHSCREEN_1V8_SDA
PCH_I2C_TCS_1V8_SDA_Q
PCH_I2C_TOUCHSCREEN_3V3_SDA
R31 TN@2.2K/F_4
Q3B TN@PMDXB600UNE
Q3A TN@PMDXB600UNE
PP3300_TRACKPAD_DX
PCH_I2C_TRACKPAD_1V8_SCL
PCH_I2C_TCP_1V8_SCL_Q
PCH_I2C_TRACKPAD_3V3_SCL
R38 1K/F_4
Q6B PMDXB600UNE
Q6A PMDXB600UNE
PCH_I2C_TRACKPAD_1V8_SDA
PCH_I2C_TCP_1V8_SDA_Q
PCH_I2C_TRACKPAD_3V3_SDA
R39 1K/F_4
Q5B PMDXB600UNE
Q5A PMDXB600UNE
PP1800_A
R533 *10K/F_2
R532 *10K/F_2
R4328 *10K/F_2
R4330 *10K/F_2
R534 *3.3K/F_2
R70 *3.3K/F_2
R522 *3.3K/F_2
R4329 *3.3K/F_2
R4331 *3.3K/F_2
TP102
TP94
TP86
TP93
TP85
TP87
TP88
TP89
TP1
TP3
TP5
TP92
TP90
TP59
R478 33_2
R189 33_2
R24 20_4
R25 20_4
R35 20_4
Quanta Computer Inc.
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APL I2C/I2S/GPIO
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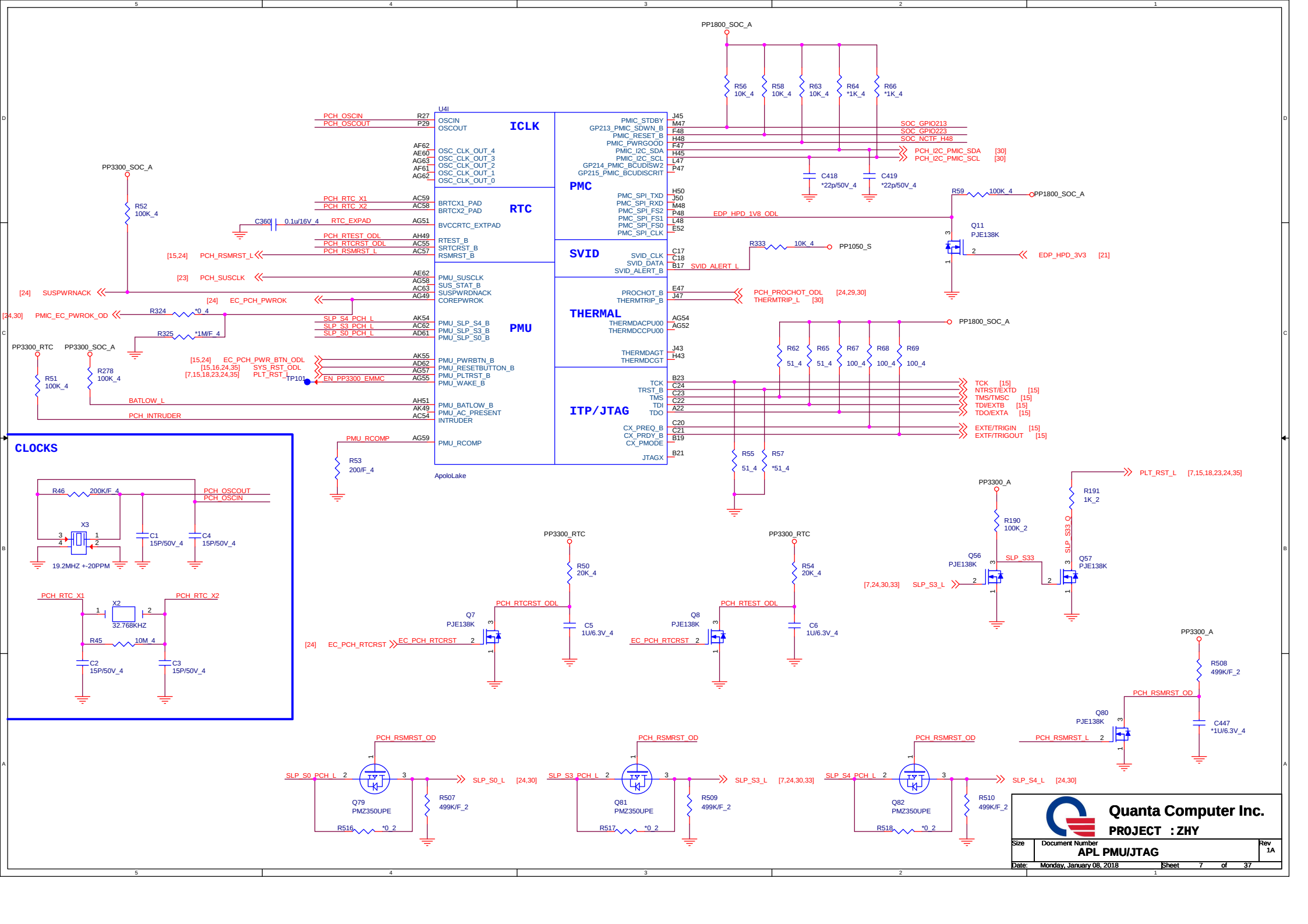
CLOCKS
U4I
ICLK
RTC
PMU
PMC
SVID
THERMAL
ITP/JTAG
ApoloLake
PP1800_SOC_A
PP3300_SOC_A
PP3300_RTC
PP3300_A
PP1050_S
R46 200K/F_4
X3
19.2MHZ +-20PPM
C1 15P/50V_4
C4 15P/50V_4
X2
32.768KHZ
R45 10M_4
C2 15P/50V_4
C3 15P/50V_4
R52 100K_4
R51 100K_4
R278 100K_4
R53 200/F_4
R324 *0_4
R325 *1M/F_4
C360 0.1u/16V_4
R56 10K_4
R58 10K_4
R63 10K_4
R64 *1K_4
R66 *1K_4
C418 *22p/50V_4
C419 *22p/50V_4
R59 100K_4
Q11 PJE138K
R333 10K_4
R62 51_4
R65 51_4
R67 100_4
R68 100_4
R69 100_4
R55 51_4
R57 *51_4
R50 20K_4
Q7 PJE138K
C5 1U/6.3V_4
R54 20K_4
Q8 PJE138K
C6 1U/6.3V_4
R190 100K_2
R191 1K_2
Q56 PJE138K
Q57 PJE138K
R508 499K/F_2
Q80 PJE138K
C447 *1U/6.3V_4
Q79 PMZ350UPE
R507 499K/F_2
R516 *0_2
Q81 PMZ350UPE
R509 499K/F_2
R517 *0_2
Q82 PMZ350UPE
R510 499K/F_2
R518 *0_2
Quanta Computer Inc.
PROJECT : ZHY
Size
Document Number
APL PMU/JTAG
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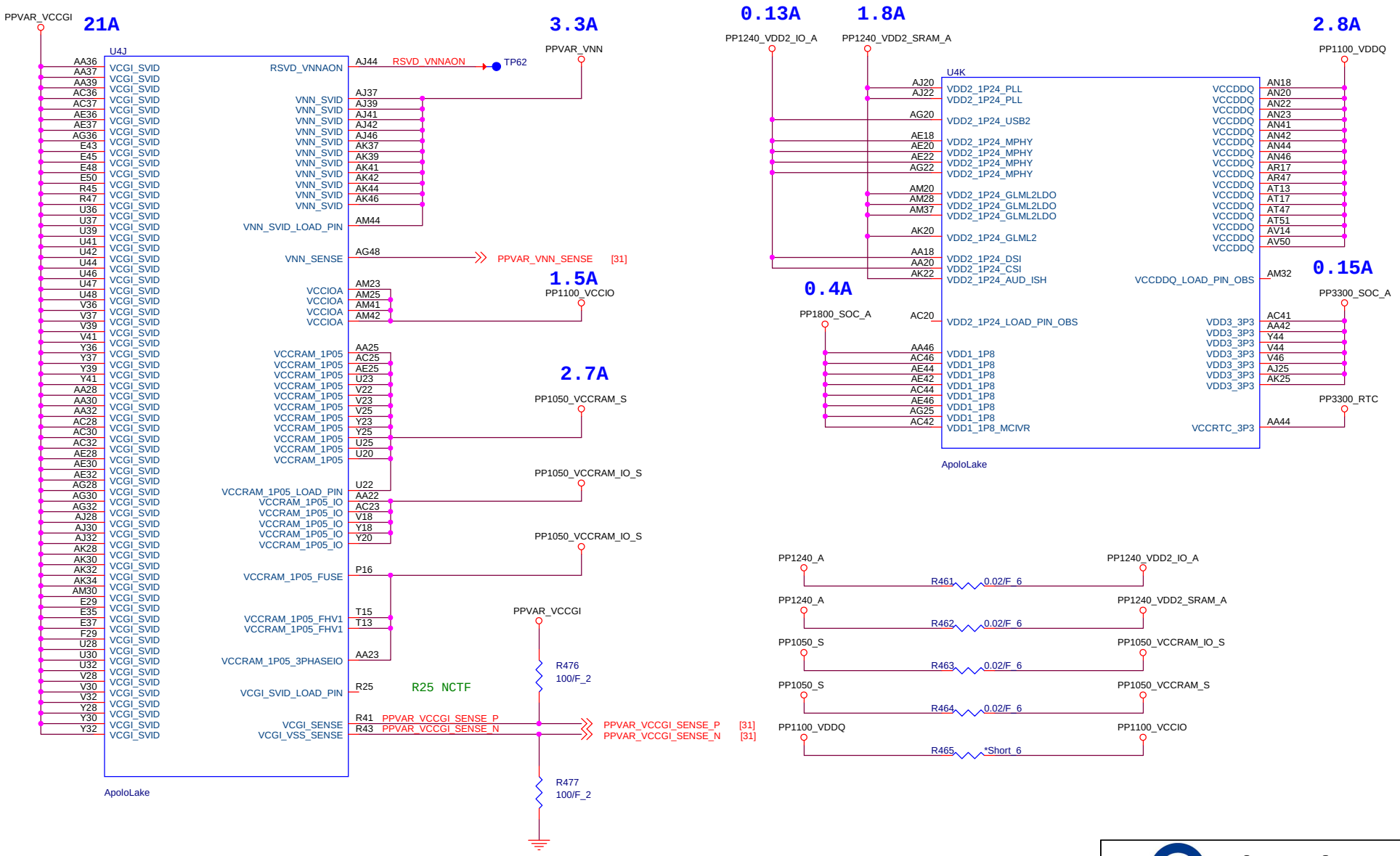

Quanta Computer Inc.

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Size	Document Number	Rev
	APL POWER	1A

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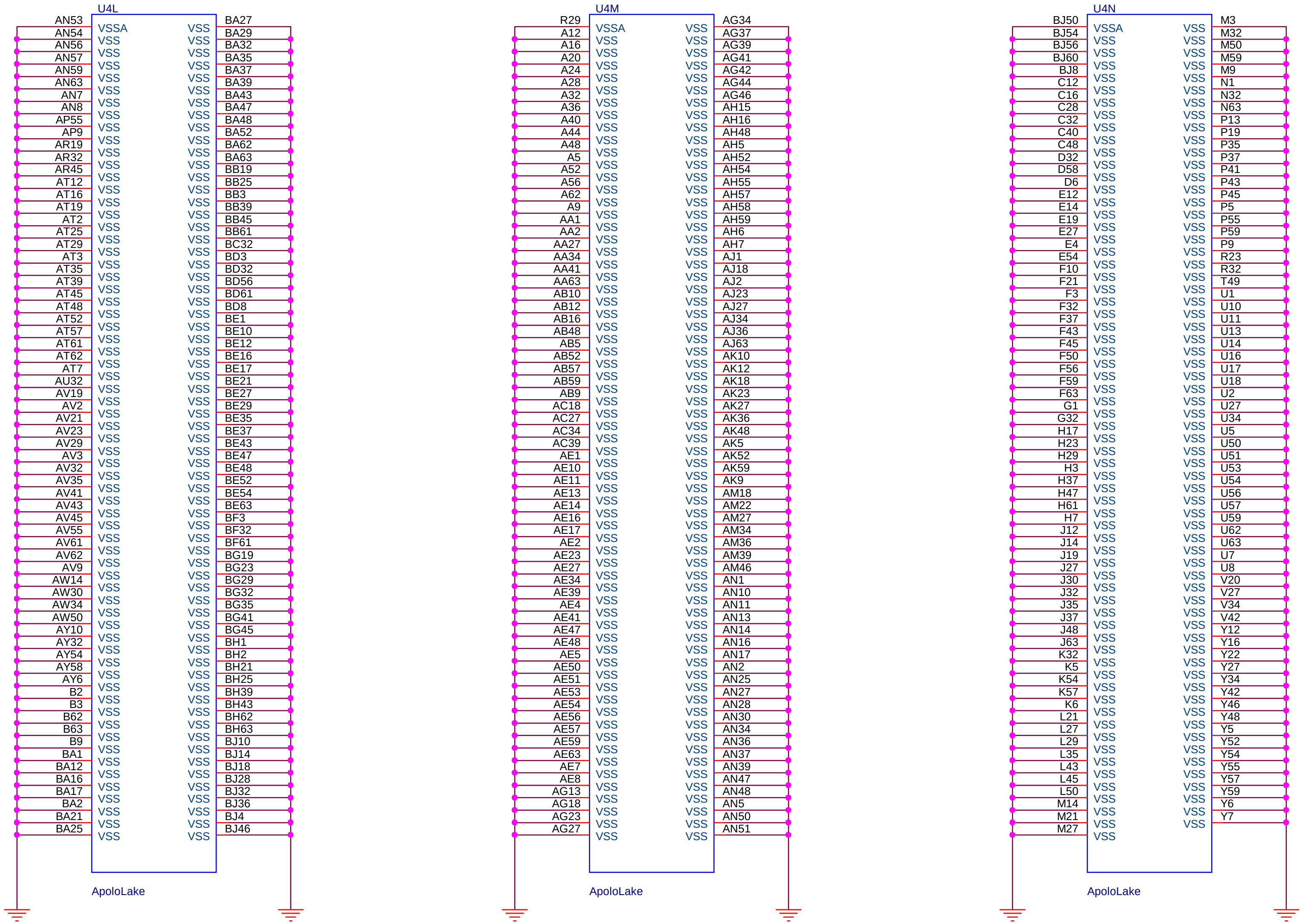

Quanta Computer Inc.

PROJECT : ZHY

Size	Document Number	Rev
	APL GROUND	1A

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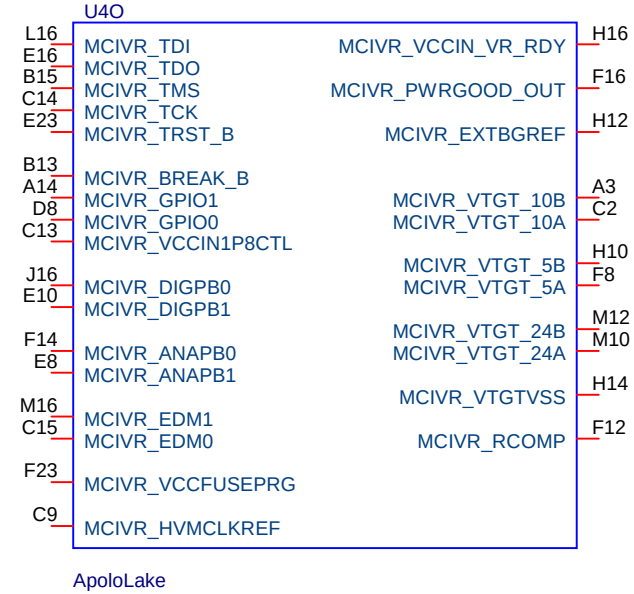

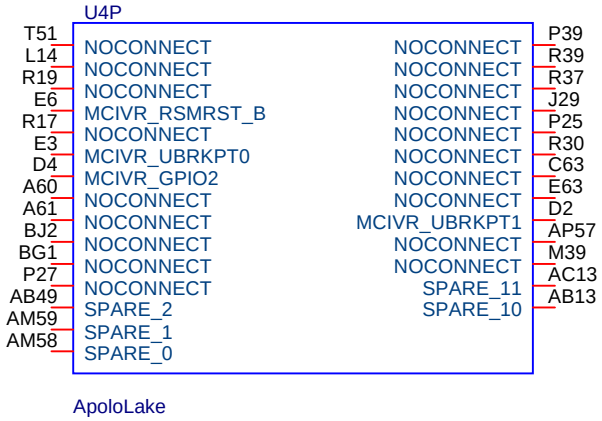

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Size	Document Number	Rev
	APL NO CONNECT	1A
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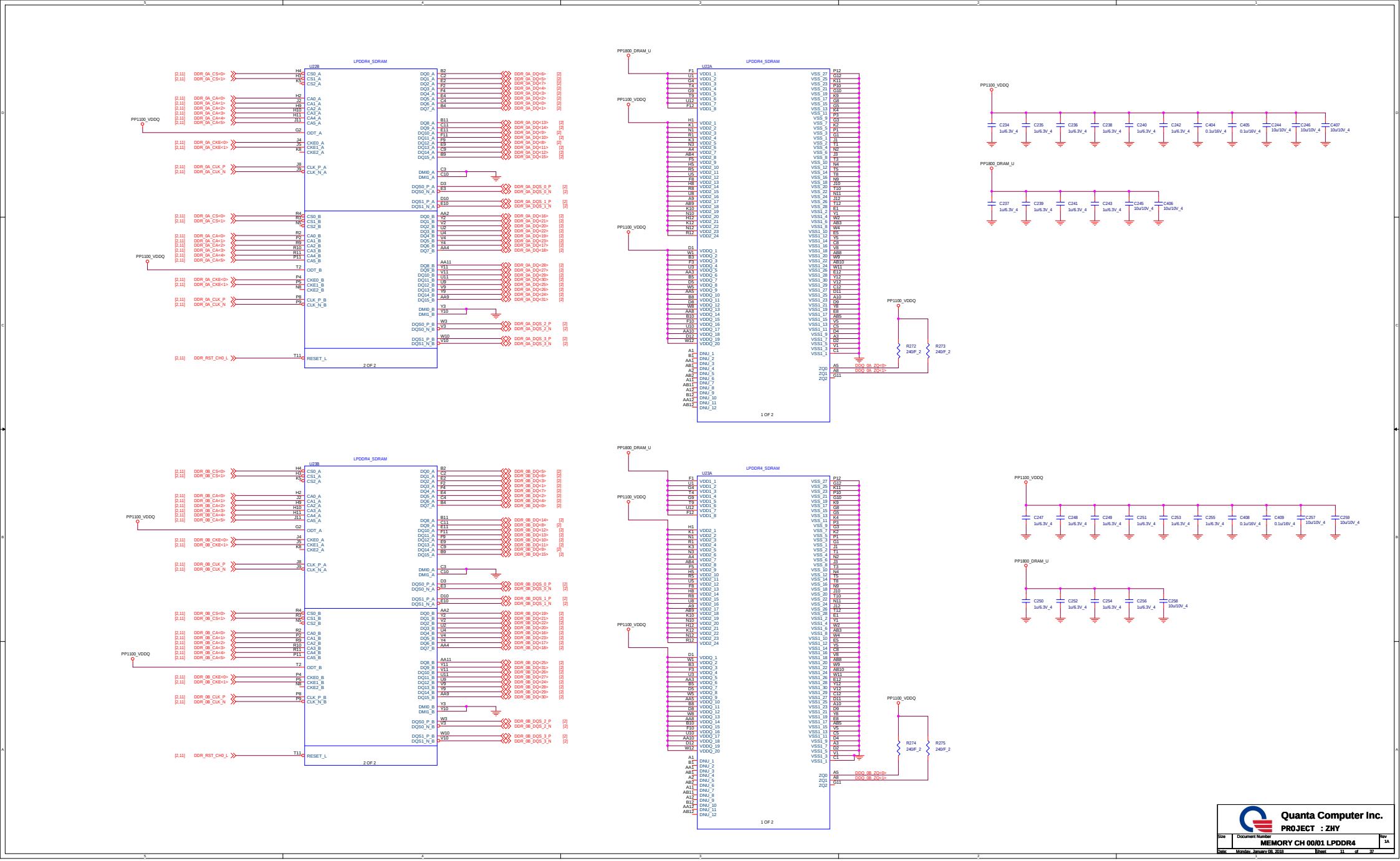

Quanta Computer Inc.			
PROJECT : ZHY			
Size	Document Number		Rev
	MEMORY CH 00/01 LPDDR4		1A
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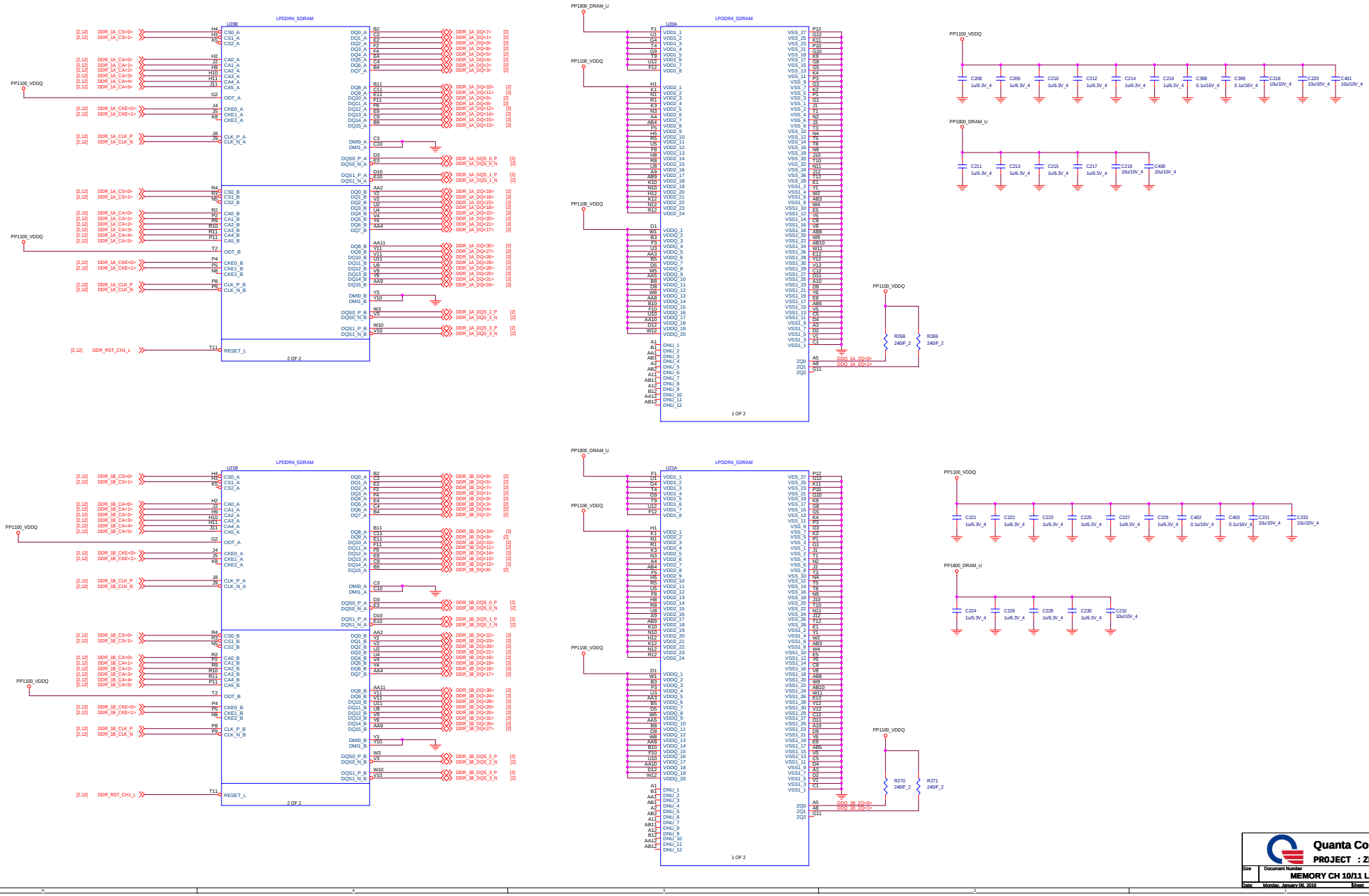

Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number: MEMORY CH 10/11 LPDDR4	Rev: 1A
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PPVAR_VCCGI
C26 1u/6.3V_4
C35 1u/6.3V_4
C44 1u/6.3V_4
C49 1u/6.3V_4
C54 1u/6.3V_4
C58 1u/6.3V_4
C62 1u/6.3V_4
C65 1u/6.3V_4
C68 1u/6.3V_4
C70 1u/6.3V_4
C72 1u/6.3V_4
C74 1u/6.3V_4
BACKSIDE
PPVAR_VCCGI
C27 22u/6.3V_6
C36 22u/6.3V_6
C45 22u/6.3V_6
C50 22u/6.3V_6
C55 22u/6.3V_6
C59 22u/6.3V_6
C63 22u/6.3V_6
C66 22u/6.3V_6
TOPSIDE
EDGE CAP
PP1050_VCCRAM_IO_S
C79 1u/6.3V_4
C84 1u/6.3V_4
C80 1u/6.3V_4
C85 1u/6.3V_4
BACKSIDE
PP1050_VCCRAM_IO_S
C88 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR VCCRAM_1P05_IO PINS
PP1240_VDD2_IO_A
C93 1u/6.3V_4
C101 1u/6.3V_4
C94 1u/6.3V_4
BACKSIDE
PP1240_VDD2_IO_A
C104 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR AE20,AE18,AE22,AG22
VDD2_1P24_MPHY
PPVAR_VNN
C28 1u/6.3V_4
C37 1u/6.3V_4
C46 1u/6.3V_4
BACKSIDE
PPVAR_VNN
C29 22u/6.3V_6
C38 22u/6.3V_6
C47 22u/6.3V_6
C51 22u/6.3V_6
C274 *22u/6.3V_6
C275 *22u/6.3V_6
TOPSIDE
EDGE CAP
PP1240_VDD2_SRAM_A
C81 1u/6.3V_4
C86 1u/6.3V_4
C82 1u/6.3V_4
BACKSIDE
PP1240_VDD2_SRAM_A
C89 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR AM20,AK20,AM37
VDD2_1P24_GLM
PP1240_VDD2_IO_A
C95 1u/6.3V_4
BACKSIDE
PP1240_VDD2_IO_A
C96 1u/6.3V_4
C105 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR AA18,AA20
VDD2_1P24_DSI_CSI
PP1100_VCCIO
C52 22u/6.3V_6
C56 22u/6.3V_6
TOPSIDE
EDGE CAP
AM42,AM25,AM23,AM41
PP1100_VCCIO
C30 1u/6.3V_4
C39 1u/6.3V_4
BACKSIDE
PP1240_VDD2_SRAM_A
C83 1u/6.3V_4
BACKSIDE
PLACE NEAR AM28
VDD2_1P24_GLM
PP3300_RTC
C99 1U/6.3V_4
C198 0.1u/16V_4
TOPSIDE
AA44
VCCRTC_3P3V
PP1100_VDDQ
C31 1u/6.3V_4
C40 1u/6.3V_4
BACKSIDE
PP1100_VDDQ
C32 22u/6.3V_6
C41 22u/6.3V_6
C48 22u/6.3V_6
C53 22u/6.3V_6
C60 22u/6.3V_6
C64 22u/6.3V_6
C67 22u/6.3V_6
C69 22u/6.3V_6
TOPSIDE
EDGE CAP
PP1240_VDD2_SRAM_A
C76 1u/6.3V_4
C77 1u/6.3V_4
BACKSIDE
PP1240_VDD2_SRAM_A
C87 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR AJ20,AJ22,AK22
VDD2_1P24_AUD_ISH_PLL
PP1800_SOC_A
C97 1u/6.3V_4
C100 1u/6.3V_4
C98 1u/6.3V_4
BACKSIDE
PP1800_SOC_A
PP1800_SOC_A
C102 1u/6.3V_4
C106 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR VDD_1P8V_A
PP1050_VCCRAM_S
C33 1u/6.3V_4
C42 1u/6.3V_4
C34 1u/6.3V_4
C43 1u/6.3V_4
BACKSIDE
PP1050_VCCRAM_S
C57 22u/6.3V_6
C61 22u/6.3V_6
TOPSIDE
EDGE CAP
PLACE NEAR VCCRAM_1P05 PINS
PP1240_VDD2_IO_A
C78 1u/6.3V_4
BACKSIDE
PLACE NEAR AG20
VDD2_1P24_USB2
BACKSIDE
PP3300_SOC_A
C90 1u/6.3V_4
BACKSIDE
PP3300_SOC_A
C107 1u/6.3V_4
AK25,AJ25
TOPSIDE
PP3300_SOC_A
C91 1u/6.3V_4
C92 1u/6.3V_4
C103 22u/6.3V_6
EDGE CAP
AC41,AA42,Y44,V44,V46
PLACE NEAR VDD_3P3V_A
Quanta Computer Inc.
PROJECT : ZHY
Size
Document Number
SOC DECOUPLING
Rev
1A
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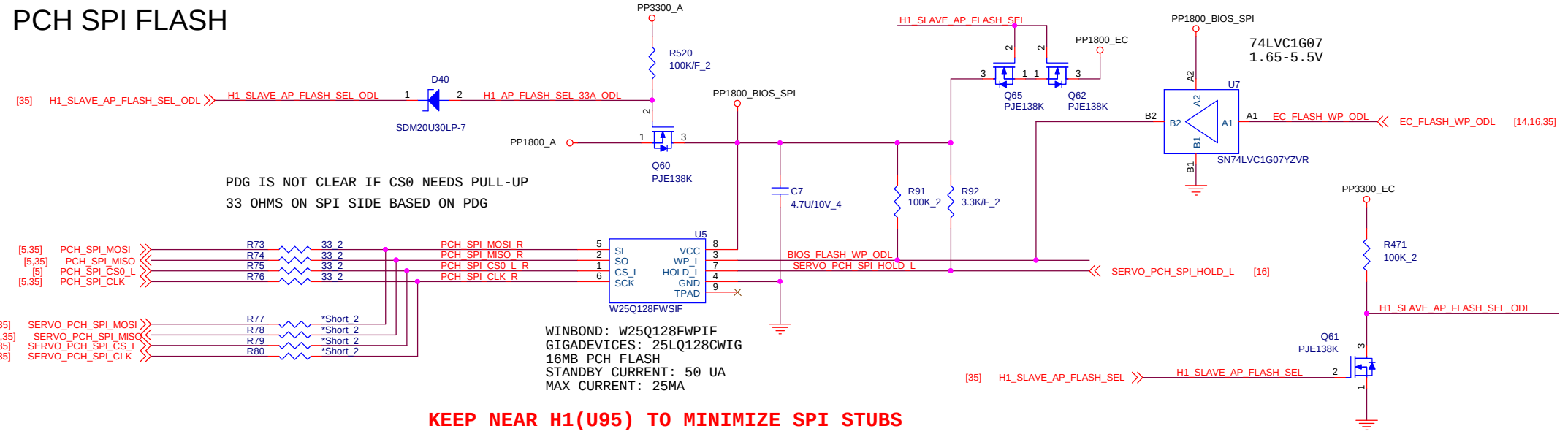
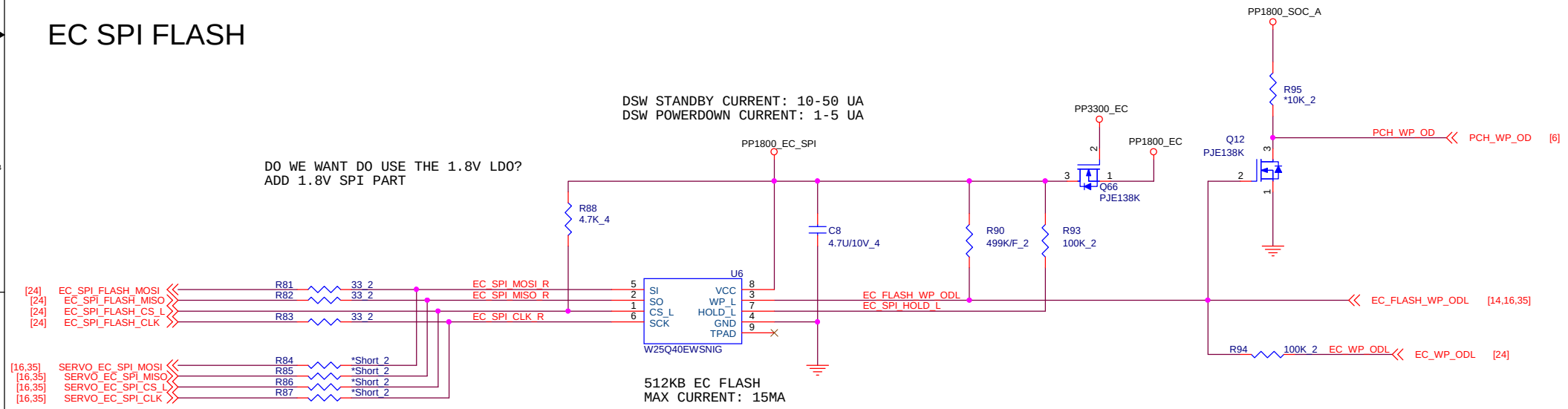
PCH SPI FLASH

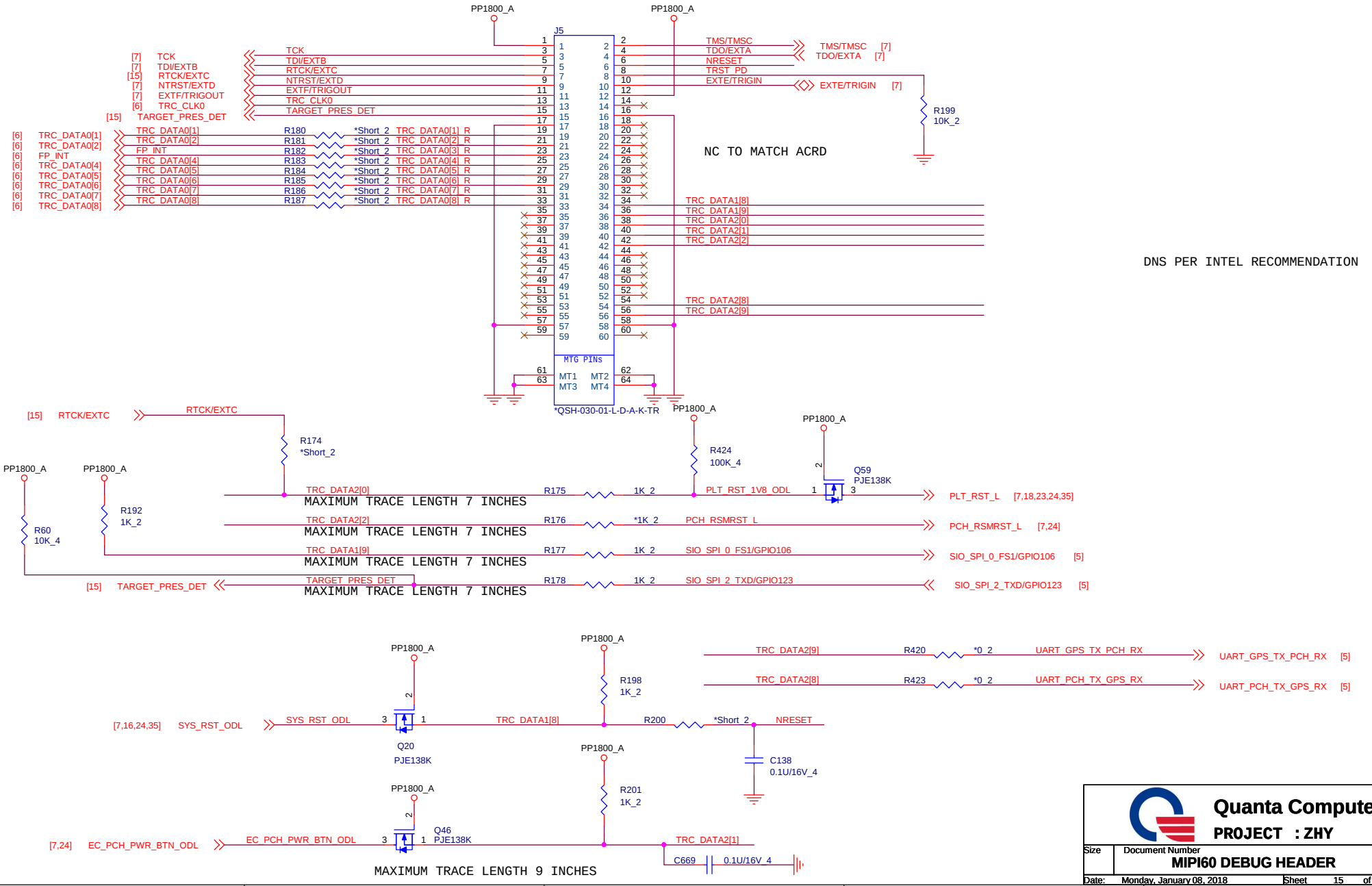


KEEP NEAR H1(U95) TO MINIMIZE SPI STUBS

EC SPI FLASH



Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number	Rev
	SPI ROM	1A
Date: Monday, January 08, 2018	Sheet 14 of 37	



Quanta Computer Inc.

PROJECT : ZHY

Size	Document Number	Rev
	MIPI60 DEBUG HEADER	1A

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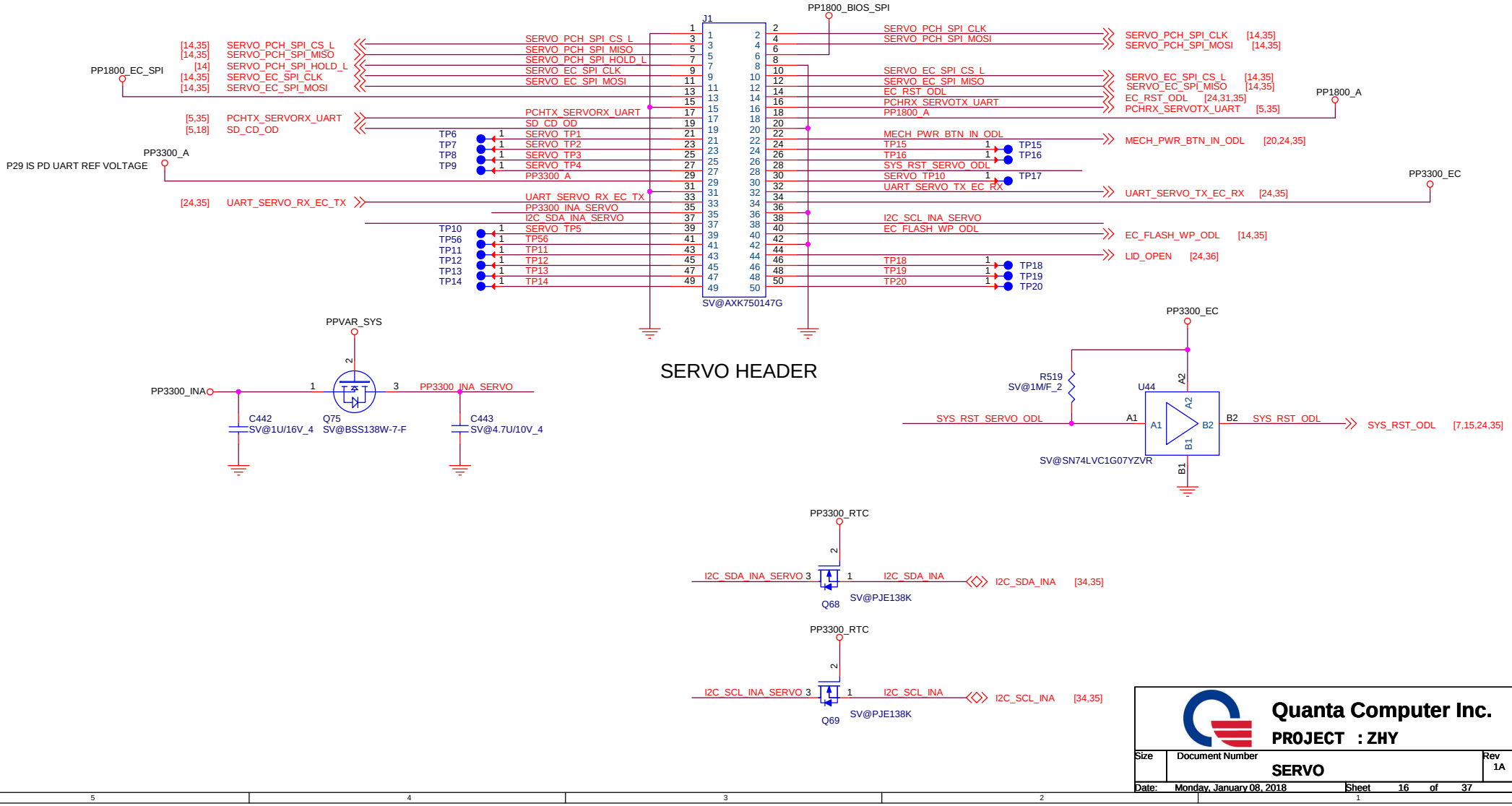

Quanta Computer Inc.

PROJECT : ZHY

Size	Document Number	Rev
	SERVO	1A

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Quanta Computer Inc.

PROJECT : ZHY

Size	Document Number	Rev
	RESERVE	1A

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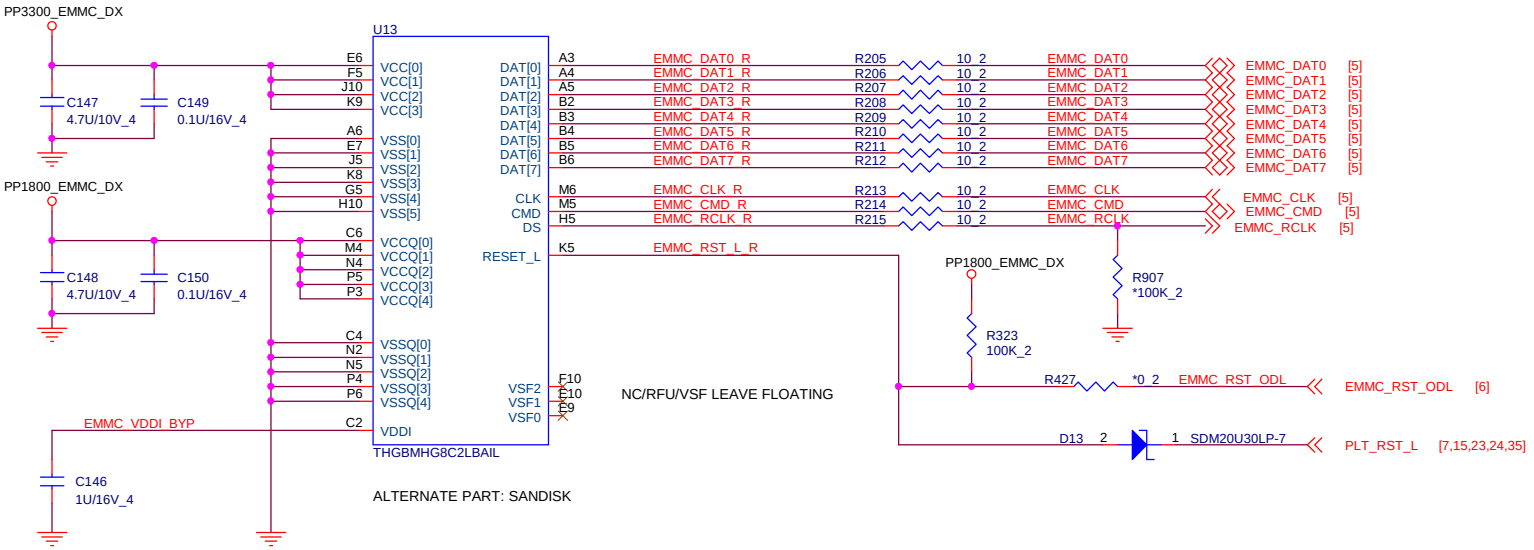
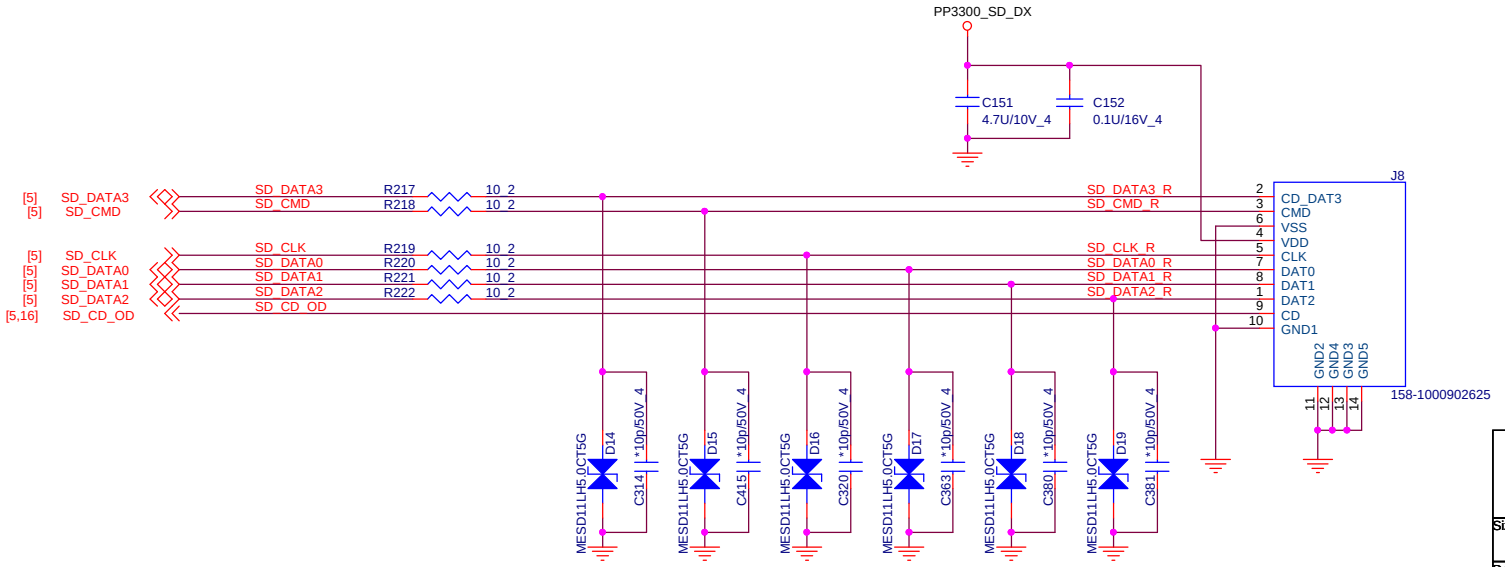
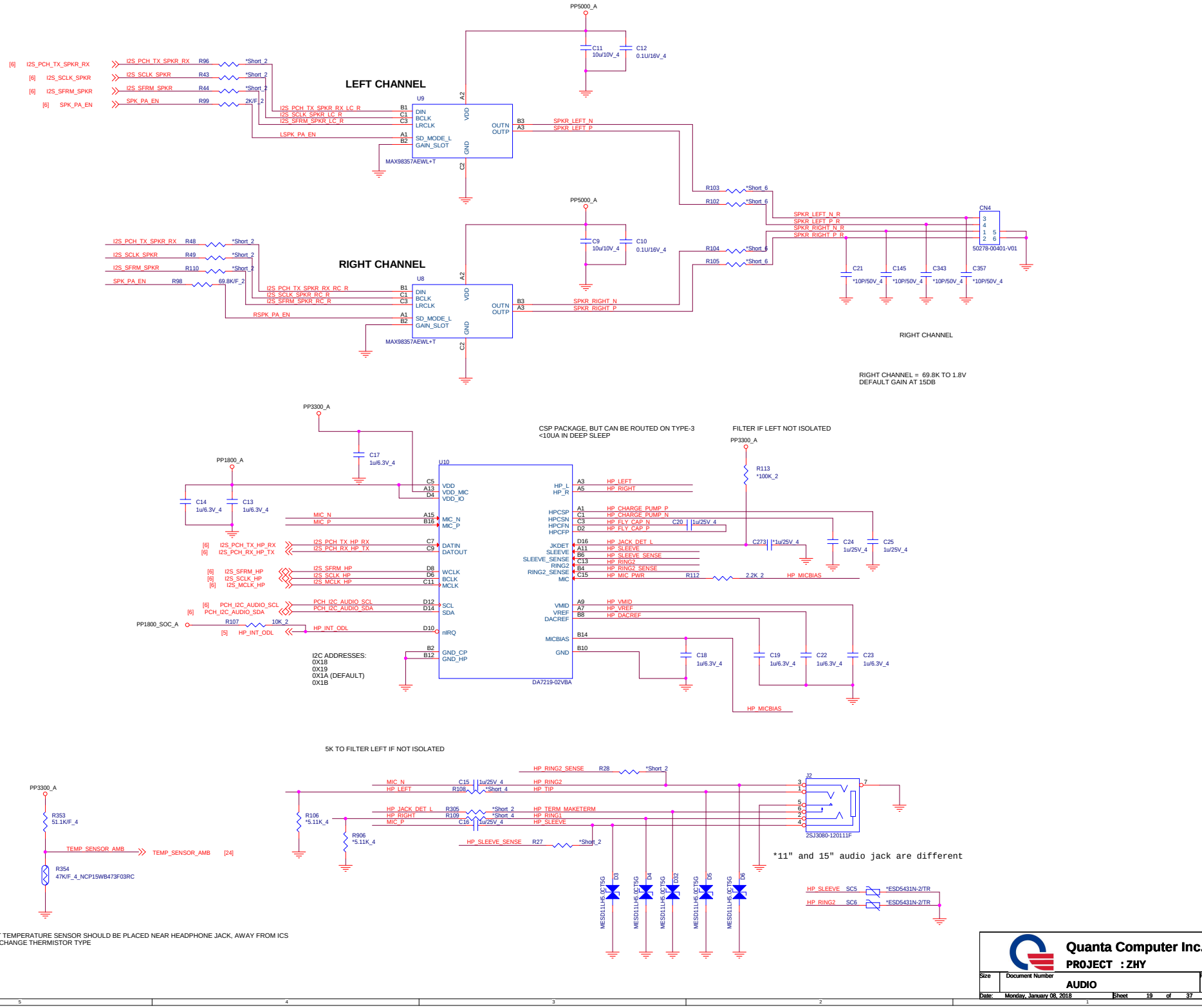
32 GB EMMC SD STORAGE

150 UA SLEEP CURRENT





Quanta Computer Inc. PROJECT : ZHY		
Size	Document Number eMMC/SD	Rev 1A
Date: Monday, January 08, 2018	Sheet 18 of 37	


LEFT CHANNEL
RIGHT CHANNEL
MAX98357AEWL+T
DA7219-02VBA
CSP PACKAGE, BUT CAN BE ROUTED ON TYPE-3
<10UA IN DEEP SLEEP
FILTER IF LEFT NOT ISOLATED
I2C ADDRESSES:
0X18
0X19
0X1A (DEFAULT)
0X1B
5K TO FILTER LEFT IF NOT ISOLATED
*11" and 15" audio jack are different
RIGHT CHANNEL
RIGHT CHANNEL = 69.8K TO 1.8V
DEFAULT GAIN AT 15DB
AMBIENT TEMPERATURE SENSOR SHOULD BE PLACED NEAR HEADPHONE JACK, AWAY FROM ICS
DO NOT CHANGE THERMISTOR TYPE
Quanta Computer Inc.
PROJECT : ZHY
AUDIO
Size
Document Number
Rev 3A
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BSW REF DESIGN ERRATA MENTIONED
A LEAKAGE PROBLEM INTO THE EC
VIA THE KSO PINS. THE FIX WAS
TO ADD 100K PULLUPS TO 3P3A_EC
ON THE KSO SIGNALS
0C2A COMPATIBLE

CONSIDER ADDING JTAG ON KB PINS

J9
51646-0300N-V01

THE PURPOSE OF THIS CIRCUIT
IS TO ALLOW A SINGLE KEYBOARD
MATRIX FOR BOTH A CONVERTIBLE
AND CLAMSHELL SKU

Convertible	R246,R248,SW3 STUFF ; R247,R249 NC
Clamshell	R247,R249 STUFF ; R246,R248,SW3 NC

D26 D27 D28 D29 *TPD4E101DPWR *TPD4E101DPWRD30

D20 D21 MESD11H5.0CT5G

CAN BE ON BACK SIDE OF BOARD

STUFF THESE FOR KEYBOARD LOCK BUTTON

STUFF FOR POWER BUTTON (DETACHABLE)

SW@ntc316-ad1t-a160t-a
SW3

THE PURPOSE OF THIS CIRCUIT
IS TO ALLOW A SINGLE KEYBOARD
MATRIX FOR BOTH A CONVERTIBLE
AND CLAMSHELL SKU

STUFF THESE FOR KEYBOARD POWER BUTTON

D41 *SW@ESD5451N-2/TR

MECH_PWR_BTN_IN_ODL [16,24,35]

KB BACKLIGHT

L3 KBL@22uH_2.5x2.0x1.2
480-00225-00
D1 KBL@RB751S40
C3672 KBL@1U/16V_4
C3671 KBL@22U/25V_8
C3673 KBL@0.22U/10V_4
R4360 KBL@4.7/F_4
U3 TPS61161
313-00590-00
TEXAS INSTRUMENTS INC
SON6
KBL@TPS61161DRVR

CN5
KBL@50505-00401-V01

TRACKPAD CONNECTOR

SUBJECT TO CHANGE PER QUANTA REQUEST

TRACKPAD 3.3V TO 1.8V LEAKAGE SHOULD BE TINY

Q28 PJE138K
Q47B PMDXB600UNE
Q47A PMDXB600UNE
J23 50506-00601-V01

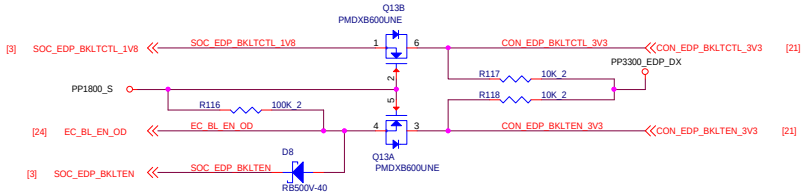
PEN CONNECTOR

PEN 7-BIT I2C ADDRESS = 0X09
~ 100 MA

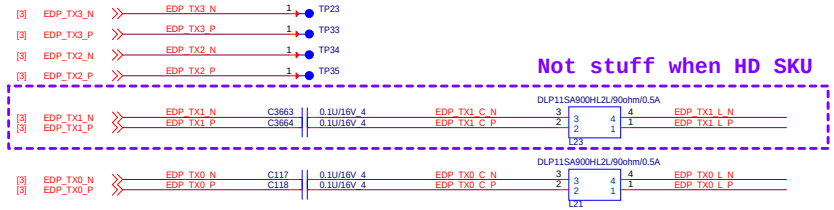
J22 PEN@50208-00801-V02
Q83 PEN@PJE138K

Quanta Computer Inc.
PROJECT : ZHY

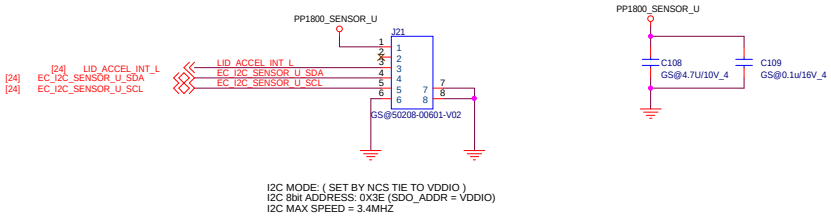
Size	Document Number	Rev
	BASE: KB, TP, PEN	2A
Date: Monday, January 08, 2018	Sheet 20 of 37	



EDP2-EDP3 DOES NOT NEED TO ROUTE TO CONNECTOR

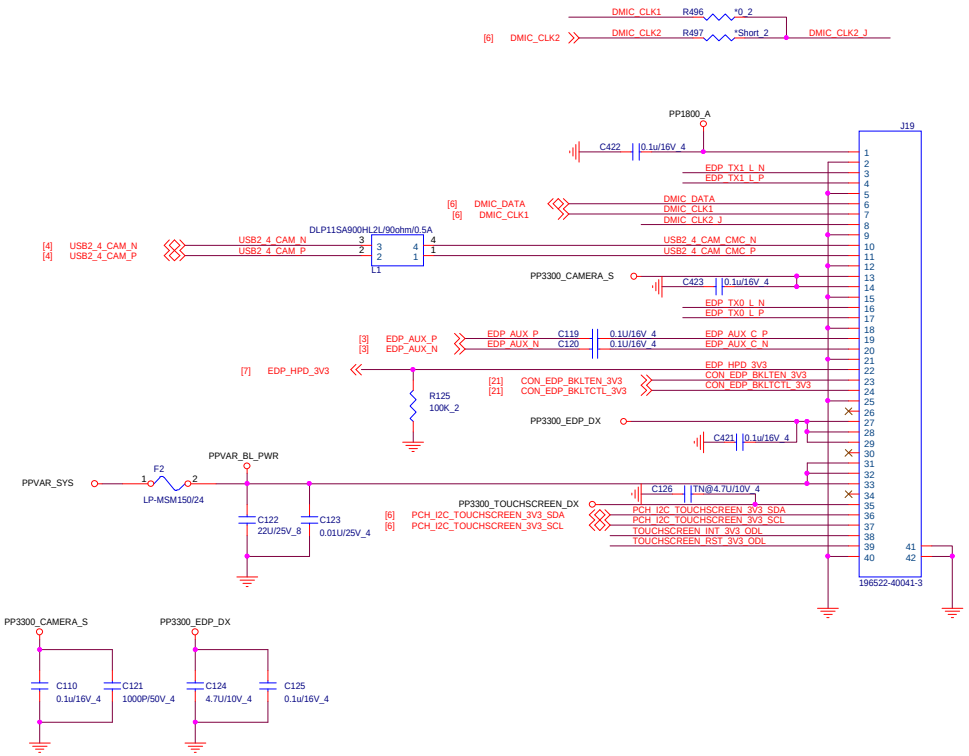


SENSOR BOARD (KX022)

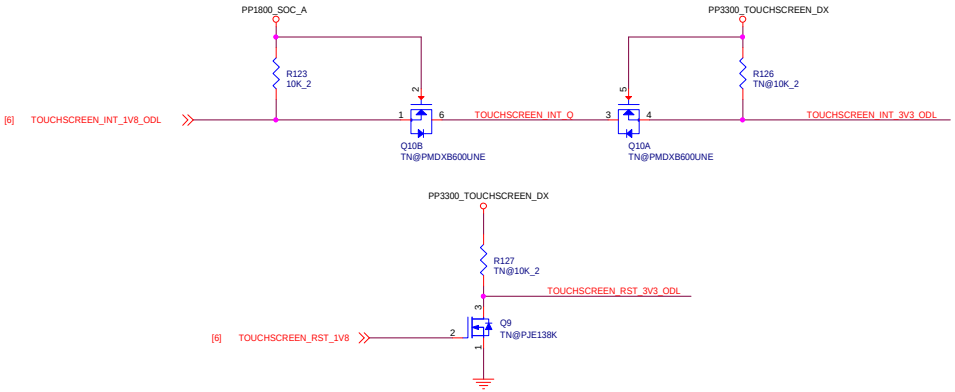


I2C MODE: (SET BY NCS TIE TO VDDIO)
I2C 8bit ADDRESS: 0X3E (SDO_ADDR = VDDIO)
I2C MAX SPEED = 3.4MHZ

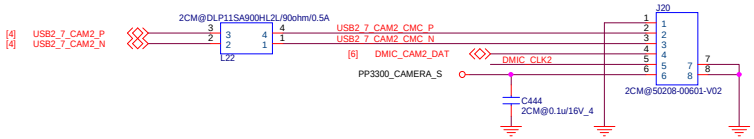
NOTE: SEE WHITE PAPER ON ACCEL PLACEMENT FOR CONVERTIBLES



TOUCH SCREEN



C-PANEL CAMERA



Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number: LID: eDP, CAM, TOUCH, SEN	Rev: 3A
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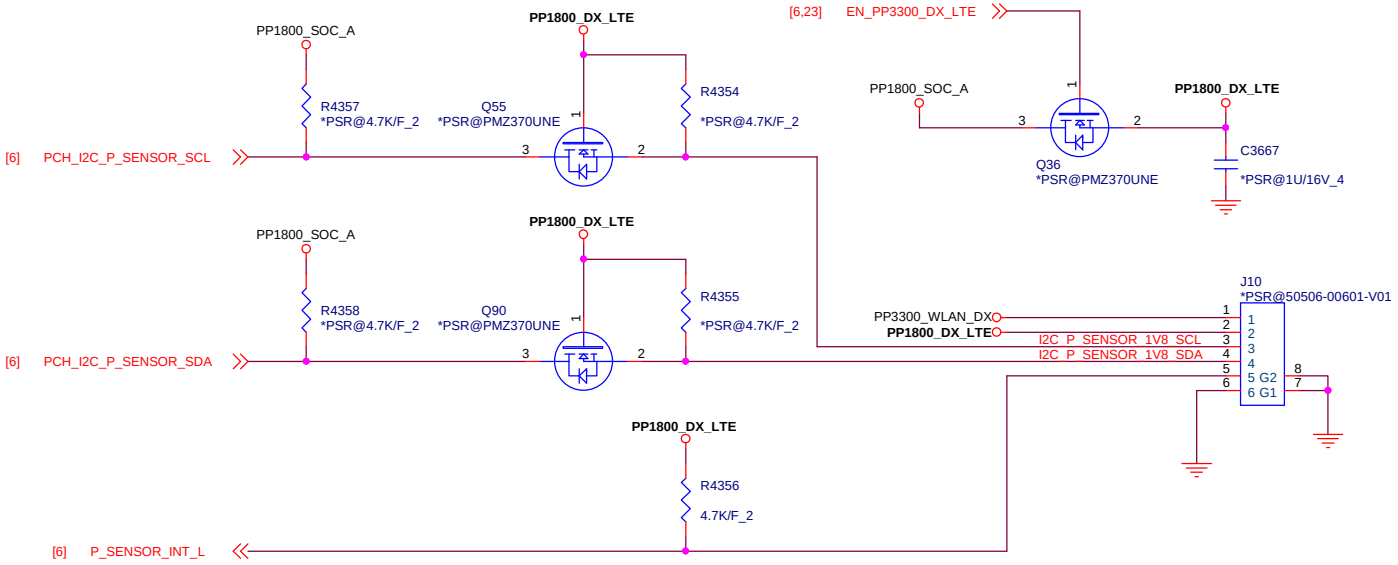
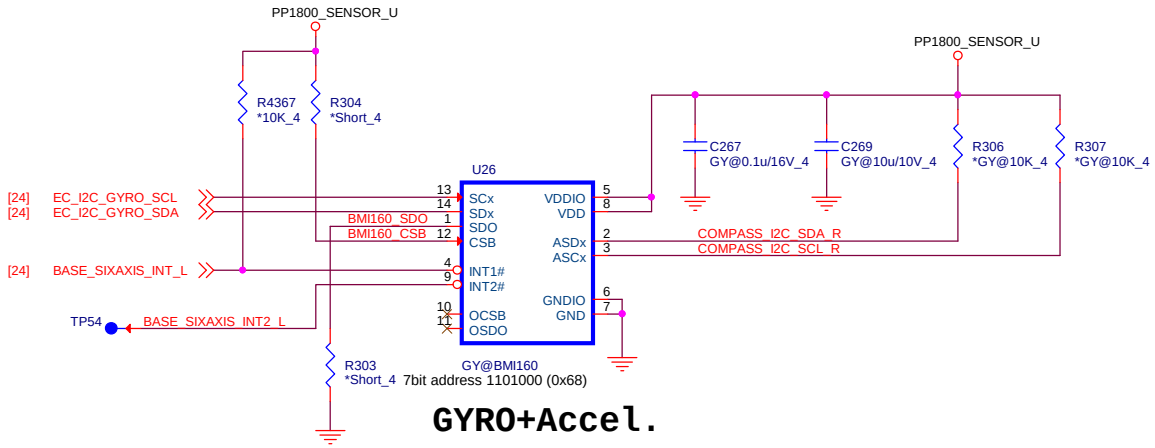
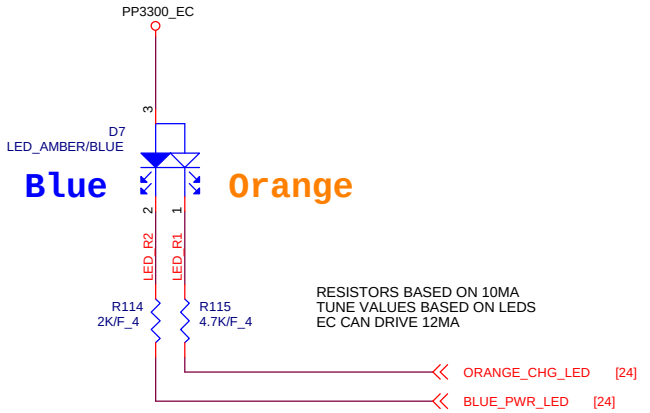
P-SENSOR





GYRO+Accel.

CHARGE/BATTERY LED



Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number	Rev
	GYRO, LED, P-SENSOR	3A
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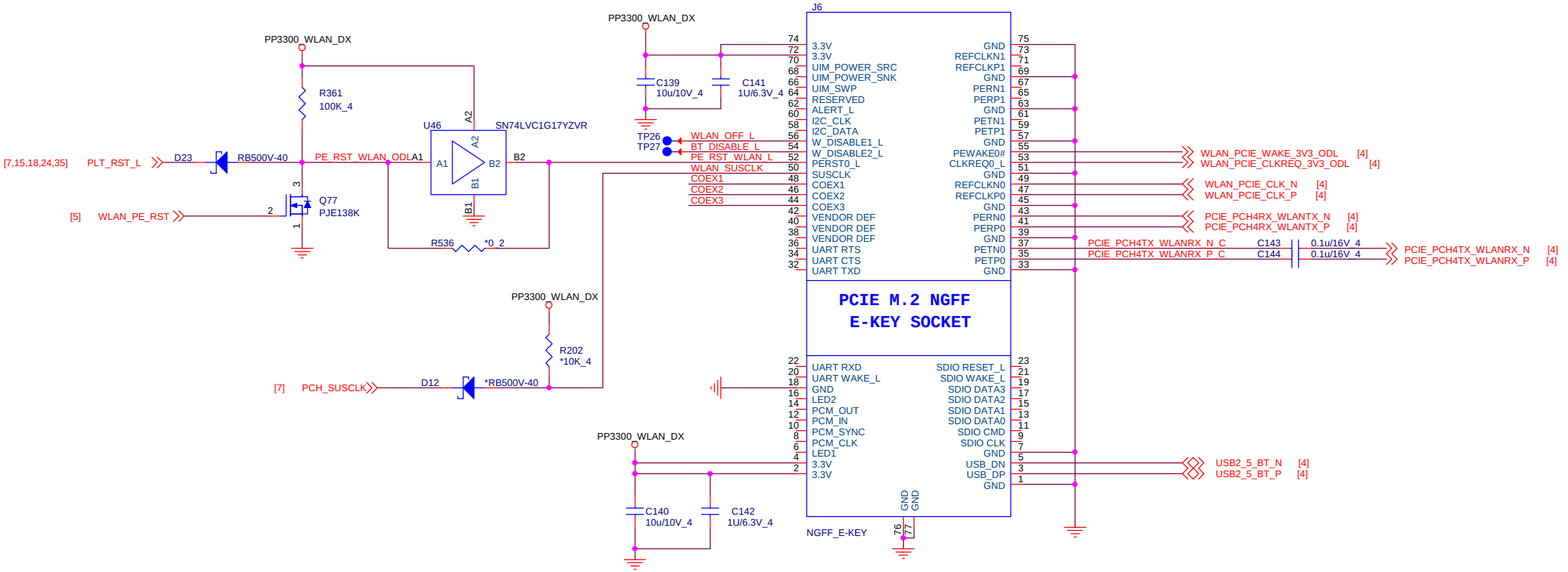
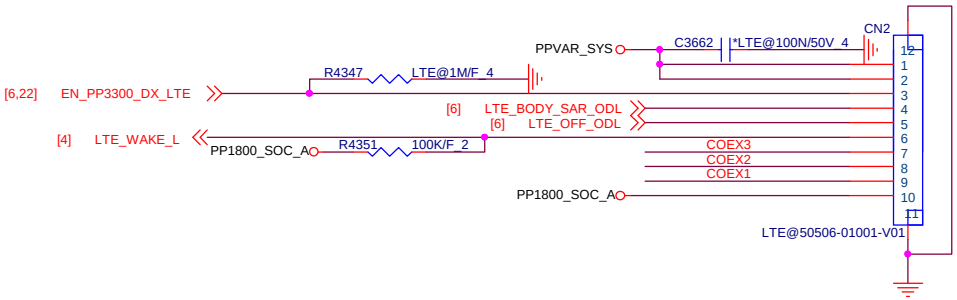
M.2 connector



To LTE/B connector



Quanta Computer Inc.
PROJECT : ZHY

Size	Document Number	Rev
	WIFI,LTE CONNTECOR	1A
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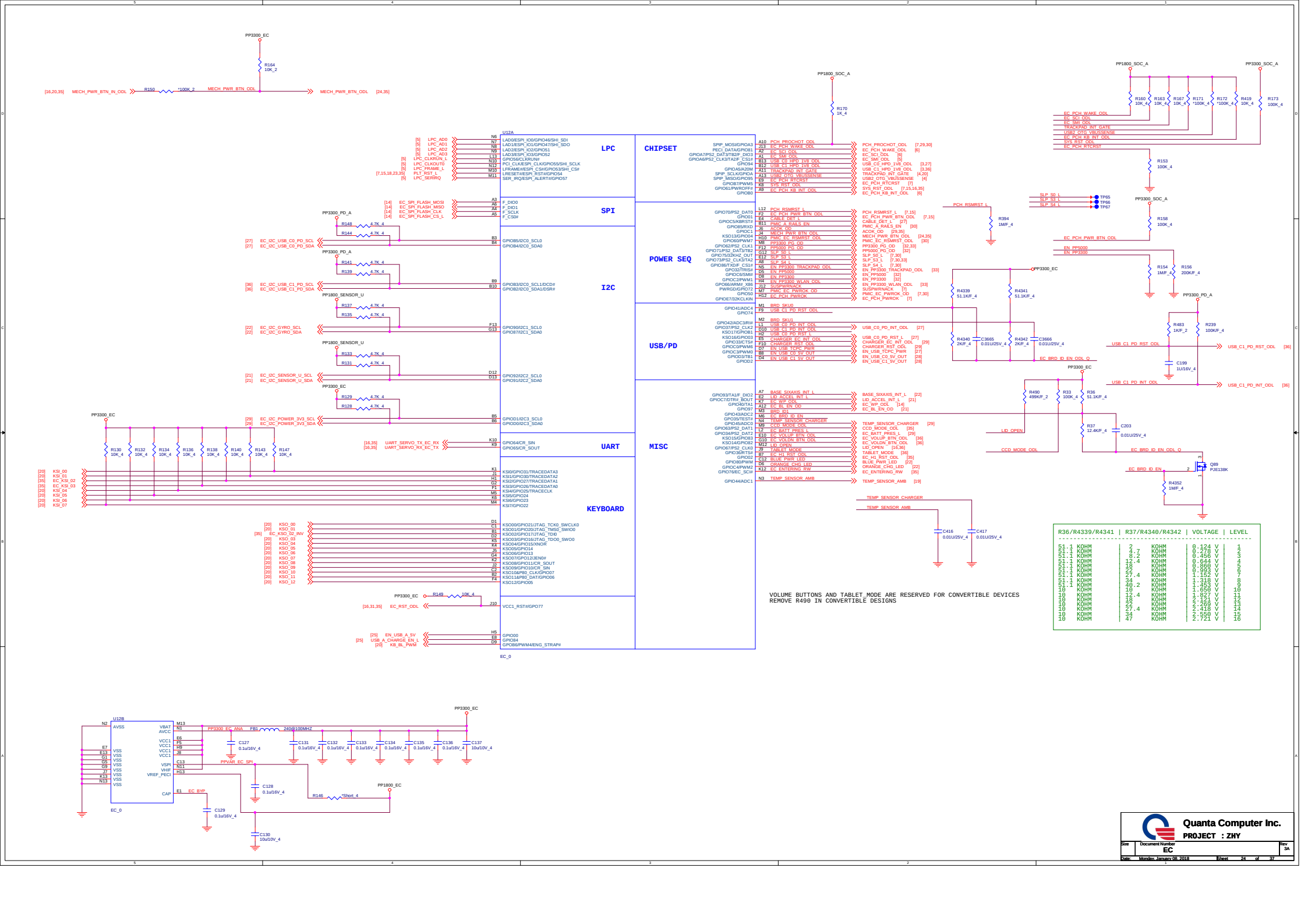
LPC
SPI
I2C
UART
KEYBOARD
CHIPSET
POWER SEQ
USB/PD
MISC
EC_0
PP3300_EC
PP1800_SOC_A
PP3300_SOC_A
PP3300_PD_A
PP1800_SENSOR_U
MECH_PWR_BTN_IN_ODL
MECH_PWR_BTN_ODL
VOLUME BUTTONS AND TABLET_MODE ARE RESERVED FOR CONVERTIBLE DEVICES
REMOVE R490 IN CONVERTIBLE DESIGNS
R36/R4339/R4341 | R37/R4340/R4342 | VOLTAGE | LEVEL
Quanta Computer Inc.
PROJECT : ZHY
Document Number
EC
Rev 3A
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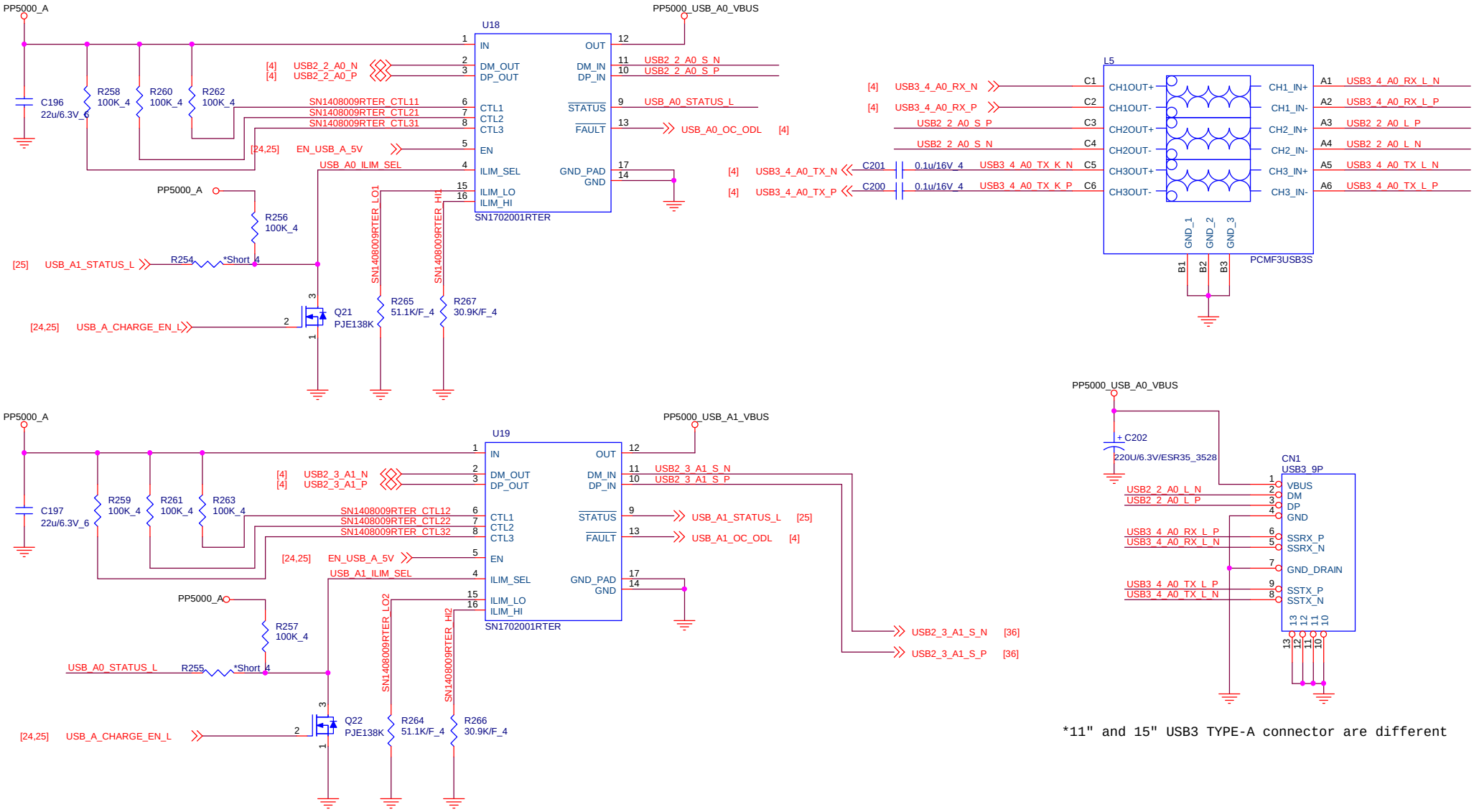

*11" and 15" USB3 TYPE-A connector are different

Quanta Computer Inc.

PROJECT : ZHY

Size	Document Number	Rev
	USB A CONNECTORS	3A
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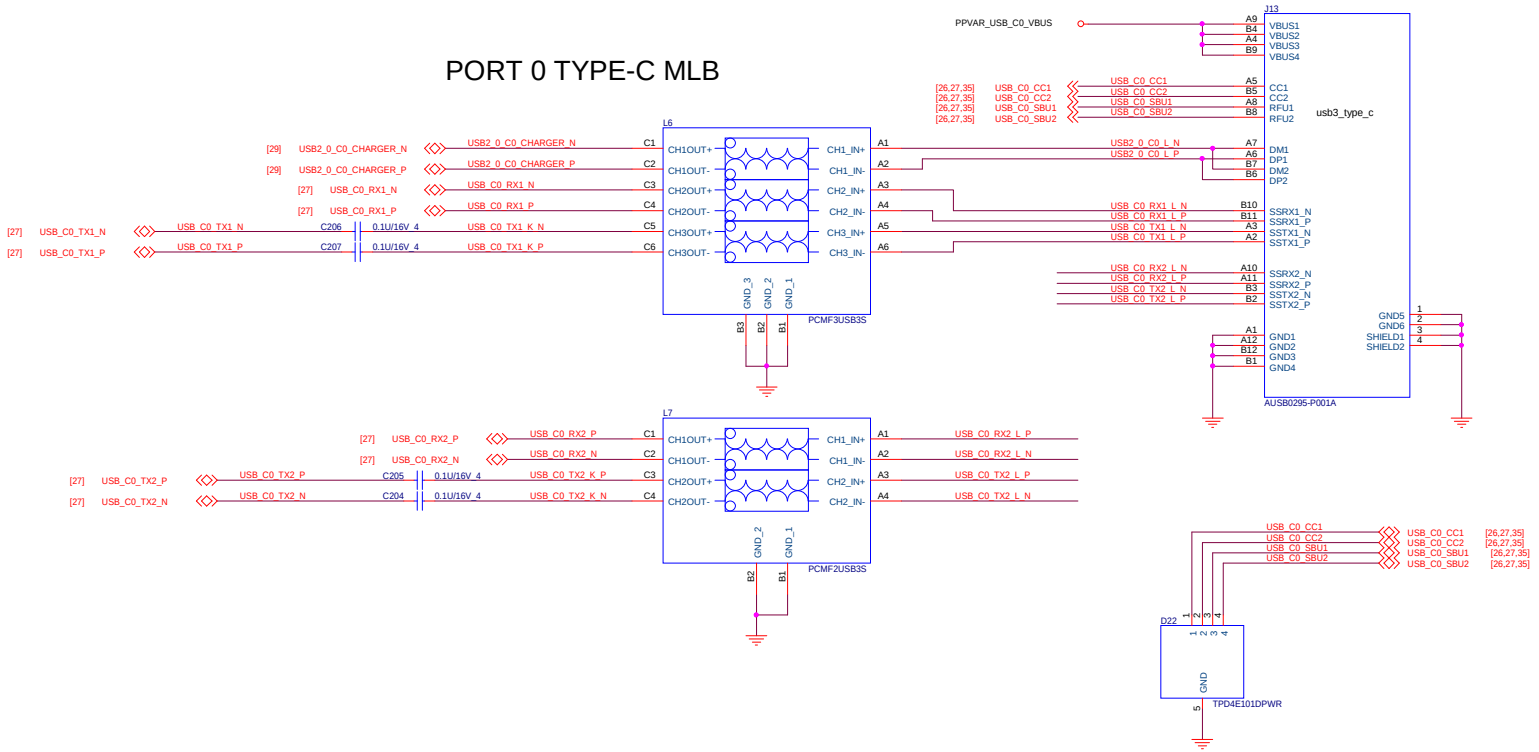
PORT 0 TYPE-C MLB



Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number: USB C CONNECTORS	Rev: 1A
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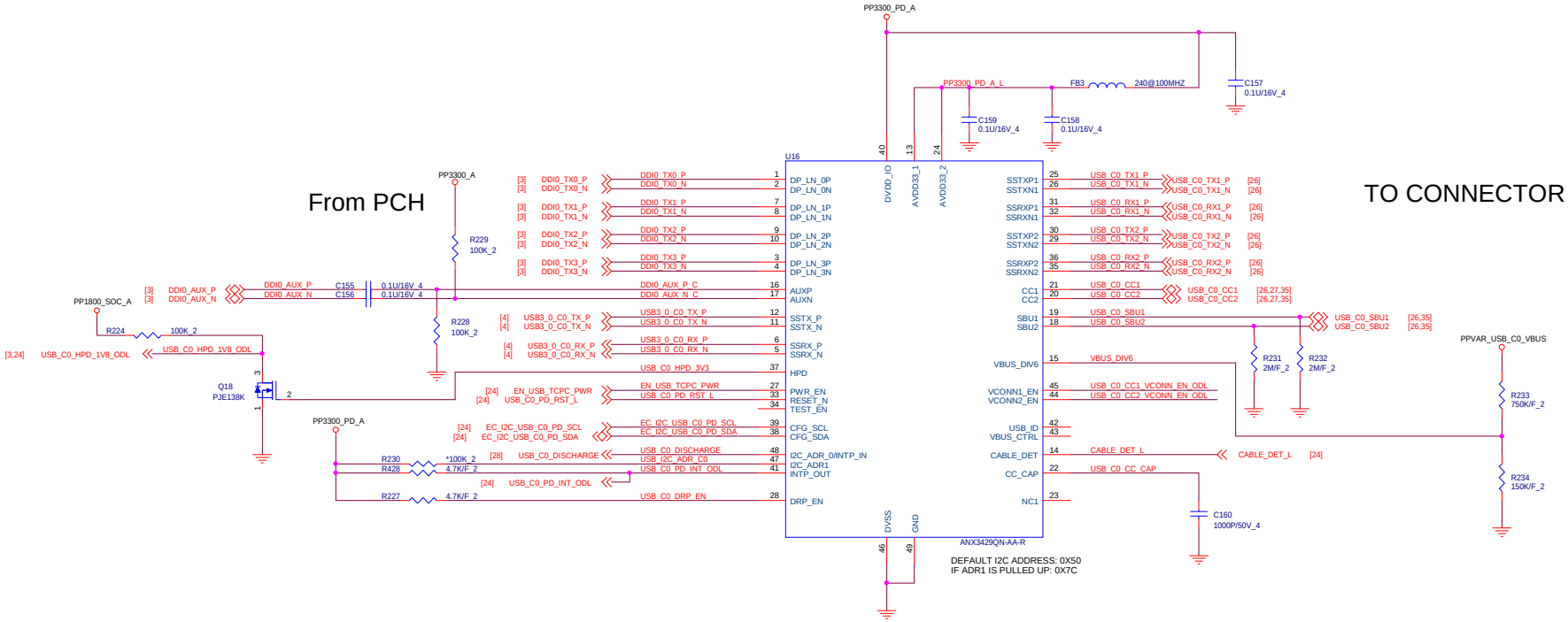

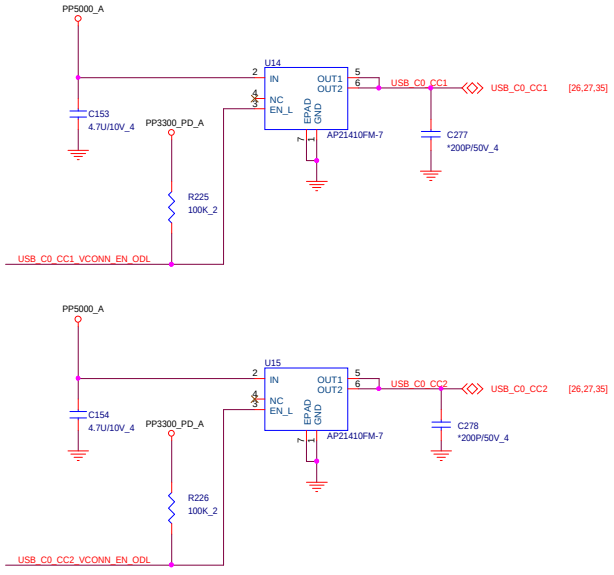

Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number: USB C TCPC/MUX	Rev: 1A
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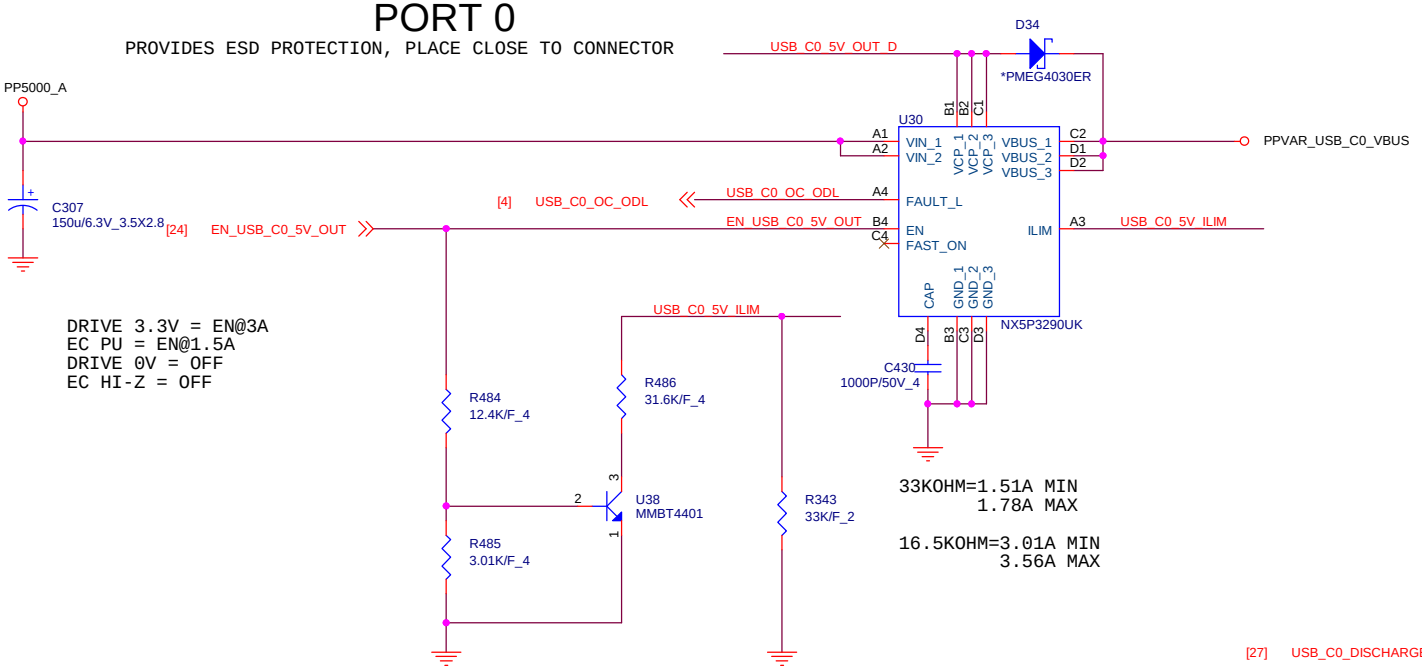
PORT 0

PROVIDES ESD PROTECTION, PLACE CLOSE TO CONNECTOR

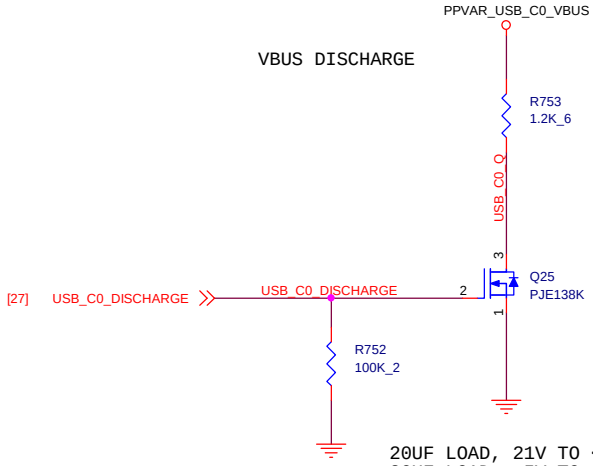


DRIVE 3.3V = EN@3A
EC PU = EN@1.5A
DRIVE 0V = OFF
EC HI-Z = OFF

33KOHM=1.51A MIN
1.78A MAX

16.5KOHM=3.01A MIN
3.56A MAX

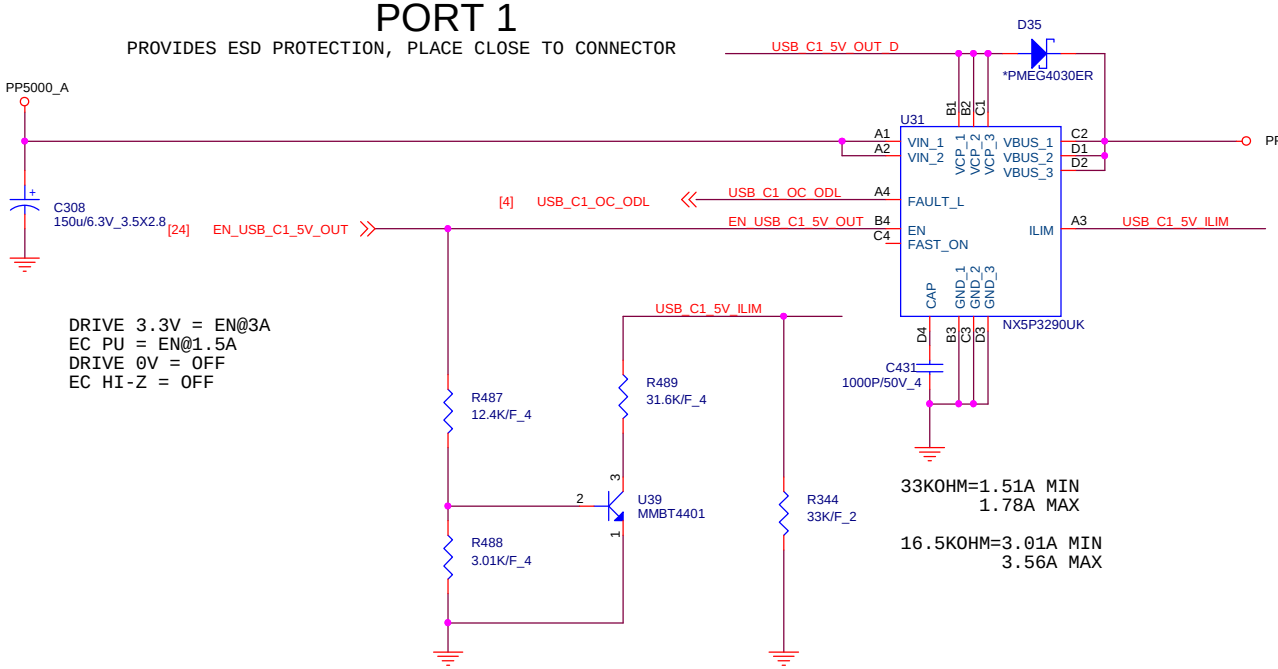
VBUS DISCHARGE



20UF LOAD, 21V TO <0.8V IN <80MS
20UF LOAD, 5V TO <0.8V IN <45MS
0402 CAN DISSIPATE 400MW FOR 80MS
0603 CAN DISSIPATE 400MW FOR 500MS
0805 CAN DISSIPATE 400MW FOR 2000MS

PORT 1

PROVIDES ESD PROTECTION, PLACE CLOSE TO CONNECTOR



DRIVE 3.3V = EN@3A
EC PU = EN@1.5A
DRIVE 0V = OFF
EC HI-Z = OFF

33KOHM=1.51A MIN
1.78A MAX

16.5KOHM=3.01A MIN
3.56A MAX

Quanta Computer Inc.
PROJECT : ZHY

Size	Document Number	Rev
	USB C 5V OUT	1A
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POWER - BATTERY CHARGER

ROHM BUCK-BOOST CHARGER

1x dual-N FET (CSD86311W1723) to 2x single-N FET (AON7410)

change to 10U/25V_8 from 10U/50V_1206

1x CSD86311W1723 to 2x AON7752
Change to PCMB103T-2R2MS from MGV12022R2M-10

For acoustic noise

Change to AON6414AL from CSD17552Q3A

1x dual-N FET (CSD86311W1723) to 2x single-N FET (AON7410)

0.6V for 512MA

11/15/16
Change Q84 to 2N7002K

CV: 12.6V
3S1P Battery

QUANTA CHOOSE PINOUT/CONNECTOR

PLACE NEAR CHARGER INDUCTOR/FETS
DO NOT CHANGE THERMISTOR TYPE (Intel suggestion)

Quanta Computer Inc.	PROJECT : ZHY
Size	Document Number: POWER - BATTERY CHARGER — Rev 3A
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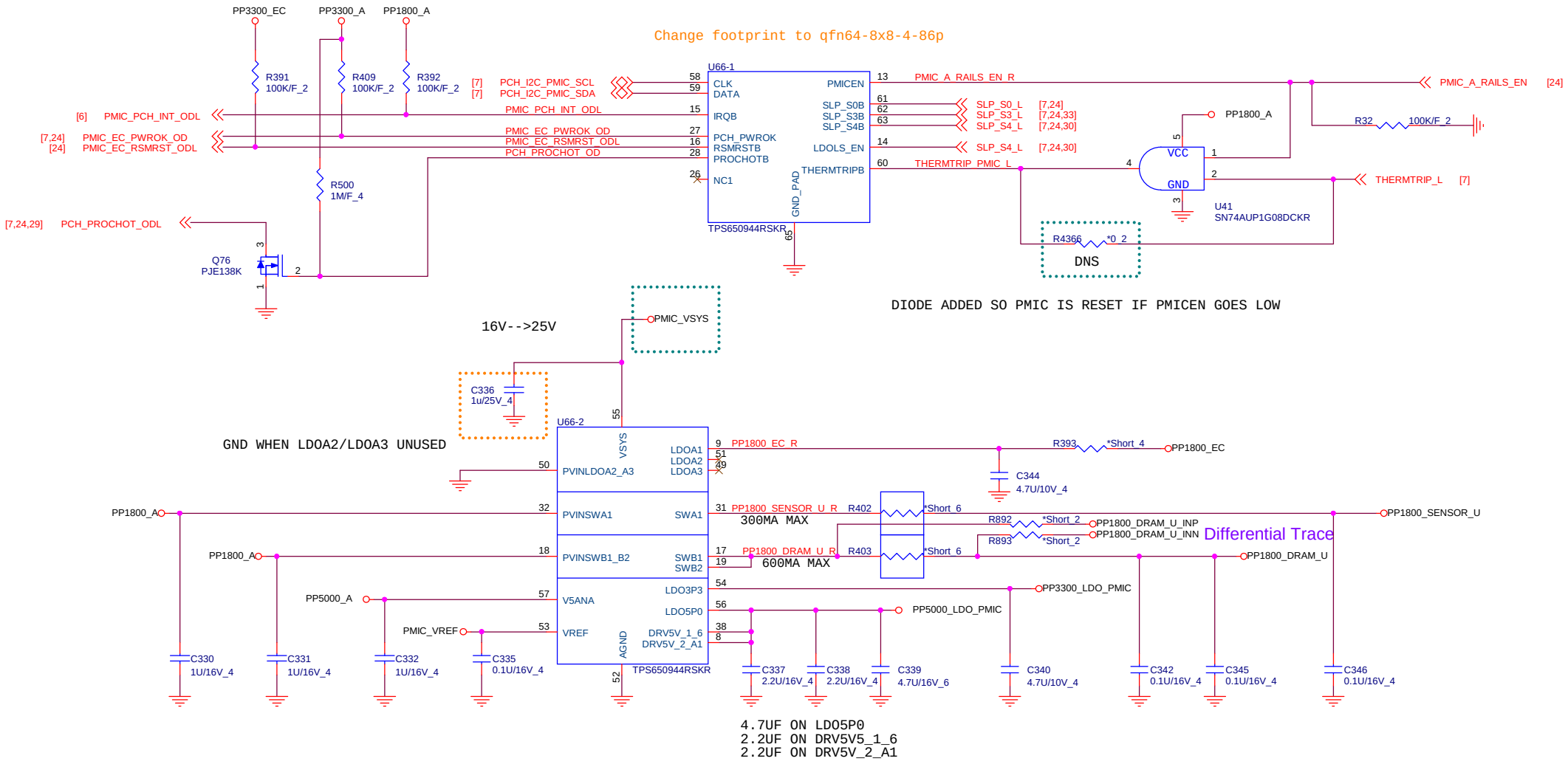
POWER - PMIC LOGIC



Quanta Computer Inc.		
PROJECT : ZHY		
Size	Document Number: POWER - PMIC LOGIC	Rev: 3A
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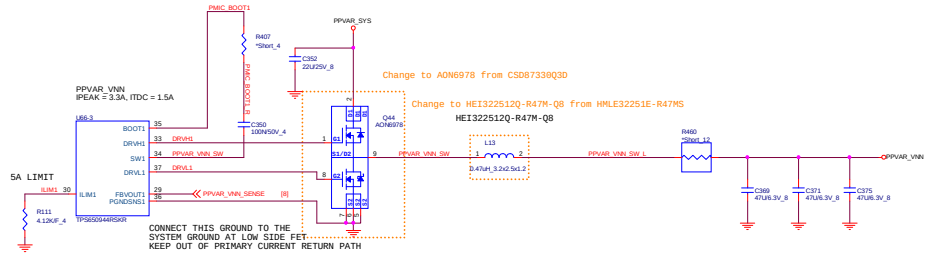
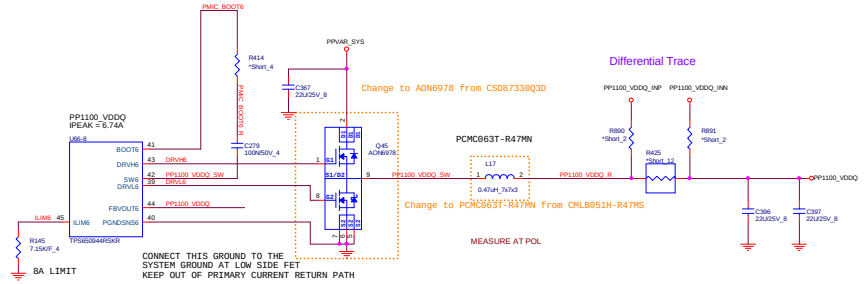
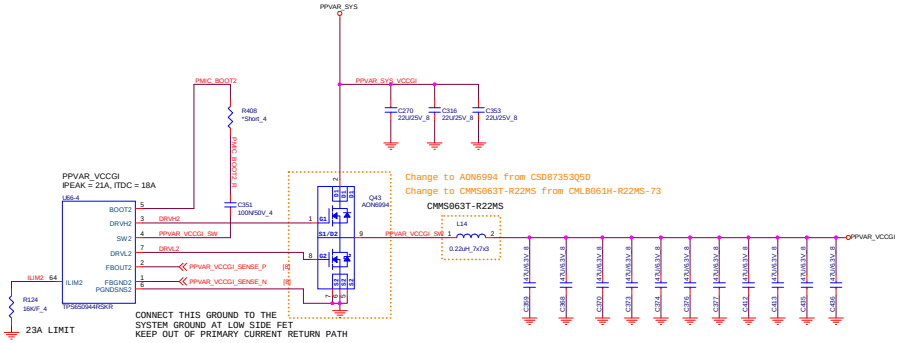
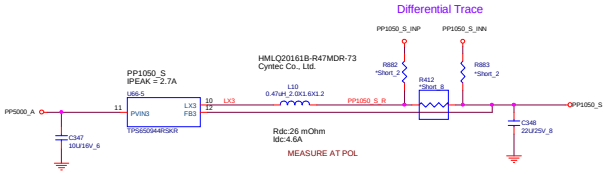
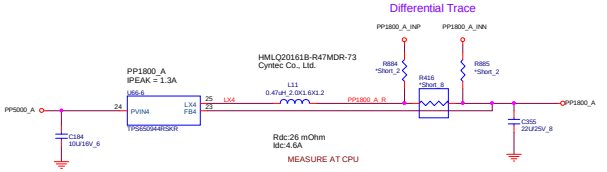
POWER - PMIC RAILS

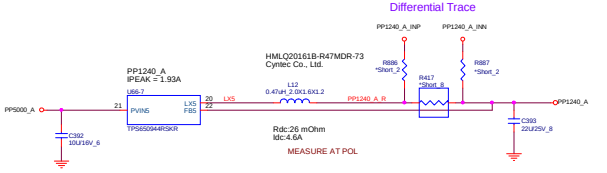






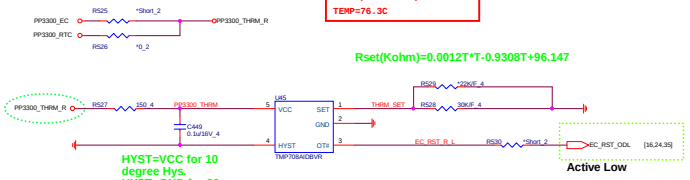






Thermal Protector

Need fine tune
for thermal protect point
Note placement position
TEMP=76.3C



PMIC_VSYS

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	POWER - PMIC RAILLS	3A
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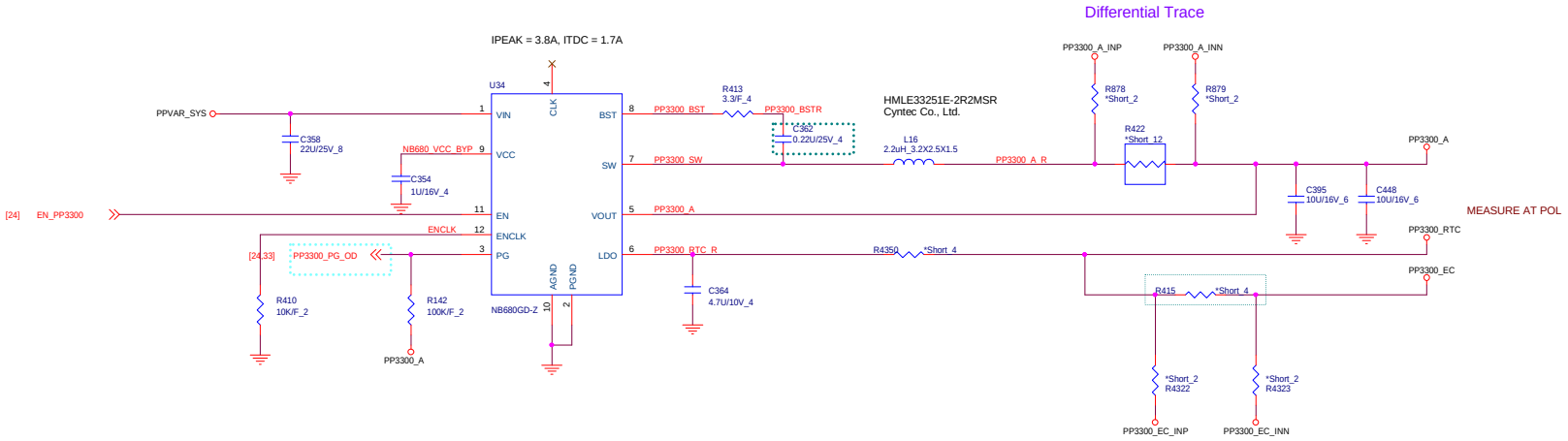
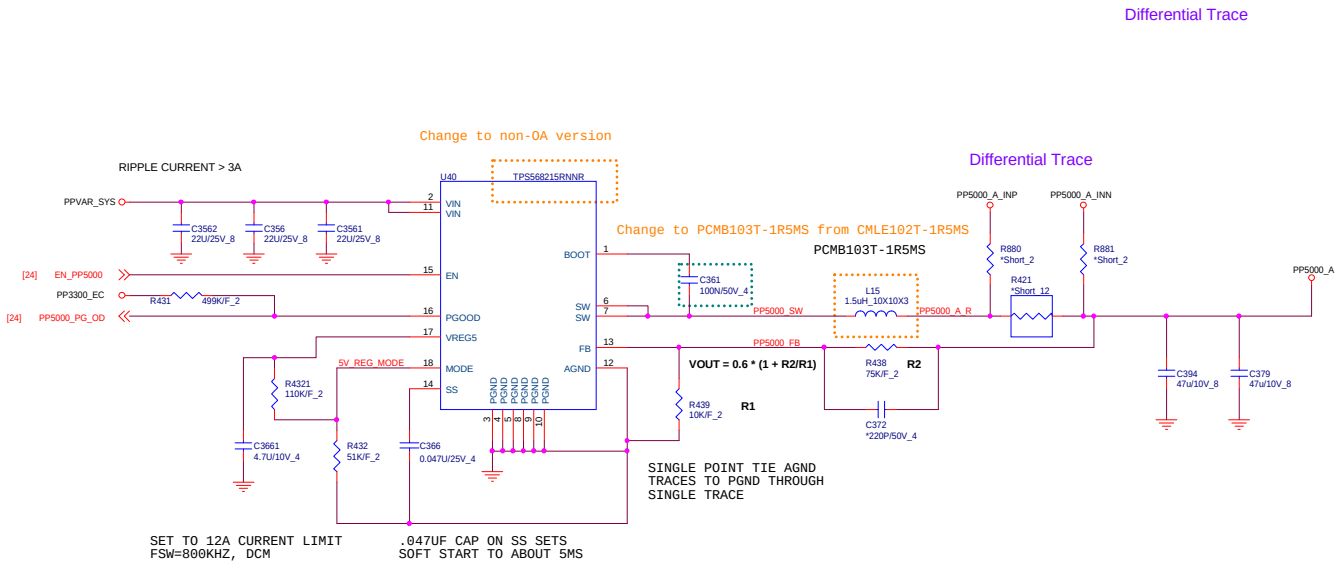
PP3300_A



PP5000_A



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	POWER: 3.3V AND 5V		1A
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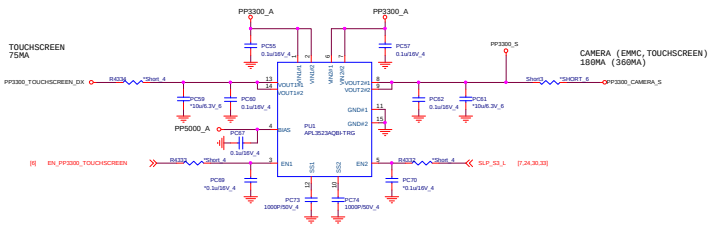
POWER - LOAD SWITCHES

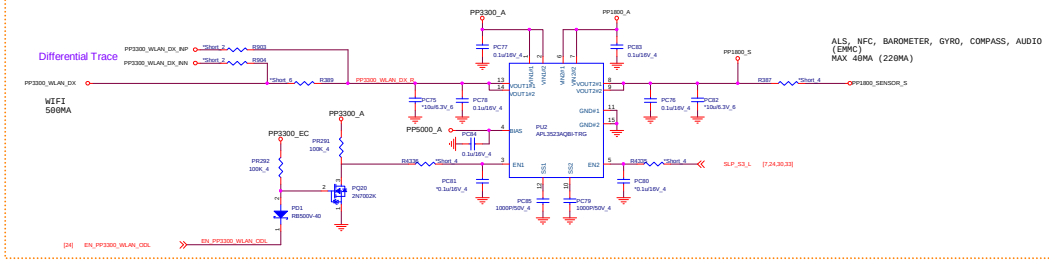
Change to switch IC

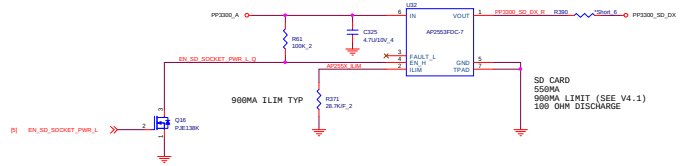
INPUT:PP3300_A

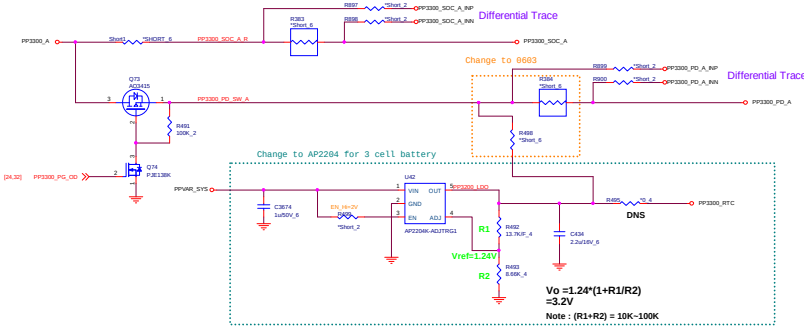


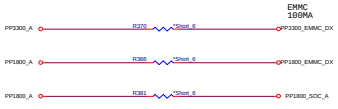
Change to switch IC

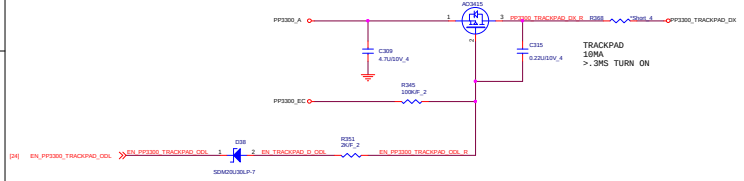
INPUT:PP3300_A INPUT:PP1800_A

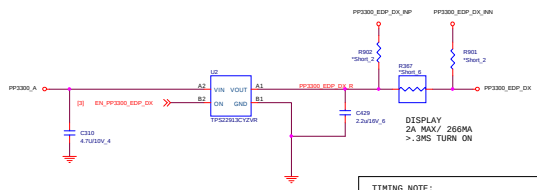












TIMING NOTE:
OTHER THAN LISTED,TURN-ON TIME IS ~50US

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POWER - BATTERY CHARGER
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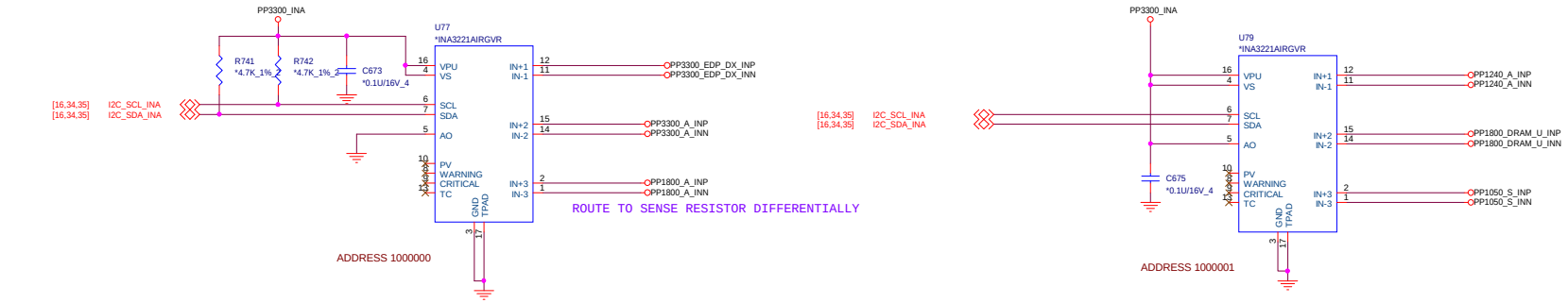
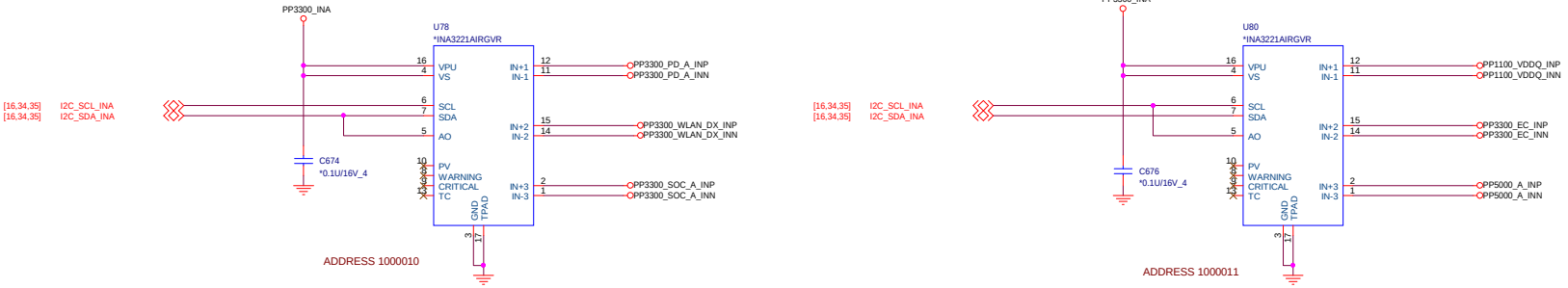
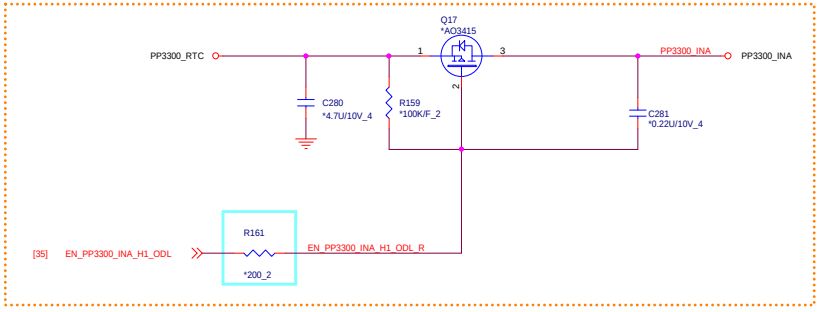
INAs

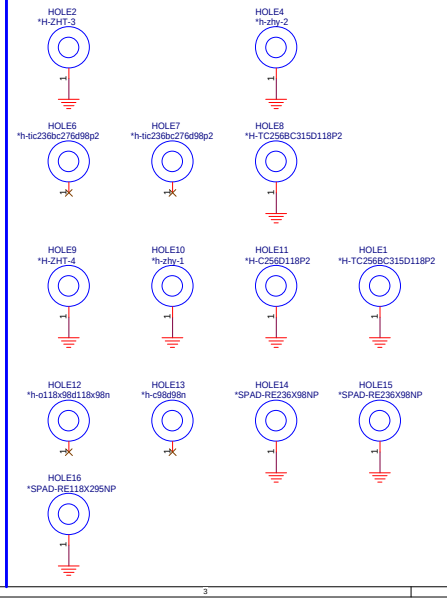




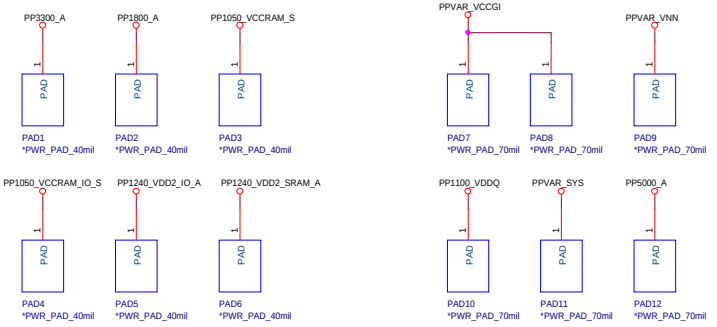
INAs power



HOLES



POWER TEST PAD



Quanta Computer Inc.
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	INAs	3A
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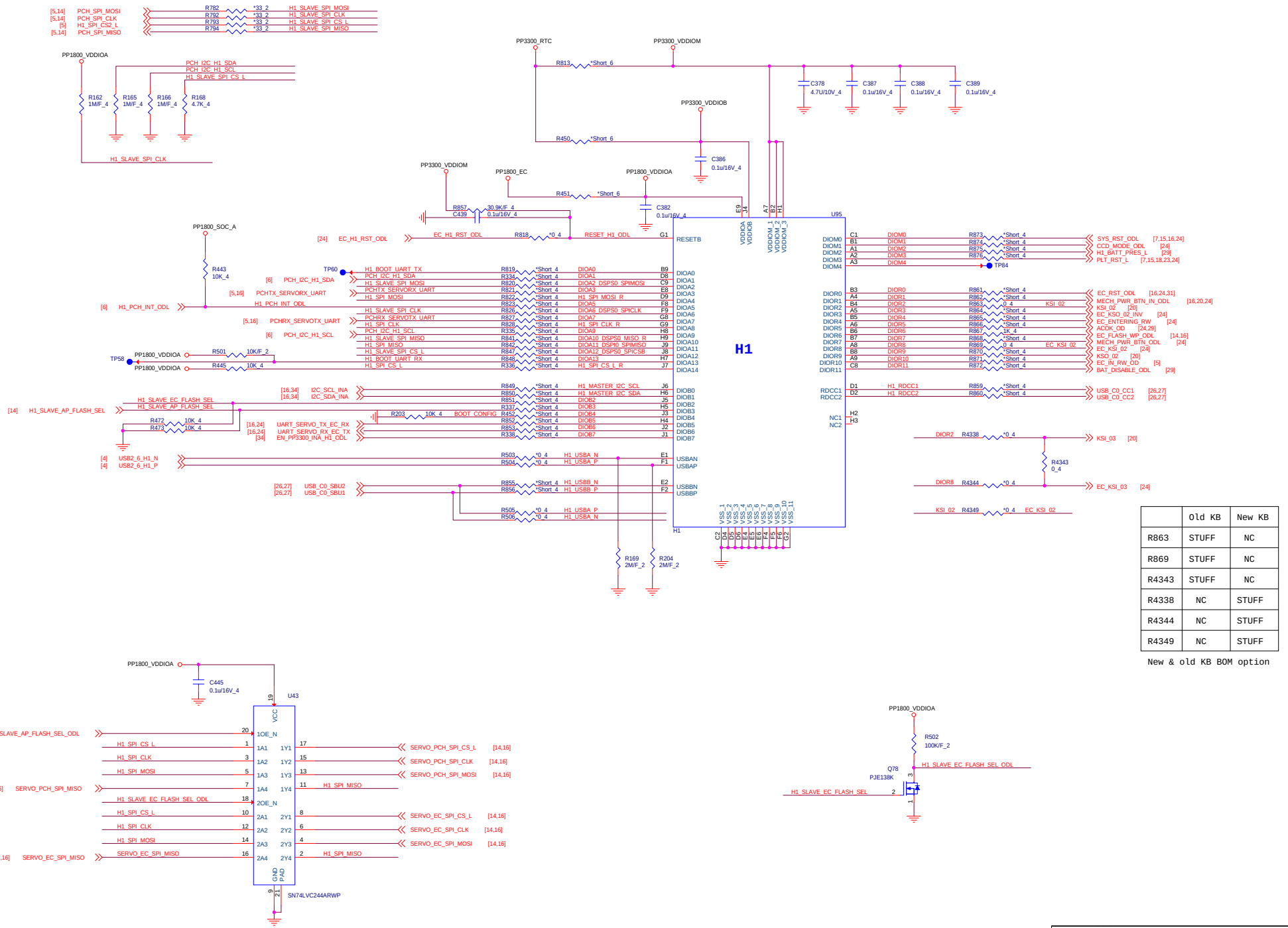

	Old KB	New KB
R863	STUFF	NC
R869	STUFF	NC
R4343	STUFF	NC
R4338	NC	STUFF
R4344	NC	STUFF
R4349	NC	STUFF

New & old KB BOM option

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	H1 SECURE MICROCONTROLLER	3A

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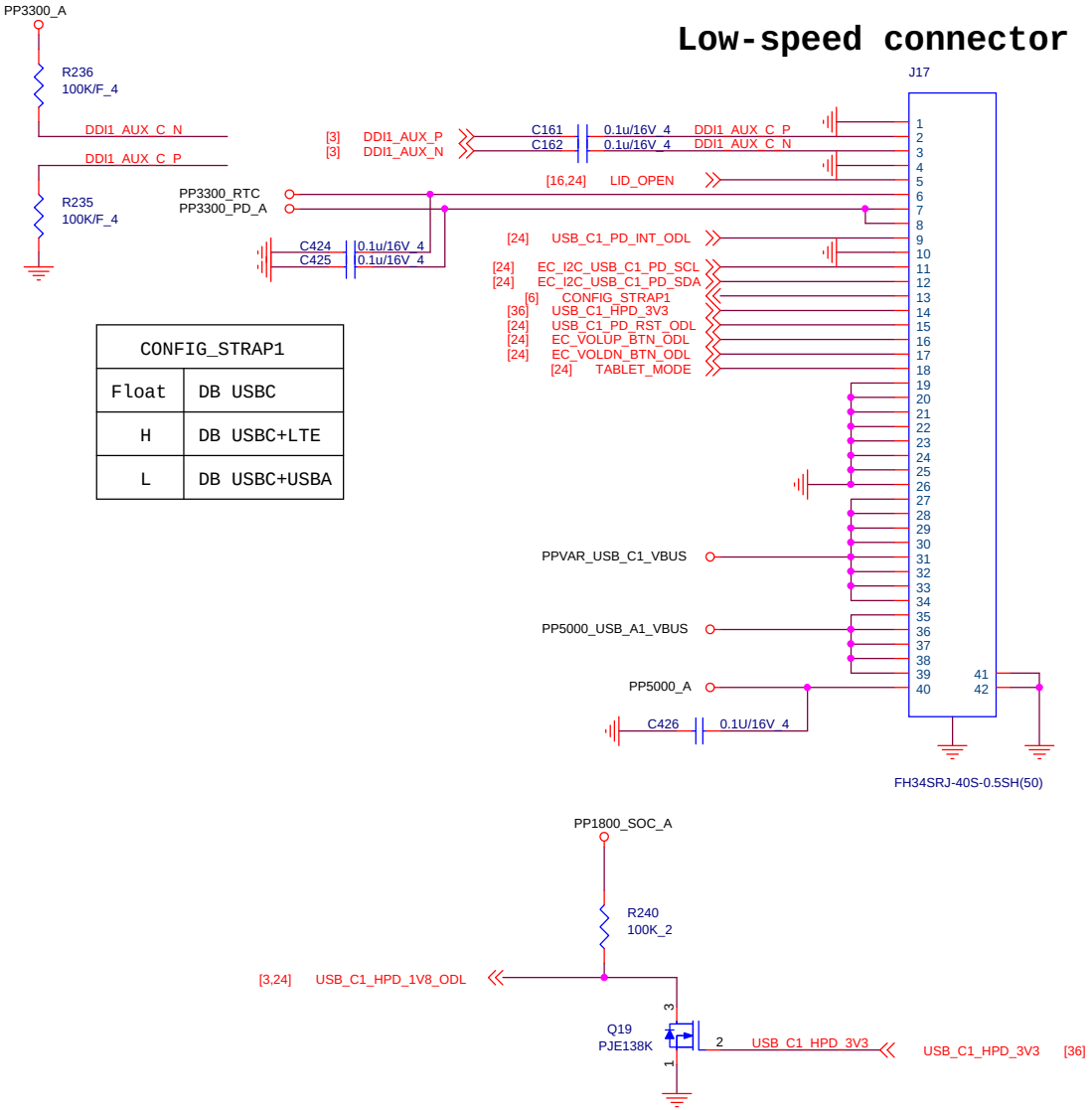
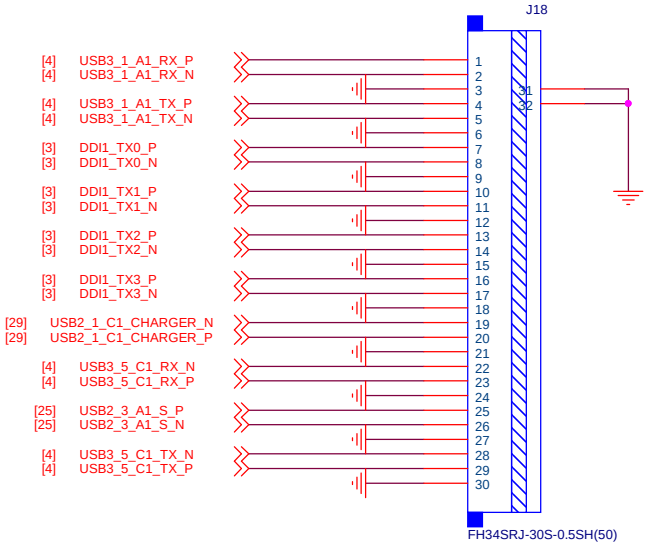
Low-speed connector



CONFIG_STRAP1	
Float	DB USBC
H	DB USBC+LTE
L	DB USBC+USBA

High-speed connector



Quanta Computer Inc.

PROJECT : ZHY

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	MLB CONNECTORS	2A
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Model	Version	CHANGE LIST
ZHY	3A	2017/12/19 page 6 Change Q91 to PMDXB600UNE, add R4368 for LTE EN_PP3300_DX_LTE signal glitch issue page 21 Change R497 to short pad page 35 Change R875,R450,R813 to short pad page 29 Change value to 10u/25V_8 for C296,C297,C410 page 30 Change R393,R402,R403 to short pad page 31 Change R460,R412,R416,R417,R425,R530,R4365 to short pad page 32 Change R422,R4350,R415,R421 to short pad page 33 Change R4334,R4333,R4332,R4336,R4335,R383,R381,R367,R499 to short pad Change R498,R384 to short pad page 34 DNS all INAs and INAs power 2017/12/20 page 29 Add C3675,C3676 (56uF/20V/7343) on PPVAR_SYS for acoustic noise. page 31 Remove PU15,R4364,PR191,PR189,PR188,R4363,PC197,PC195. 2017/12/29 page 29 Stuff C3676 for all project,stuff C3675 for Astronaut project only 2018/1/3 page 24 Change R37 to 12.4Kohm for PVT

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CHANGE LIST
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