FOXCONN CONFIDENTIAL
DO NOT DISTRIBUTE

Lenovo - BIDDING BOX B365

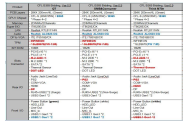
SCHEMATIC INDEX

PROJECT INFORMATION

PHASE:	SVT (Ver:1.0) 2019/07/05
BOM:	0.1
SVID:	17AA
SSID:	3178

BOM DISTRIBUTION RULE

QT,SMB&Consumer,Think M720e
(BOM, BOM, BOM)



PCB Fab Note

Layer	Layer Name	Min/Typical/Max Layer Thickness (mil)	Dielectric Constant	Remark
	Solder Mask	0.4 / 0.65 / 1.8	3.40	
L1	Signal	1.4 / 1.90 / 2.4	NA	1.5 oz.(With Plating)
	Prepreg	2.2 / 2.75 / 3.2	3.90	
L2	Power/Gnd	1.0 / 1.20 / 1.4	NA	1. oz.
	Core	NA / 49.0 / NA	4.125	
L3	Power/Gnd	1.0 / 1.20 / 1.4	NA	1. oz.
	Prepreg	2.2 / 2.75 / 3.2	3.90	
L4	Signal	1.4 / 1.90 / 2.4	NA	1.5 oz.(With Plating)
	Solder Mask	0.4 / 0.65 / 1.8	3.40	

PCB / SILKSCREEN COLOR

PHASE	PCB	SILKSCREEN
ET	RED	YELLOW
SDV	Blue	WHITE
SIT/SIT-R/SVT	GREEN	WHITE

BOM DEFINITION:

MARKING	DESCRIPTION
I	INSTALL
NI	NOT INSTALL
MP	PRODUCTION PART ONLY
PROTO	NOT FOR PRODUCTION PART
CCL	CRITICAL COMPONENT LIST

PCB Color and version:
ET phase:Red, V0.1
SDV phase:blue, V0.2
SIT phase:Green, V0.3
SVT and SS phase: Green,V1.0
after SS: Green, V1.x or VX.0

PCB Layer stack-up design:
The PCB total thickness must be within 1.6+/-0.13mm for DT chipset
The PCB lotal thickness must be within 1.2+/-0.10mm for Mobile chipse
The adviced thickness of inner layer is within 1.2+/-10%mil.

BIOS Licence Label

LBL1
BIOS_LICENCE
I

Note:
AMI uEFI

PCB For CFL BIDDING BOX

PCB1 I
Printed Circuit Board
PCB_B365_SVT_PCB
CCL=Y
4-Layer PCB,Color With Green Soldermask,White Silkscreen,11.14X7.87inch,CM-1,KB-6160,Rev:V1.0,ROHS
0101HGH01-491-G
GBM

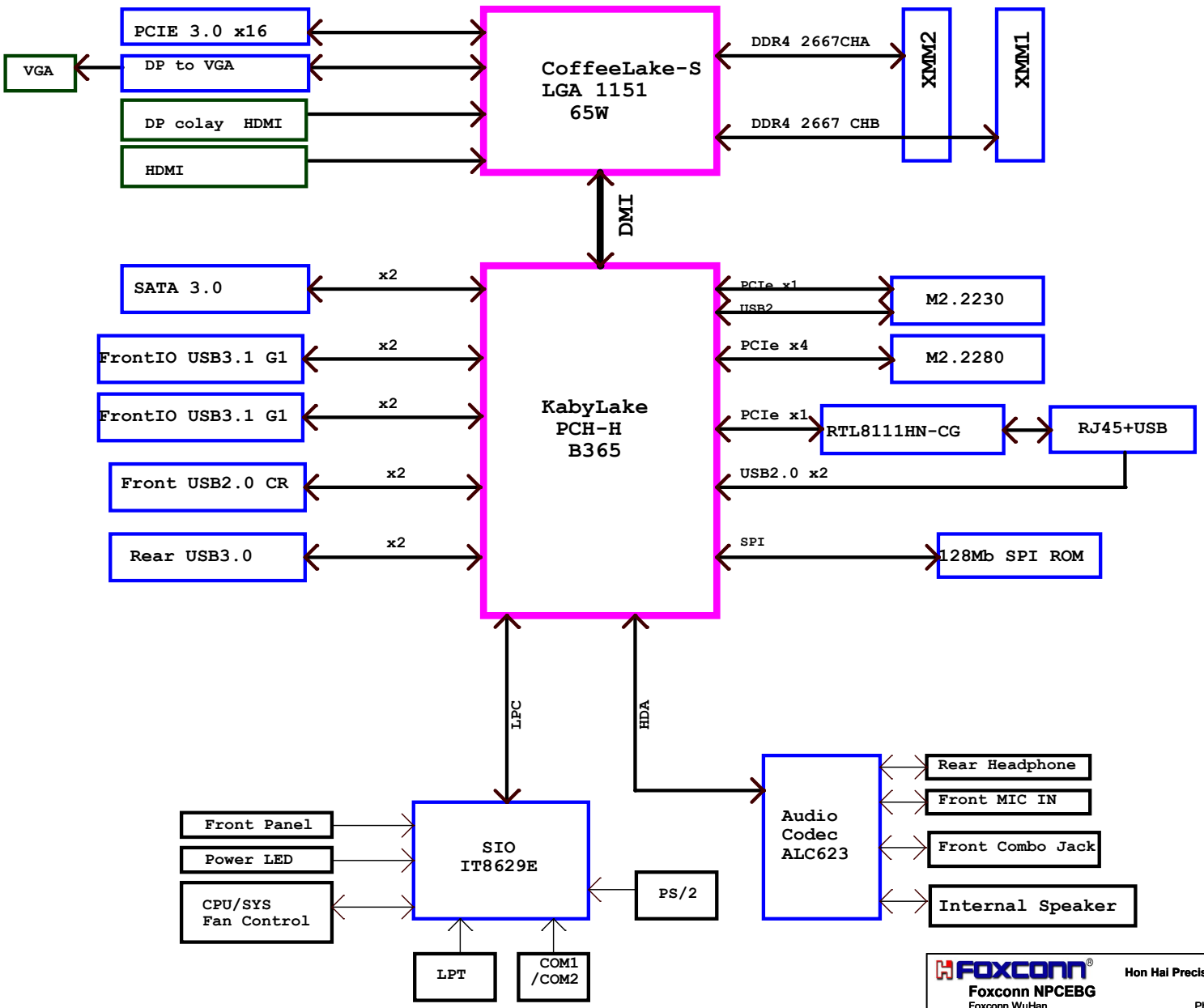
SVT

HH PN	Description	Supplier	Supplier PN
0101HGH01-491-G	4-Layer PCB,Color With Green Soldermask,White Silkscreen,11.14X7.874 inch,CM-1,KB-6160, Rev:V1.0,ROHS	GBM	0101HGH01-491-G
0101HGH01-575-G	4-Layer PCB,Color With Green Soldermask,White Silkscreen,11.14X7.874 inch,ML1,IT-158TC, Rev:V1.0,ROHS	PI	0101HGH01-575-G
0101HGH01-145-G	4-Layer PCB,Color With Green Soldermask,White Silkscreen,11.14X7.874 inch,GE-1,NP-140TL, Rev:V1.0,ROHS	ECS	0101HGH01-145-G

FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

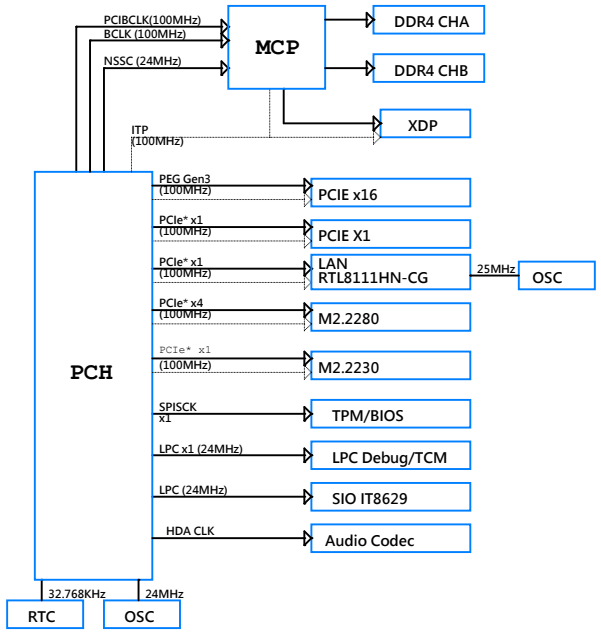
Title: 01. INDEX
Size: C
Document Number: B365_SFF
Rev: SVT
Page Modified: Wednesday, July 17, 2019 08:32:32 (UTC/GMT) Sheet 1 of 65

System BLOCK Diagram

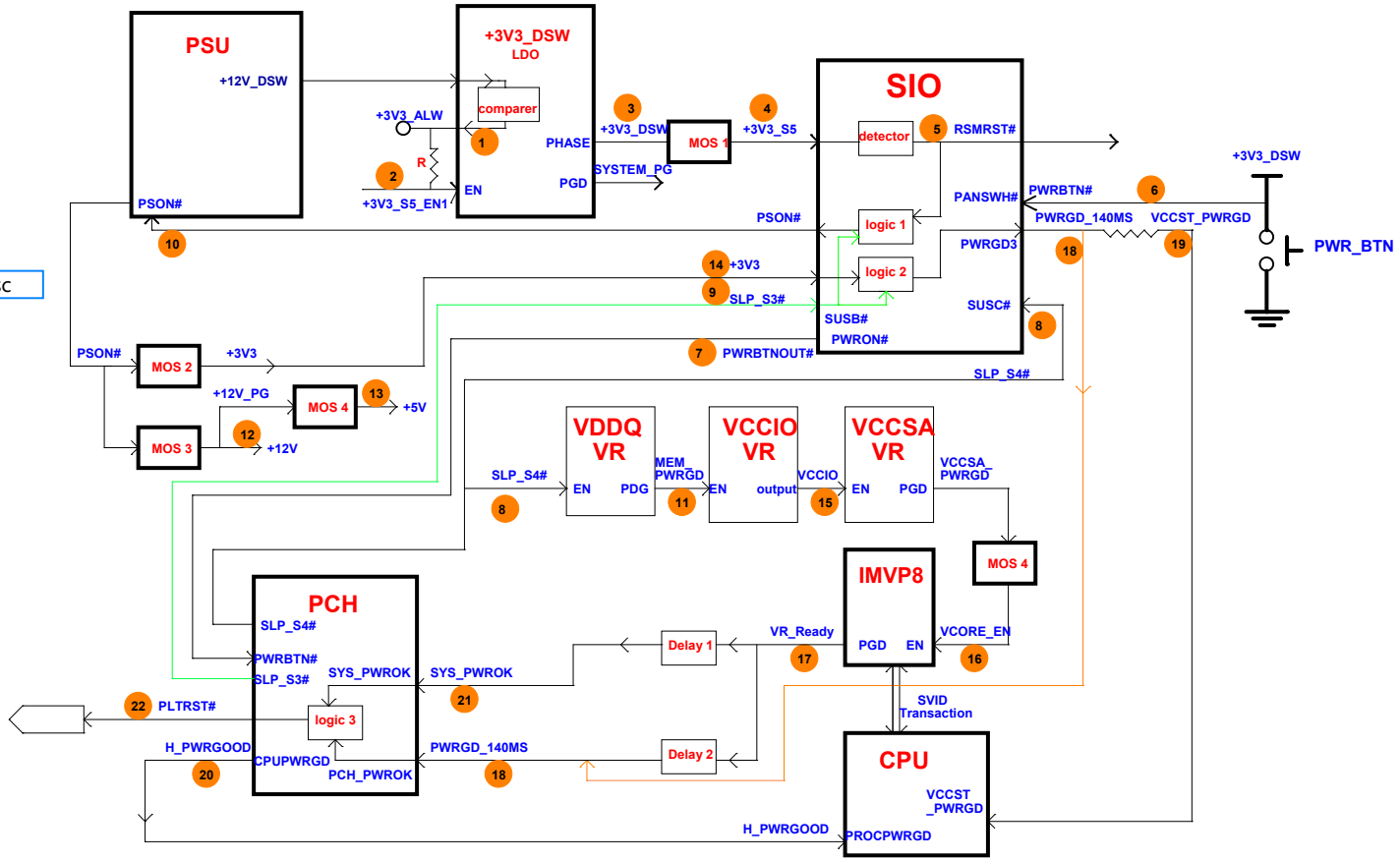


Foxconn NPCEBG Foxconn WuHan China	Hon Hai Precision Industry Co. Ltd. Phone: 027-59603888 Fax:	
Title: 02. BLOCK DIAGRAM		
Size: Custom	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 2 of 65	

Clock Diagram



RESET & POWER GOOD DIAGRAM

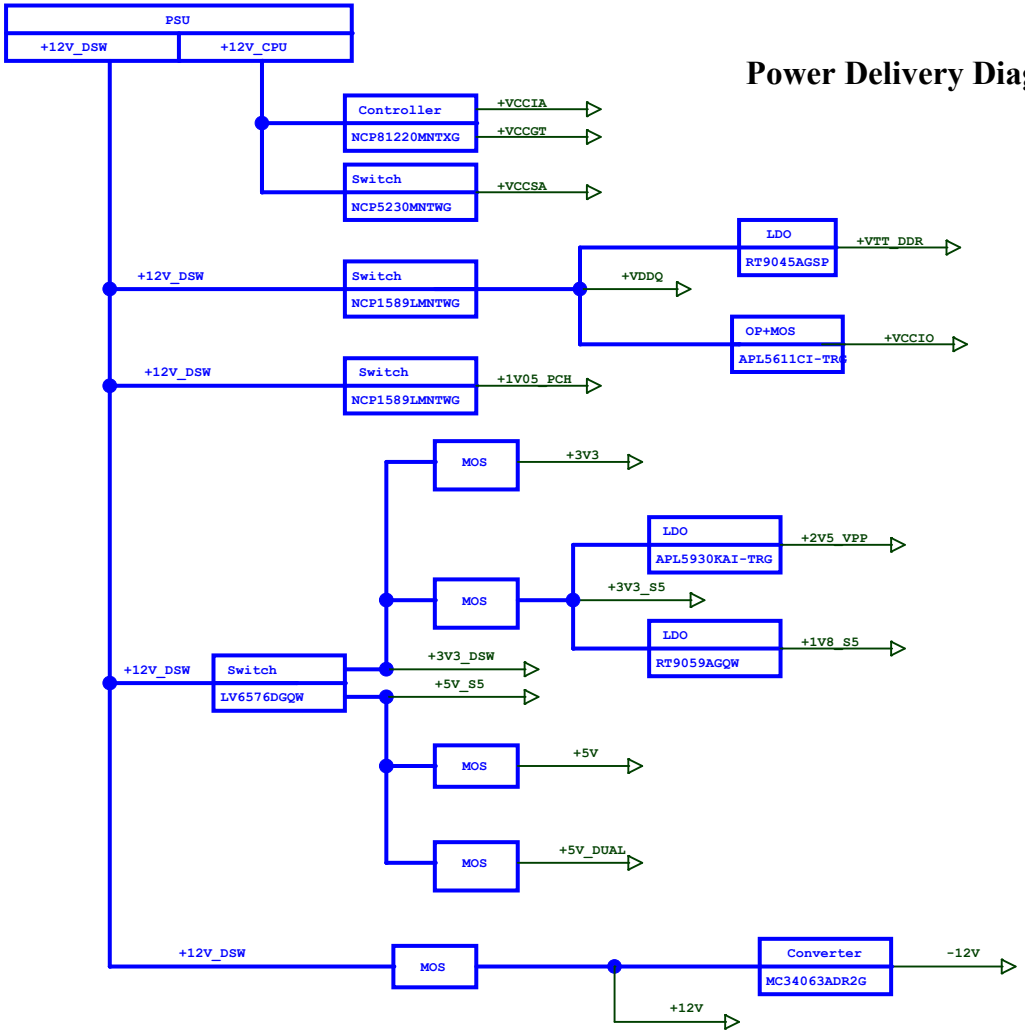


Foxconn NPCEBG
Hon Hai Precision Industry Co. Ltd.

03. CLOCKS & RESET

E365_SFF

Power Delivery Diagram



CPU	
+VCCIA	
+VCCGT	
+VCCSA	
+VCCIO	
+VDDQ	
+1V0_S5	
VCCIA	79A
VCCGT	45A
VCCSA	11.1A
VCCIO	6.4A
VDDQ	3.3A
VCCPLL_OC	0.13A
VCCST	0.08A
VCCPLL	0.15A

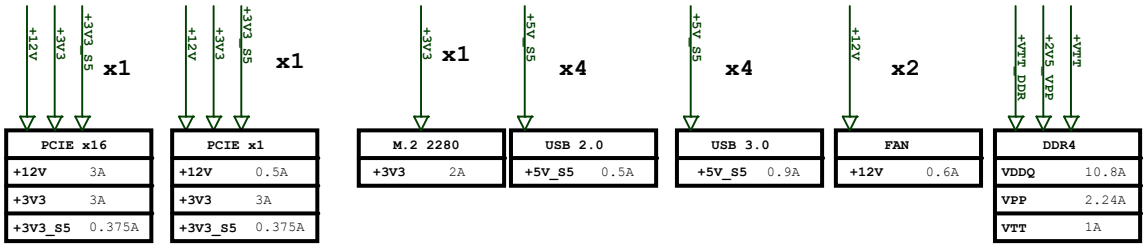
PCH	
+1V0_S5	
+3V3_S5	
+3V3_DSW	
+3V_BATT	
VCC1P05V	10.936A
VCC3P3	2.519A
VCCDSW	0.113A
VCCRTC	0.6mA

SIO	
+3V3_DSW	
+3V3	
+3V_BATT	
3VSB	0.02A
AVCC3	0.02A
VCCBT	0.01A
VBAT	1uA

Audio Codec	
+3V3_S5	
+5V_S5	
DVDD	0.04A
DVDD-IO	0.04A
PVDD	1.22A

Realtek LAN	
+3V3_S5	
DVDD33	0.065A
AVDD33	0.15A

DP2VGA	
+3V3	
IVDD33	254mA
OVDD33	1.6mA



FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn Wuhan
China
Phone: 027-59003088
Fax:

Title: 04. POWER DELIVERY

Size: D | Document Number: E365_SFF | Rev: SVT

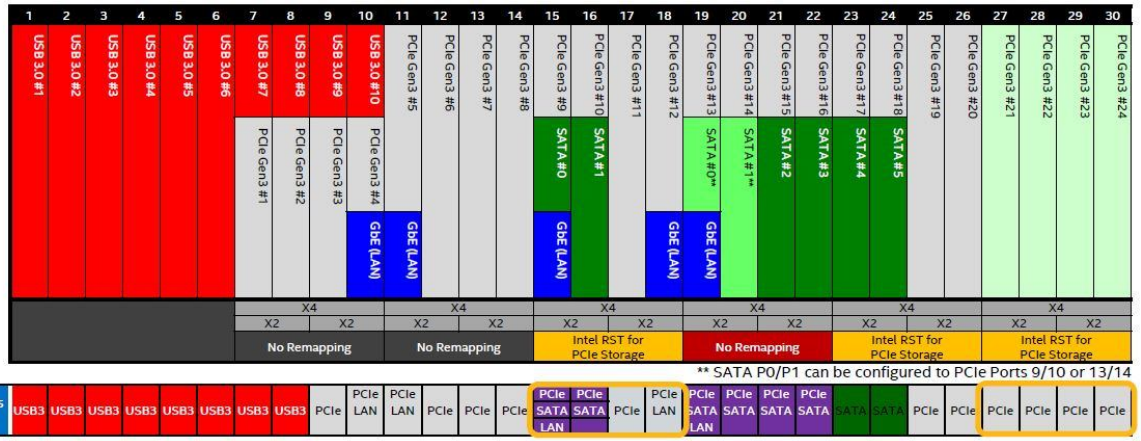
Page Modified: Friday, July 05, 2019 17:53:33 | Sheet 4 of 65

HSIO MAPPING

HSIO FULL FEATURE				RST Support
0	USB3.1 Gen1/Gen2 #1			
1	USB3.1 Gen1/Gen2 #2			
2	USB3.1 Gen1/Gen2 #3			
3	USB3.1 Gen1/Gen2 #4			
4	USB3.1 Gen1/Gen2 #5			
5	USB3.1 Gen1/Gen2 #6			
6	USB3.1 Gen1 #7		PCIe #1	
7	USB3.1 Gen1 #8		PCIe #2	
8	USB3.1 Gen1 #9		PCIe #3	
9	USB3.1 Gen1 #10		PCIe #4	
10	PCIe #5	GbE		
11	PCIe #6			
12	PCIe #7			
13	PCIe #8			
14	PCIe #9	GbE		RST
15	PCIe #10	SATA 0a		
16	PCIe #11			
17	PCIe #12	SATA 1a	GbE	
18	PCIe #13	SATA 0b	GbE	
19	PCIe #14		SATA 1b	
20	PCIe #15		SATA #2	
21	PCIe #16		SATA #3	
22	PCIe #17		SATA #4	RST
23	PCIe #18		SATA #5	
24	PCIe #19			
25	PCIe #20			
26	PCIe #21			RST
27	PCIe #22			
28	PCIe #23			
29	PCIe #24			

B360 Sku																														
RST Support																														RST
Bidding BOX B360 Usage	Rear U3/G1	Rear U3/G1	Front U3/G1	Front U3/G1	Front U3/G1	Front U3/G1	Not support				NO use	PCIE X1	LAN RTL811HN	M.2 WIFI	NO use	No use	SATA 1	SATA 2	NO use			Not support									M.2 MEMORY
			Gen1	Gen1													SATA	SATA		SATA	SATA		SATA	SATA						

Intel® B365 Chipset HSIO Lane Assignments



SKU

** SATA P0/P1 can be configured to PCIe Ports 9/10 or 13/14

FOXCONN®	Hon Hai Precision Industry Co. Ltd.			
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:			
Title: 05. HSIO MAPPING				
Size: C	Document Number: B365_SFF		Rev: SVT	
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 5 of 65		

PCH GPIO Table & Strap

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_A0	VCCPGPPA	LPC mode : RCIN# eSPI mode : GPI	LPC mode : RCIN# eSPI mode : GPI	None	None	RCIN#
GPP_A1	VCCPGPPA	LPC mode : LAD0 eSPI mode : eSPI_IO0	LPC mode : LAD0 eSPI mode : eSPI_IO0	None	None	LAD0
GPP_A2	VCCPGPPA	LPC mode : LAD1 eSPI mode : eSPI_IO1	LPC mode : LAD1 eSPI mode : eSPI_IO1	None	None	LAD1
GPP_A3	VCCPGPPA	LPC mode : LAD2 eSPI mode : eSPI_IO2	LPC mode : LAD2 eSPI mode : eSPI_IO2	None	None	LAD2
GPP_A4	VCCPGPPA	LPC mode : LAD3 eSPI mode : eSPI_IO3	LPC mode : LAD3 eSPI mode : eSPI_IO3	None	None	LAD3
GPP_A5	VCCPGPPA	LPC mode : LFRAME eSPI mode : eSPI_CS#	LPC mode : LFRAME eSPI mode : eSPI_CS#	None	None	LFRAME#
GPP_A6	VCCPGPPA	LPC mode : SERIRQ eSPI mode : ESPI_CS1#	LPC mode : SERIRQ eSPI mode : ESPI_CS1#	None	None	SERIRQ
GPP_A7	VCCPGPPA	LPC mode : PIRQA# eSPI mode : ESPI_ALERT0#	LPC mode : PIRQA# eSPI mode : ESPI_ALERT0#	None	None	Not Used
GPP_A8	VCCPGPPA	LPC mode : CLKRUN# eSPI mode : None	LPC mode : CLKRUN# eSPI mode : GPI	None	None	Not Used
GPP_A9	VCCPGPPA	LPC mode : CLKOUT_0 eSPI mode : eSPI_CLK	LPC mode : CLKOUT_0 eSPI mode : eSPI_CLK	None	None	CLKOUT_LPC0
GPP_A10	VCCPGPPA	LPC mode : CLKOUT_1 eSPI mode : None	LPC mode : CLKOUT_1 eSPI mode : GPI	None	None	CLKOUT_LPC1
GPP_A11	VCCPGPPA	LPC mode : PME#/SD_VDD2_PWR_EN# eSPI mode : None	LPC mode : PME# eSPI mode : GPI	None	None	PME#
GPP_A12	VCCPGPPA	BM_BUSY#/ISH_GP6 SX_EXIT_HOLDOFF#	GPI	None	None	Not Used
GPP_A13	VCCPGPPA	LPC mode : SUSWARN#/SUSPWRDNACK eSPI mode : None	LPC mode : SUSWARN#/SUSPWRDNACK eSPI mode : GPI	None	None	SUSWARN#
GPP_A14	VCCPGPPA	LPC mode : SUS_STAT# eSPI mode : eSPI_RESET#	LPC mode : SUS_STAT# eSPI mode : eSPI_RESET#	None	None	PCH_SUS_STAT#
GPP_A15	VCCPGPPA	LPC mode : SUS_ACK# eSPI mode : None	LPC mode : SUS_ACK# eSPI mode : GPI	None	None	SUSACK#
GPP_A16	VCCPGPPA	LPC mode : CLKOUT_48 eSPI mode : None	LPC mode : CLKOUT_48 eSPI mode : GPI	None	None	Not Used
GPP_A17	VCCPGPPA	SD_PWR_EN#/ISH_GP7	GPI	None	None	Not Used
GPP_A18	VCCPGPPA	ISH_GP0	GPI	None	None	Not Used
GPP_A19	VCCPGPPA	ISH_GP1	GPI	None	None	Not Used
GPP_A20	VCCPGPPA	ISH_GP2	GPI	None	None	Not Used
GPP_A21	VCCPGPPA	ISH_GP3	GPI	None	None	Not Used
GPP_A22	VCCPGPPA	ISH_GP4	GPI	None	None	Not Used
GPP_A23	VCCPGPPA	ISH_GP5	GPI	None	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_B0	VCCPGPPBC	GSPI0_CS1#	GPI	None	None	Not Used
GPP_B1	VCCPGPPBC	GSPI1_CS1# / TIME_SYNC1	GPI	None	None	Not Used
GPP_B2	VCCPGPPBC	VRALERT#	GPI	None	None	Not Used
GPP_B3	VCCPGPPBC	CPU_GP2	GPI	None	None	Not Used
GPP_B4	VCCPGPPBC	CPU_GP3	GPI	None	None	Not Used
GPP_B5	VCCPGPPBC	SRCCLKREQ0#	GPI	None	None	SRCCLKREQ0#
GPP_B6	VCCPGPPBC	SRCCLKREQ1#	GPI	None	None	SRCCLKREQ1#
GPP_B7	VCCPGPPBC	SRCCLKREQ2#	GPI	None	None	Not Used
GPP_B8	VCCPGPPBC	SRCCLKREQ3#	GPI	None	None	Not Used
GPP_B9	VCCPGPPBC	SRCCLKREQ4#	GPI	None	None	Not Used
GPP_B10	VCCPGPPBC	SRCCLKREQ5#	GPI	None	None	Not Used
GPP_B11	VCCPGPPBC	I2S_MCLK	GPI	None	None	Not Used
GPP_B12	VCCPGPPBC	SLP_S0#	SLP_S0#	None	None	SLP_S0#
GPP_B13	VCCPGPPBC	PLTRST#	PLTRST#	None	None	PLTRST#
GPP_B14	VCCPGPPBC	SPKR	GPO	SMI or NMI	Top Swap Override	SPKR
GPP_B15	VCCPGPPBC	GSPI0_CS#	GPI	None	None	GPP_B15
GPP_B16	VCCPGPPBC	GSPI0_CLK	GPI	None	None	Not Used
GPP_B17	VCCPGPPBC	GSPI0_MISO	GPI	None	None	Not Used
GPP_B18	VCCPGPPBC	GSPI0_MOSI	GPO	None	NO REBOOT	Strap Pin
GPP_B19	VCCPGPPBC	GSPI1_CS#	GPI	None	None	Not Used
GPP_B20	VCCPGPPBC	GSPI1_CLK	GPI	SMI or NMI	None	Not Used
GPP_B21	VCCPGPPBC	GSPI1_MISO	GPI	None	None	Not Used
GPP_B22	VCCPGPPBC	GSPI1_MOSI	GPO	None	Boot BIOS Strap Bit	Strap Pin
GPP_B23	VCCPGPPBC	SML1ALERT#/ PCHHOT#	GPO	SMI or NMI	Intel DCI-OOB Enable	Strap Pin

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_C0	VCCPGPPBC	SMB_CLK	SMB_CLK	None	None	SMBCLK
GPP_C1	VCCPGPPBC	SMB_DATA	SMB_DATA	None	None	SMBDATA
GPP_C2	VCCPGPPBC	SMBALERT#	GPO	None	TLS Confidentiality	Strap Pin
GPP_C3	VCCPGPPBC	SML0CLK	SML0CLK	None	None	Not Used
GPP_C4	VCCPGPPBC	SML0DATA	SML0DATA	None	None	Not Used
GPP_C5	VCCPGPPBC	SML0ALERT#	GPO	None	eSPI or LPC	Strap Pin
GPP_C6	VCCPGPPBC	SML1CLK	GPI	None	None	SML1CLK
GPP_C7	VCCPGPPBC	SML1DATA	GPI	None	None	SML1DATA
GPP_C8	VCCPGPPBC	UART0_RXD	GPI	None	None	Not Used
GPP_C9	VCCPGPPBC	UART0_TXD	GPI	None	None	Not Used
GPP_C10	VCCPGPPBC	UART0_RTS#	GPI	None	None	Not Used
GPP_C11	VCCPGPPBC	UART0_CTS#	GPI	None	None	Not Used
GPP_C12	VCCPGPPBC	UART1_RXD/ ISH_UART1_RXD	GPI	None	None	Not Used
GPP_C13	VCCPGPPBC	UART1_TXD/ ISH_UART1_TXD	GPI	None	None	Not Used
GPP_C14	VCCPGPPBC	UART1_RTS#/ ISH_UART1_RTS#	GPI	None	None	Not Used
GPP_C15	VCCPGPPBC	UART1_CTS#/ ISH_UART1_CTS#	GPI	None	None	Not Used
GPP_C16	VCCPGPPBC	I2SC0_SCA	GPI	None	None	Not Used
GPP_C17	VCCPGPPBC	I2SC0_SCL	GPI	None	None	Not Used
GPP_C18	VCCPGPPBC	I2SC1_SDA	GPI	None	None	Not Used
GPP_C19	VCCPGPPBC	I2SC1_SDL	GPI	None	None	Not Used
GPP_C20	VCCPGPPBC	UART2_RXD	GPI	None	None	Not Used
GPP_C21	VCCPGPPBC	UART2_TXD	GPI	None	None	Not Used
GPP_C22	VCCPGPPBC	UART2_RTS#	GPI	SMI or NMI	None	Not Used
GPP_C23	VCCPGPPBC	UART2_CTS#	GPI	SMI or NMI	None	GPP_C23

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_D0	VCCPGPPD	SPI1_CS# / SBK0 / BK0	GPI	SMI or NMI	None	Not Used
GPP_D1	VCCPGPPD	SPI1_CLK / SBK1 / BK1	GPI	SMI or NMI	None	Not Used
GPP_D2	VCCPGPPD	SPI1_MISO / SBK2 / BK2	GPI	SMI or NMI	None	Not Used
GPP_D3	VCCPGPPD	SPI1_MOSI / SBK3 / BK3	GPI	SMI or NMI	None	Not Used
GPP_D4	VCCPGPPD	ISH_I2C2_SDA / I2C3_SDA / SBK4 / BK4	GPI	SMI or NMI	None	Not Used
GPP_D5	VCCPGPPD	I2S2_SFRM / CNV_RF_RESET#	CNV_RF_RESET#	None	None	CNV_RF_RESET#
GPP_D6	VCCPGPPD	I2S2_TXD / MODEM_CLKREQ	MODEM_- CLKREQ	None	None	MODEN_CLKREQ
GPP_D7	VCCPGPPD	I2S2_RXD	GPI	None	None	Not Used
GPP_D8	VCCPGPPD	I2S2_SCLK	GPI	None	None	Not Used
GPP_D9	VCCPGPPD	ISH_SPI_CS# / GSPI2_CS0#	GPI	None	None	Not Used
GPP_D10	VCCPGPPD	ISH_SPI_CLK / GSPI2_CLK	GPI	None	None	Not Used
GPP_D11	VCCPGPPD	ISH_SPI_MISO / GP_BSSB_CLK / GSPI2_MISO	GP_BSSB_CLK	None	None	Not Used
GPP_D12	VCCPGPPD	ISH_SPI_MOSI / GP_BSSB_DI / GSPI2_MOSI	GP_BSSB_DI	None	None	Not Used
GPP_D13	VCCPGPPD	ISH_UART0_RXD / I2C2_SDA	GPI	None	None	Not Used
GPP_D14	VCCPGPPD	ISH_UART0_TXD / I2C2_SCL	GPI	None	None	Not Used
GPP_D15	VCCPGPPD	ISH_UART0_RTS# / GSPI2_CS1# / CNV_WFEN	GPI	None	None	GPP_D15
GPP_D16	VCCPGPPD	ISH_UART0_CTS# / CNV_WCEN	GPI	None	None	GPP_D16
GPP_D17	VCCPGPPD	DMIC_CLK1 / SNDW3_CLK	GPI	None	None	Not Used
GPP_D18	VCCPGPPD	DMIC_DATA1 / SNDW3_DATA	GPI	None	None	Not Used
GPP_D19	VCCPGPPD	DMIC_CLK0 / SNDW4_CLK	GPI	None	None	Not Used
GPP_D20	VCCPGPPD	DMIC_DATA0 / SNDW4_DATA	GPI	None	None	Not Used
GPP_D21	VCCPGPPD	SPI1_IO2	GPI	None	None	Not Used
GPP_D22	VCCPGPPD	SPI1_IO3	GPI	None	None	Not Used
GPP_D23	VCCPGPPD	ISH_I2C2_SCL / I2C3_SCL	GPI	None	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_E0	VCCPGPPEF	SATAXPCIE0/ SATAGP0	SATAXPCIE0 or GPI	SMI or NMI	None	Not Used
GPP_E1	VCCPGPPEF	SATAXPCIE1/ SATAGP1	SATAXPCIE1 or GPI	SMI or NMI	None	Not Used
GPP_E2	VCCPGPPEF	SATAXPCIE2/ SATAGP2	SATAXPCIE2 or GPI	SMI or NMI	None	Not Used
GPP_E3	VCCPGPPEF	CPU_GP0	GPI	SMI or NMI	None	Not Used
GPP_E4	VCCPGPPEF	SATA_DEVSLP0	GPI	SMI or NMI	None	Not Used
GPP_E5	VCCPGPPEF	SATA_DEVSLP1	GPI	SMI or NMI	None	Not Used
GPP_E6	VCCPGPPEF	SATA_DEVSLP2	GPI	SMI or NMI	None	Not Used
GPP_E7	VCCPGPPEF	CPU_GP1	GPI	SMI or NMI	None	Not Used
GPP_E8	VCCPGPPEF	SATA_LED#	GPI	None	None	SATA_LED#
GPP_E9	VCCPGPPEF	USB_OC0#	GPI	None	None	USB2_OC0#
GPP_E10	VCCPGPPEF	USB_OC1#	GPI	None	None	USB2_OC1#
GPP_E11	VCCPGPPEF	USB_OC2#	GPI	None	None	USB2_OC2#
GPP_E12	VCCPGPPEF	USB_OC3#	GPI	None	None	USB2_OC3#

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_F0	VCCPGPPEF	SATAXPCIE3/ SATAGP3	SATAXPCIE3 or GPI	None	None	Not Used
GPP_F1	VCCPGPPEF	SATAXPCIE4/ SATAGP4	SATAXPCIE4 or GPI	None	None	Not Used
GPP_F2	VCCPGPPEF	SATAXPCIE5/ SATAGP5	SATAXPCIE5 or GPI	None	None	Not Used
GPP_F3	VCCPGPPEF	SATAXPCIE6 / SATAGP6	SATAXPCIE6 or GPI	None	None	Not Used
GPP_F4	VCCPGPPEF	SATAXPCIE7 / SATAGP7	SATAXPCIE7 or GPI	None	None	Not Used
GPP_F5	VCCPGPPEF	DEVSLP3	GPI	None	None	Not Used
GPP_F6	VCCPGPPEF	DEVSLP4	GPI	None	None	Not Used
GPP_F7	VCCPGPPEF	DEVSLP5	GPI	None	None	Not Used
GPP_F8	VCCPGPPEF	DEVSLP6	GPI	None	None	Not Used
GPP_F9	VCCPGPPEF	DEVSLP7	GPI	None	None	Not Used
GPP_F10	VCCPGPPEF	SATA_SCLOCK	GPI	None	None	Not Used
GPP_F11	VCCPGPPEF	SATA_SCLOAD	GPI	None	None	Not Used
GPP_F12	VCCPGPPEF	SATA_SDATAOUT1	GPI	None	None	Not Used
GPP_F13	VCCPGPPEF	SATA_SDATAOUT2	GPI	None	None	Not Used
GPP_F14	VCCPGPPEF	PS_ON#	PS_ON#	None	None	Not Used
GPP_F15	VCCPGPPEF	USB_OC4#	GPI	None	None	USB2_OC4#
GPP_F16	VCCPGPPEF	USB_OC5#	GPI	None	None	Not Used
GPP_F17	VCCPGPPEF	USB_OC6#	GPI	None	None	USB_OC6#
GPP_F18	VCCPGPPEF	USB_OC7#	GPI	None	None	Not Used
GPP_F19	VCCPGPPEF	EDP_VDDEN	GPI	None	None	Not Used
GPP_F20	VCCPGPPEF	EDP_BKLTEN	GPI	None	None	Not Used
GPP_F21	VCCPGPPEF	EDP_BKLTCTL	GPI	None	None	Not Used
GPP_F22	VCCPGPPEF	DDPF_CTRLCLK	GPI	None	None	GPP_F22
GPP_F23	VCCPGPPEF	DDPF_CTRLDATA	GPI	None	Display Port F Detected	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_G0	VCCPGPPG_3P3 or VCCPRIM_1P8	SD_CMD	GPI	SMI	None	GPP_G0
GPP_G1	VCCPGPPG_3P3 or VCCPRIM_1P9	SD_D0	GPI	SMI	None	GPP_G1
GPP_G2	VCCPGPPG_3P3 or VCCPRIM_1P10	SD_D1	GPI	SMI	None	GPP_G2
GPP_G3	VCCPGPPG_3P3 or VCCPRIM_1P11	SD_D2	GPI	SMI	None	GPP_G3
GPP_G4	VCCPGPPG_3P3 or VCCPRIM_1P10	SD_D3	GPI	SMI	None	GPP_G4
GPP_G5	VCCPGPPG_3P3 or VCCPRIM_1P11	SD_CD#	GPI	SMI	None	GPP_G5
GPP_G6	VCCPGPPG_3P3 or VCCPRIM_1P10	SD_CLK	GPI	SMI	None	GPP_G6
GPP_G7	VCCPGPPG_3P3 or VCCPRIM_1P11	SD_WP	GPI	SMI	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_H0	VCCPGPPHK	SCRCLKRES6#	GPI	None	None	SCRCLKRES6#
GPP_H1	VCCPGPPHK	SCRCLKRES7#	GPI	None	None	Not Used
GPP_H2	VCCPGPPHK	SCRCLKRES8#	GPI	None	None	Not Used
GPP_H3	VCCPGPPHK	SCRCLKRES9#	GPI	None	None	Not Used
GPP_H4	VCCPGPPHK	SCRCLKRES10#	GPI	None	None	SCRCLKRES10#
GPP_H5	VCCPGPPHK	SCRCLKRES11#	GPI	None	None	Not Used
GPP_H6	VCCPGPPHK	SCRCLKRES12#	GPI	None	None	Not Used
GPP_H7	VCCPGPPHK	SCRCLKRES13#	GPI	None	None	SCRCLKRES13#
GPP_H8	VCCPGPPHK	SCRCLKRES14#	GPI	None	None	Not Used
GPP_H9	VCCPGPPHK	SCRCLKRES15#	GPI	None	None	Not Used
GPP_H10	VCCPGPPHK	SML2CLK	GPI	None	None	Not Used
GPP_H11	VCCPGPPHK	SML2DATA	GPI	None	None	Not Used
GPP_H12	VCCPGPPHK	SML2ALERT#	GPO	None	ESPI Flash Sharing Mode	Strap pin
GPP_H13	VCCPGPPHK	SML3CLK	GPI	None	None	Not Used
GPP_H14	VCCPGPPHK	SML3DATA	GPI	None	None	Not Used
GPP_H15	VCCPGPPHK	SML3ALERT#	GPI	None	Reserved strap	Strap pin
GPP_H16	VCCPGPPHK	SML4CLK	GPI	None	None	Not Used
GPP_H17	VCCPGPPHK	SML4DATA	GPI	None	None	Not Used
GPP_H18	VCCPGPPHK	SML4ALERT#	GPI	None	None	Not Used
GPP_H19	VCCPGPPHK	ISH_I2C0_SDA	GPI	None	None	Not Used
GPP_H20	VCCPGPPHK	ISH_I2C0_SCL	GPI	None	None	Not Used
GPP_H21	VCCPGPPHK	ISH_I2C1_SDA	GPI	None	None	Not Used
GPP_H22	VCCPGPPHK	ISH_I2C1_SDL	GPI	None	None	Not Used
GPP_H23	VCCPGPPHK	TIME_SYNC0	GPI	None	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_I0	VCCPRIM_3P3	DDPB_HPD0 / DISP_MISC0	GPI	SMI or NMI	None	DDSP_HPD0(portB)
GPP_I1	VCCPRIM_3P3	DDPC_HPD1 / DISP_MISC1	GPI	SMI or NMI	None	DDSP_HPD1(portC)
GPP_I2	VCCPRIM_3P3	DDPD_HPD2 / DISP_MISC2	GPI	SMI or NMI	None	Not Used
GPP_I3	VCCPRIM_3P3	DDPE_HPD3 / DISP_MISC3	GPI	SMI or NMI	None	EDP_HPD
GPP_I4		EDP_HPD / DISP_MISC4	GPI	None	None	Not Used
GPP_I5	VCCPRIM_3P3	DDPB_CTRLCLK	GPI	None	None	DDPB_CTRLCLK
GPP_I6	VCCPRIM_3P3	DDPB_CTRLDATA	GPO	None	Display Port B Detected	DDPB_CTRLDATA
GPP_I7	VCCPRIM_3P3	DDPC_CTRLCLK	GPI	None	None	DDPC_CTRLCLK
GPP_I8	VCCPRIM_3P3	DDPC_CTRLDATA	GPO	None	Display Port C Detected	DDPC_CTRLDATA
GPP_I9	VCCPRIM_3P3	DDPD_CTRLCLK	GPI	None	None	Not Used
GPP_I10	VCCPRIM_3P3	DDPD_CTRLDATA	GPO	None	Display Port D Detected	Not Used
GPP_I11	VCCPRIM_3P3	M2_SKT2_CFG0	GPI	None	None	Not Used
GPP_I12	VCCPRIM_3P3	M2_SKT2_CFG1	GPI	None	None	Not Used
GPP_I13	VCCPRIM_3P3	M2_SKT2_CFG2	GPI	None	None	Not Used
GPP_I14	VCCPRIM_3P3	M2_SKT2_CFG3	GPI	None	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_J0	VCCPRIM_1P8	CNV_PA_BLANKING	GPI	None	None	Not Used
GPP_J1	VCCPRIM_1P8	CPU_VCCIO_PWR_GATE#	CPU_VCCIO_PWR_GATE#	None	None	Not Used
GPP_J2	VCCPRIM_1P8	None	GPI	None	None	Not Used
GPP_J3	VCCPRIM_1P8	None	GPI	None	None	Not Used
GPP_J4	VCCPRIM_1P8	NV_BRI_DT / UART0_RTS#	CNV_BRI_DT	None	None	CNV_BRI_DT
GPP_J5	VCCPRIM_1P8	CNV_BRI_RSP / UART0_RXD	CNV_BRI_RSP	None	None	CNV_BRI_RSP
GPP_J6	VCCPRIM_1P8	CNV_RGI_DT / UART0_TXD	CNV_RGI_DT	None	None	CNV_RGI_DT
GPP_J7	VCCPRIM_1P8	CNV_RGI_RSP / UART0_CTS#	CNV_RGI_RSP	None	None	CNV_RGI_RSP
GPP_J8	VCCPRIM_1P8	CNV_MFUART2_RXD	GPI	None	None	Not Used
GPP_J9	VCCPRIM_1P8	CNV_MFUART2_TXD	GPO	None	1.8 V VCCSPI	Strap pin
GPP_J10	VCCPRIM_1P8	None	GPI	None	None	Not Used
GPP_J11	VCCPRIM_1P8	A4WP_PRESENT	A4WP_PRESENT	None	None	Not Used

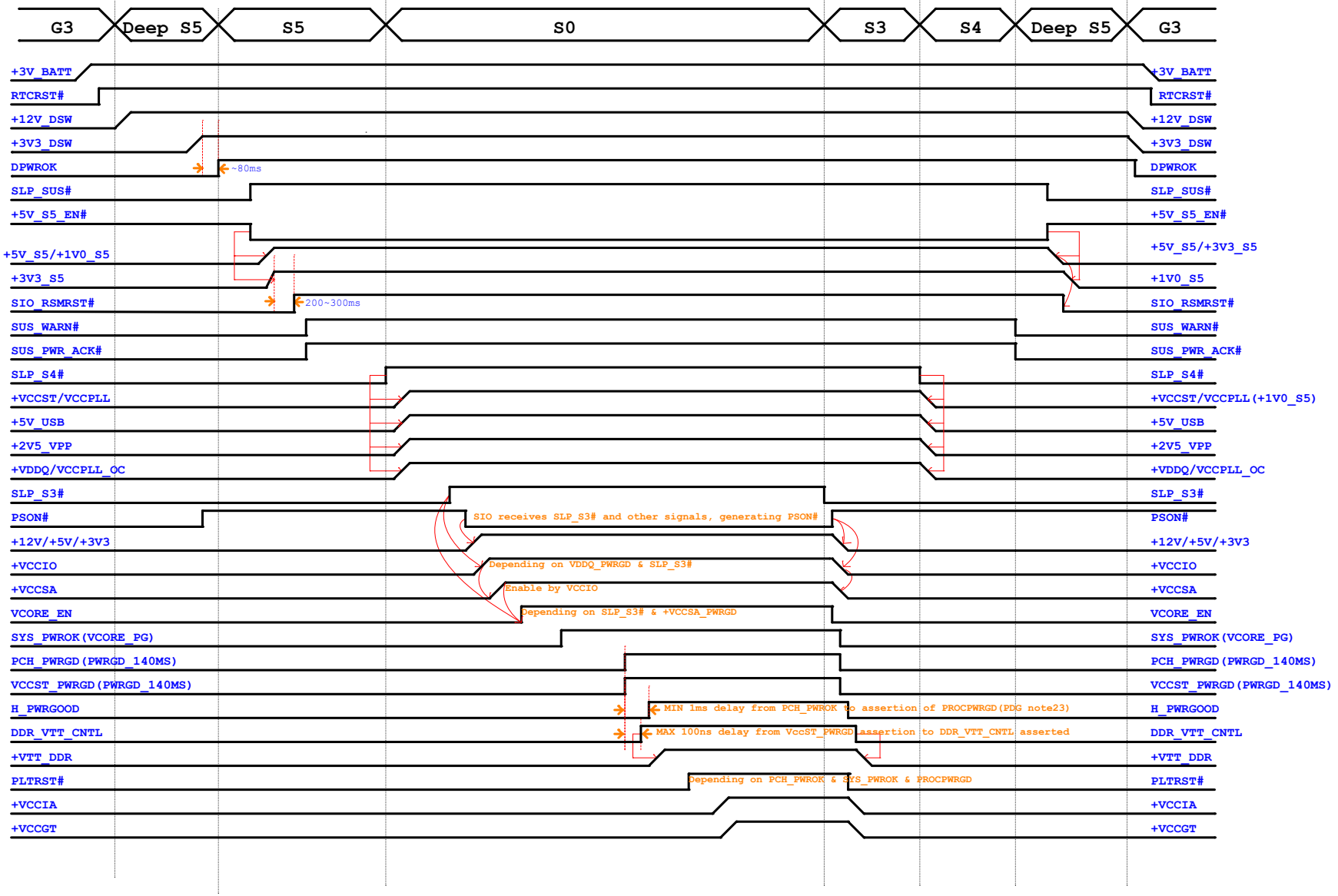
	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPP_K0	VCCPGPPHK	None	GPI	None	None	Not Used
GPP_K1	VCCPGPPHK	None	GPI	None	None	GPP_K1
GPP_K2	VCCPGPPHK	None	GPI	None	None	Not Used
GPP_K3	VCCPGPPHK	None	GPI	None	None	GPP_K3
GPP_K4	VCCPGPPHK	None	GPI	None	None	GPP_K4
GPP_K5	VCCPGPPHK	None	GPI	None	None	Not Used
GPP_K6	VCCPGPPHK	None	GPI	None	None	Not Used
GPP_K7	VCCPGPPHK	None	GPI	None	None	Not Used
GPP_K8	VCCPGPPHK	Reserved	Reserved	None	None	GPP_K8
GPP_K9	VCCPGPPHK	Reserved	Reserved	None	None	GPP_K9
GPP_K10	VCCPGPPHK	Reserved	Reserved	None	None	GPP_K10
GPP_K11	VCCPGPPHK	Reserved	Reserved	None	None	Not Used
GPP_K12	VCCPGPPHK	GSXDOUT	GPI	None	None	Not Used
GPP_K13	VCCPGPPHK	GSXSLOAD	GPI	None	None	Not Used
GPP_K14	VCCPGPPHK	GSXDIN	GPI	None	None	GPP_K14
GPP_K15	VCCPGPPHK	GSXSRESET#	GPI	None	None	Not Used
GPP_K16	VCCPGPPHK	GSXCLK	GPI	None	None	Not Used
GPP_K17	VCCPGPPHK	ADR_COMPLETE	GPI	None	None	Not Used
GPP_K18	VCCPGPPHK	NMI#	GPI	None	None	GPP_K18
GPP_K19	VCCPGPPHK	SMI#	GPI	None	None	Not Used
GPP_K20	VCCPGPPHK	Reserved	GPI	Reserved	None	Not Used
GPP_K21	VCCPGPPHK	Reserved	GPI	Reserved	None	Not Used
GPP_K22	VCCPGPPHK	IMGCLKOUT0	GPI	None	None	Not Used
GPP_K23	VCCPGPPHK	IMGCLKOUT1	GPI	None	None	Not Used

	Power Rail	Multiplexed with	Defalut	SMI or NMI	Strap Function	Function
GPD0	VCCDSW_3P3	BATLOW#	BATLOW#	None	None	Not Used
GPD1	VCCDSW_3P3	ACPRESENT	ACPRESENT	None	None	Not Used
GPD2	VCCDSW_3P3	LAN_WAKE#	LAN_WAKE#	None	None	Not Used
GPD3	VCCDSW_3P3	PWRBTN#	PWRBTN#	None	None	PWRBTN#
GPD4	VCCDSW_3P3	SLP_S3#	SLP_S3# or GPI	None	None	SLP_S3#
GPD5	VCCDSW_3P3	SLP_S4#	SLP_S4# or GPI	None	None	SLP_S4#
GPD6	VCCDSW_3P3	SLP_A#	SLP_A# or GPI	None	None	Not Used
GPD7	VCCDSW_3P3	None	GPO	Reserved	Reserved	Strap pin
GPD8	VCCDSW_3P3	SUS_CLK	SUS_CLK	None	None	SUS_CLK
GPD9	VCCDSW_3P3	SLP_WLAN#	SLP_WLAN# or GPI	None	None	Not Used
GPD10	VCCDSW_3P3	SLP_S5#	SLP_S5# or GPI	None	None	SLP_S5#
GPD11	VCCDSW_3P3	LANPHYPC	LANPHYPC or GPI	None	None	Not Used

PCH Strapping

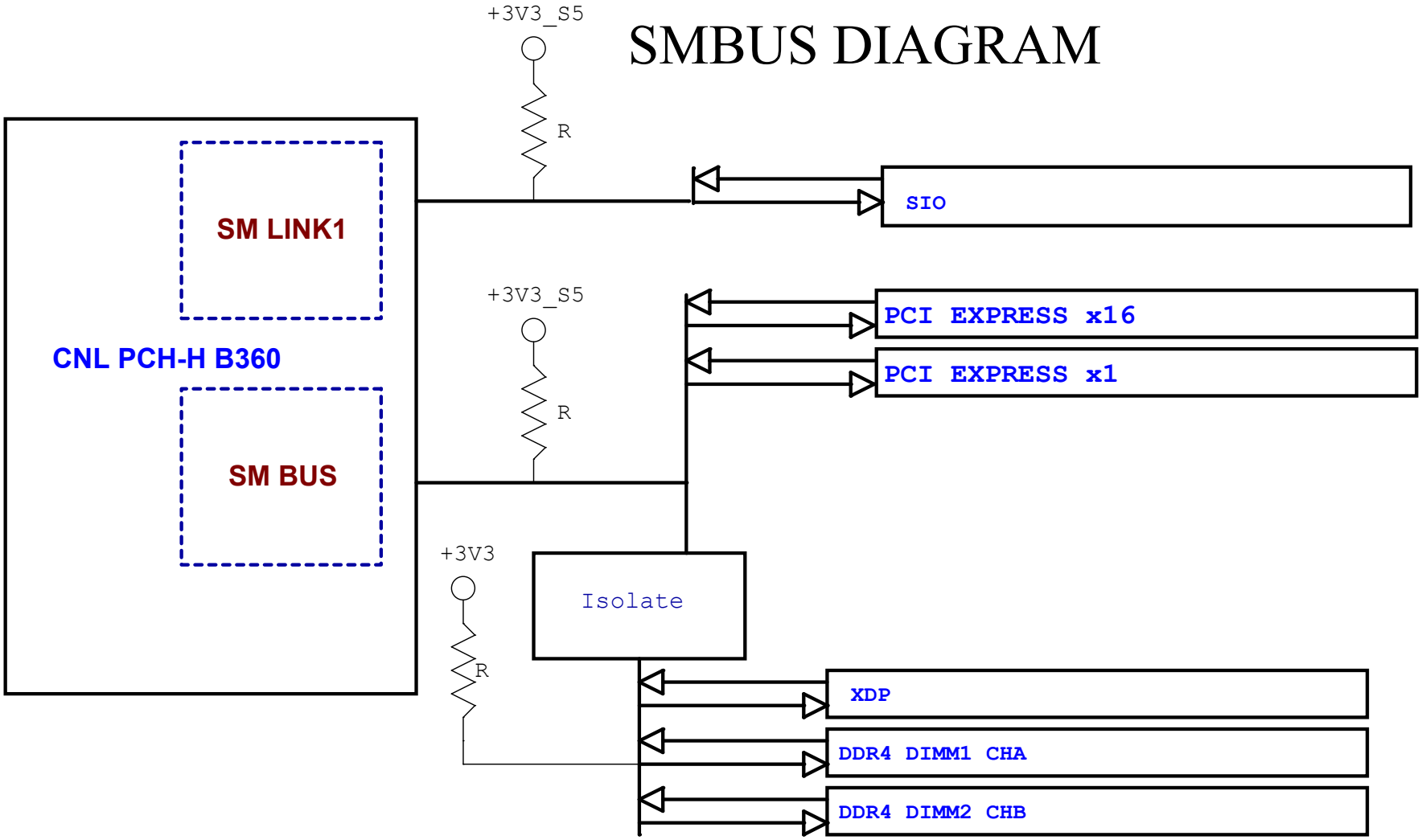
Signal	Usage	When Sampled	Comment
GPP_B14 / SPKR	Top Swap Override	Rising edge of PCH_PWROK	The signal has a weak internal pull-down. 0 = Disable ※Top Swap§ mode. (Default) 1 = Enable ※Top Swap§ mode
GPP_B18 / GSPI0_MOSI	No Reboot	Rising edge of PCH_PWROK	The signal has a weak internal pull-down. 0 = Disable ※No Reboot§ mode. (Default) 1 = Enable ※No Reboot§ mode
GPP_C2 / SMBALERT#	TLS Confi-dentiality	Rising edge of RSMRST#	This signal has a weak internal pull-down. 0 = Disable Intel ME Crypto Transport Layer Security (TLS) cipher suite (no confidentiality). (Default) 1 = Enable Intel ME Crypto Transport Layer Security (TLS) cipher suite (with confidentiality).
GPP_B22 / GSPI1_MOSI	Boot BIOS Strap Bit BBS	Rising edge of PCH_PWROK	This Signal has a weak internal pull-down. This field determines the destination of accesses to the BIOS memory range. Also controllable using Boot BIOS Destination bit (Bus0, Device31, Function0, offset BCh, bit 6). Bit 6 Boot BIOS Destination 0 SPI (Default) 1 LPC
GPP_C5 / SML0ALERT#	eSPI or LPC	Rising edge of RSMRST#	This signal has a weak internal pull-down. 0 = LPC is selected (for EC). (Default) 1 = eSPI is selected (for EC).
SPI0_MOSI	Reserved	Rising edge of RSMRST#	External pull-up is required . Recommend 100K if pulled up to 3.3V or 75K if pulled up to 1.8V. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling.
GPP_H15 / SML3ALERT#	Reserved	Rising edge of RSMRST#	External pull-up is required . Recommend 100K if pulled up to 3.3V or 75K if pulled up to 1.8V. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling.
GPP_B23 / SML1ALERT# PCHHOT#	Intel /DCI-OOB	Rising edge of RSMRST#	This signal has an internal pull-down. 0 = Disable Intel DCI-OOB (Default) 1 = Enable Intel DCI-OOB
SPI0_IO2	Reserved	Rising edge of RSMRST#	External pull-up is required . Recommend 100K if pulled up to 3.3V or 75K if pulled up to 1.8V. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling.
SPI0_IO3	Reserved	Rising edge of RSMRST#	External pull-up is required . Recommend 100K if pulled up to 3.3V or 75K if pulled up to 1.8V. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling.
HDA_SDO / I2S0_TXD	Flash Descriptor Security Override	Rising edge of PCH_PWROK	This signal has a weak internal pull-down. 0 = Enable security measures defined in the Flash Descriptor. (Default) 1 = Disable Flash Descriptor Security (override).
GPP_H12 / SML2ALERT#	eSPI Flash Sharing Mode	Rising edge of RSMRST#	This signal has a weak internal pull-down. 0 = Master Attached Flash Sharing (MAFS) enabled (Default) 1 = Slave Attached Flash Sharing (SAFS) enabled.
GPP_I6 / DDPB_CTRLDATA	Display Port B Detected	Rising edge of PCH_PWROK	This signal has a weak internal pull-down. 0 = Port B is not detected. (Default) 1 = Port B is detected.
GPP_I8 / DDPC_CTRLDATA	Display Port C Detected	Rising edge of PCH_PWROK	This signal has a weak internal Pull-down. 0 = Port C is not detected. (Default) 1 = Port C is detected
GPP_I10 / DDPD_CTRLDATA	Display Port D Detected	Rising edge of PCH_PWROK	This signal has a weak internal pull-down. 0 = Port D is not detected. (Default) 1 = Port D is detected.
GPP_F23	Display Port F Detected	Rising edge of PCH_PWROK	This signal has a weak internal pull-down. 0 = Port F is not detected. (Default) 1 = Port F is detected.
GPP_J4 / CNV_BRI_DT / UART0_RTS#	XTAL Frequency Select	Rising edge of RSMRST#	This signal has a weak internal pull-down. An external pull-up is required on this strap since 38.4 MHz XTAL is not supported on the PCH. 0 = 38.4 XTAL frequency selected. (Default) 1 = 24MHz XTAL frequency selected.
GPP_J6 / CNV_RGI_DT / UART0_TXD	M.2 CNV Mode Select	Rising edge of RSMRST#	An external pull-up or pull-down is required. 0 = Integrated CNVi enable. 1 = Integrated CNVi disable.
GPP_J9	1.8V VCCPSPI	Rising edge of RSMRST#	The signal has a weak internal pull-down 0 = VCCSPI is connected to 3.3V rail 1 = VCCSPI is connected to 1.8V rail
GPD7	Reserved	Rising edge of DSW_PWROK	External pull-up is required. Recommend 100K. This strap should sample HIGH. There should NOT be any on-board device driving it to opposite direction during strap sampling

DEEP SLEEP POWER SEQUENCE DIAGRAM



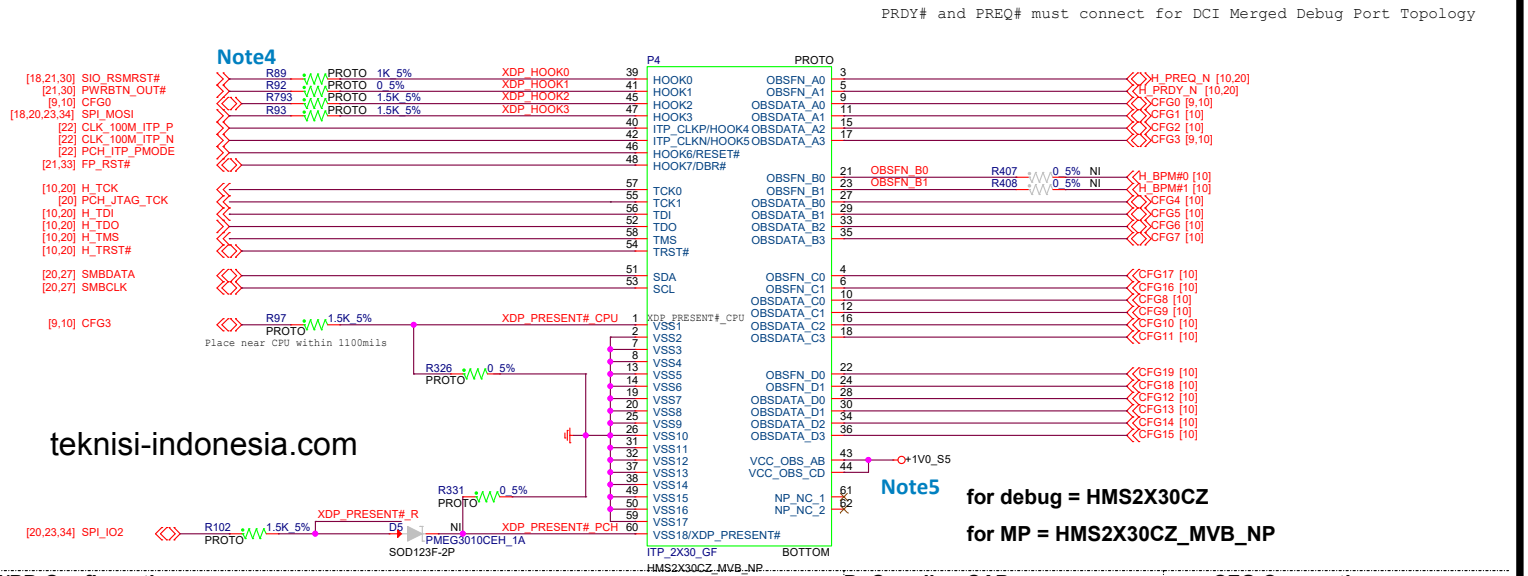
FOXCONN	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 07. POWER SEQUENCE DIAGRAM		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 7 of 65

SMBUS DIAGRAM

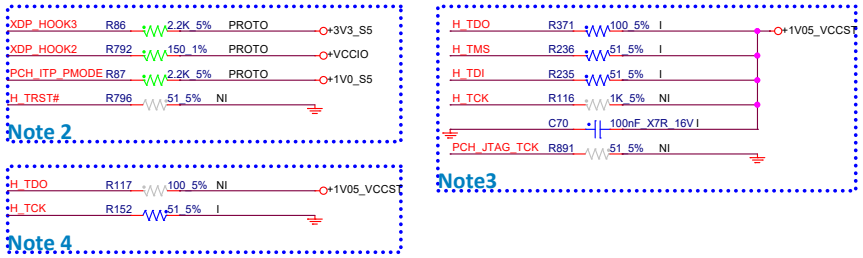


FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 08. SMBUS DIAGRAM		
Size: B	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 8 of 65	

Intel MCP XDP Debug Connector

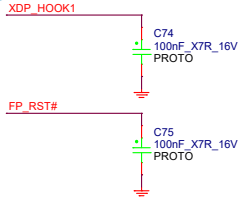


HW PU/PD Configuration



DeCoupling CAP

Note 2



CFG Connection

Design Note

Note 1: XDP Connector Footprint

NPI
HMS2X30CZ
MVB
HMS2X30CZ_MVB_NP

Note 2

C74 Place close to P4 Connector
C75 Place close to P4 Connector
R792 Place close to P4 Connector
R86 Place close to P4 Connector
R87 Place close to P4 Connector
R796 Close P4

Note3

R891 Place Close to U4 Within 1.1"
R116 Place Close to U4 Within 1.1"
R235 Place Close to U4 Within 1.5"
R236 Place Close to U4 Within 1.5"
R371 Place Close to U4 Within 1.5"
C70 Place Close to R235, R236, R371

Note4

R793 Place close to T Point
R89 Place close to T Point
R102 Place close to Tpoint within 500mils (PCH_SPI_IO2)
R93 Close to T-Point of SPI_MOSI < 1100mils
R152 Place Close to CPU Within 1.5"
R117 Place Close to CPU Within 1.5"

Note5

P4.43 and P4.44 Power trace width = 10mils

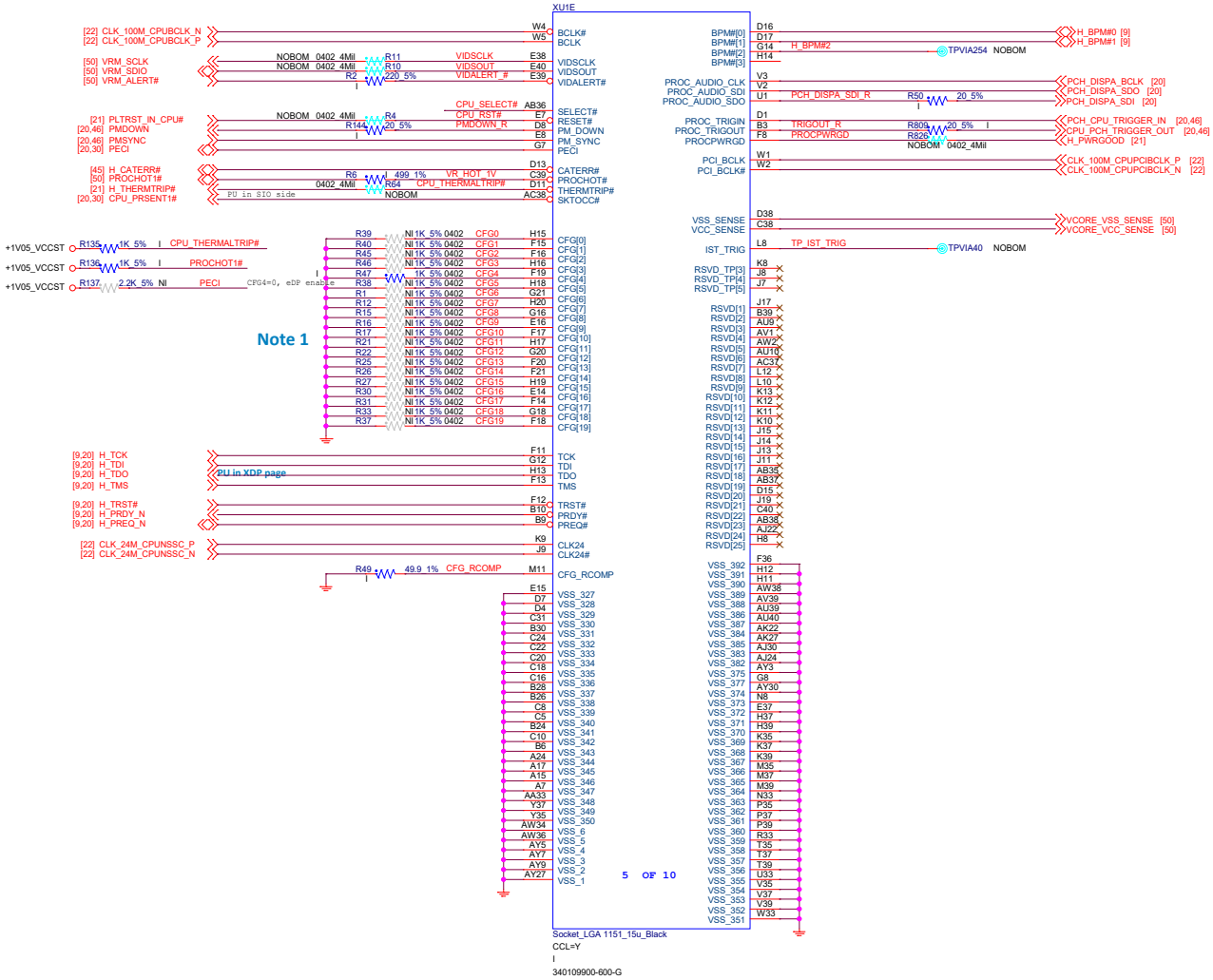
BOM Change list for MP PCA if need to enable DCI/XDP:
1.Remove P4 soldermask on pad and install P4 XDP connector.
2.Install D5,R86,R87,R89,R92,R93,R97,R102,R792,R793

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title	09. CPU XDP	
Size: Custom	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019	17:11:43 (UTC/GMT)	Sheet 9 of 65

MCP- VRM/CLK/CTRL/JTAG

CPU - D part



Note 1

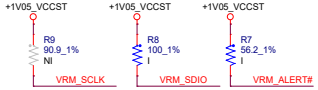
PEI-E CONFIG TABLE		
CFG6	CFG5	PCI-E CONFIG
0	0	X8 X4 X4
0	1	RESERVED
1	0	X8 X8
1	1	X16

ALL PINS HAVE INTERNAL PULL-UPS

CFG	High	Low	Strap Description
0	NORMAL	STALL	EAR
1			RESERVED
2	NORMAL	REVERSE	PEG_LANE_REVERSAL
3			RESERVED
4	DISABLE	ENABLE "0"	eDP enable
5	ENABLE "1"	DISABLE "0"	PEG0CFGSEL[0] x16
6	ENABLE "1"	DISABLE "0"	PEG0CFGSEL[1] x16
7	RESET_N	BIOS REQ	PEG_DEFER_TRAINING
8-19			RESERVED

CPU Part E - HW PU/PD and Decoupling

VRM Pull-Up

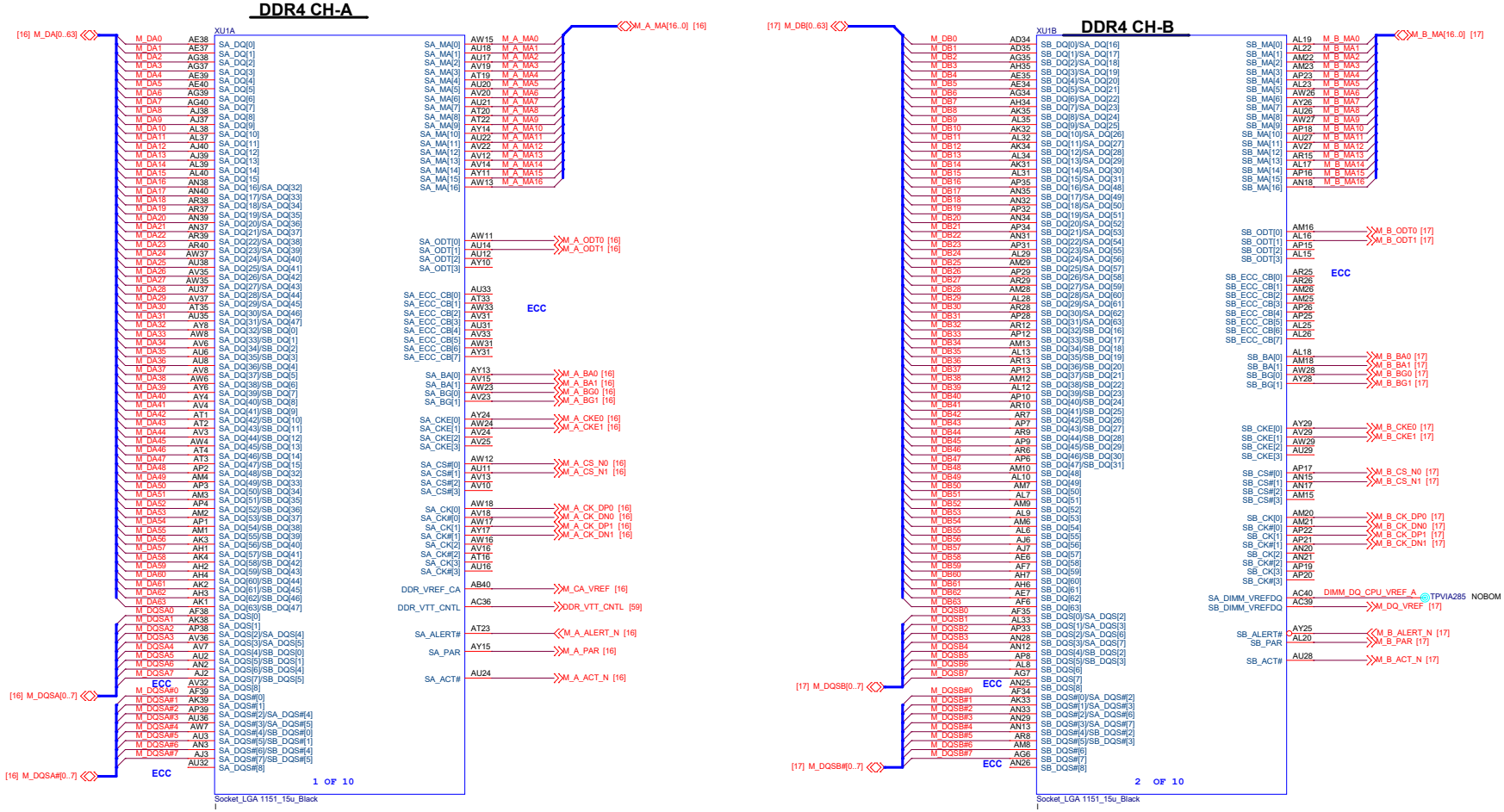


CFG Connection

FOXCONN	Hon Hai Precision Industry Co. Ltd.		
Foxconn NPCEBG			
Foxconn WuHan China	Phone: 027-59603888 Fax:		
Title: 10. MCP- VRM/CLK/CTRL/JTAG			
Size: C	Document Number: B365_SFF		Rev: SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 10 of 65	

MCP- DDR4 CHANNEL A & B

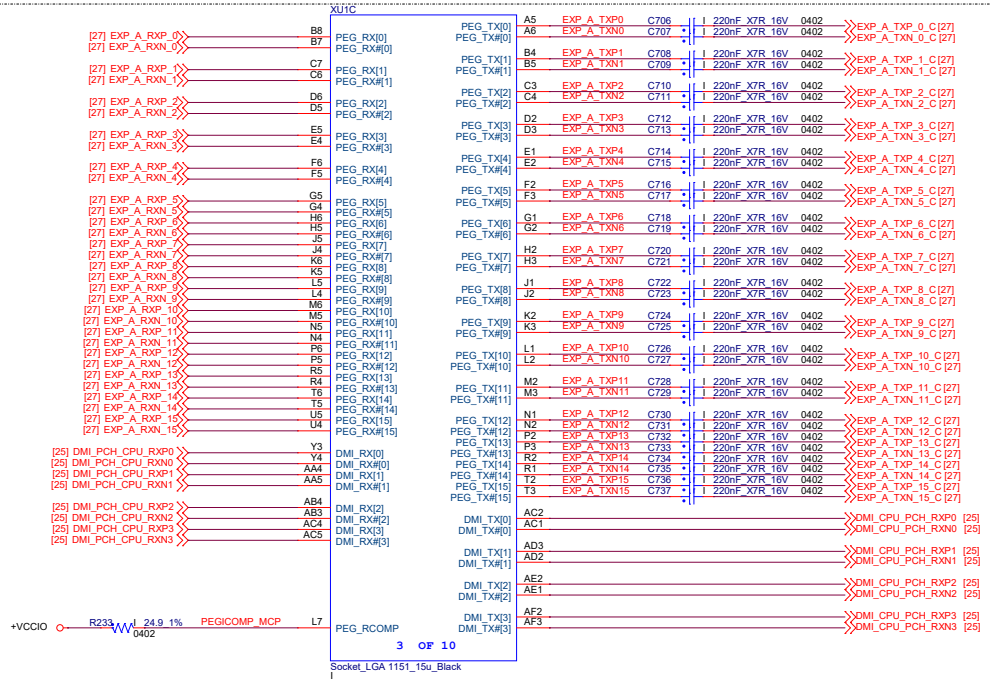
CPU - A/B part
DDR Channel A/B



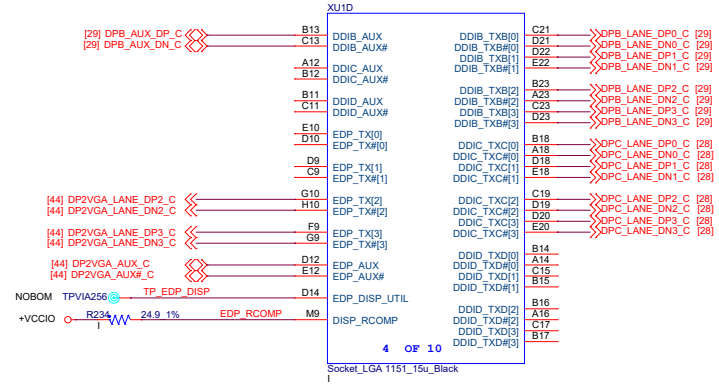
Hon Hai Precision Industry Co. Ltd.		
Foxconn NPCEBG		
Foxconn WuHan China	Phone: 027-59603888	
Title: 11. MCP- DDR4 CHANNEL A & B		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:16:33 (UTC/GMT)	Sheet 11 of 65	

MCP - PEG, DMI, DDI

CPU - C part
PEG&DMI



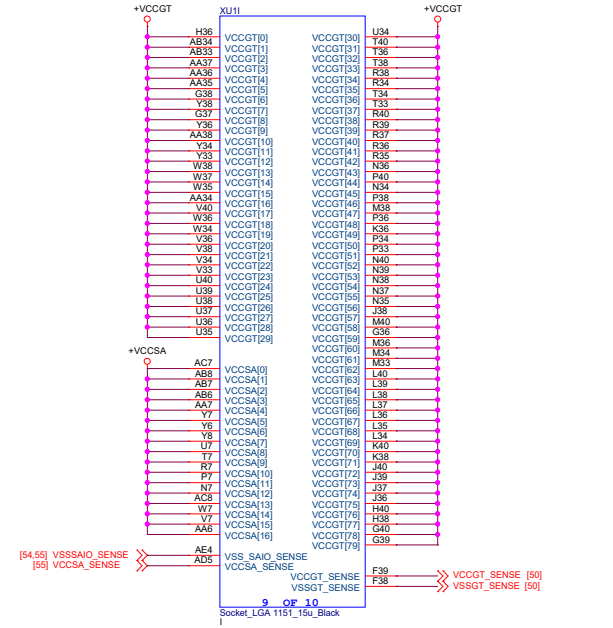
CPU - D part
Displayport

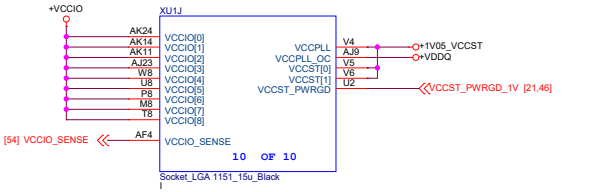


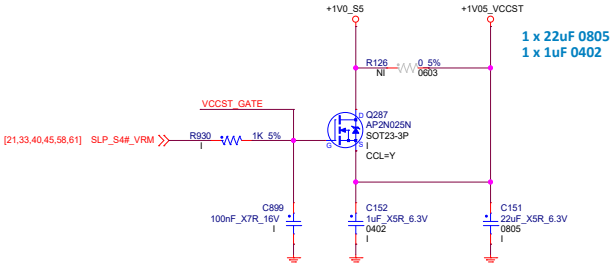
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.
Foxconn WuHan China	Phone: 027-59603888 Fax:
Title	12. MCP- PCI/DMI/DDI
Size: Custom	Document Number: B365_SFF
Rev	SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 12 of 65

MCP- POWER CONNECTIONS

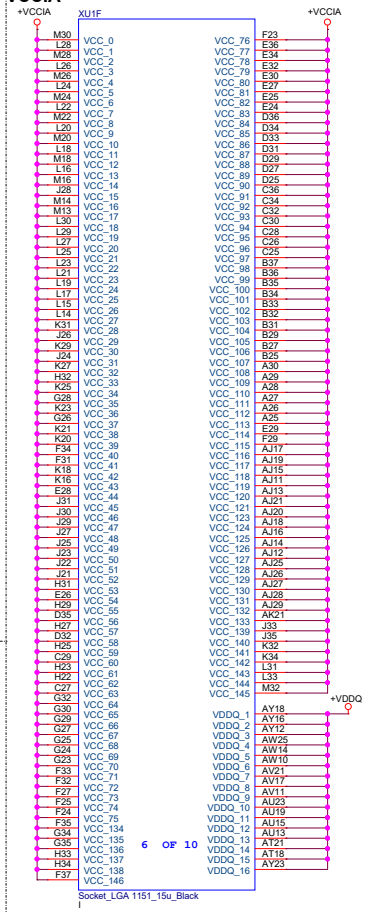
CPU - I part
VCCGT and VCCSA



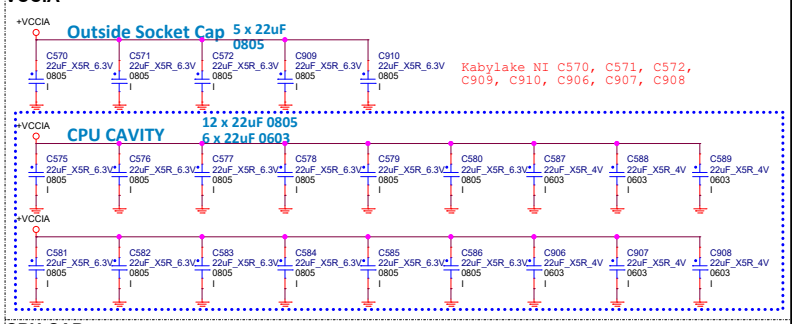




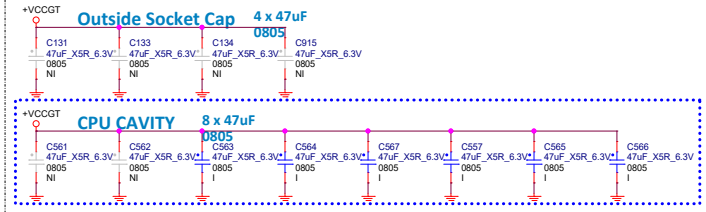
CPU - F part
VCCIA



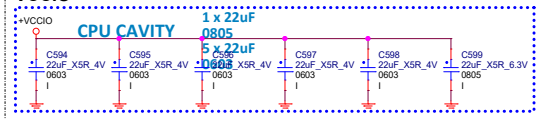
CPU CAPs
VCCIA



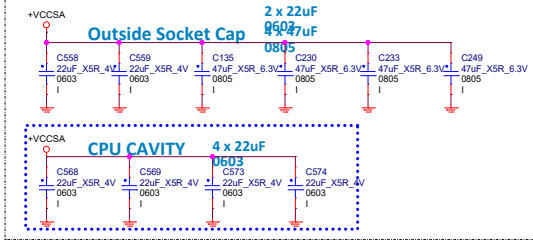
CPU CAPs
+VCCGT



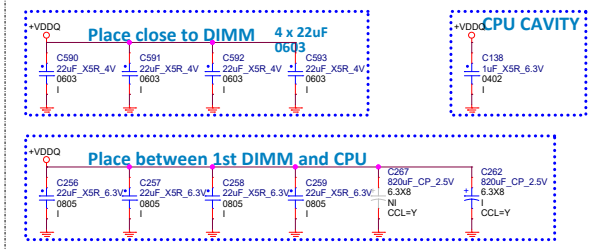
CPU CAPs
+VCCIO



CPU CAPs
+VCCSA



CPU CAPs
+VDDQ



Design Note

VCCPLL , Iccmax=150mA / 1V
VCCST , Iccmax=80mA / 1V
VCCIO, Iccmax=6.4A / 0.95V
VCCGT, Iccmax=45A / 1.15V
VCCIA, Iccmax=79A / 1.15V
VDDQ, Iccmax=3.3A / 1.2V

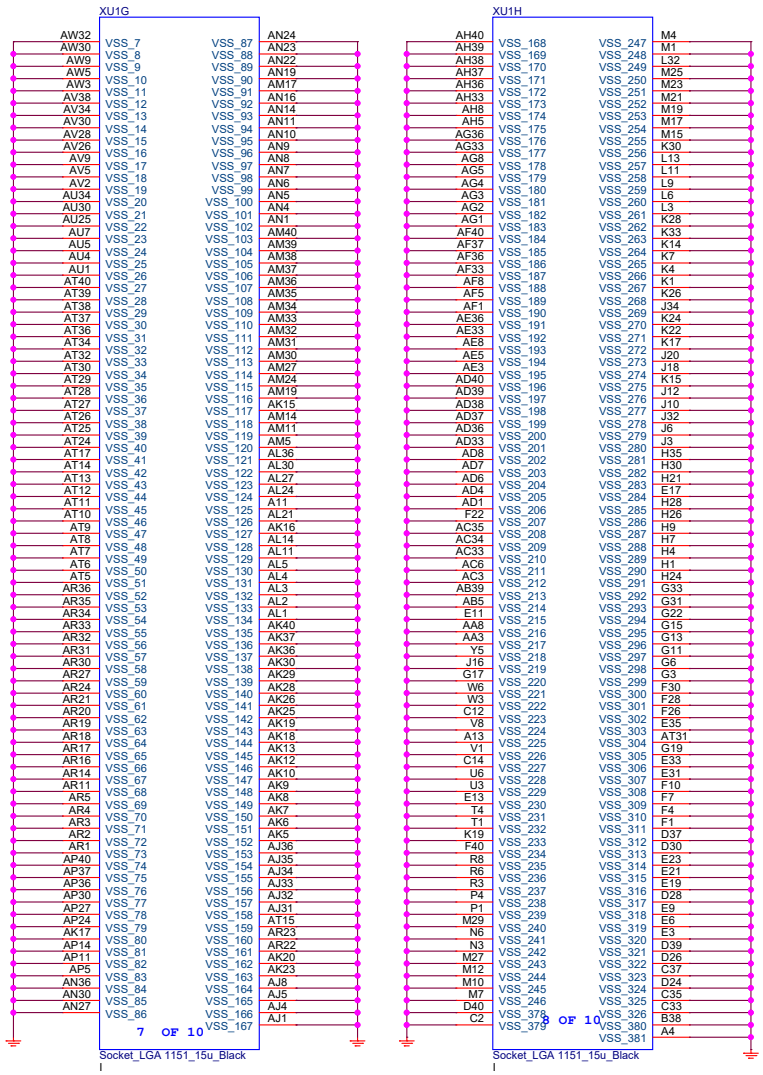
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 13. MCP- POWER CONNECTIONS

Size: C | Document Number: B365_SFF | Rev: SVT

MCP- VSS

CPU - G/H part
VSS



www.teknisi-indonesia.com

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 14. MCP- VSS

Size: Custom | Document Number: B365_SFF | Rev: SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 14 of 65

Hon Hai Precision Industry Co. Ltd.

Foxconn NPCEBG

Foxconn WuHan
China

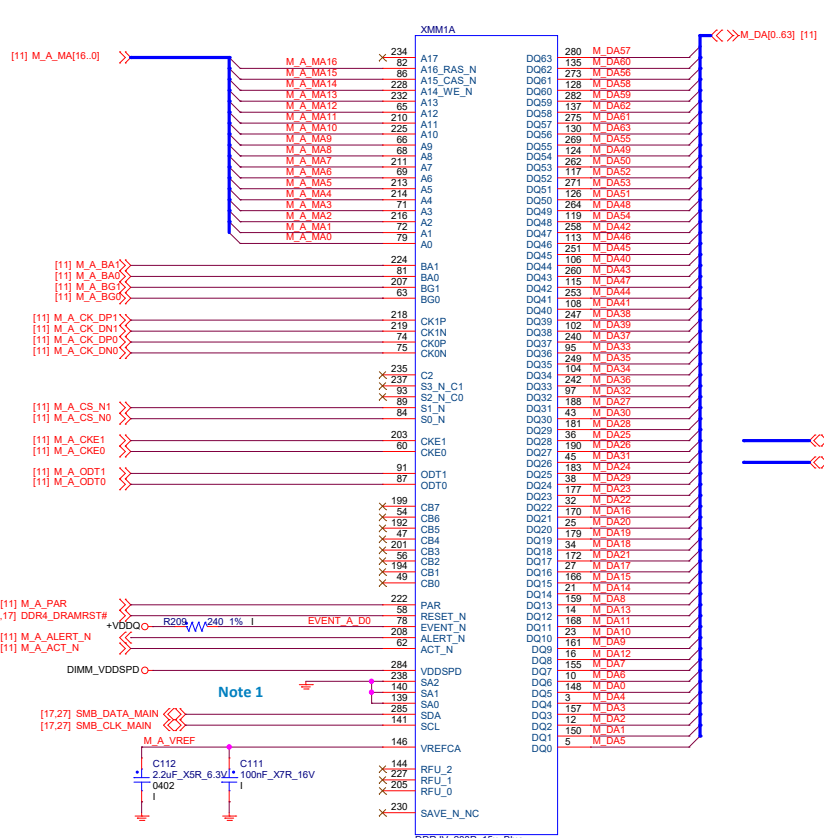
Phone: 027-59603888
Fax:

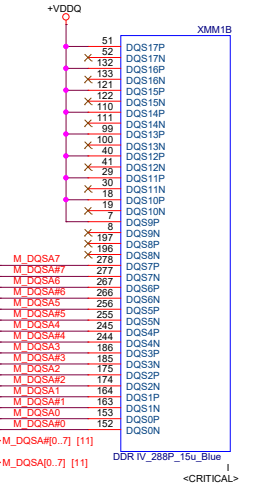
Title

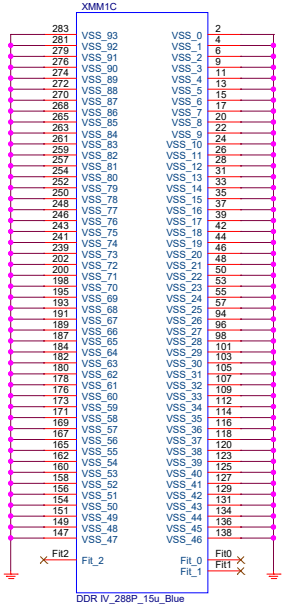
15. BLANK

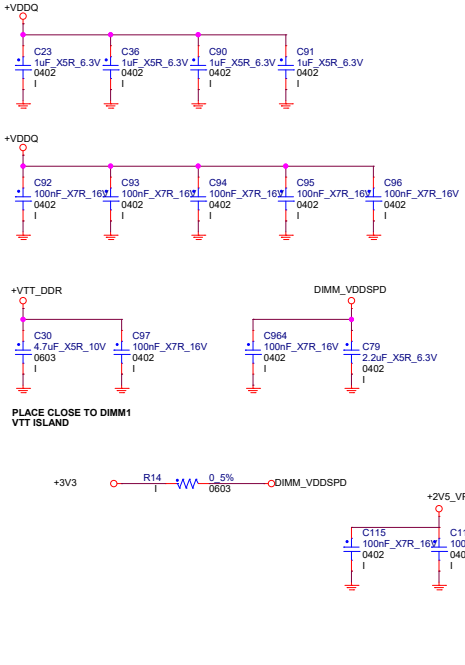
Size	Document Number	Rev
B	B365_SFF	SVT

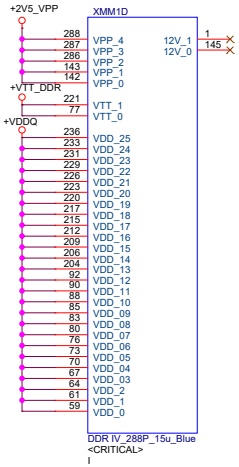
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) Sheet 15 of 65

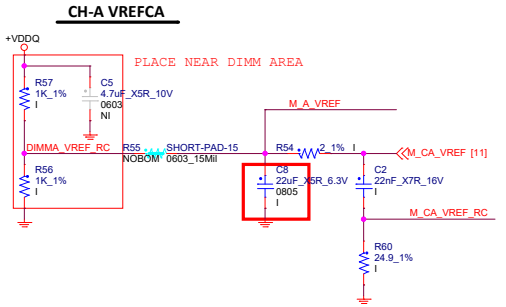












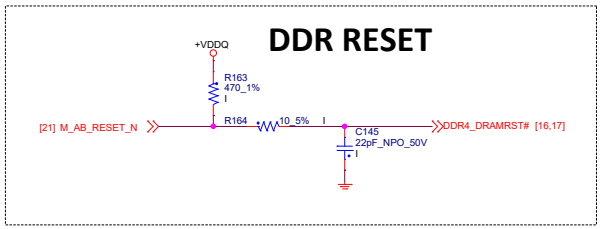
Design Note

Note 1

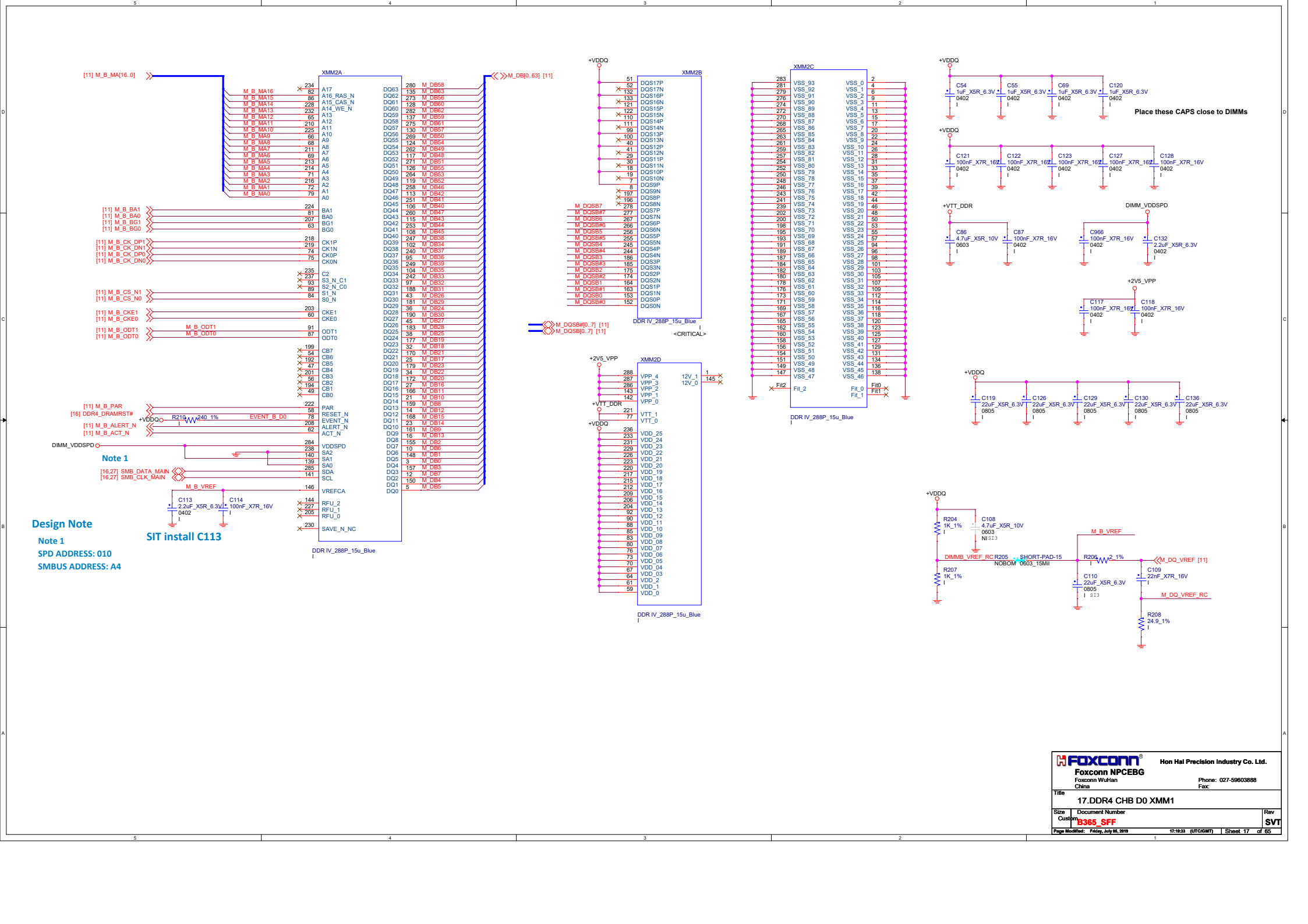
SPD ADDRESS: 000

SMBUS ADDRESS: A0

SIT install C112



Foxconn NPCEBG Foxconn WuHan China	Hon Hai Precision Industry Co. Ltd. Phone: 027-59603888 Fax:	
Title: 16.DDR4 CHA D0 XMM2		
Size: Custom	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 16 of 65


XMM2A
XMM2B
XMM2C
XMM2D
DDR IV_288P_15u_Blue
Note 1
SPD ADDRESS: 010
SMBUS ADDRESS: A4
Design Note
SIT install C113
Place these CAPS close to DIMMs
Foxconn NPCEBG
Hon Hai Precision Industry Co. Ltd.
17.DDR4 CHB D0 XMM1
B365_SFF
SVT

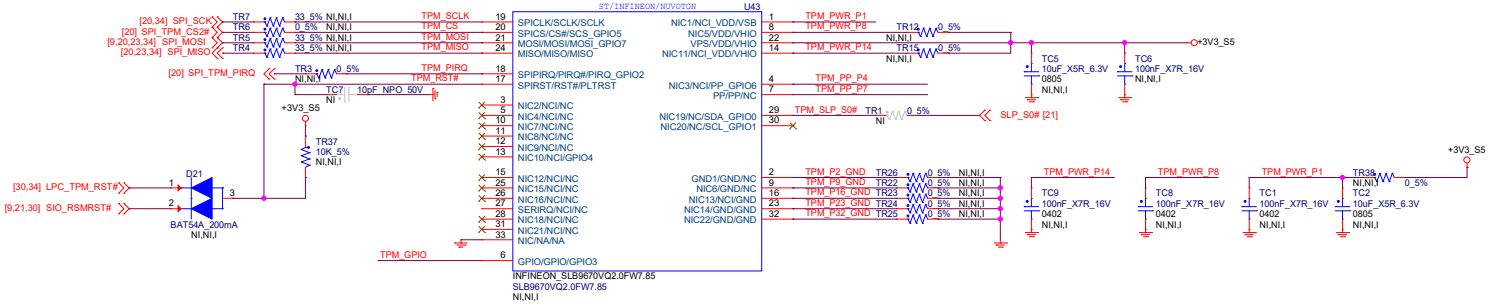
PIN	SLB9670VQ2.0FW7.62	NPCT750	ST33HTPH2E32AHB4
1	TR38/TC1/TC2	TR38/TC1/TC2	NI
2	TR26	NI	TR26
7	TR33	NI	NI
8	TR12/TC8	TR12/TC8	NI
9	TR22	TR22	NI
14	TR15/TC9	TR15/TC9	NI
16	TR23	TR23	NI
23	TR24	TR24	NI
27	NI	TR39	NI
29	NI	TR1	NI
32	TR25	TR25	NI

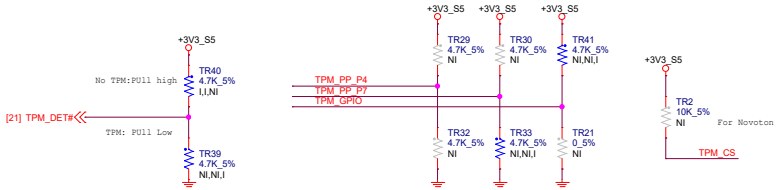
TPM

ST & NCT & Infineon co-lay

NPCT750LBAYX
ST33HTPH2E32AHB4
SLB9670VQ2.0FW7.62

TPM-SPI Interface





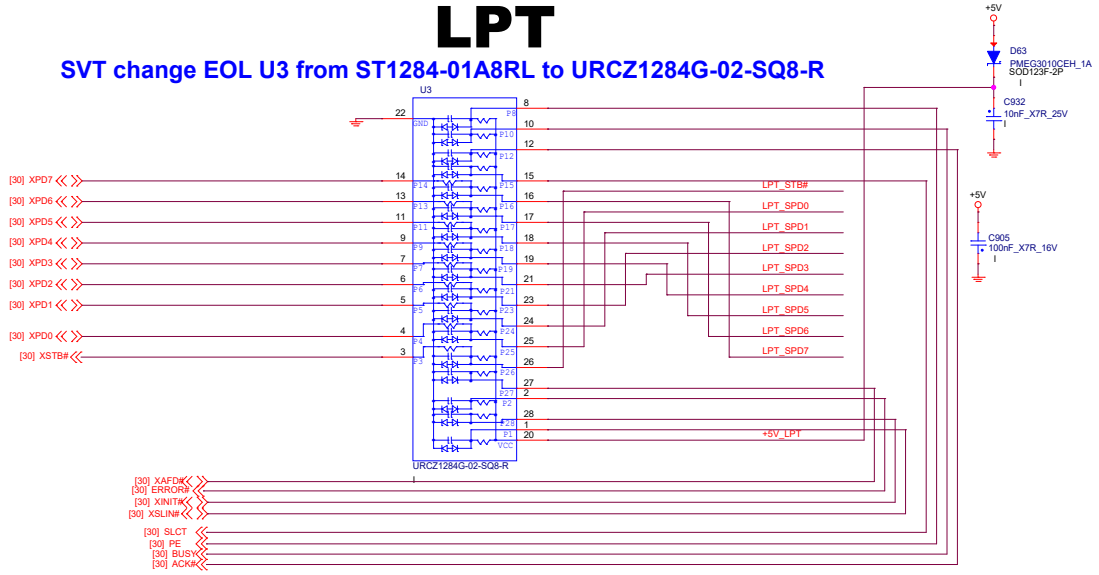
BOM DISTRIBUTION RULE

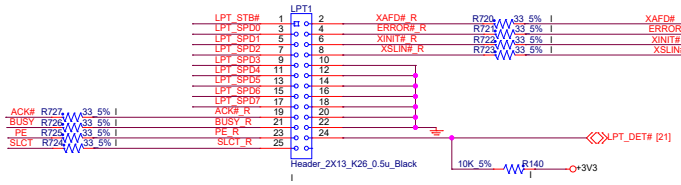
QT,SMB&Consumer,Think M70e
(BOM, BOM, BOM)

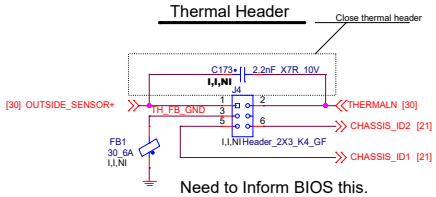
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.	
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 18.TCM & TPM		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019	17:16:33 (UTC/GMT)	Sheet 18 of 65

LPT

SVT change EOL U3 from ST1284-01A8RL to URCZ1284G-02-SQ8-R

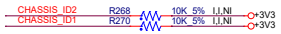






Need to Inform BIOS this.

Chassis ID:

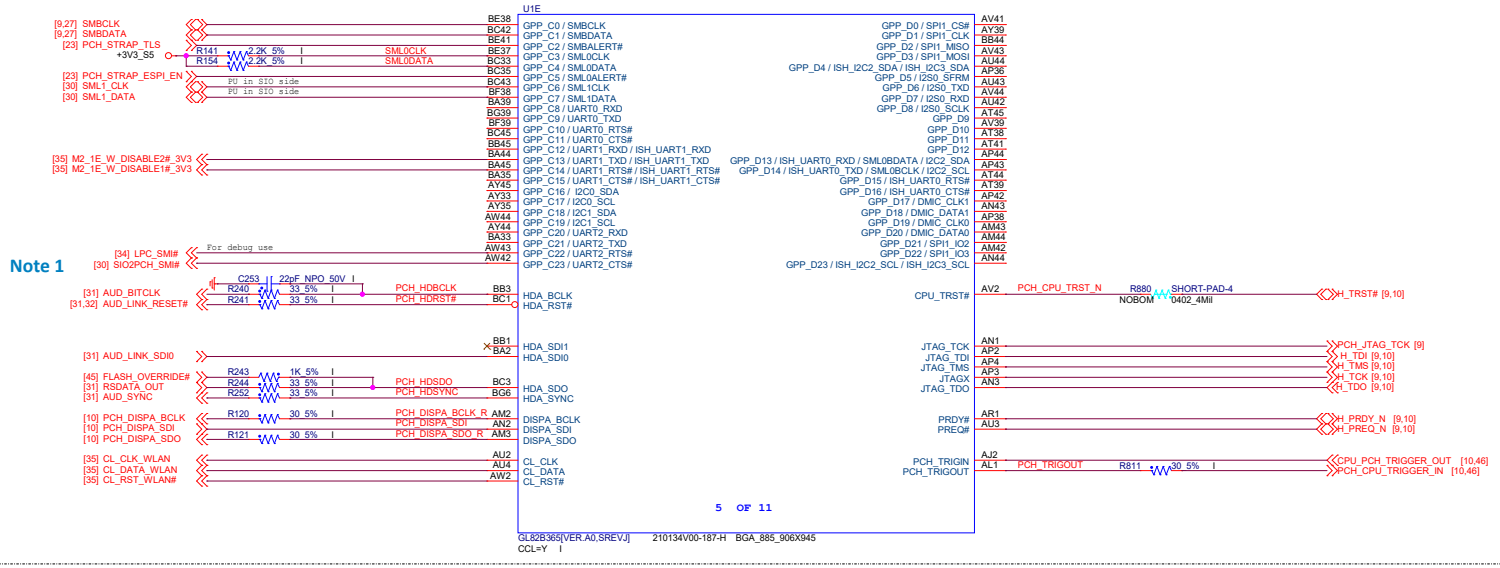


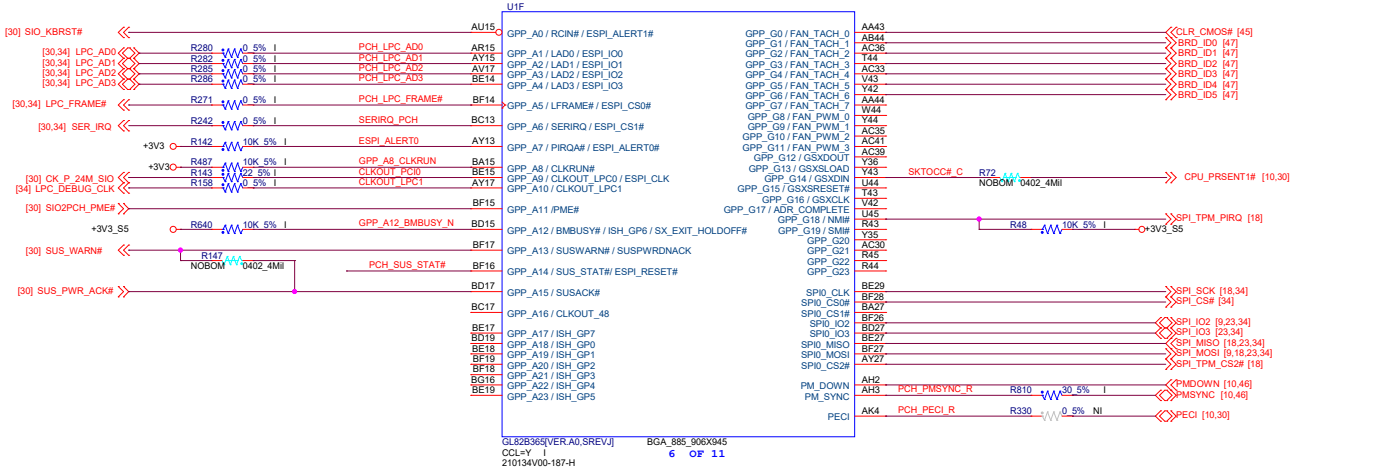
	Chassis ID1	Chassis ID2
25L	1 (Empty)	1 (Empty)
17L	1 (Empty)	0 (GND)
20L (New) 13L	0	1
11L 10L	0	0

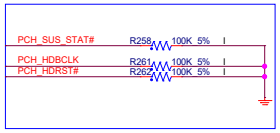
Waiting Update

FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 19.LPT		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 19 of 65

PCH - (E)SPI/HDA/SMB/GPIO



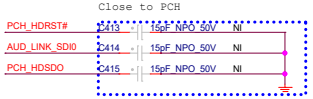




New added,Follow intel CFL PDG V1.0 Chapter 21

teknisi-indonesia.com

AUDIO EMI



Design Note

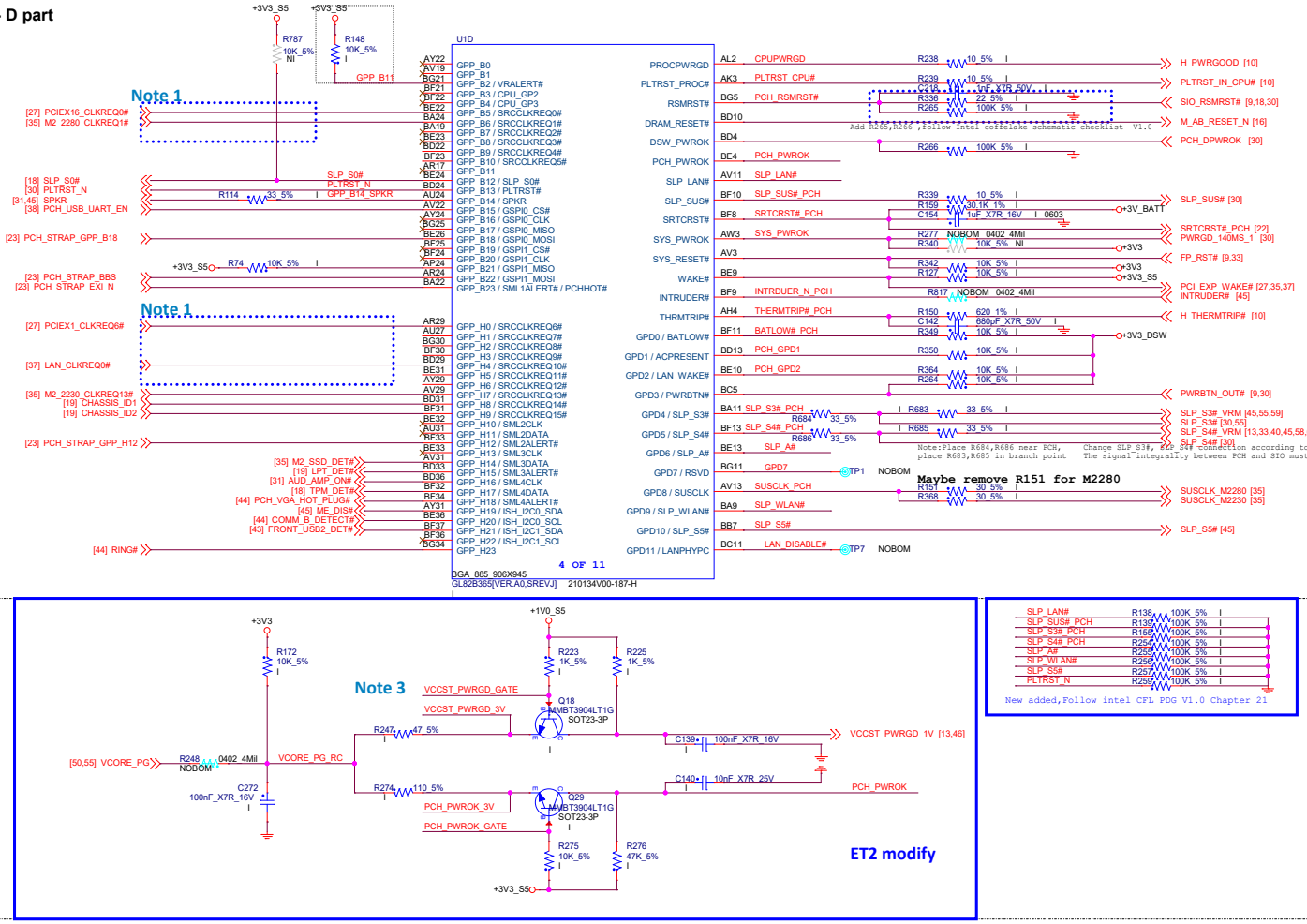
Note 1

18.5.5 SMI#/SCI and NMISCI capability is available on all GPIOs, while NMI and SMI capability is available only on select GPIOs.
Below are the PCH GPIOs that can be routed to generate SMI# or NMI:
. GPP_B14, GPP_B20, GPP_B23
. GPP_C[23:22]
. GPP_D[4:0]
. GPP_E[8:0]
. GPP_I[3:0]
. GPP_G[7:0] (support SMI# only).

Foxconn NPCEBG Foxconn WuHan China	Hon Hai Precision Industry Co. Ltd. Phone: 027-59603888 Fax:		
Title: 20. PCH - LPC/HDA/SMB/GPIO			
Size: C	Document Number: B365_SFF		Rev: SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 20 of 65	

PCH - GPIO/SEQUENCE

PCH - D part



Design Note

Note 1

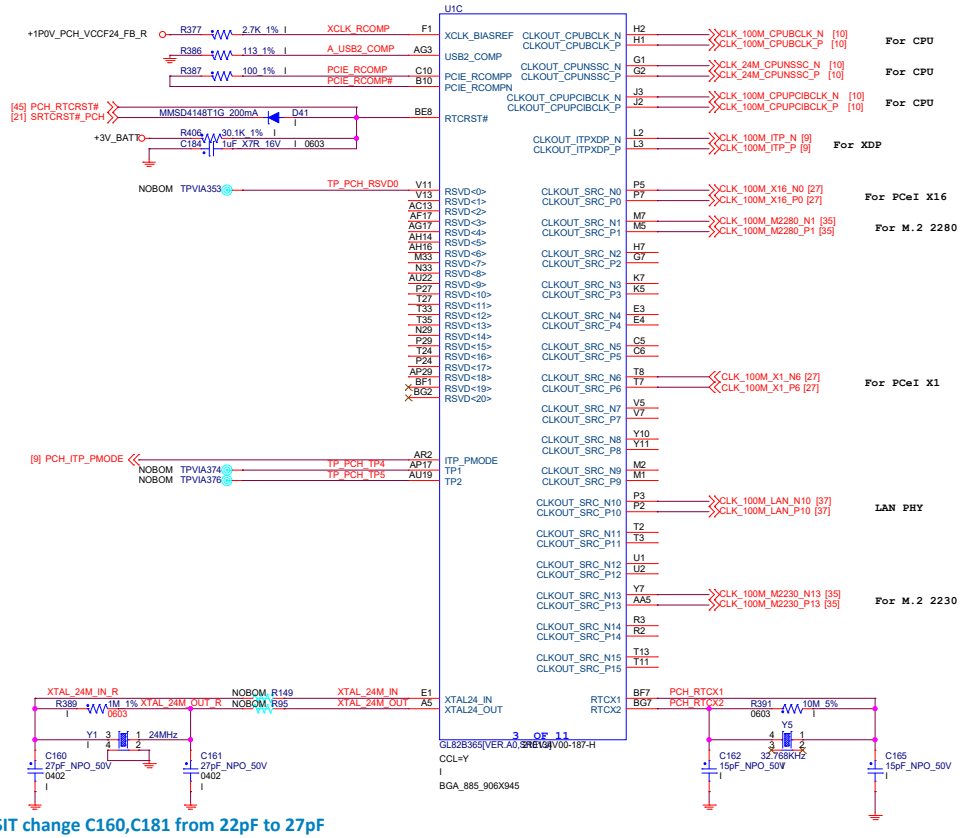
SRCCLKREQ#[15:0] to CLKOUT_PCIE_P/N[15:0] Mapping Requirements

SRCCLKREQ#[7:0] signals can be mapped to any of the CLKOUT_PCIE_P/N[7:0] differential clock pairs

SRCCLKREQ#[15:8] signals can be mapped to any of the CLKOUT_PCIE_P/N[15:8] differential clock pairs

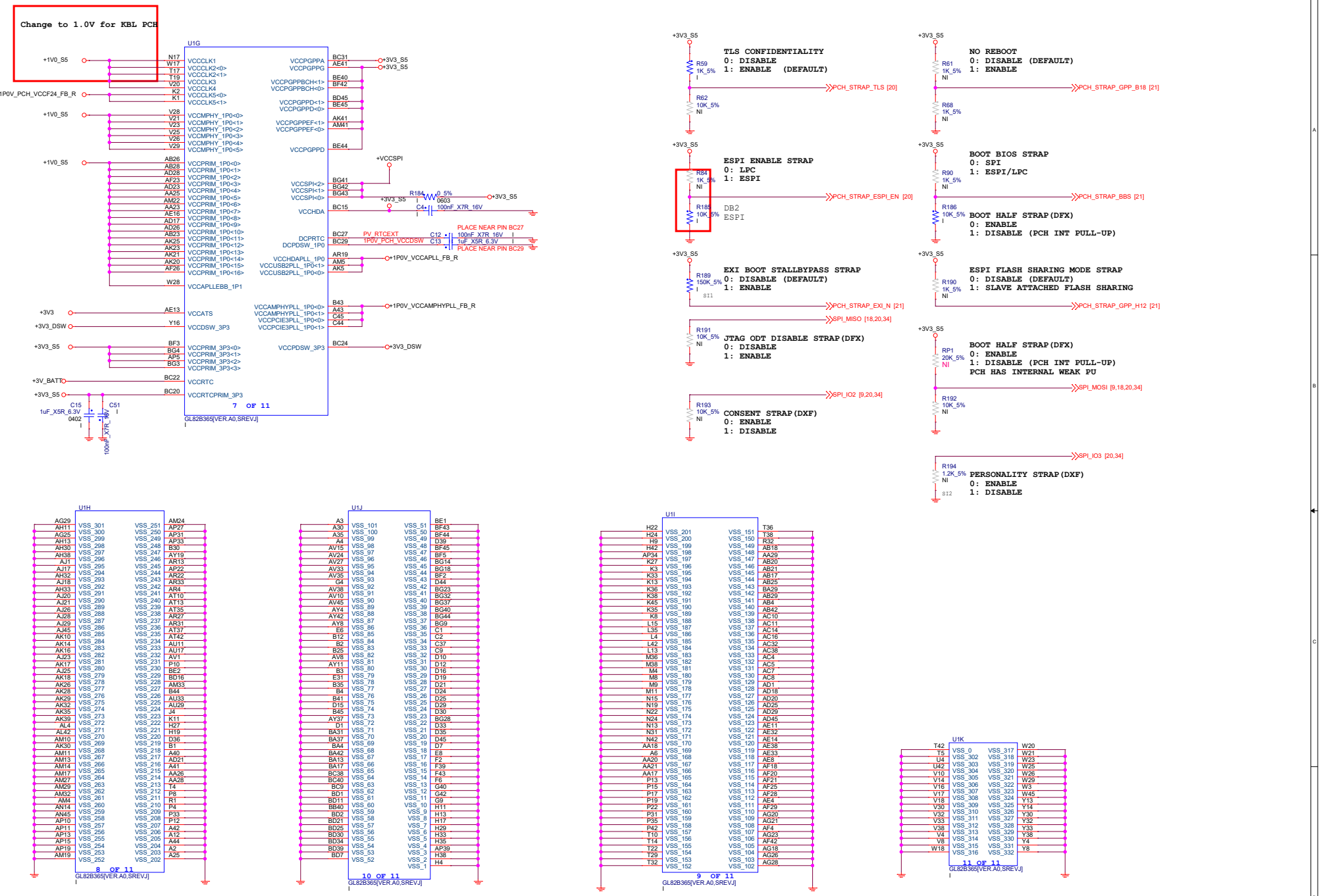
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.	
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 21. PCH - GPIO/SEQUENCE		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Wednesday, July 17, 2019 09:53:54 (UTC/GMT)	Sheet 21 of 65	

PCH - CLOCK



SIT change C160,C181 from 22pF to 27pF

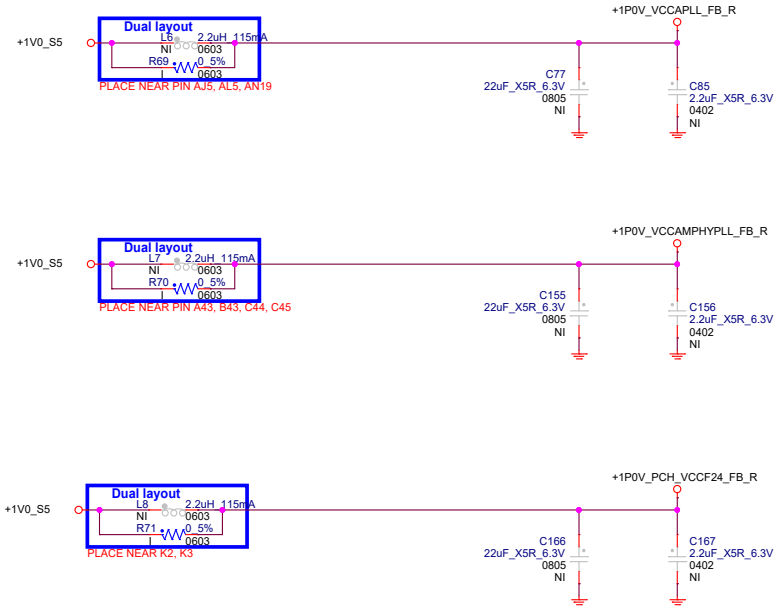
Hon Hai Precision Industry Co. Ltd.		
Foxconn NPCEBG		
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 22. PCH - CLOCK		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 22 of 65



Foxconn	Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG	
Foxconn WuHan, China	Phone: 027-59603888 Fax:
Title	23. PCH - PWR/FILTER
Size: C	Document Number: B365_SFF
Rev	SVT
Page Modified: Friday, July 05, 2019 17:16:33 (UTC/GMT)	Sheet 23 of 65

FILTER

SKYLAKE Decoupling & filter

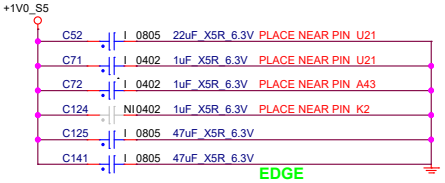


Power Plane Isolation

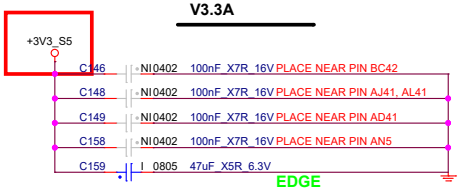
Need to update for KBL

Voltage	Interface	PCH Pins sharing power rail
VCC_PCH 1.05V	Core	U26, U25, U23, U21, V26,
	PCIe/SATA/ USB3	T19, T20, P22, P23, P25, P26, P28, P14, P16, P17
	GPIO/LPC	AC12
	FDI	M14
	DIFFCLK	U12, V14
		W14
		AB2
	SSC	T16, V16
		AA16, W16
	USB2	AF19, AF20, AF22, AF23, AP22
PCH 3.3V Standby	SUS	AM33, AN33
	USB2	AH18, AH20, AH22, AJ20, AK20
	AZALIA	AW26
	USB3	P20
	RTC	AP35
PCH 3.3V	CLK	AM7, AM9, AP5, AP7, AR4, AT5, AV4, AW4, AW9, AG12, AK11,
	HVCMOS	AG1
	PCIe	AV3, AW3
	Core	U30, W30
	Fuse	AF26

V1.0A

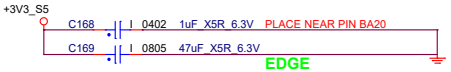


V3.3A

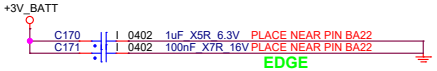


V1.8A / V1.8S / V3.3S

V3.3A

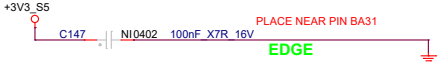


VCCRTC



V3.3 DSW

VccPGPPA



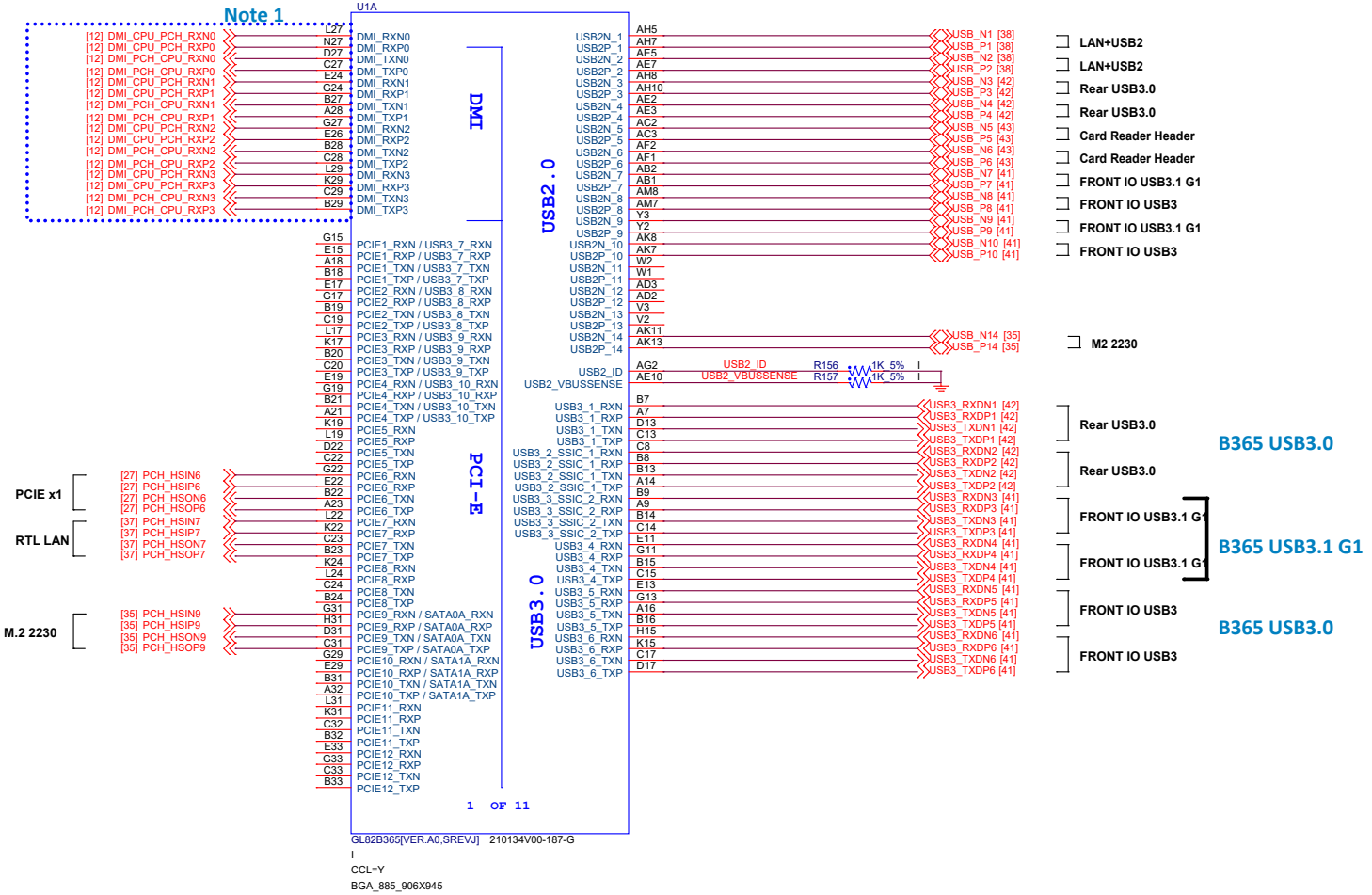
FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 24. PCH - GND/STRAP

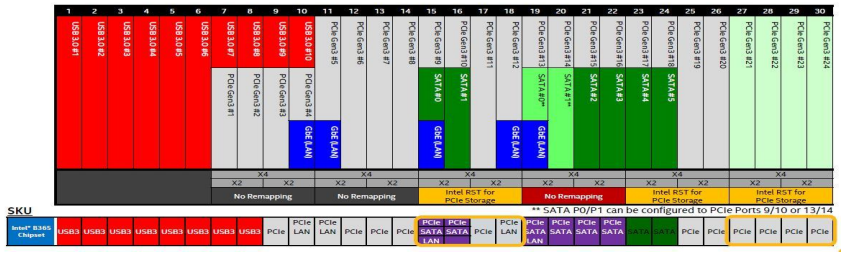
Size: Custom | Document Number: B365_SFF | Rev: SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 24 of 65

PCH - DMI/PCIE/USB2-3



Intel® B365 Chipset HSIO Lane Assignments



Design Note

Note 1

According to Intel's update
DMI@PCH can not have lane reversal

Foxconn NPCEBG
Foxconn WuHan
China
Hon Hai Precision Industry Co. Ltd.
Phone: 027-59603888
Fax:

Title: 25. PCH - DMI/PCIE/USB2-3

Size: Custom | Document Number: B365_SFF | Rev: SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 25 of 65

PCH - SATA/PCIE/HPD/GPIO

B360 SATA Only

U1B

[39] SATA_RXN0	G35	PCIE13_RXN / SATA0B_RXN	
[39] SATA_RXP0	E35	PCIE13_RXP / SATA0B_RXP	
[39] SATA_TXN0	C36	PCIE13_TXN / SATA0B_TXN	
[39] SATA_TXP0	B36	PCIE13_TXP / SATA0B_TXP	
[39] SATA_RXN1	E37	PCIE14_RXN / SATA1B_RXN	
[39] SATA_RXP1	G37	PCIE14_RXP / SATA1B_RXP	
[39] SATA_TXN1	A37	PCIE14_TXN / SATA1B_TXN	
[39] SATA_TXP1	B37	PCIE14_TXP / SATA1B_TXP	
	E41	PCIE15_RXN / SATA2_RXN	
	C42	PCIE15_RXP / SATA2_RXP	
	C38	PCIE15_TXN / SATA2_TXN	
	B38	PCIE15_TXP / SATA2_TXP	
	D42	PCIE16_RXN / SATA3_RXN	
	E43	PCIE16_RXP / SATA3_RXP	
	B39	PCIE16_TXN / SATA3_TXN	
	A39	PCIE16_TXP / SATA3_TXP	
	J41	PCIE17_RXN / SATA4_RXN	
	K39	PCIE17_RXP / SATA4_RXP	
	E45	PCIE17_TXN / SATA4_TXN	
	F45	PCIE17_TXP / SATA4_TXP	
	M39	PCIE18_RXN / SATA5_RXN	
	M41	PCIE18_RXP / SATA5_RXP	
	G45	PCIE18_TXN / SATA5_TXN	
	G44	PCIE18_TXP / SATA5_TXP	
	P39	PCIE19_RXN / SATA6_RXN	
	P41	PCIE19_RXP / SATA6_RXP	
	H44	PCIE19_TXN / SATA6_TXN	
	H45	PCIE19_TXP / SATA6_TXP	
	P38	PCIE20_RXN / SATA7_RXN	
	P36	PCIE20_RXP / SATA7_RXP	
	J43	PCIE20_TXN / SATA7_TXN	
	J44	PCIE20_TXP / SATA7_TXP	
	AP41	GPP_E3 / CPU_GP0	
	AK43	GPP_E7 / CPU_GP1	
	AL44	GPP_E4 / DEVSLP0	
	AL45	GPP_E5 / DEVSLP1	
	AK44	GPP_E6 / DEVSLP2	
	AF44	GPP_F5 / DEVSLP3	
	AG41	GPP_F6 / DEVSLP4	
	AH39	GPP_F7 / DEVSLP5	
	AH36	GPP_F8 / DEVSLP6	
	AF45	GPP_F9 / DEVSLP7	

	AM36	GPP_E0 / SATAXPCIE0 / SATAGP0	
	AM35	GPP_E1 / SATAXPCIE1 / SATAGP1	
	AM38	GPP_E2 / SATAXPCIE2 / SATAGP2	
	AK36	GPP_F0 / SATAXPCIE3 / SATAGP3	
	AK33	GPP_F1 / SATAXPCIE4 / SATAGP4	
	AK38	GPP_F2 / SATAXPCIE5 / SATAGP5	
	AH43	GPP_F3 / SATAXPCIE6 / SATAGP6	
	AE42	GPP_F4 / SATAXPCIE7 / SATAGP7	
SATA_LED# [33]			
	AJ44	GPP_E8 / SATALED#	R131 NI 10K_5% +3V3
	AE30	GPP_F10 / SCLOCK	
	AH35	GPP_F11 / SLOAD	
	AE44	GPP_F12 / SDATAOUT1	
	AE43	GPP_F13 / SDATAOUT0	
	AC42	GPP_F19 / EDP_VDDEN	
	AE35	GPP_F20 / EDP_BKLTEN	
	AE36	GPP_F21 / EDP_BKLTCTL	
	AD44	GPP_F14	EXT_PWR_GATE# R58 100K_5% NI, R413 10K_5% NI +3V3_S5 +3V3_S5
	AB45	GPP_F22	GPP_PCIE_RST# **no USE**
	AE39	GPP_F23	GPP_F23 R289 4.7K_5% NI

Note 1

	AJ43	GPP_E9 / USB2_OC0#	R5 10K_5% I +3V3_S5 — USB_OC_LAN# [40]
	AH44	GPP_E10 / USB2_OC1#	R153 10K_5% I +3V3_S5 — USB3_OC_REAR# [40]
	AM39	GPP_E11 / USB2_OC2#	OC2# R448 10K_5% I +3V3_S5
	AK42	GPP_E12 / USB2_OC3#	R914 10K_5% I +3V3_S5 — USB3_OC_FRONT1# [40]
	AD43	GPP_F15 / USB2_OCB_4	R470 10K_5% I +3V3_S5 — USB_OC_FRONT2# [40]
	AC44	GPP_F16 / USB2_OCB_5	OC5# R559 10K_5% I +3V3_S5
	AH42	GPP_F17 / USB2_OCB_6	R528 10K_5% I +3V3_S5 — USB3_OC_FRONT3# [40]
	AC43	GPP_F18 / USB2_OCB_7	OC7# R594 10K_5% I +3V3_S5

USB2 cardReader OC

[29] DPB_HPD_R	AP7	GPP_I0 / DDPB_HPD0	
[28] DPC_HPD_R	AT8	GPP_I1 / DDPC_HPD1	
	AP8	GPP_I2 / DDPD_HPD2	
[44] DPE_HPD_R	AT7	GPP_I3 / DDPE_HPD3	
	BA1	GPP_I4 / EDP_HPD	100K_5% R938 PCH_EDP_HPD I
[29] DDPB_CTRLCLK	AW5	GPP_I5 / DDPB_CTRLCLK	
[29] DDPB_CTRLDATA	AV7	GPP_I6 / DDPB_CTRLDATA	
[28] DDPC_CTRLCLK	AT5	GPP_I7 / DDPC_CTRLCLK	
[28] DDPC_CTRLDATA	BA6	GPP_I8 / DDPC_CTRLDATA	
	AY1	GPP_I9 / DDPD_CTRLCLK	
	AY2	GPP_I10 / DDPD_CTRLDATA	

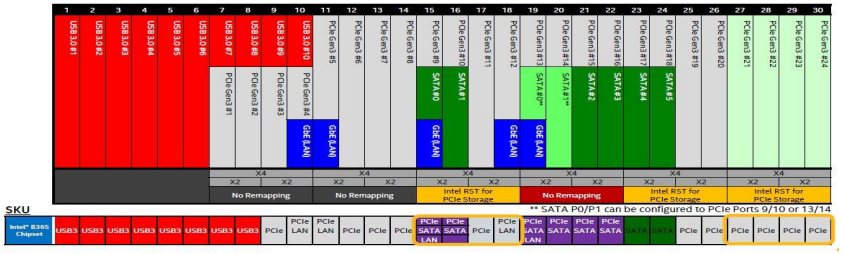
M.2 2280

[35] PCH_HSIN21	T39	PCIE_21_RXN
[35] PCH_HSIP21	T41	PCIE_21_RXP
[35] PCH_HSON21	K43	PCIE_21_TXN
[35] PCH_HSOP21	K44	PCIE_21_TXP
[35] PCH_HSIN22	V35	PCIE_22_RXN
[35] PCH_HSIP22	V36	PCIE_22_RXP
[35] PCH_HSON22	L43	PCIE_22_TXN
[35] PCH_HSOP22	L44	PCIE_22_TXP
[35] PCH_HSIN23	V39	PCIE_23_RXN
[35] PCH_HSIP23	V41	PCIE_23_RXP
[35] PCH_HSON23	N44	PCIE_23_TXN
[35] PCH_HSOP23	N45	PCIE_23_TXP
[35] PCH_HSIN24	Y39	PCIE_24_RXN
[35] PCH_HSIP24	Y41	PCIE_24_RXP
[35] PCH_HSON24	P43	PCIE_24_TXN
[35] PCH_HSOP24	P44	PCIE_24_TXP

2 OF 11

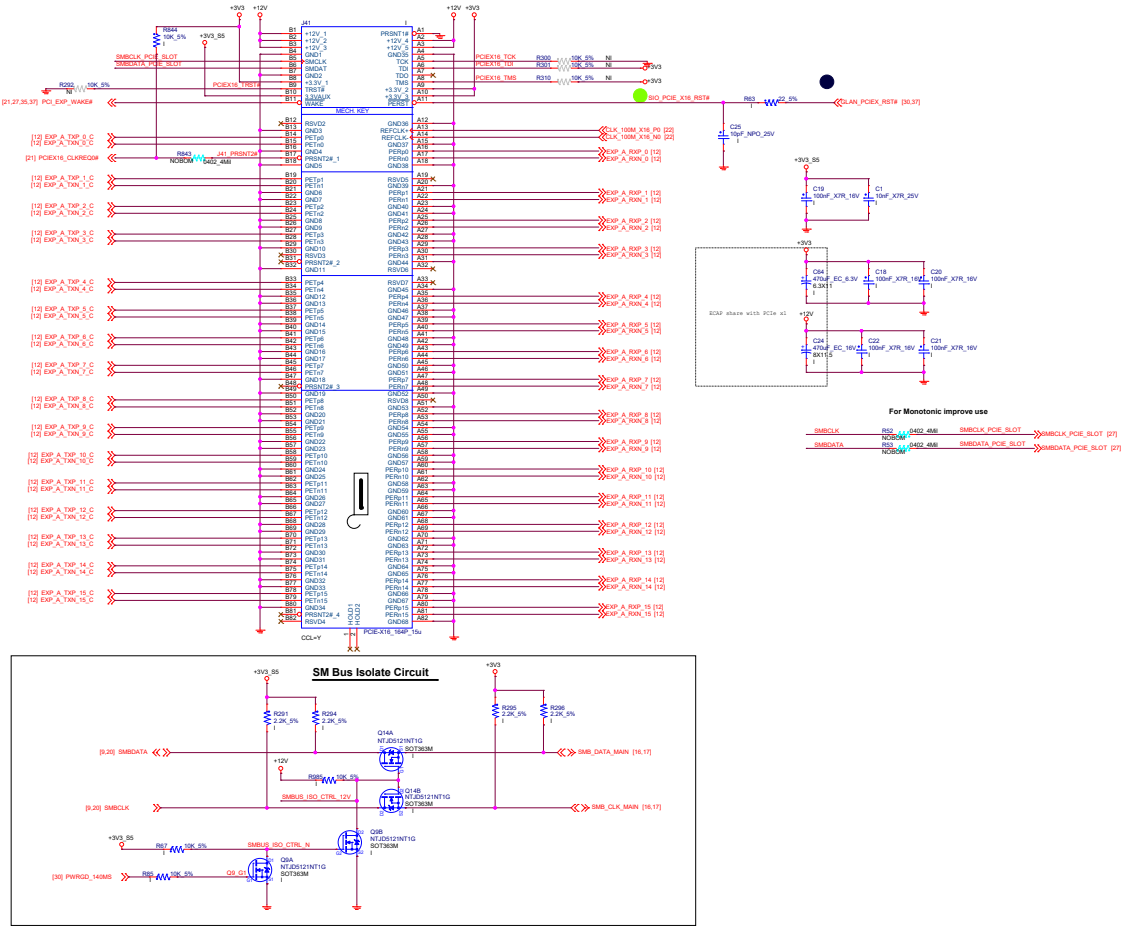
GL82B365[VER.A0,SREVJ] 210134V00-187-H
I
CCL=Y
BGA_885_906X945

Intel® B365 Chipset HSIO Lane Assignments

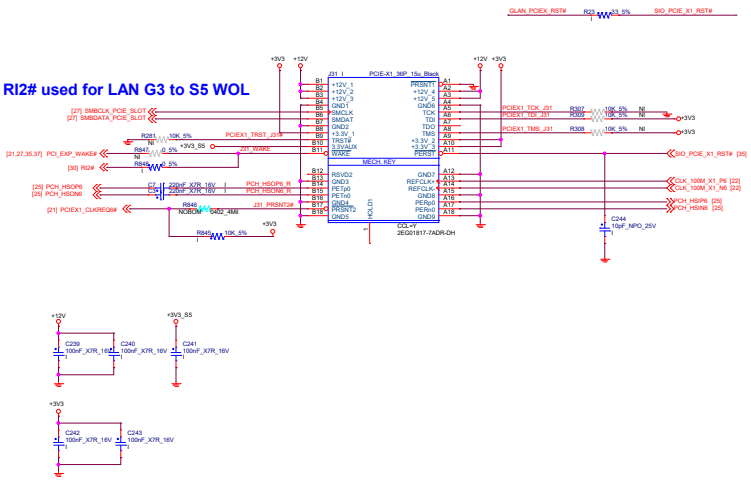


Hon Hai Precision Industry Co. Ltd.	Foxconn NPCEBG
Foxconn WuHan, China	Phone: 027-59603888 Fax:
Title	26. PCH - SATA/PCIE/GPIO
Size: Custom	Document Number: B365_SFF
Rev	SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 26 of 65

PCI EXPRESS x16 SLOT

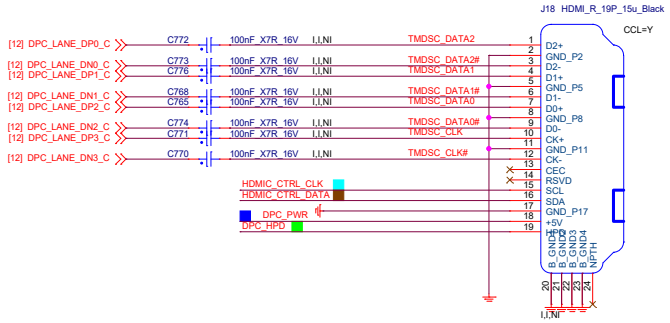


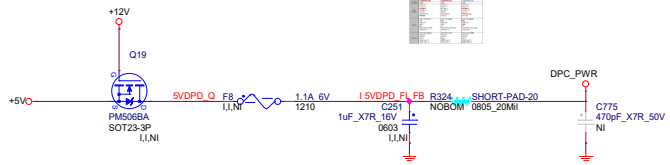
PCI EXPRESS X1 SLOT1(Support Gen3)

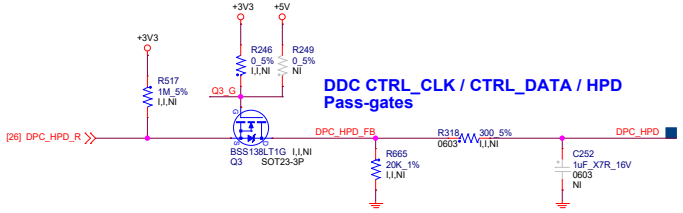


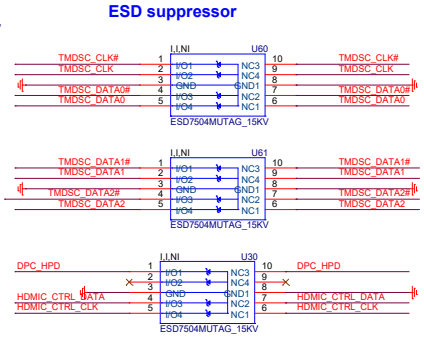
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.		
Foxconn Wuhan China	Phone: 027-59603088 Fax:		
Title: 27.PCIEx16 & PCIEX1			
Size: D	Document Number: 8365_SFF		Rev: SVT
Page Modified: Friday, July 08, 2016	17:53:33	Sheet 27 of 55	

HDMI

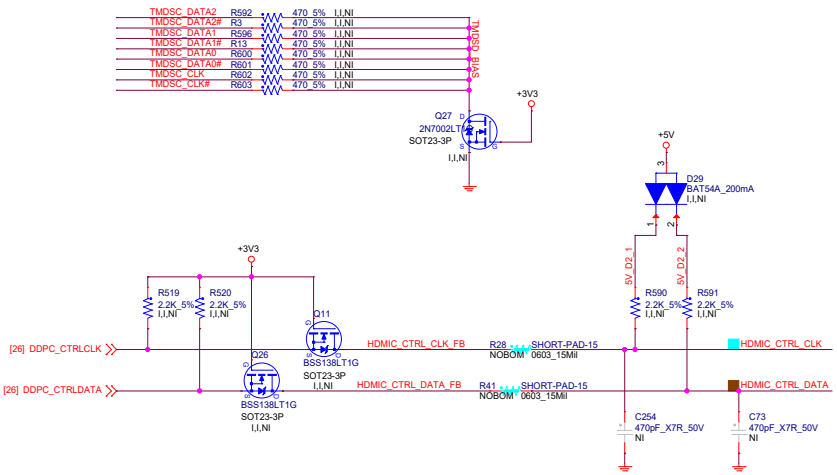


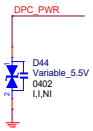






Cost Reduced Level Shifter Solution

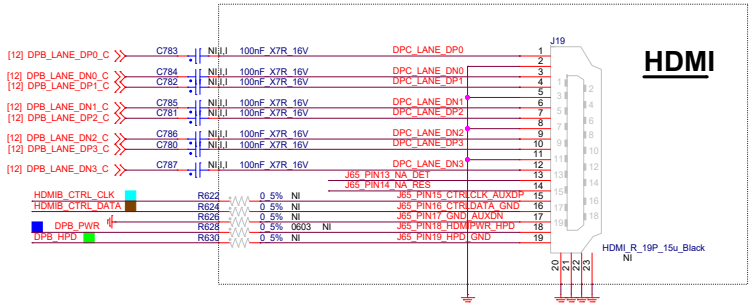




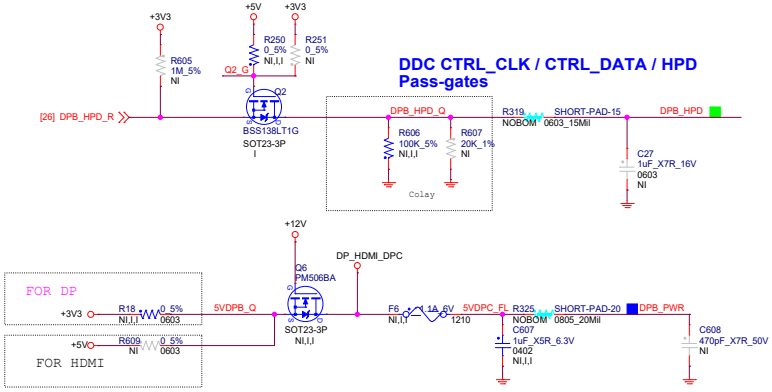
FOXCONN	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG		
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title	28.DISPLAY PORT 2	
Size C	Document Number B365_SFF	Rev SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 28 of 65

HDMI : Green
DP : Pink

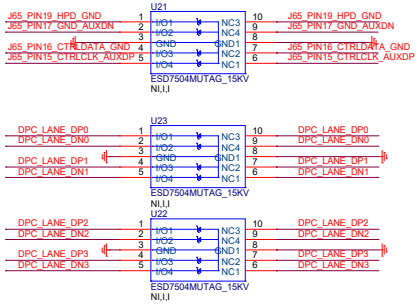
HDMI



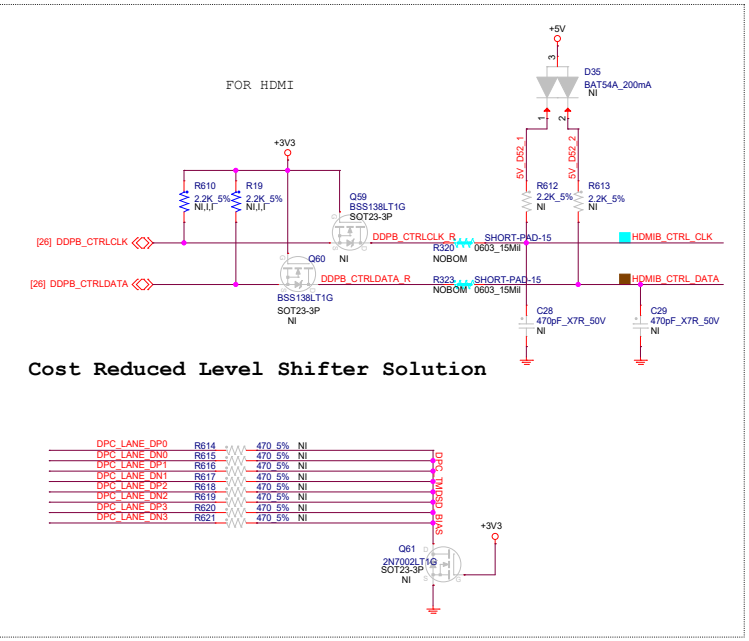
DDC CTRL_CLK / CTRL_DATA / HPD Pass-gates



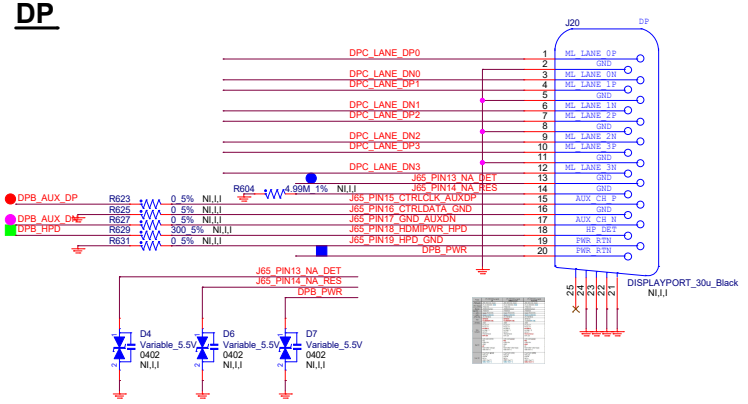
ESD suppressor

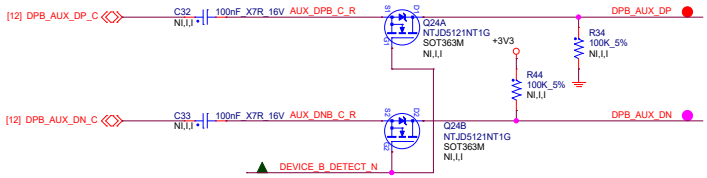


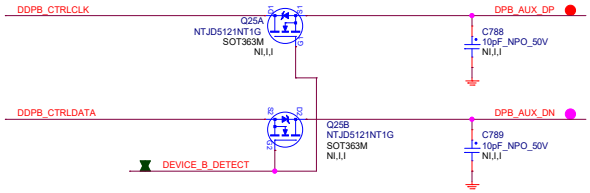
Cost Reduced Level Shifter Solution

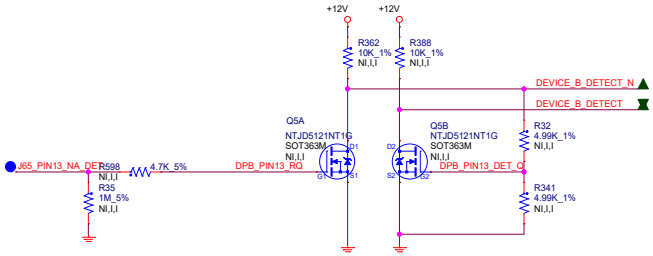


DP









PIN13		FUNCTION
DP	DONGLE	
L	X	DEVICE_C_DETECT
X	H	DEVICE_C_DETECT_N

FOXCONN	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG		
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title	29.DISPLAY PORT 1	
Size C	Document Number B365_SFF	Rev SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 29 of 65

IT8629E Power On Strapping Options

Power-On Strapping

	Symbol	Value	Description
JP1 Pin-45	DSW_EUP_SEL	1	**EUP**
		0	DSW
JP2 Pin-119	WDT_EN	1	**Disable WDT to reset PWROK**
		0	Enable WDT to reset PWROK
JP3 Pin-121	FAN_CTL_SEL	1	**EC Index 63h/73h/7B/A3 is 80h**
		0	EC Index 63h/73h/7B/A3 is 00h
JP4 Pin-123	K8PWR_EN	1	**Disable K8 Power Sequence**
		0	Enable K8 Power Sequence
JP5 Pin-26	UOVMODE_SEL OV/UV	1	Notice Mode (Default)
		0	Force Mode
JP6 Pin-46	VIH/VIL_SEL	1	BAY-TRAIL PLATFORM
		0	NOT BAY-TRAIL PLATFORM

FAN_CTRL2 not supported by JP3 FAN_CTL_SEL(EC index 6Bh default value always 80h)

ITE +3V3 Bleed off

RI2# for PCIex1 Wakeup

RI1# for LAN Wakeup

Maybe change to 4.7K

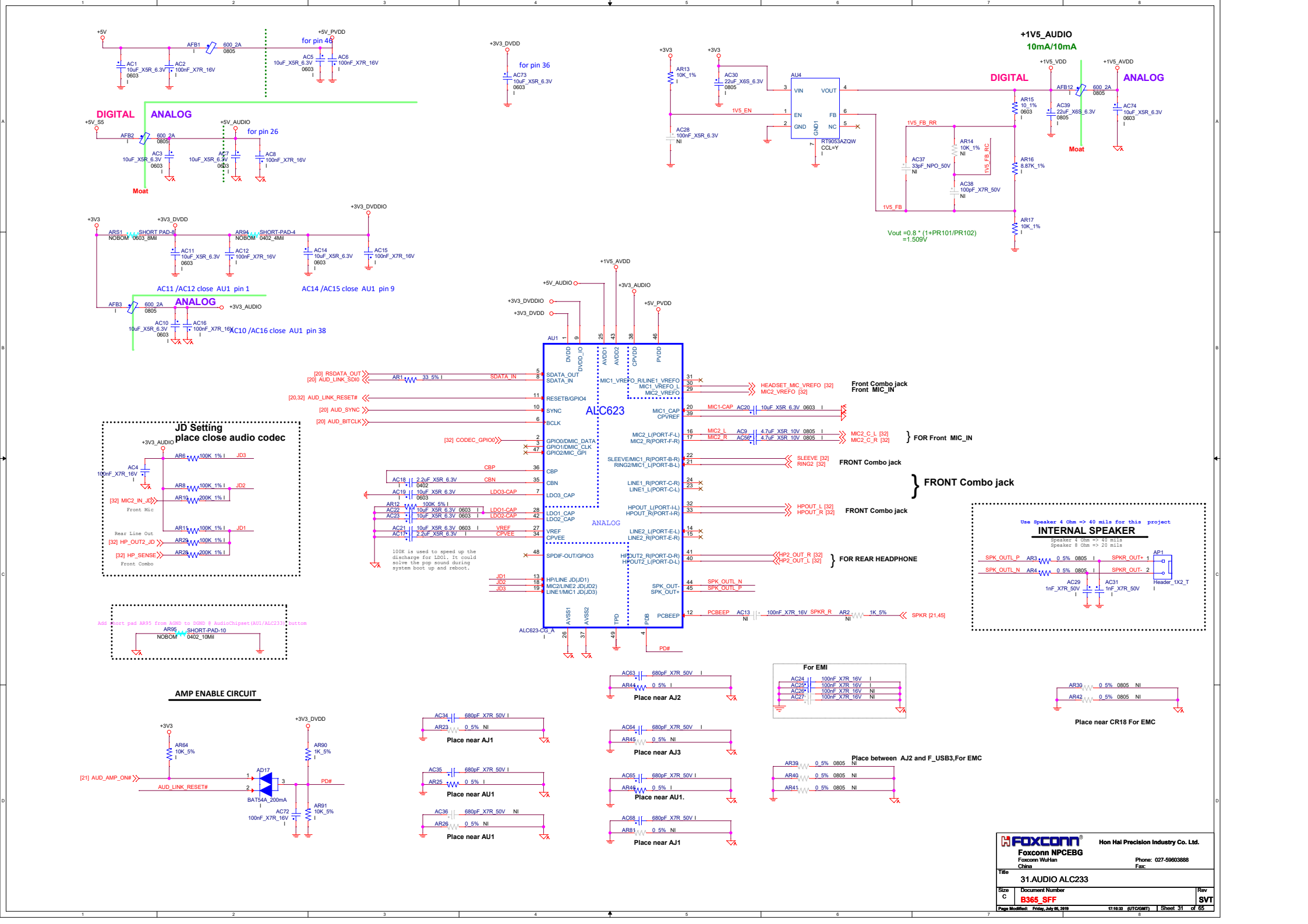
Voltage detect

Place SC1,SC20 close to SIO PIN

SC193/SC194/SC88 Close SIO pin 96

Place SQ1,SC19 close to VCORE 1st phase

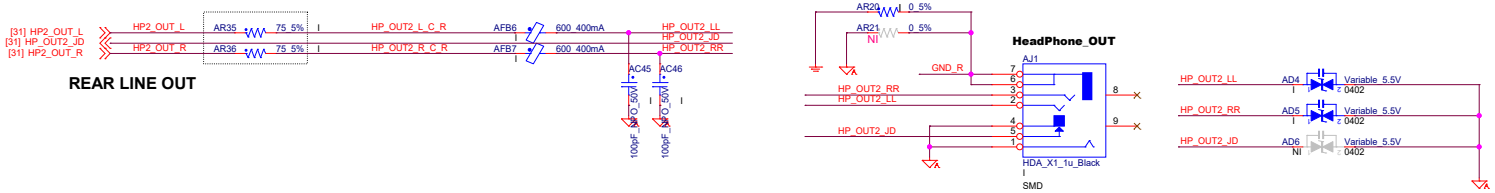
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.
Foxconn WuHan China	Phone: 027-59603888 Fax:
Title	30.SIO IT8629E
Size	Document Number B365_SFF
Custom	Rev SVT
Page Modified: Wednesday, July 10, 2013	Sheet 30 of 85


+5V
AFB1
600_2A
0805
+5V_PVDD
for pin 46
AC1
10uF_X5R_6.3V
0603
AC2
100nF_X7R_16V
AC5
10uF_X5R_6.3V
0603
AC6
100nF_X7R_16V
DIGITAL
ANALOG
+5V_SS
AFB2
600_2A
0805
+5V_AUDIO
for pin 26
AC3
10uF_X5R_6.3V
0603
AC7
10uF_X5R_6.3V
0603
AC8
100nF_X7R_16V
Moat
+3V3_DVDD
for pin 36
AC73
10uF_X5R_6.3V
0603
+3V3
AR13
10K_1%
AC30
22uF_X6S_6.3V
0805
AU4
VIN
VOUT
EN
FB
GND
NC
GND1
1V5_EN
AC28
100nF_X5R_6.3V
NI
RT9053AZQW
CCL=Y
+1V5_AUDIO
10mA/10mA
DIGITAL
+1V5_VDD
AFB12
600_2A
0805
+1V5_AVDD
ANALOG
AC39
22uF_X6S_6.3V
0805
AC74
10uF_X5R_6.3V
0603
Moat
AR15
10_1%
0603
AR16
8.87K_1%
AR17
10K_1%
1V5_FB_RR
AR14
10K_1%
NI
1V5_FB_RC
AC37
33pF_NPO_50V
NI
AC38
100pF_X7R_50V
NI
1V5_FB
Vout =0.8 * (1+PR101/PR102)
=1.509V
+3V3
+3V3_DVDD
+3V3_DVDDIO
AR81
SHORT PAD-8
NOBOM
0603_8Mil
AR94
SHORT-PAD-4
NOBOM
0402_4Mil
AC11
10uF_X5R_6.3V
0603
AC12
100nF_X7R_16V
AC14
10uF_X5R_6.3V
0603
AC15
100nF_X7R_16V
AC11 /AC12 close AU1 pin 1
AC14 /AC15 close AU1 pin 9
AFB3
600_2A
0805
ANALOG
+3V3_AUDIO
AC10
10uF_X5R_6.3V
0603
AC16
100nF_X7R_16V
AC10 /AC16 close AU1 pin 38
+1V5_AVDD
+5V_AUDIO
+3V3_AUDIO
+3V3_DVDDIO
+3V3_DVDD
+5V_PVDD
AU1
DVDD
DVDD_IO
AVDD1
AVDD2
CPVDD
PVDD
ALC623
[20] RSDATA_OUT
[20] AUD_LINK_SDI0
AR1
33_5%
SDATA_IN
SDATA_OUT
SDATA_IN
[20,32] AUD_LINK_RESET#
RESETB/GPIO4
[20] AUD_SYNC
SYNC
[20] AUD_BITCLK
BCLK
[32] CODEC_GPIO0
GPIO0/DMIC_DATA
GPIO1/DMIC_CLK
GPIO2/MIC_GPI
CBP
CBN
LDO3_CAP
LDO1_CAP
LDO2_CAP
VREF
CPVEE
SPDIF-OUT/GPIO3
HP/LINE JD(JD1)
MIC2/LINE2 JD(JD2)
LINE1/MIC1 JD(JD3)
MIC1_VREFO_R/LINE1_VREFO
MIC1_VREFO_L
MIC2_VREFO
HEADSET_MIC_VREFO [32]
MIC2_VREFO [32]
Front Combo jack
Front MIC_IN
MIC1_CAP
CPVREF
MIC1-CAP
AC20
10uF_X5R_6.3V
0603
MIC2_L(PORT-F-L)
MIC2_R(PORT-F-R)
MIC2_L
MIC2_R
AC9
AC56*
4.7uF_X5R_10V
0805
MIC2_C_L [32]
MIC2_C_R [32]
FOR Front MIC_IN
SLEEVE/MIC1_R(PORT-B-R)
RING2/MIC1_L(PORT-B-L)
SLEEVE [32]
RING2 [32]
FRONT Combo jack
LINE1_R(PORT-C-R)
LINE1_L(PORT-C-L)
FRONT Combo jack
HPOUT_L(PORT-I-L)
HPOUT_R(PORT-I-R)
HPOUT_L [32]
HPOUT_R [32]
FRONT Combo jack
LINE2_L(PORT-E-L)
LINE2_R(PORT-E-R)
HPOUT2_R(PORT-D-R)
HPOUT2_L(PORT-D-L)
HP2_OUT_R [32]
HP2_OUT_L [32]
FOR REAR HEADPHONE
SPK_OUT-
SPK_OUT+
SPK_OUTL_N
SPK_OUTL_P
PCBEEP
AC13
NI
100nF_X7R_16V
SPKR_R
AR2
NI
1K_5%
SPKR [21,45]
JD1
JD2
JD3
ALC623-CG_A
AVSS1
AVSS2
TPD
PDB
PD#
100K is used to speed up the discharge for LDO1. It could solve the pop sound during system boot up and reboot.
JD Setting
place close audio codec
+3V3_AUDIO
AC4
100nF_X7R_16V
AR6
100K_1%
JD3
AR8
100K_1%
JD2
[32] MIC2_IN_JD
Front Mic
AR10
200K_1%
Rear Line Out
AR11
100K_1%
JD1
[32] HP_OUT2_JD
AR29
100K_1%
[32] HP_SENSE
AR28
200K_1%
Front Combo
Add short pad AR95 from AGND to DGND @ AudioChipset(AU1/ALC233) bottom
AR95
SHORT-PAD-10
NOBOM
0402_10Mil
Use Speaker 4 Ohm => 40 mils for this project
INTERNAL SPEAKER
Speaker 4 Ohm => 40 mils
Speaker 8 Ohm => 20 mils
SPK_OUTL_P
AR3
0_5%
0805
SPKR_OUT+
SPK_OUTL_N
AR4
SPKR_OUT-
AP1
Header_1X2_T
AC29
1nF_X7R_50V
AC31
1nF_X7R_50V
AMP ENABLE CIRCUIT
+3V3
AR64
10K_5%
+3V3_DVDD
AR90
1K_5%
[21] AUD_AMP_ON#
AUD_LINK_RESET#
AD17
BAT54A_200mA
PD#
AR91
10K_5%
AC72
100nF_X7R_16V
AC34
680pF_X7R_50V
AR23
0_5%
NI
Place near AJ1
AC35
680pF_X7R_50V
AR25
Place near AU1
AC36
680pF_X7R_50V
AR26
Place near AU1
AC63
680pF_X7R_50V
AR44
Place near AJ2
AC64
680pF_X7R_50V
AR45
Place near AJ3
AC65
680pF_X7R_50V
AR46
Place near AU1.
AC68
680pF_X7R_50V
AR81
Place near AJ1
For EMI
AC24
100nF_X7R_16V
AC25*
AC26*
AC27*
AR39
AR40
AR41
Place between AJ2 and F_USB3,For EMC
AR30
AR42
Place near CR18 For EMC
FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:
Title
31.AUDIO ALC233
Size
C
Document Number
B365_SFF
Rev
SVT
Page Modified: Friday, July 05, 2019
17:10:33 (UTC/GMT)
Sheet 31 of 65

Rear Audio Jack

AJ1,2,3 use SMD process

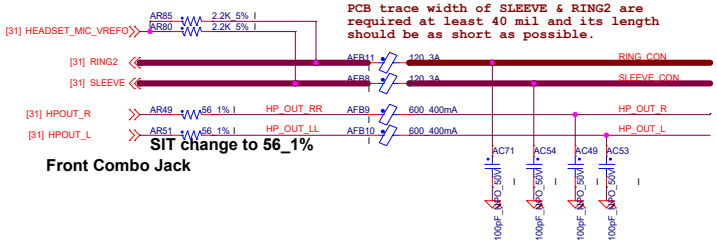
Maybe add ESD part between AGND and GND near Rear Audio Jack



Audio Jack

Front Audio Jack

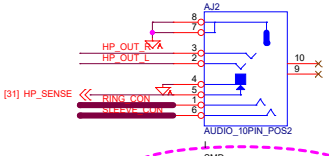
PCB trace width of SLEEVE & RING2 are required at least 40 mil and its length should be as short as possible.

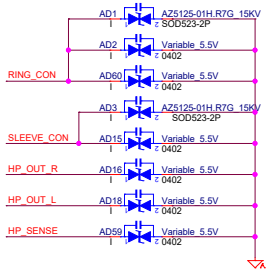


SIT change to 56_1%

Front Combo Jack

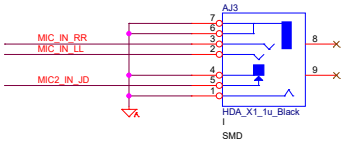
Combo Jack connector

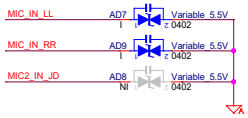


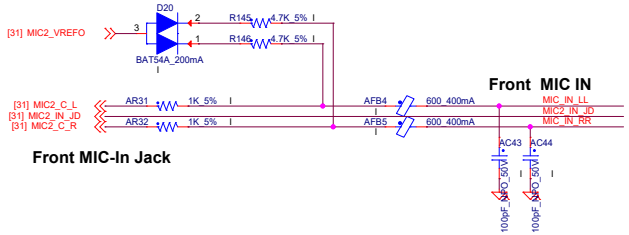


AJ1,2,3 use SMD process

MIC_Jack connector





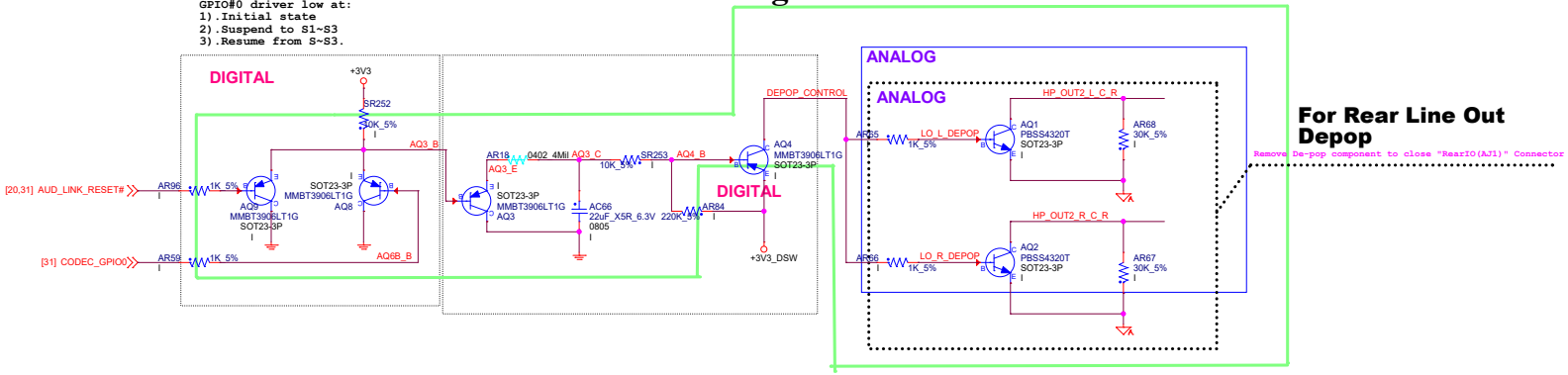


Front MIC IN

Front MIC-In Jack

Darlington circuit

Control by software driver and Codec GPIO.
GPIO#0 driver low at:
1).Initial state
2).Suspend to S1~S3
3).Resume from S~S3.



For Rear Line Out Depop

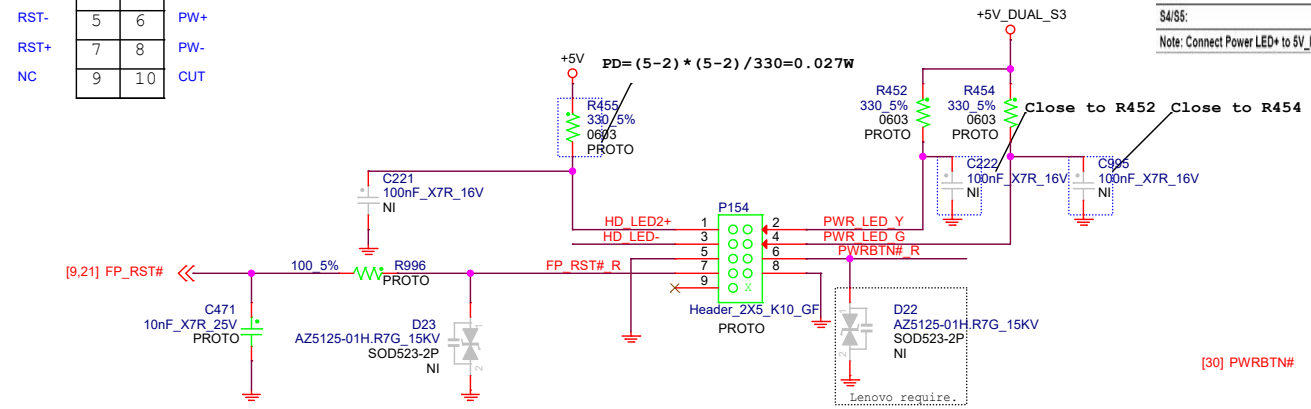
Remove De-pop component to close "RearIO(AJ1)" Connector

FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:
Title: 32.AUDIO CONNECTOR
Size: C
Document Number: B365_SFF
Rev: SVT
Page Modified: Wednesday, July 17, 2019 09:53:54 (UTC/GMT)
Sheet 32 of 65

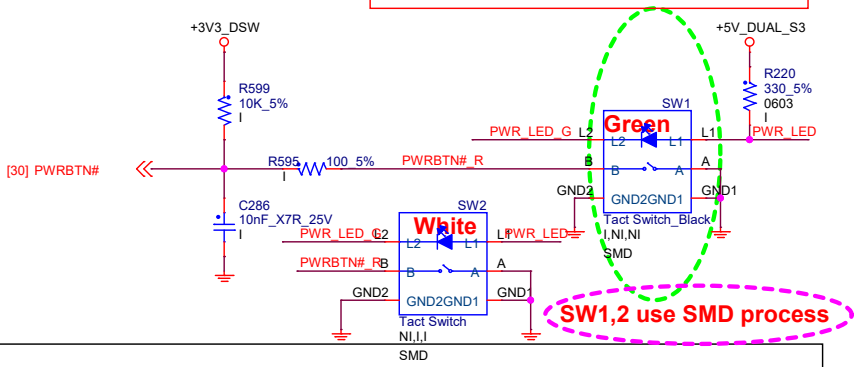
FRONT PANEL

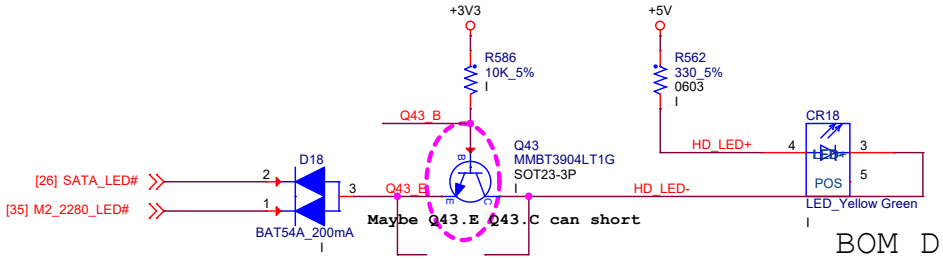
HD+	1	2	PWRLED(Yellow)
HD-	3	4	PWRLED(Green)
RST-	5	6	PW+
RST+	7	8	PW-
NC	9	10	CUT

2-Pin single color LED	
S0:	LED is on steady green
S1/S3:	LED blinks(frequency: 1Hz/S)
S4/S5:	LED is off
Note: Connect Power LED+ to 5V_DUAL by 330ohm	



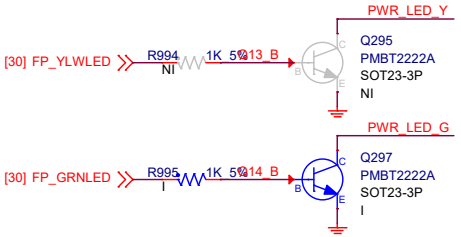
SMB/Consumer need white PWR LED

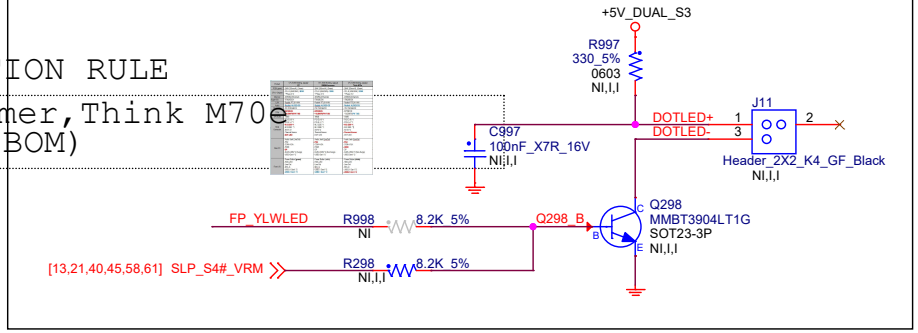


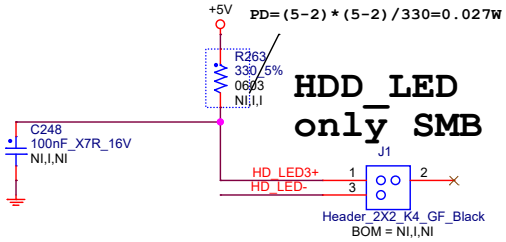


BOM DISTRIBUTION RULE

QT,SMB&Consumer,Think M70e (BOM, BOM, BOM)







The HDD LED header color will change to white,to distinguish Dot_LED header

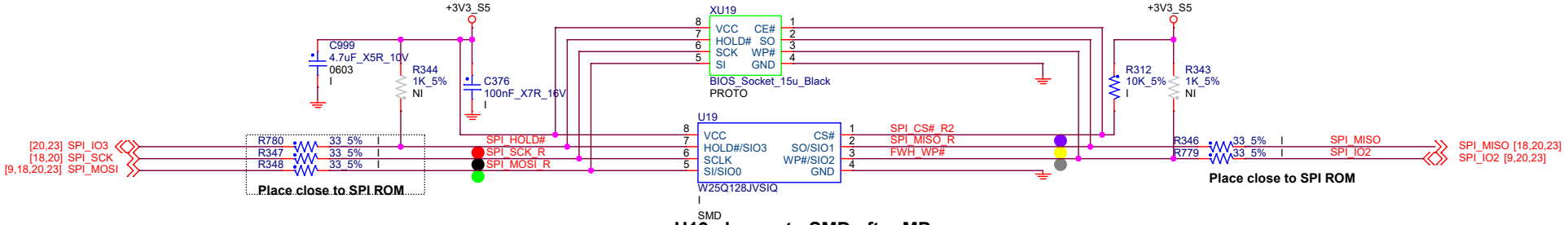
FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 33.FRONT PANEL

Size: B | Document Number: B365_SFF | Rev: SVT

Page Modified: Friday, July 05, 2019 17:32:56 (UTC/GMT) | Sheet 33 of 65

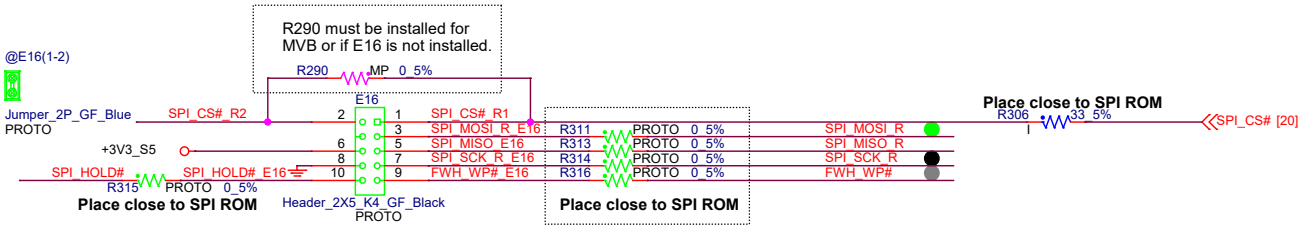
SPI ROM

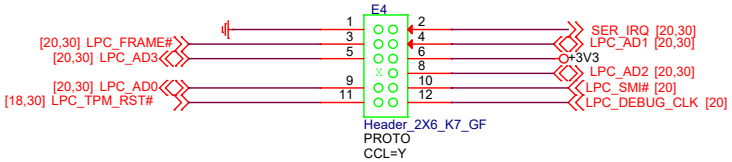


U19 change to SMD after MP

FOXCONN SPI ROM DEBUG HEADER

The header traces should be daisy-chain through the header with no stubs.

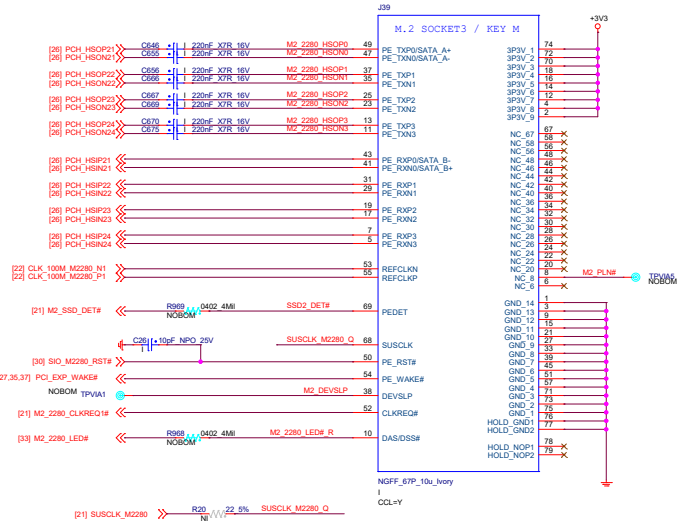




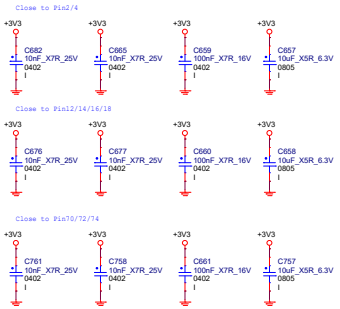
FOXCONN®	Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG	
Foxconn WuHan China	Phone: 027-59603888 Fax:
Title	34.SPI ROM & SPI DEBUG*
Size: B	Document Number: B365_SFF
Rev: SVT	
Page Modified: Friday, July 05, 2019 17:24:29 (UTC/GMT)	Sheet 34 of 65

M.2 2280-3M

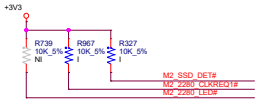
white color



Decoupling CAP (J39)



M.2 SSD PU/PD Config



LED Res	Power Rating(W)
Spec	0.0625
Actual	0.0075

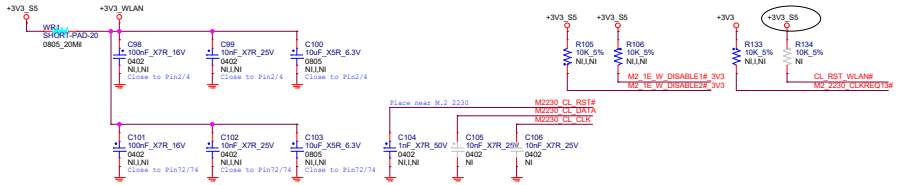
M2_2230_SOCKET1-KEYE

W_Disable1# : Disable WiFI
W_Disable2# : Disable BT

BOM DISTRIBUTION RULE

QT,SMB&Consumer,Think M70e
(BOM, BOM, BOM)

M.2 HW Config and Power Cap



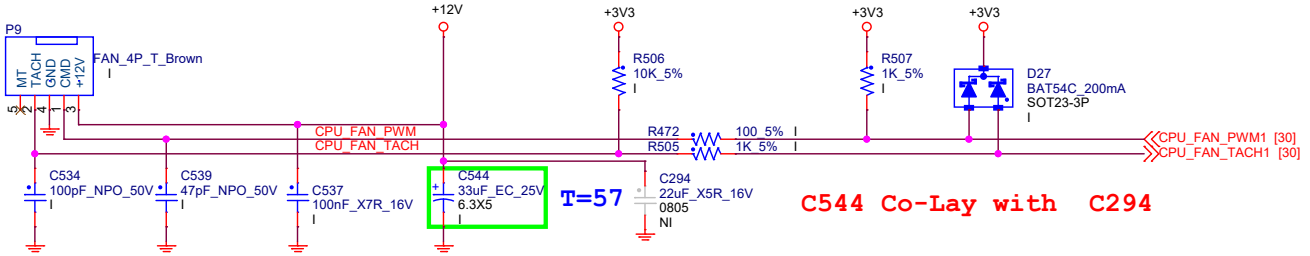
www.teknisi-indonesia.com

Foxconn NPCEBG
Foxconn Wuhan China
Hon Hai Precision Industry Co. Ltd.
Phone: 027-59603888
Fax:

Title: 35.M2.2280 & M.2 2230
Size: Custom
Document Number: B365_SFF
Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)
Sheet 35 of 55

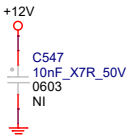
CPU FAN

Color: Brown
Follow DTDL



C544 Co-Lay with C294

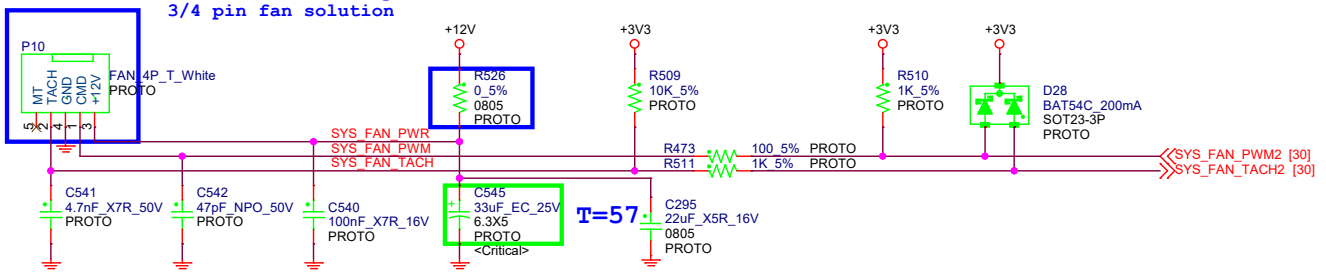
For EMI



R526/R473/R545 is optional for 3/4 pin fan solution

SYSTEM FAN

Color: White
Follow DTDL

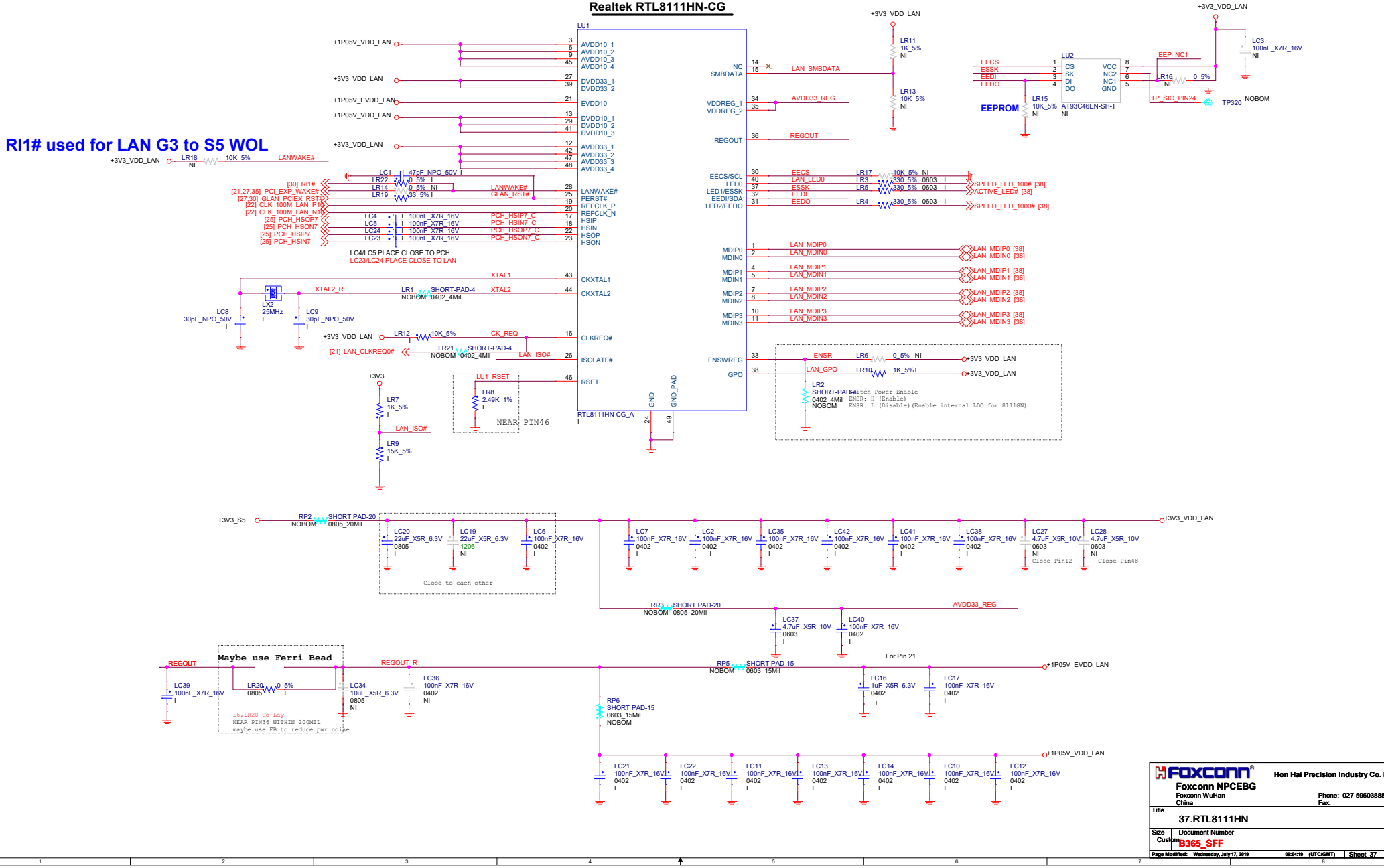


C545 Co-Lay with C295

FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 36.FAN HEADERS		
Size: B	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019	17:10:33 (UTC/GMT)	Sheet 36 of 65

Realtek RTL8111HN-CG

RI1# used for LAN G3 to S5 WOL

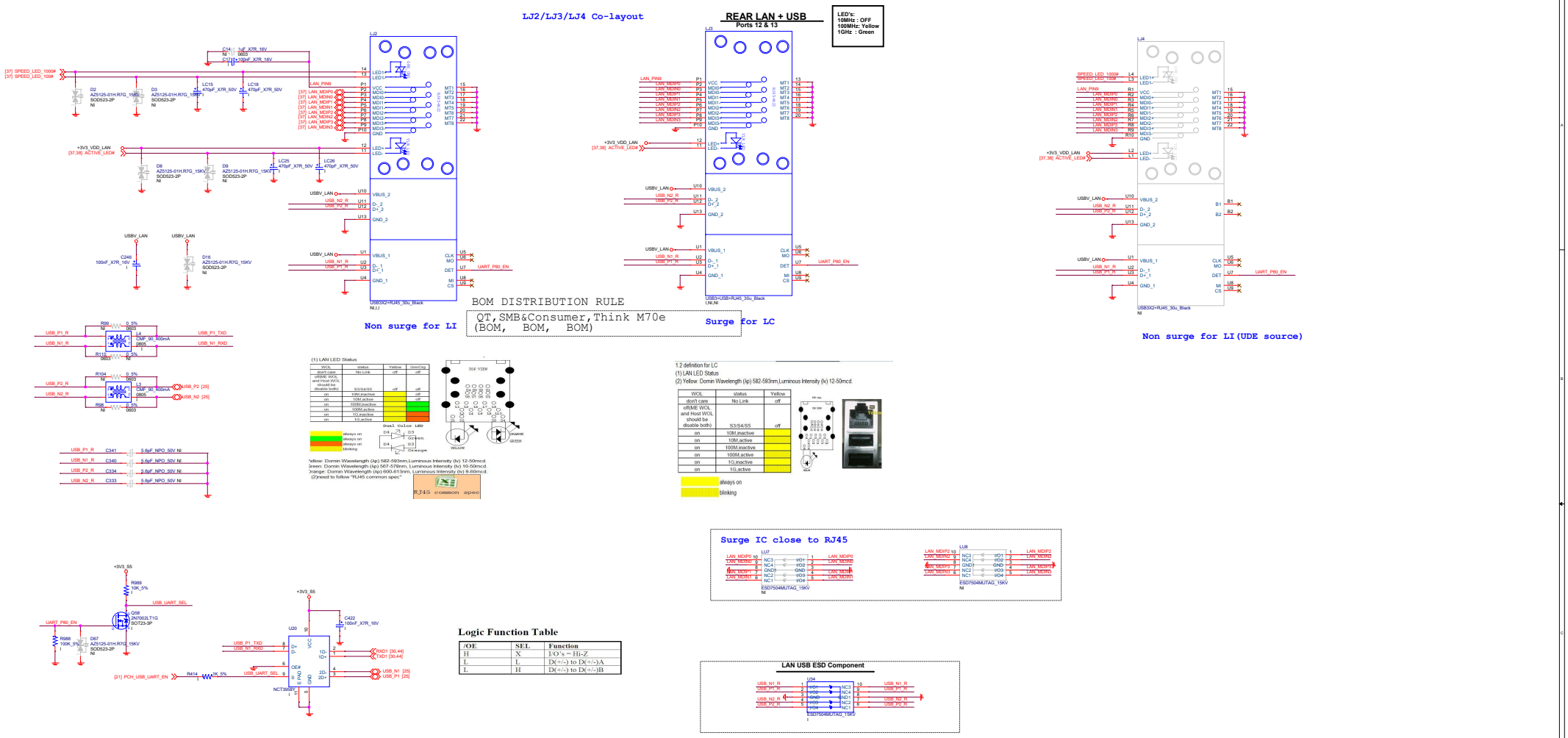


Foxconn NPCEBG
Foxconn WuHan
China
Hon Hai Precision Industry Co. Ltd.
Phone: 027-59603888
Fax:

Title: 37.RTL8111HN

Size: Custom | Document Number: B365_SFF | Rev: SVT

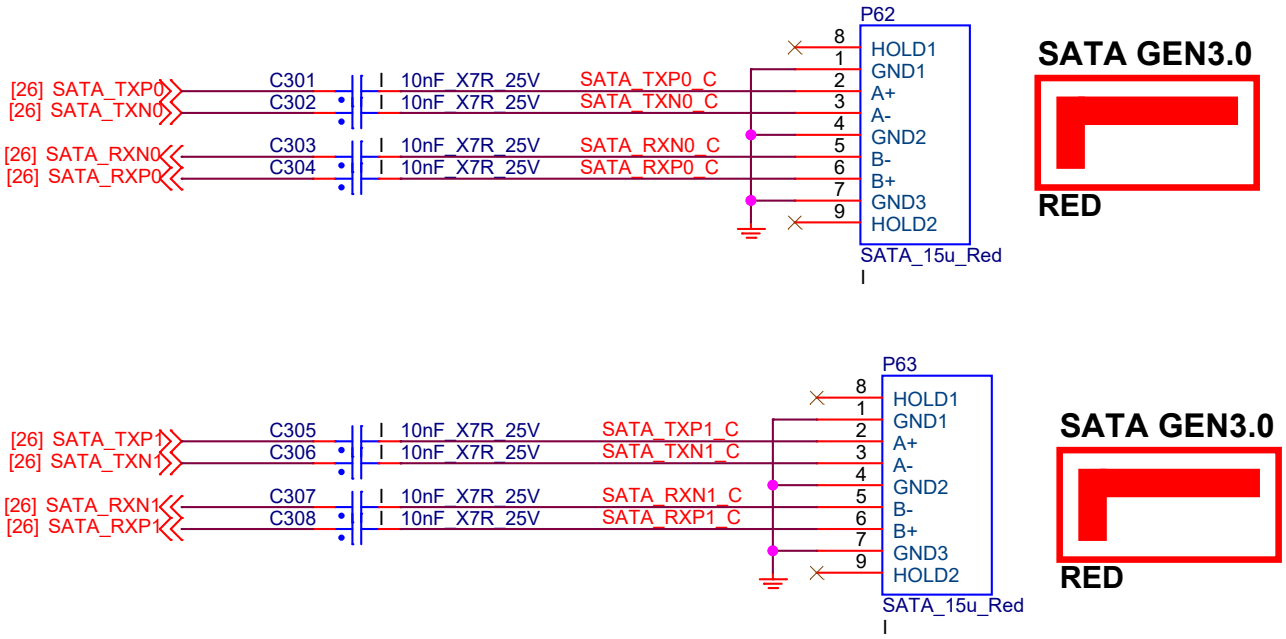
Page Modified: Wednesday, July 17, 2019 09:04:19 (UTC/GMT) | Sheet 37 of 65



WOL	status	Yellow
don't care	No Link	off
off(ME WOL and Host WOL should be disable both)	S3/S4/S5	off
on	10M,inactive	
on	10M,active	
on	100M,inactive	
on	100M,active	
on	1G,inactive	
on	1G,active	

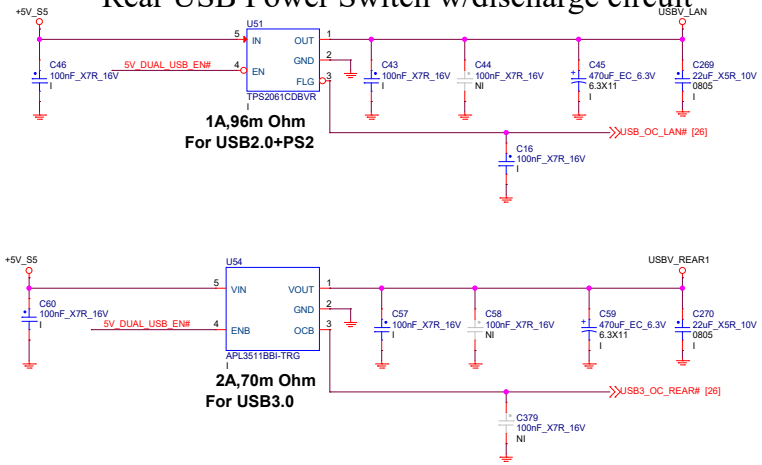
Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.	
Foxconn Wuhan China	Phone: 027-59603088 Fax:	
Title: 38.RJ45/BLEED OFF/USB X2		
Size: D	Document Number: E365_SFF	Rev: SVT
Page Modified: Friday, July 09, 2010	17:53:23 (GMT+08:00)	Sheet 38 of 65

SATA 3.0 Port0,1

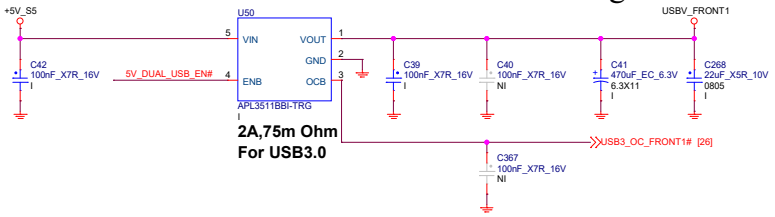


FOXCONN® Foxconn NPCEBG Foxconn WuHan China	Hon Hai Precision Industry Co. Ltd. Phone: 027-59603888 Fax:	
Title: 39.SATA		
Size: A	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 39 of 65

Rear USB Power Switch w/discharge circuit

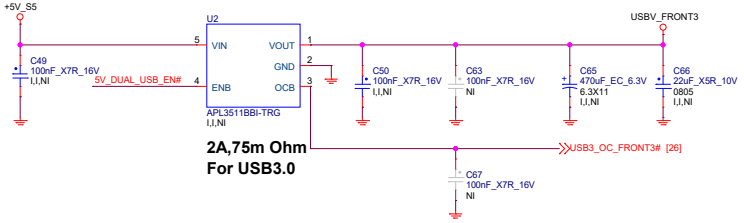


Front USB Power Switch w/discharge circuit

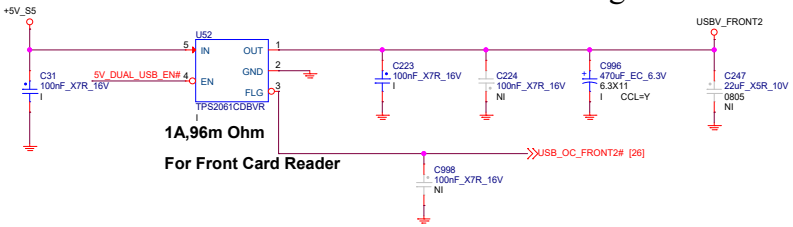


BOM DISTRIBUTION RULE

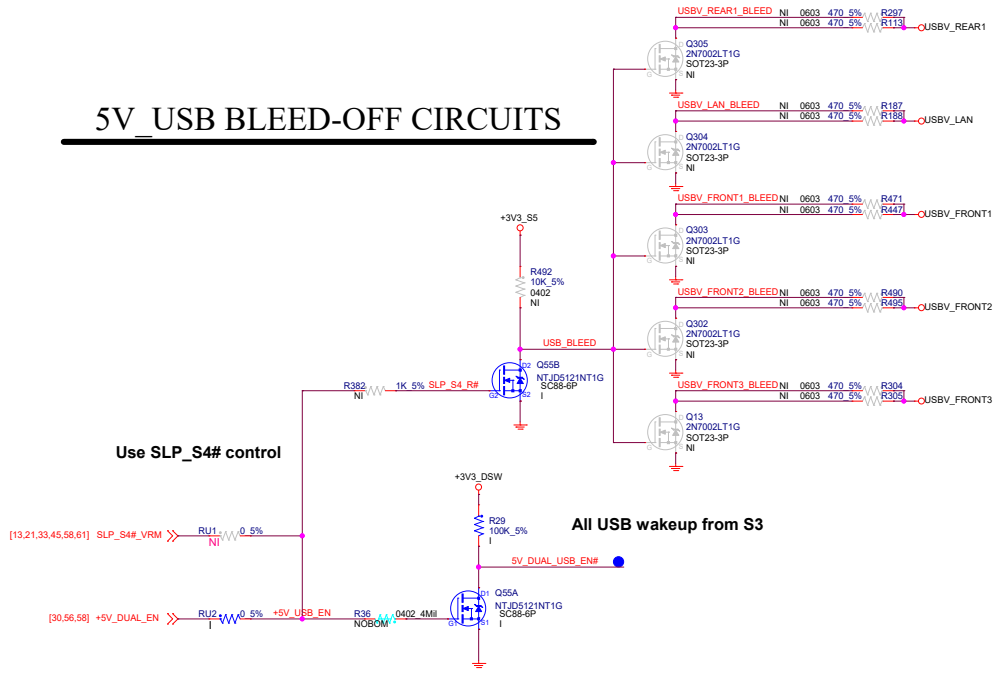
QT,SMB&Consumer,Think M70e
(BOM, BOM, BOM)



Internal USB Power Switch w/discharge circuit

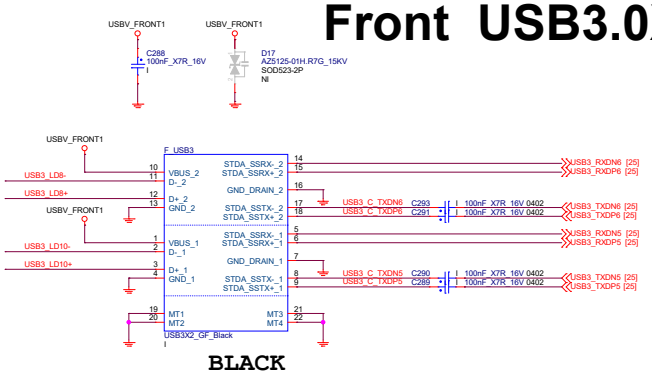


5V_USB BLEED-OFF CIRCUITS

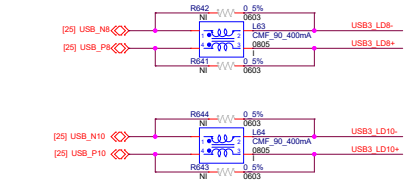


FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 40.USB POWER		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Wednesday, July 17, 2019	08:41:55 (UTC/GMT)	Sheet 40 of 65

Front USB3.0X2

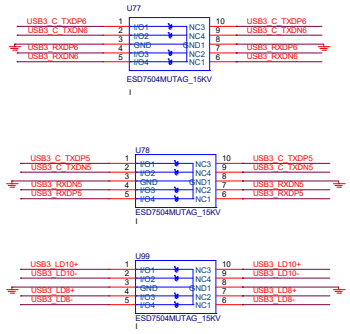


BLACK



Remove the CMC/0ohm co-lay solution for USB3 signals in SIT phase

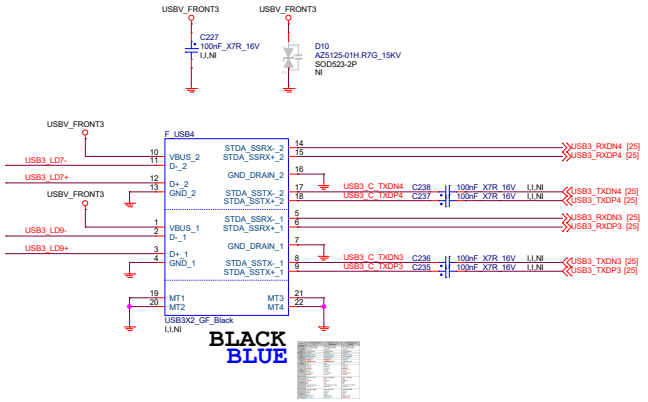
ESD suppressor



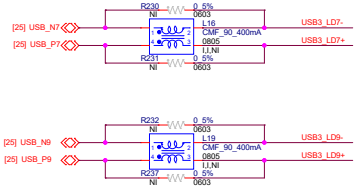
Front USB3.1 gen1

BOM DISTRIBUTION RULE

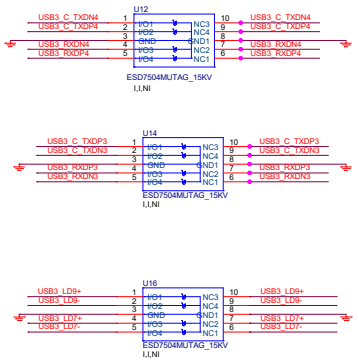
QT,SMB&Consumer,Think M70e
(BOM, BOM, BOM)



BLACK
BLUE



ESD suppressor



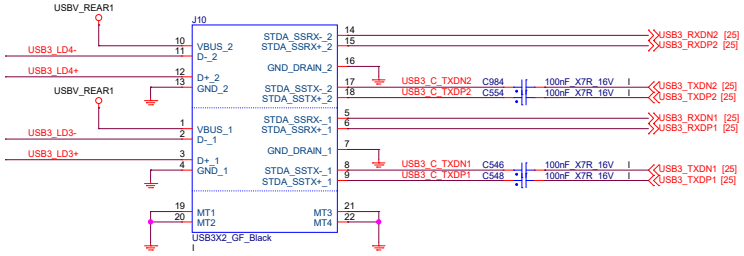
FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

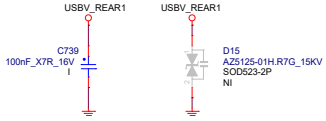
Title: 41.FRONT USB3 X4

Size: Custom | Document Number: B365_SFF | Rev: SVT

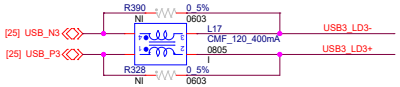
Page Modified: Friday, July 05, 2019 17:18:33 (UTC/GMT) | Sheet 41 of 85

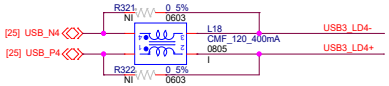
REAR USB3.0X2



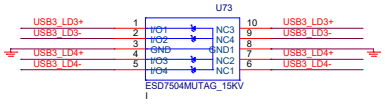


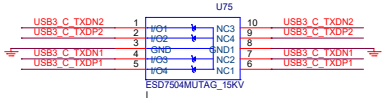
Remove the CMC/0ohm co-lay solution for USB3 signals in SIT phase

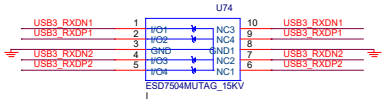




ESD suppressor



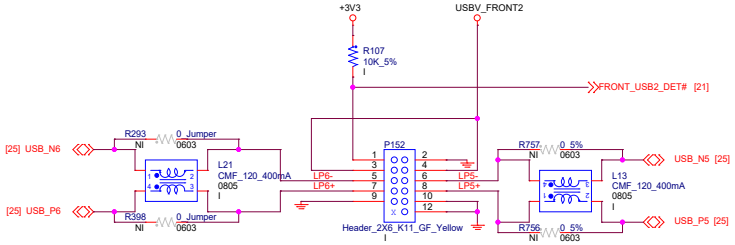


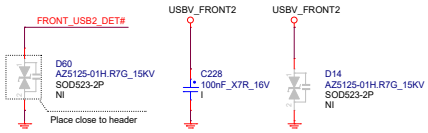


FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

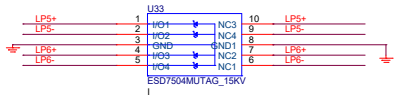
Title		
42.REAR USB3.0 X2*		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 42 of 65

Card Reader USB Port





ESD suppressor

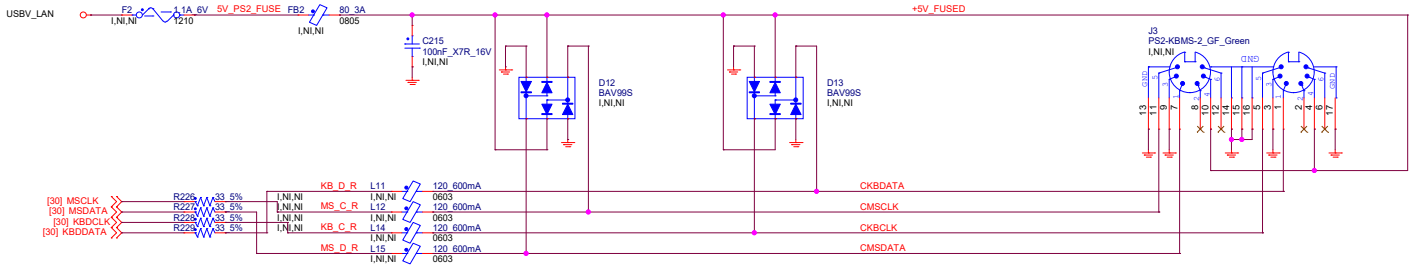


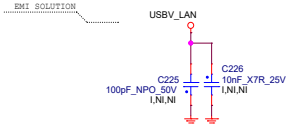
BOM DISTRIBUTION RULE

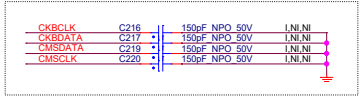
QT,SMB&Consumer,Think M70e
(BOM, BOM, BOM)

KEYBOARD / MOUSE

The +5V_FUSED power trace width must be 40 mils or greater







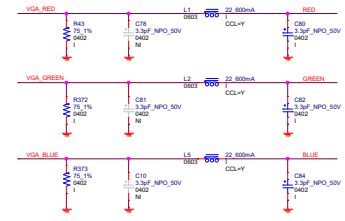
FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 43.CARD READER & PS2

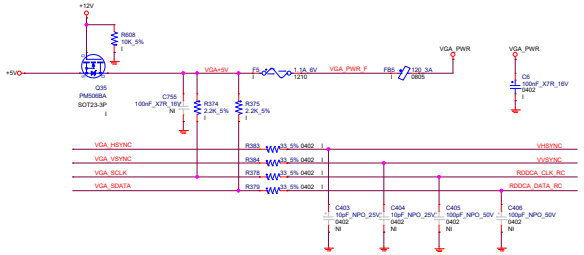
Size	Document Number	Rev
C	B365_SFF	SVT

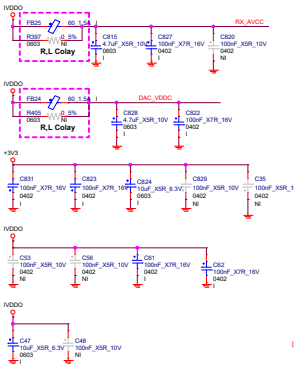
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 43 of 65

VGA

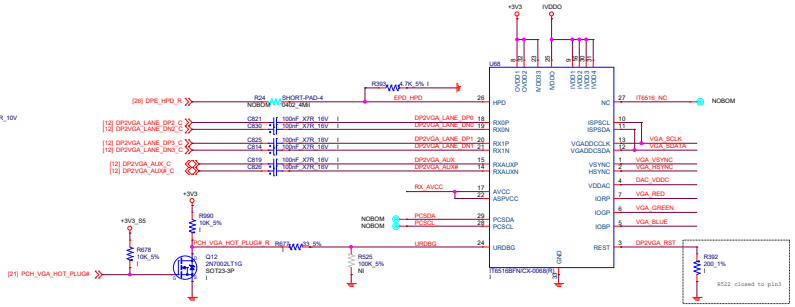


Place 150 ohm resistors close to filters (Cap/Ferrite-Beads)



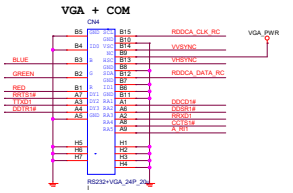


DP to VGA_IT6516BFN/CX

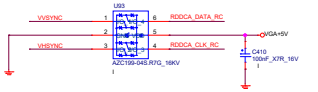


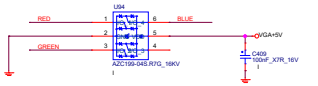
Pin24 [URDBG]	Pin26 [HPD]	VGA Device
HIGH	HIGH	Plug in or Un-Plug
LOW	HIGH	Plug in
LOW	LOW	Un-Plug

VGA + COM

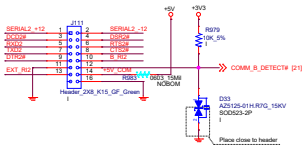


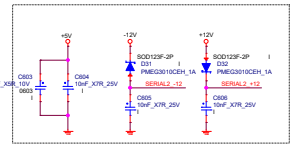
ESD pads are as close as possible to I/O connector pins.
capacitor pads are as close as possible to the ESD diode.

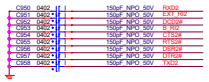




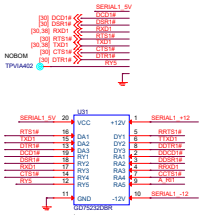
COM2 on Header



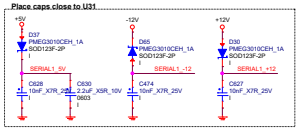




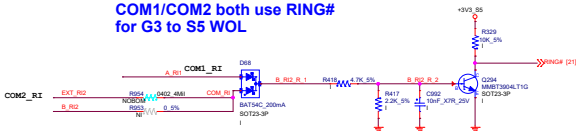
COM1 on board

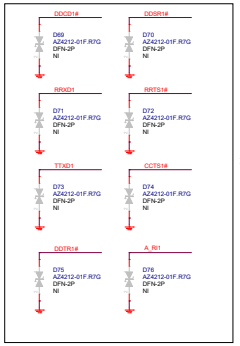


SIT change U31 from SN75185DBR to GD75232DBR



COM1/COM2 both use RING# for G3 to S5 WOL

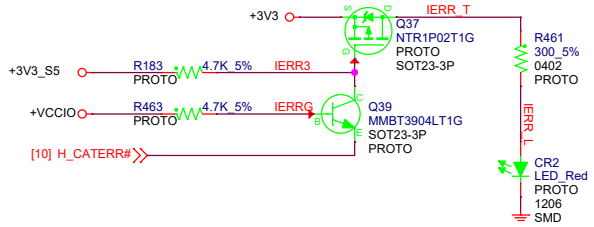




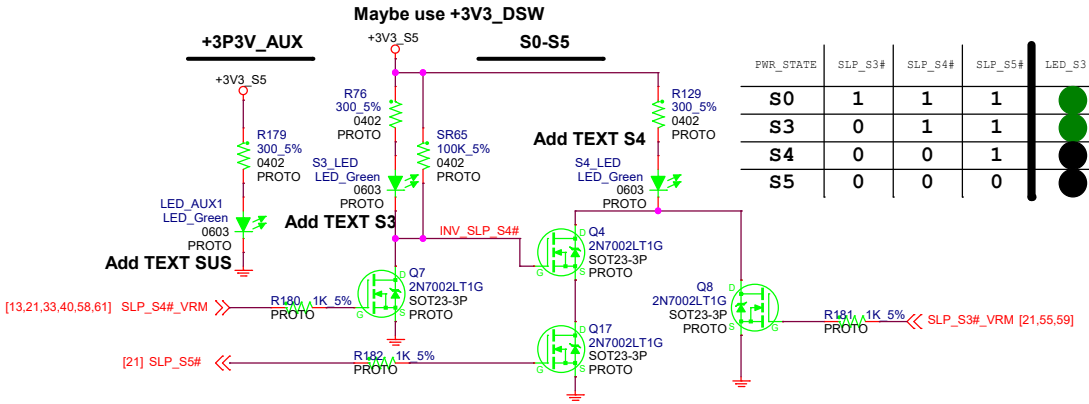
EMC Request

FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn Wuhan
China
Phone: 027-59603088
Fax:
Title: 44.DP2VGA & COM
Size: D
Document Number: 8365_SFF
Rev: SVT
Page Modified: Friday, July 08, 2016 17:53:33 (UTC/GMT) | Sheet 44 of 65

PCA LED

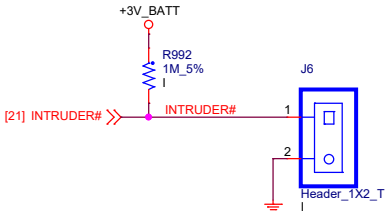


CATERR#

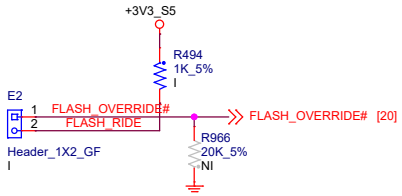


PWR_STATE	SLP_S3#	SLP_S4#	SLP_S5#	LED_S3	LED_S4
S0	1	1	1		
S3	0	1	1		
S4	0	0	1		
S5	0	0	0		

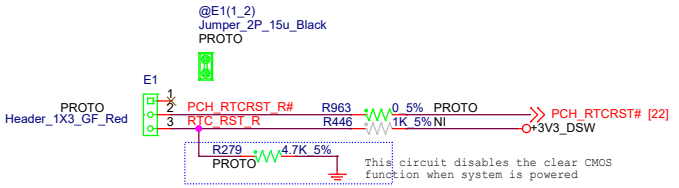
Case Open



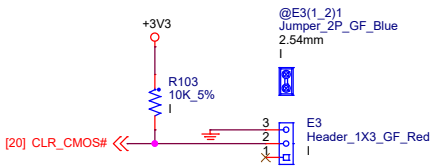
FLASH OVERRIDE(ME Disable)



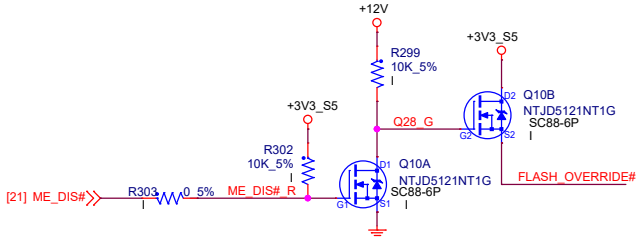
CLEAR CMOS HW



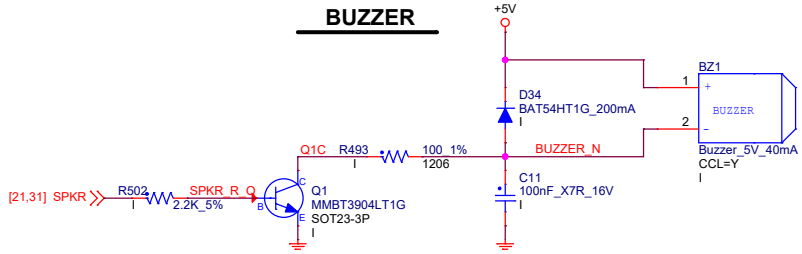
CLR CMOS



SW FLASH OVERRIDE



BUZZER



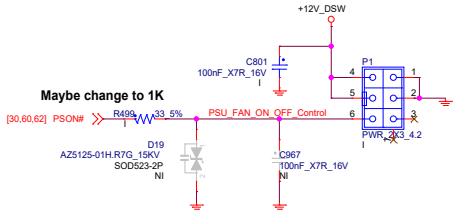
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 45.LED/HEADER/BUZZER

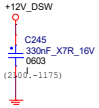
Size: Custom | Document Number: B365_SFF | Rev: SVT

Page Modified: Wednesday, July 17, 2019 08:52:36 (UTC/GMT) | Sheet 45 of 65

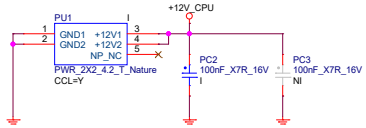
Power Input Connector



For EMI surge issue

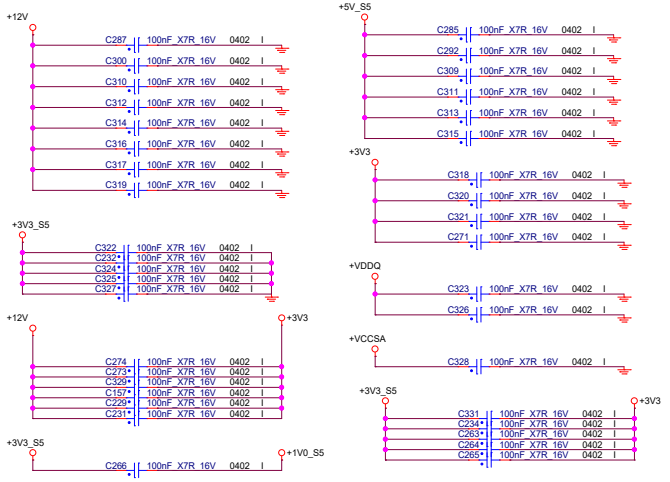


CPU POWER



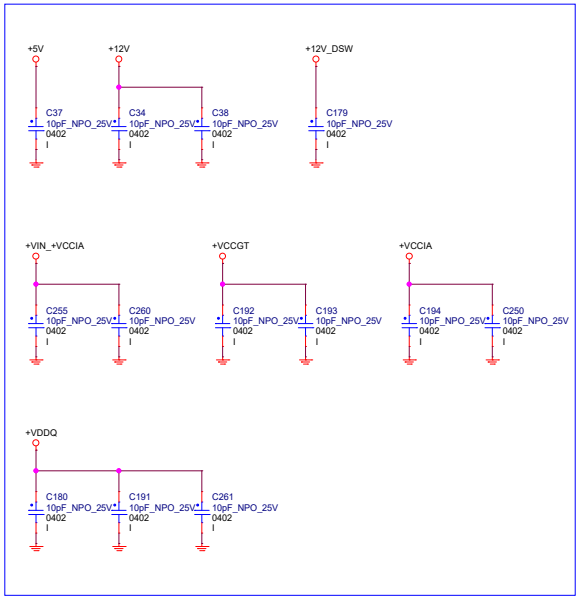
EMI CAP

FXN EMI SUGGESTED PLACEMENT

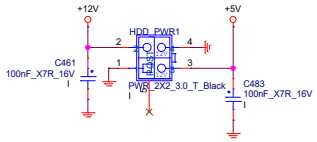


RF Caps

Need follow RF team suggest location

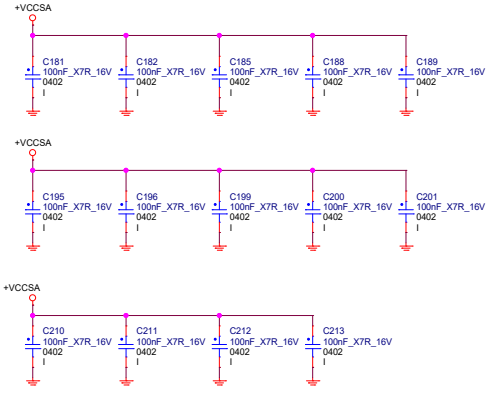


SATA POWER

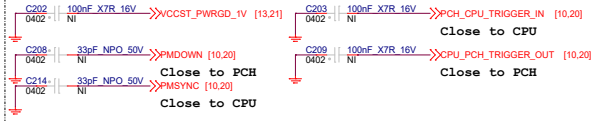


HSIO Stitching Caps

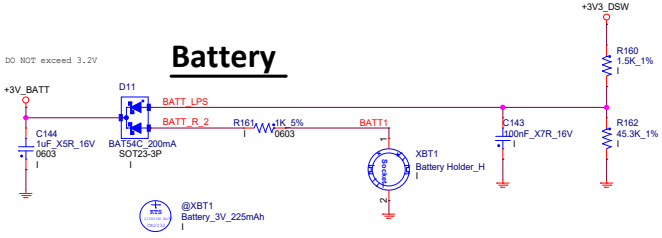
CPU STICHING CAP for PEGx16 Note 1



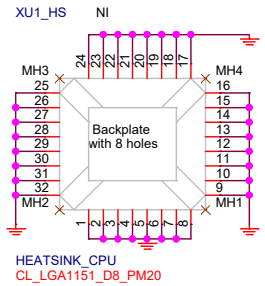
Decoupling CAP Note3

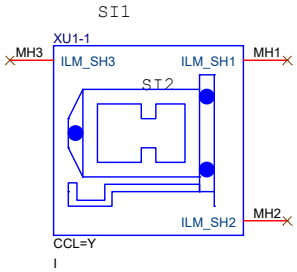


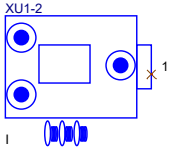
Battery

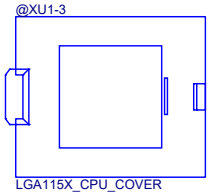


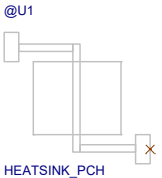
FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: 46.POWER INPUT & EMI CAP		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Wednesday, July 17, 2019 08:48:28 (UTC/GMT)		Sheet 46 of 65

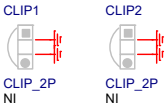


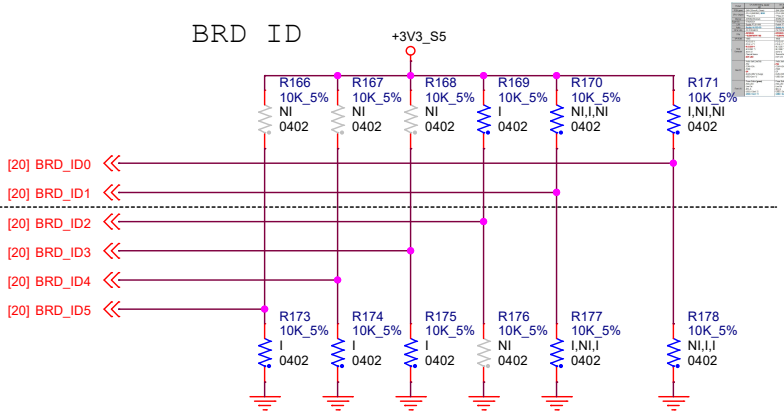








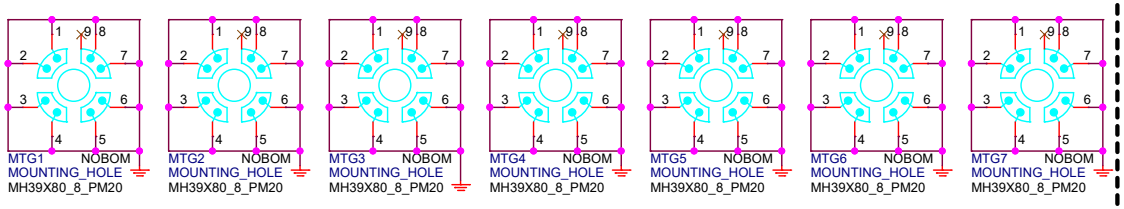


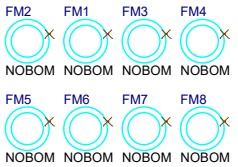


SKU	BRD_ID2	BRD_ID1	BRD_ID0
QT	0	0	1
SMB&Consumer	0	1	0
M70e	0	0	0
QT	1	0	1
SMB&Consumer	1	1	0
M70e	1	0	0

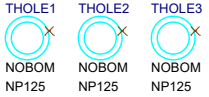
DO NOT SUPPORT 8C

SUPPORT 8C





DFT Tooling Hole



FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 47.MECHANICAL PARTS

Size: B | Document Number: B365_SFF | Rev: SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 47 of 65

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 48. BLANK

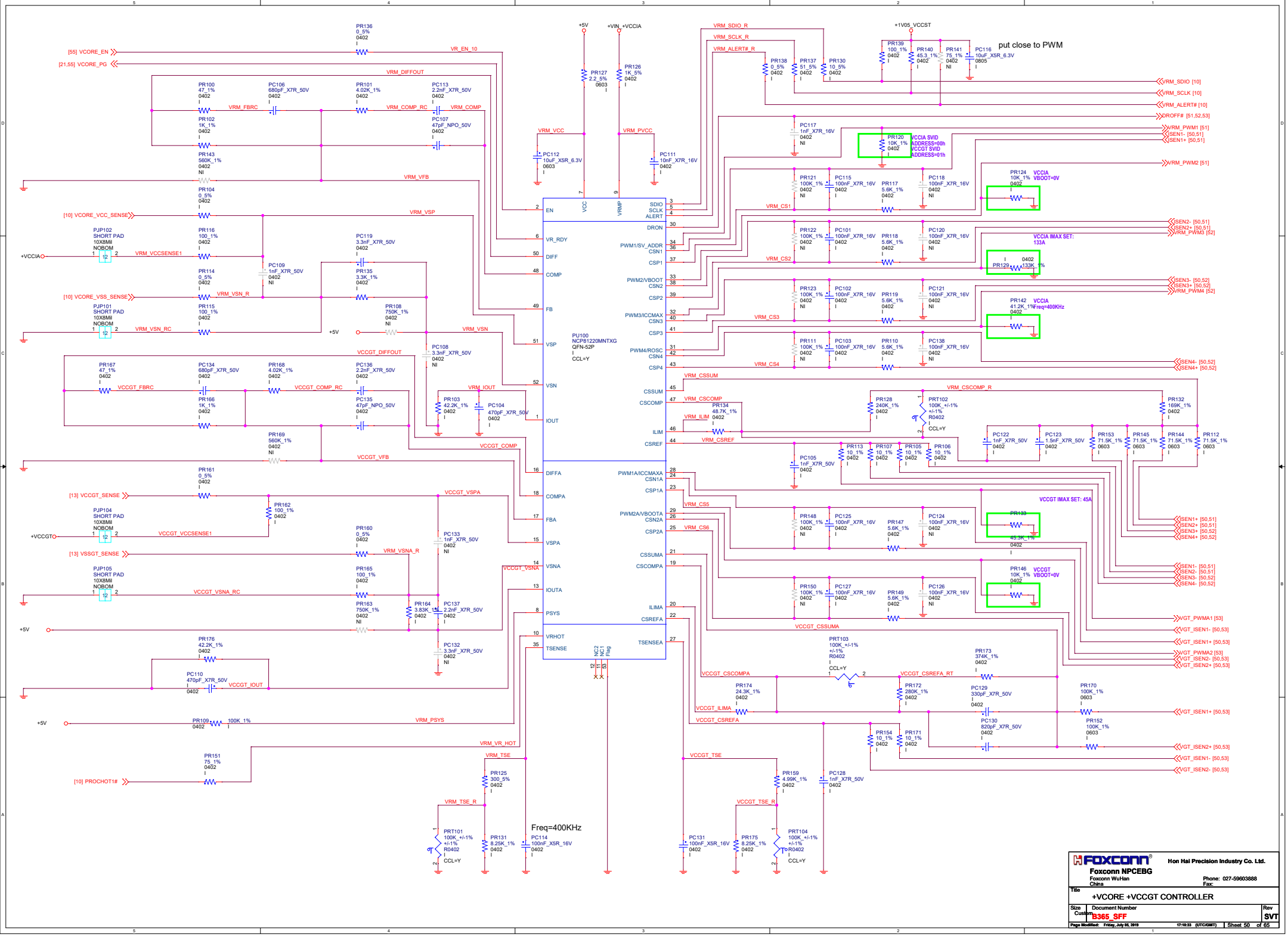
Size: Custom
Document Number: B365_SFF
Rev: SVT

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 49. Blank

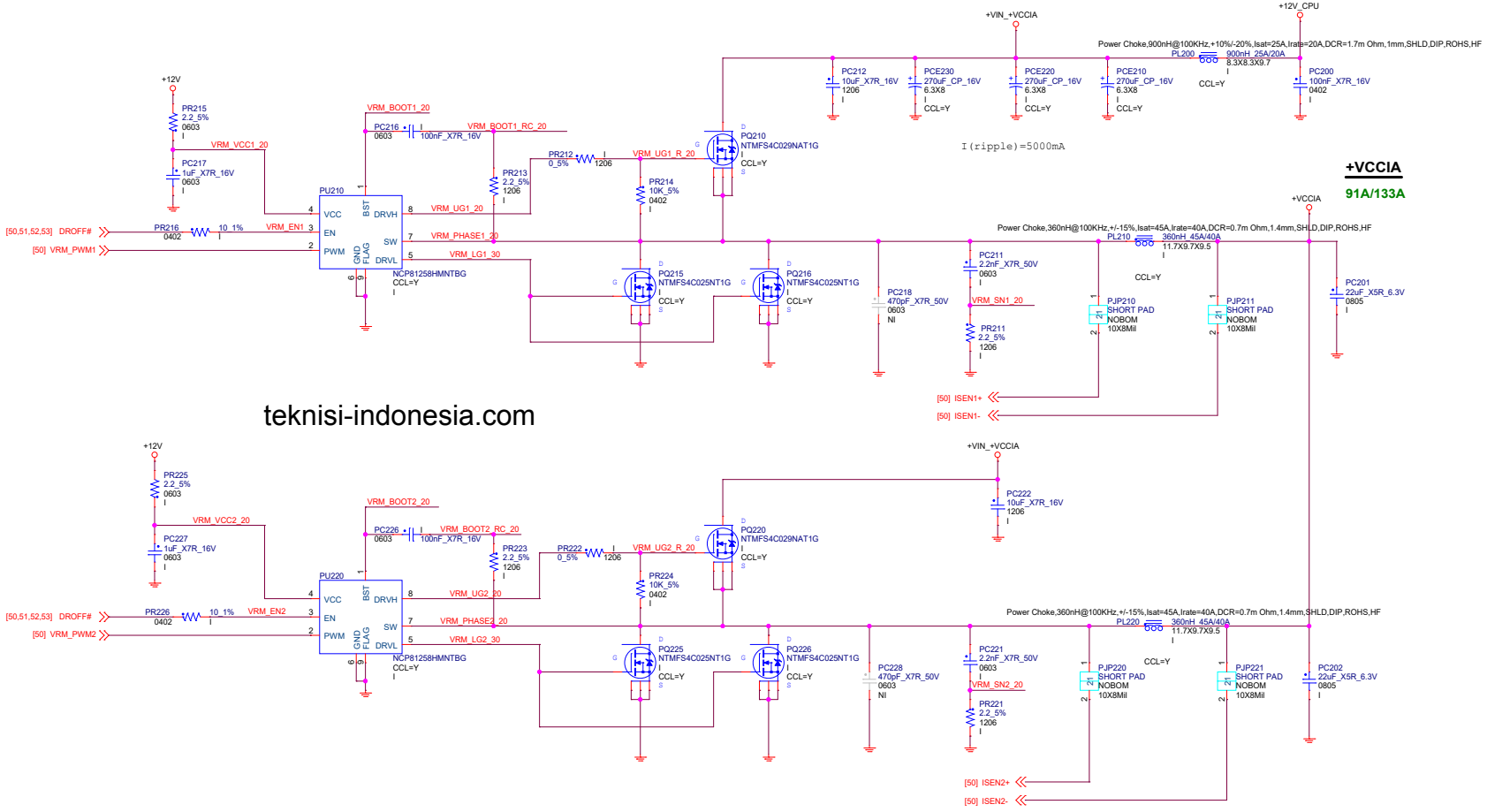
Size: B
Document Number: B365_SFF
Rev: SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)



Foxconn NPCEBG	Hon Hai Precision Industry Co. Ltd.	
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: +VCORE +VCCGT CONTROLLER		
Size: Custom	Document Number: 8365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 50 of 65

VCORE PHASE1~2



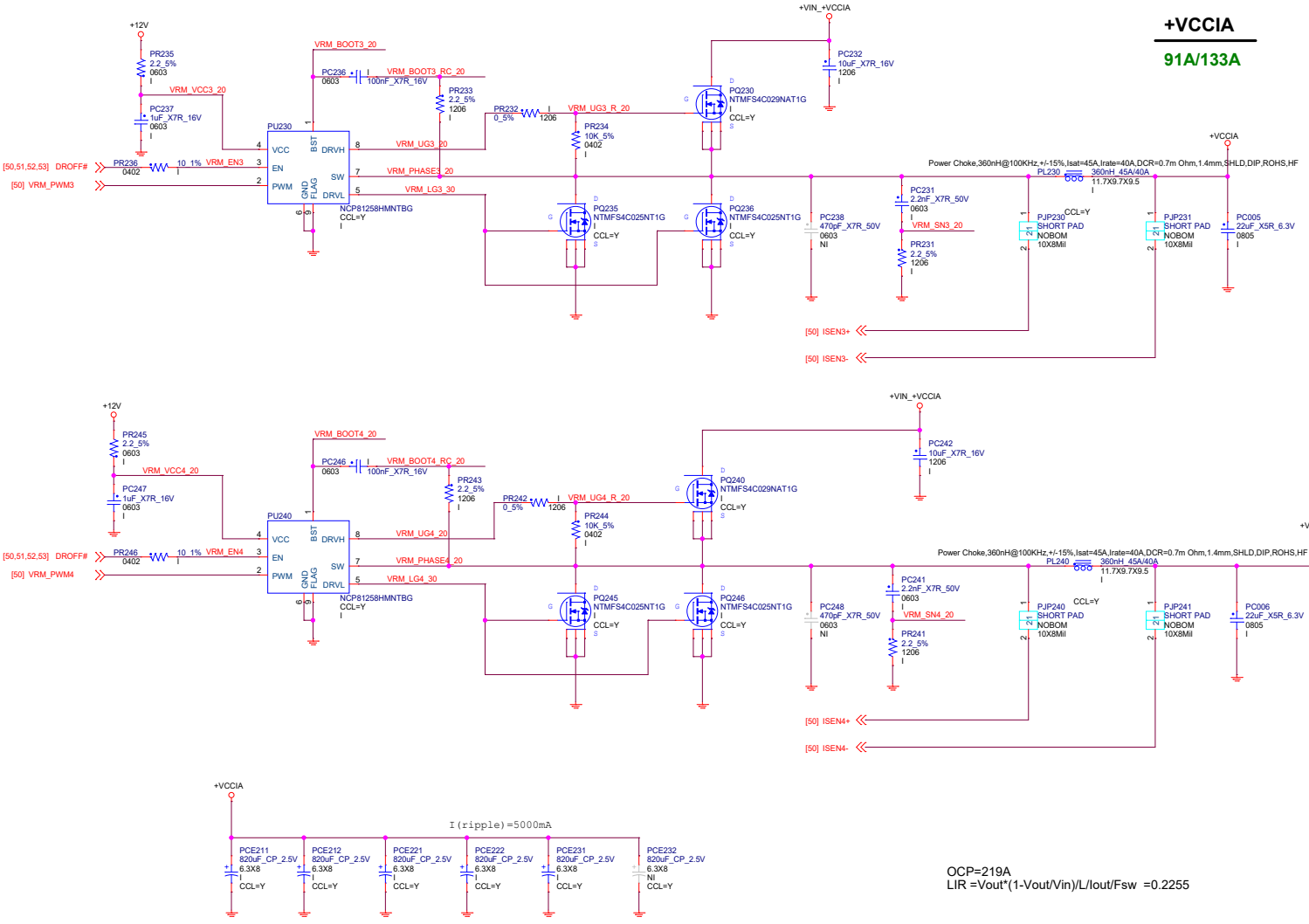
FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: +VCORE PHASE 1 & 2

Size	Document Number	Rev
C	B365_SFF	SVT

Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT) | Sheet 51 of 65

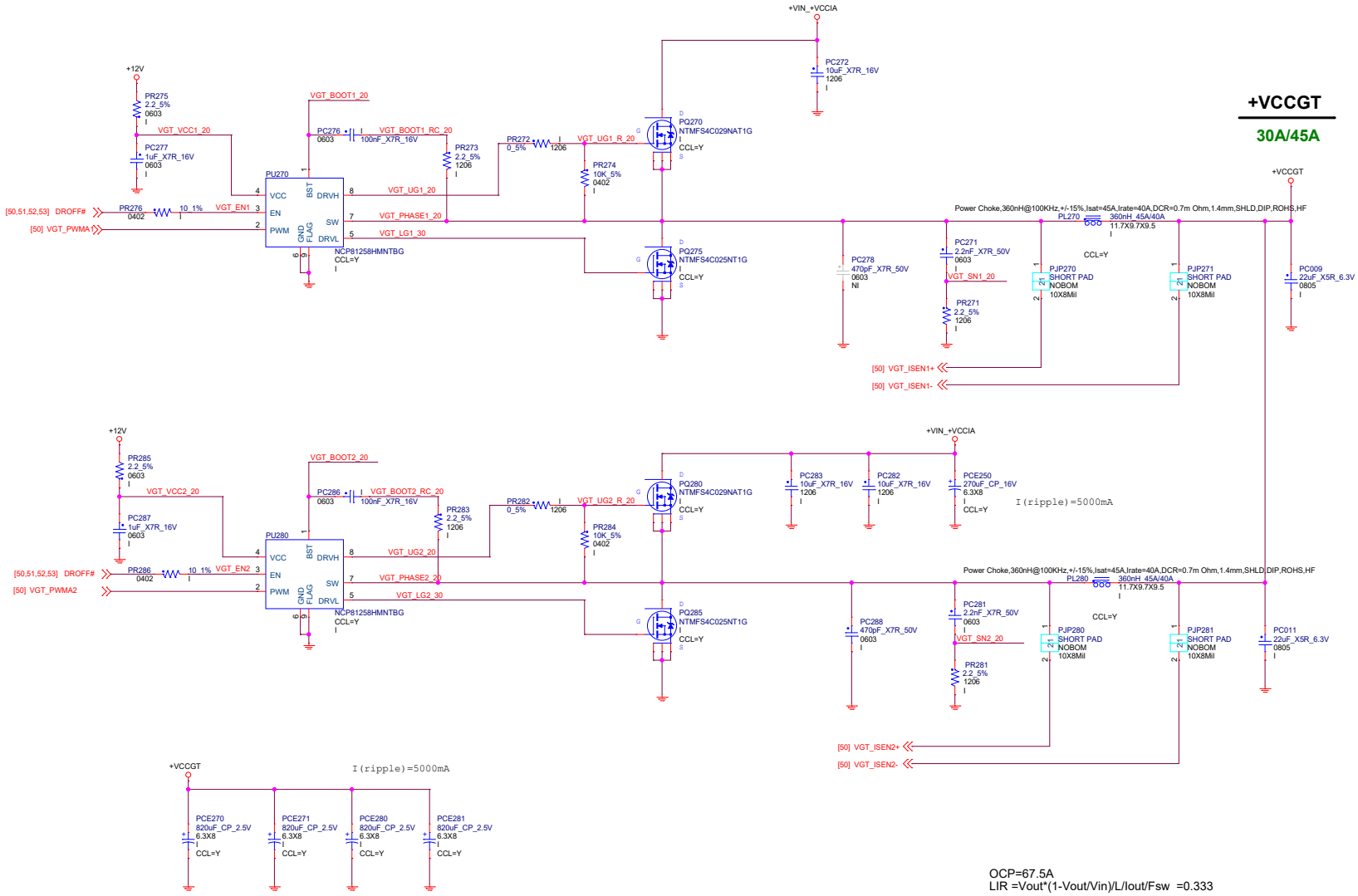
VCORE PHASE3~4



OCP=219A
LIR =Vout*(1-Vout/Vin)/L/Iout/Fsw =0.2255

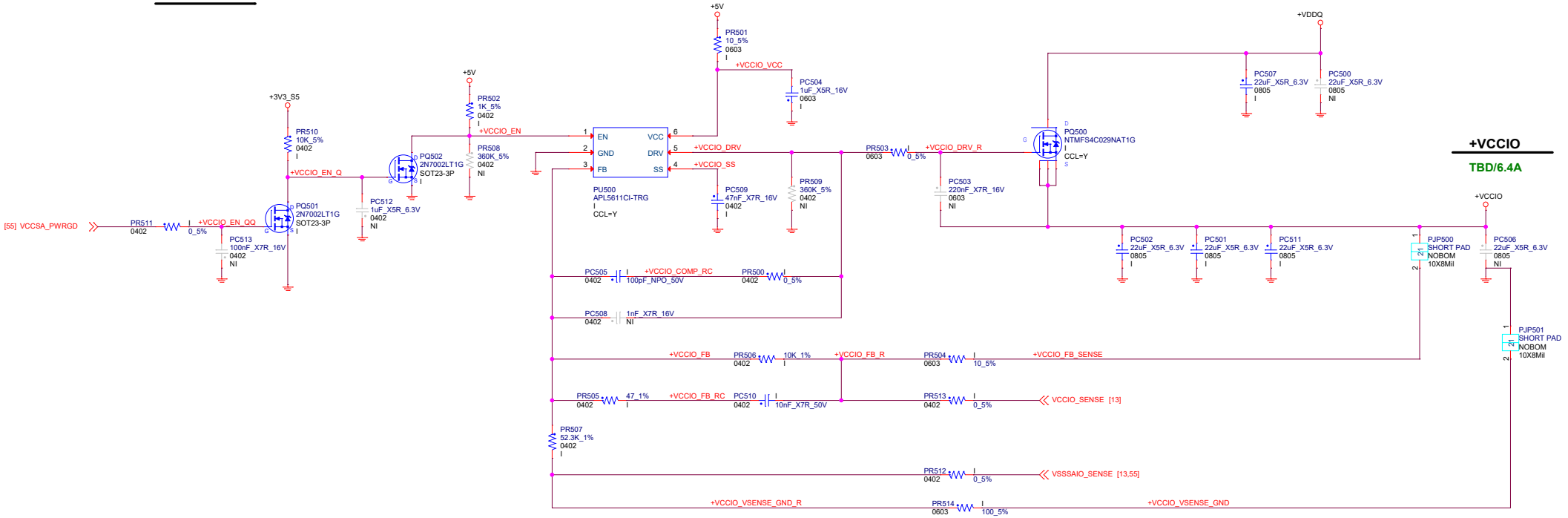
FOXCONN	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: +VCORE PHASE 3 & 4		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 52 of 65	

VCCGT PHASE1~2



FOXCONN	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: +VCCGT Phase 1 & 2		
Size: C	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 53 of 65	

+VCCIO

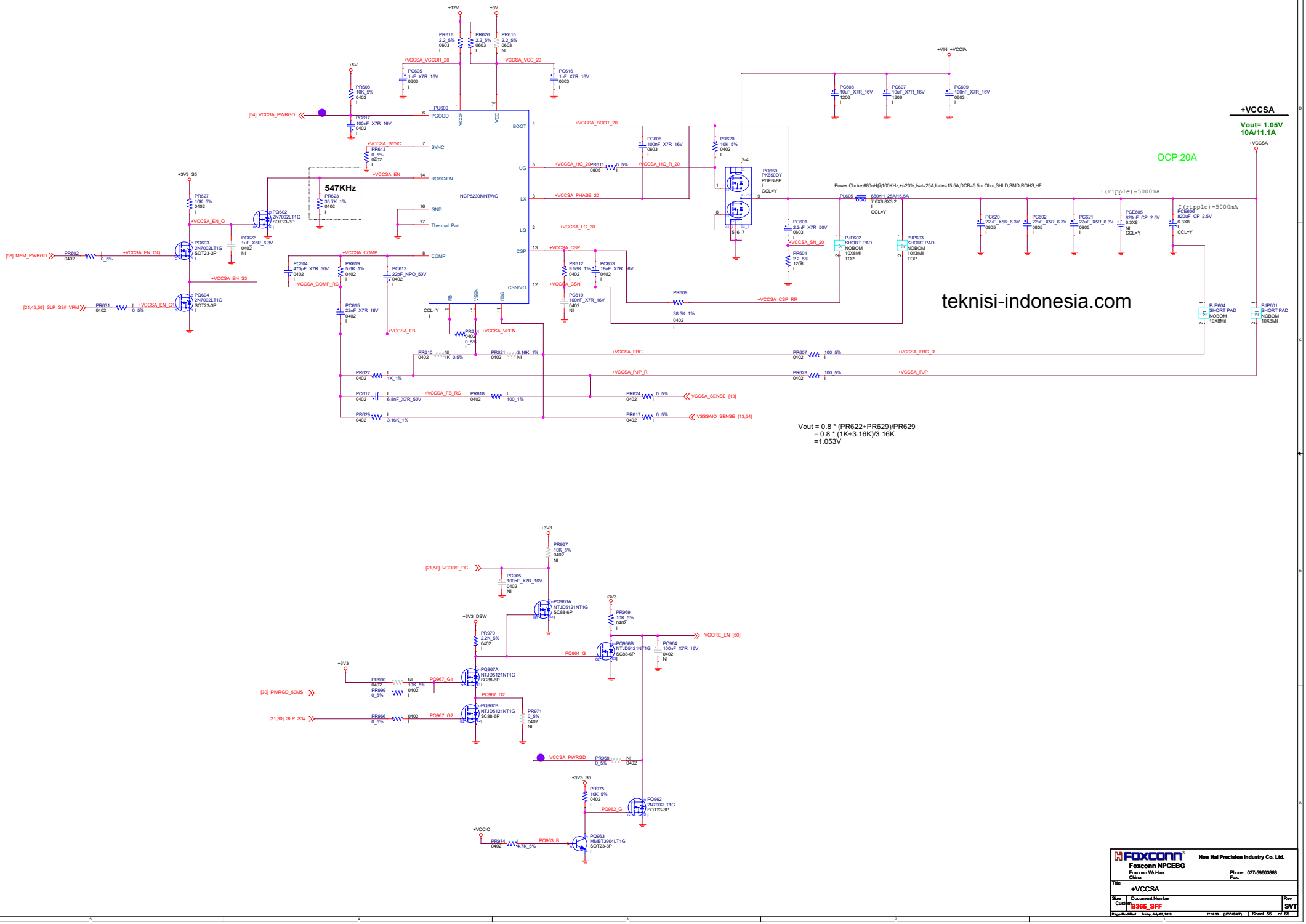


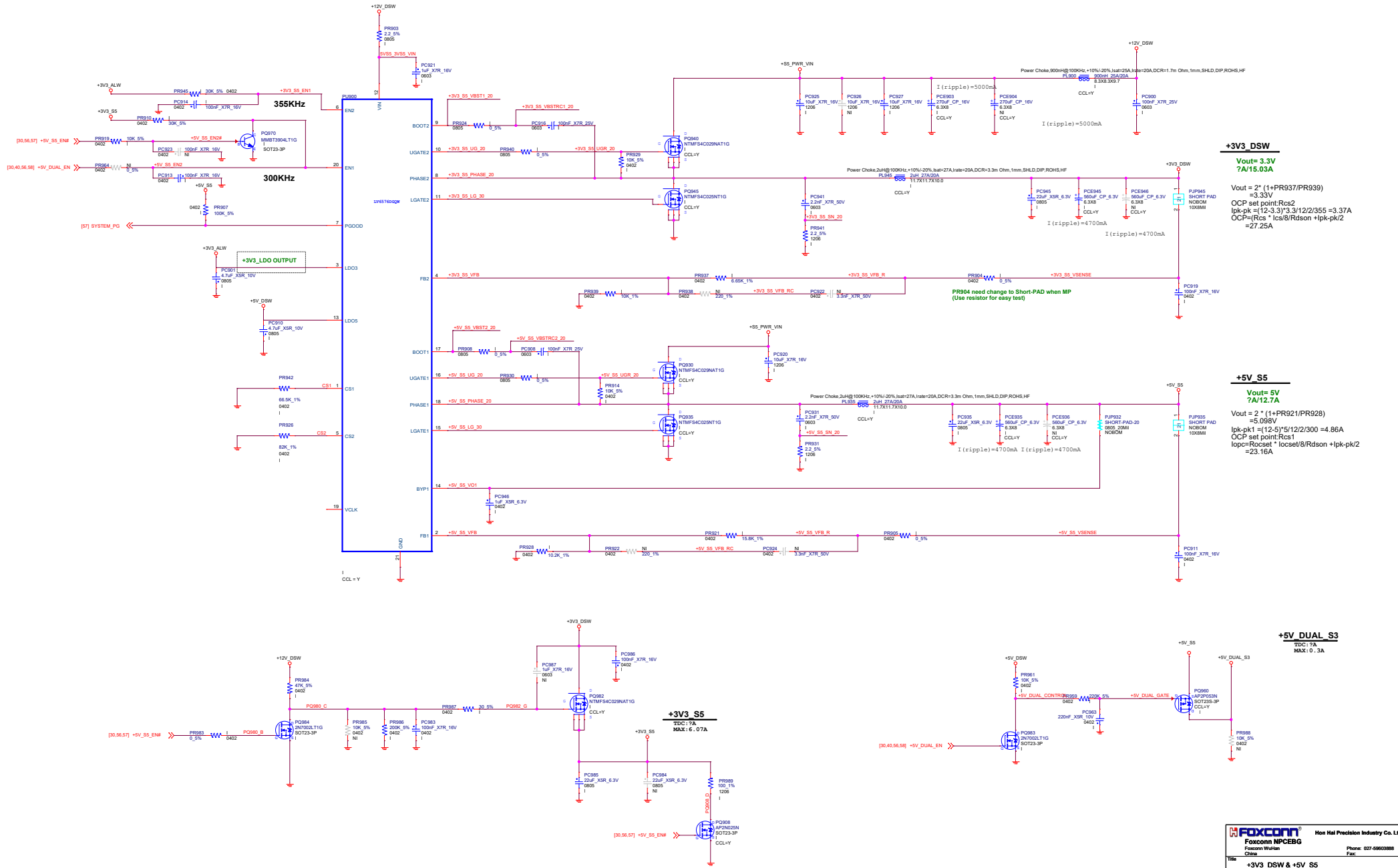
+VCCIO

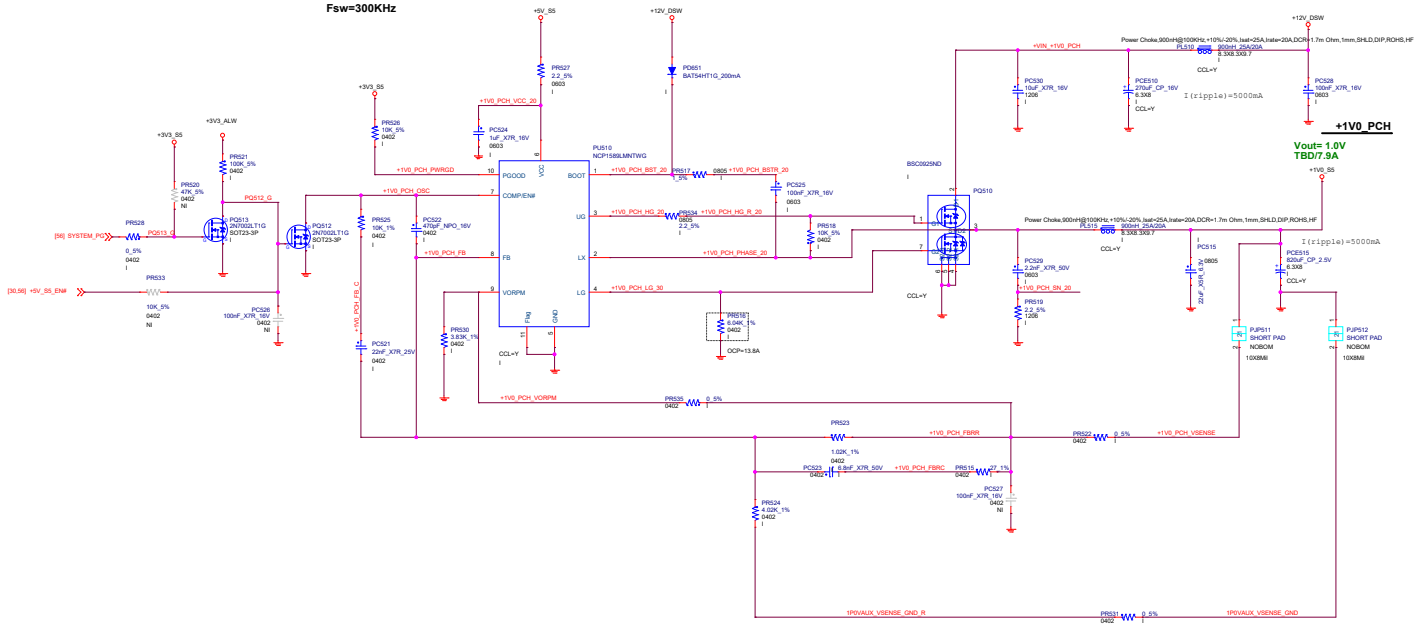
TBD/6.4A

Vout = 0.8 * (PR506+PR507)/PR507
= 0.8 * (10K+52.3K)/52.3K
=0.953V

Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG	
Foxconn WuHan China	Phone: 027-59603888 Fax:
Title: +VCCIO	
Size: Custom	Document Number: B365_SFF
Rev: SVT	
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 54 of 65


+VCCSA
Vout= 1.05V
10A/11.1A
OCP:20A
547KHz
NCP5230MNTWG
teknisi-indonesia.com
Vout = 0.8 * (PR622+PR629)/PR629
= 0.8 * (1K+3.16K)/3.16K
=1.053V
Power Choke,680nH@100KHz,+/-20%,Isat=25A,Irate=15.5A,DCR=5.5m Ohm,SHLD,SMD,ROHS,HF
I(ripple)=5000mA
I(ripple)=5000mA
Foxconn NPCEBG
Hon Hai Precision Industry Co. Ltd.
Foxconn WuHan
China
Phone: 027-59603888
Fax:
+VCCSA
B365_SFF
SVT
Sheet 55 of 65


+3V3_DSW
Vout= 3.3V
?A/15.03A
Vout = 2* (1+PR937/PR939)
=3.33V
OCP set point:Rcs2
Ipk-pk =(12-3.3)*3.3/12/2/355 =3.37A
OCP=(Rcs * Ics/8/Rdson +Ipk-pk/2
=27.25A
+5V_S5
Vout= 5V
?A/12.7A
Vout = 2 * (1+PR921/PR928)
=5.098V
Ipk-pk1 =(12-5)*5/12/2/300 =4.86A
OCP set point:Rcs1
Iopc=Rocset * Iocset/8/Rdson +Ipk-pk/2
=23.16A
PR904 need change to Short-PAD when MP
(Use resistor for easy test)
+3V3_LDO OUTPUT
355KHz
300KHz
+3V3_S5
TDC:?A
MAX:6.07A
+5V_DUAL_S3
TDC:?A
MAX:0.3A
Foxconn NPCEBG
Foxconn Wuhan
China
Hon Hai Precision Industry Co. Ltd.
Phone: 027-59603888
Fax:
+3V3_DSW & +5V_S5
B365_SFF
SVT
Sheet 56 of 65

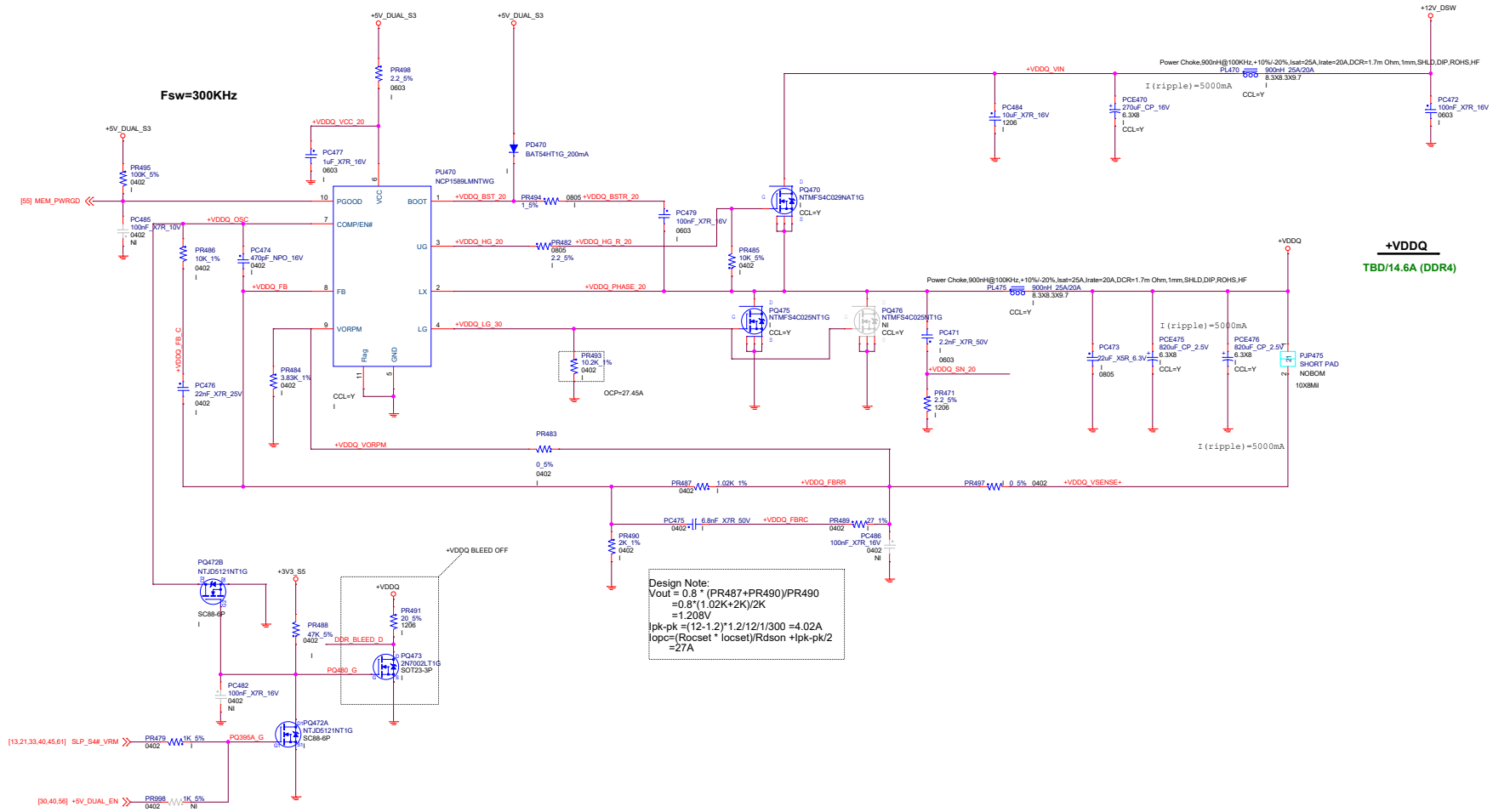


Vout = 0.8 * (1+PR523/PR524)
=1.003V
Ipk-pk =(12-1)*1/12/0.9/300 =3.34A
Iopc=(Rocset * Iocset)/Rdson +Ipk-pk/2
=13.8A

Foxconn NPCEBG Foxconn Wuhan China	Hon Hai Precision Industry Co. Ltd. Phone: 027-59603088 Fax:	
Title: +1V0_PCH		
Size: D	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 06, 2018	17:56:33 (UTC/GMT)	Sheet 37 of 65

+VDDQ

Note: net-name:+VDDQ



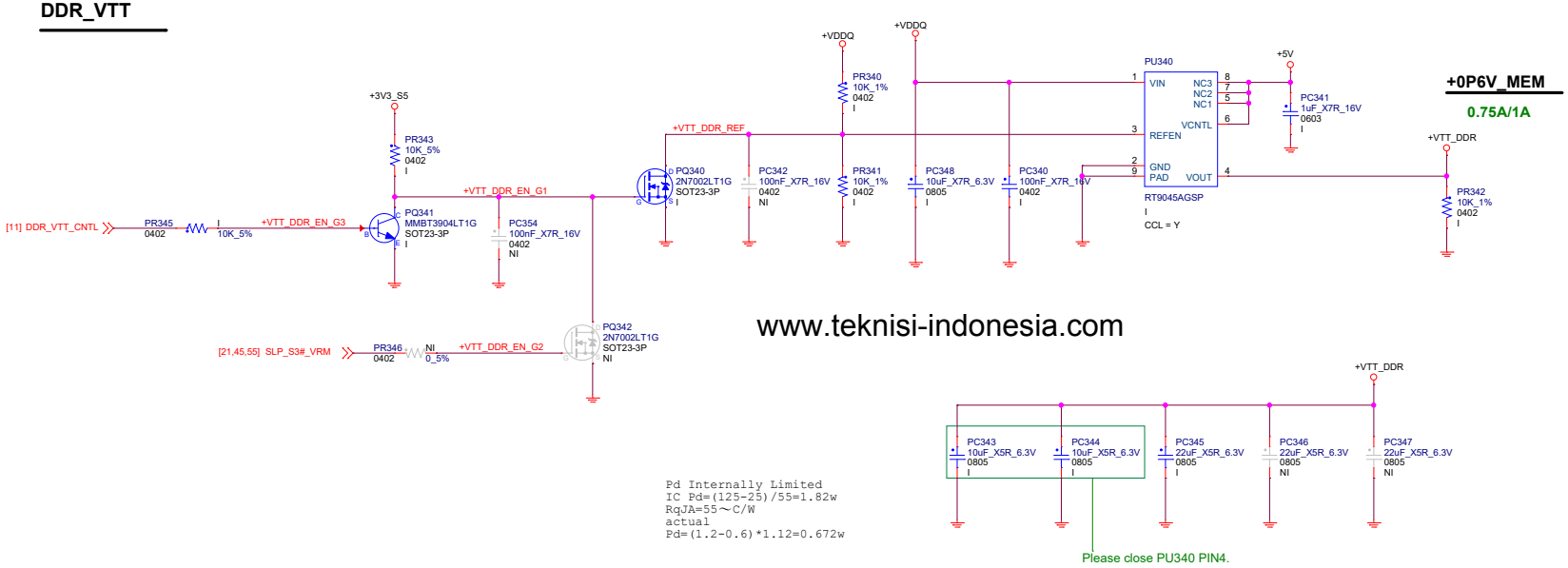
+VDDQ

TBD/14.6A (DDR4)

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title		
+VDDQ		
Size: Custom	Document Number: 8365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:16:33 (UTC/GMT)	Sheet 58 of 65	

DDR_VTT



+0P6V_MEM

0.75A/1A

www.teknisi-indonesia.com

Pd Internally Limited
IC Pd=(125-25)/55=1.82w
RqJA=55～C/W
actual
Pd=(1.2-0.6)*1.12=0.672w

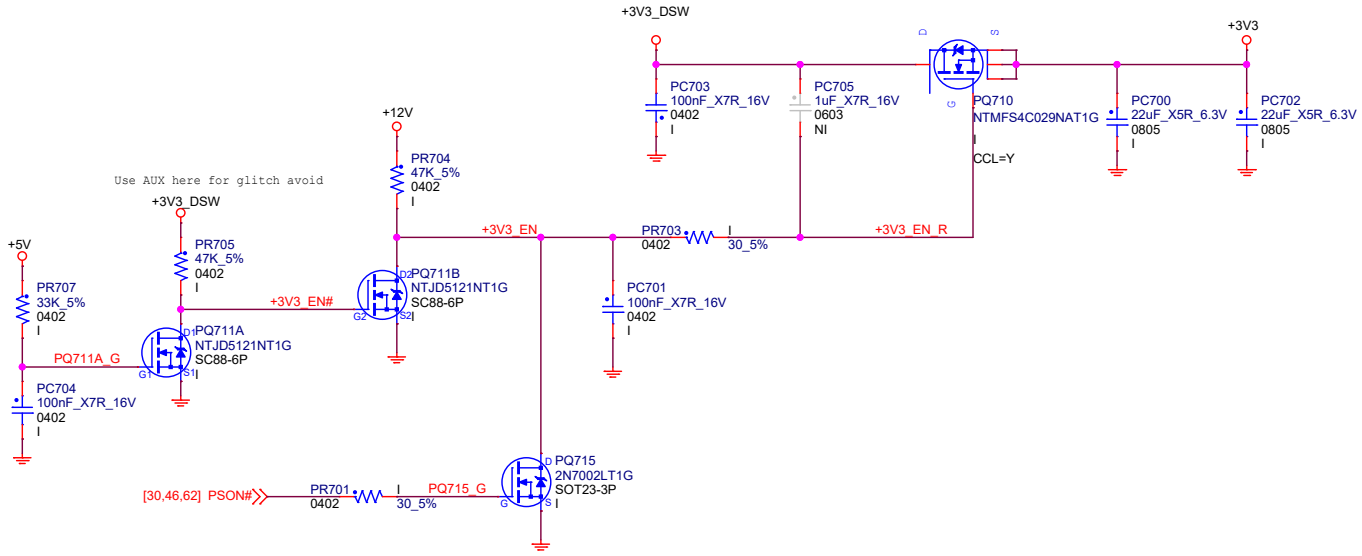
Please close PU340 PIN4.

FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: +VTT_DDR		
Size: Custom	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:19:33 (UTC/GMT)		Sheet 59 of 65

+3V3 (S0)

TBD/8.83A

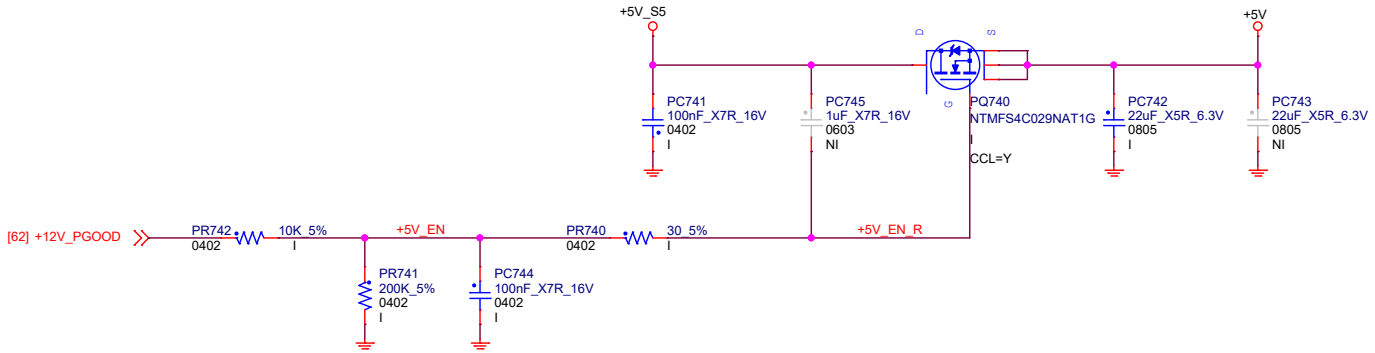
(S0-S5)



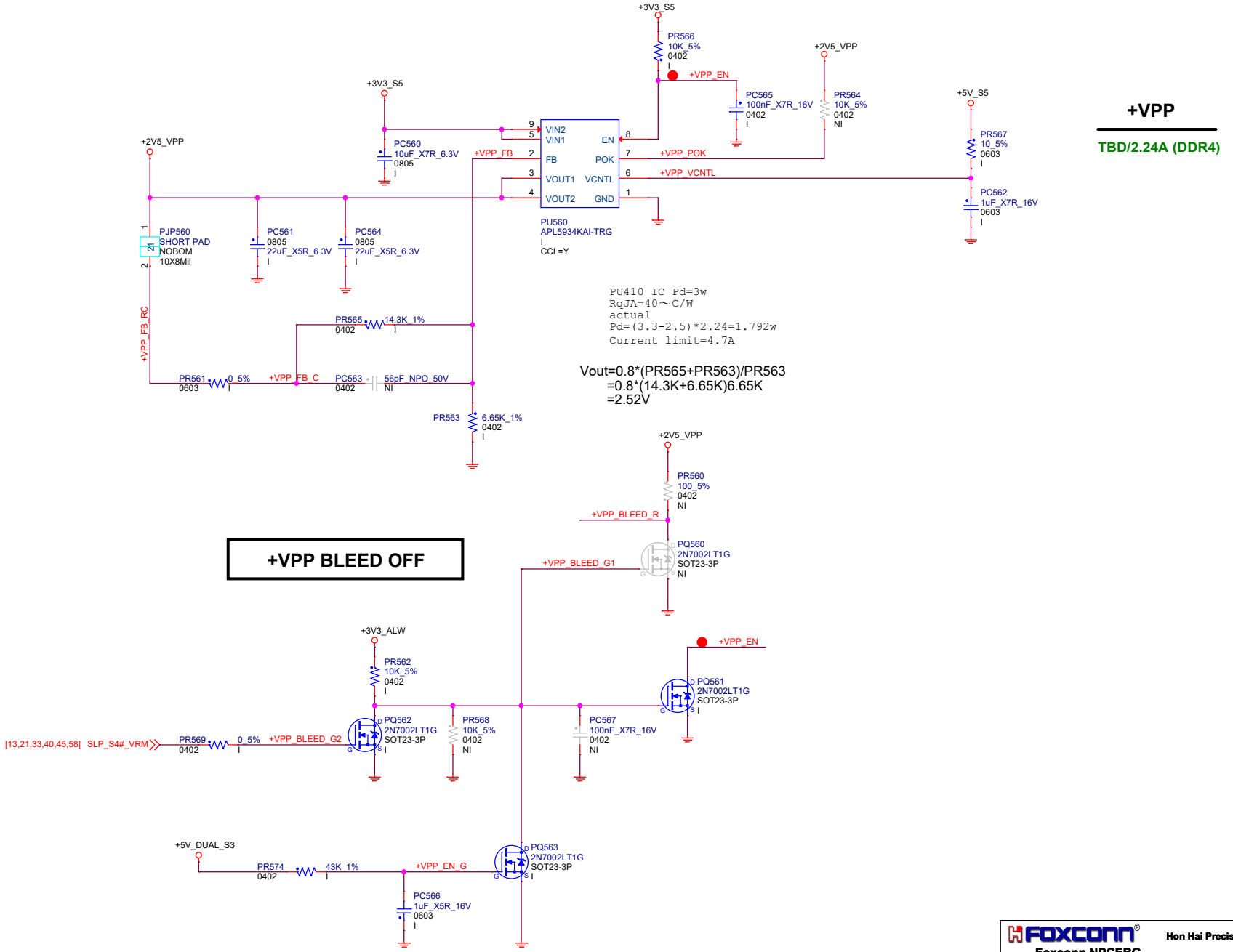
+5V (S0)

TBD/3.78A

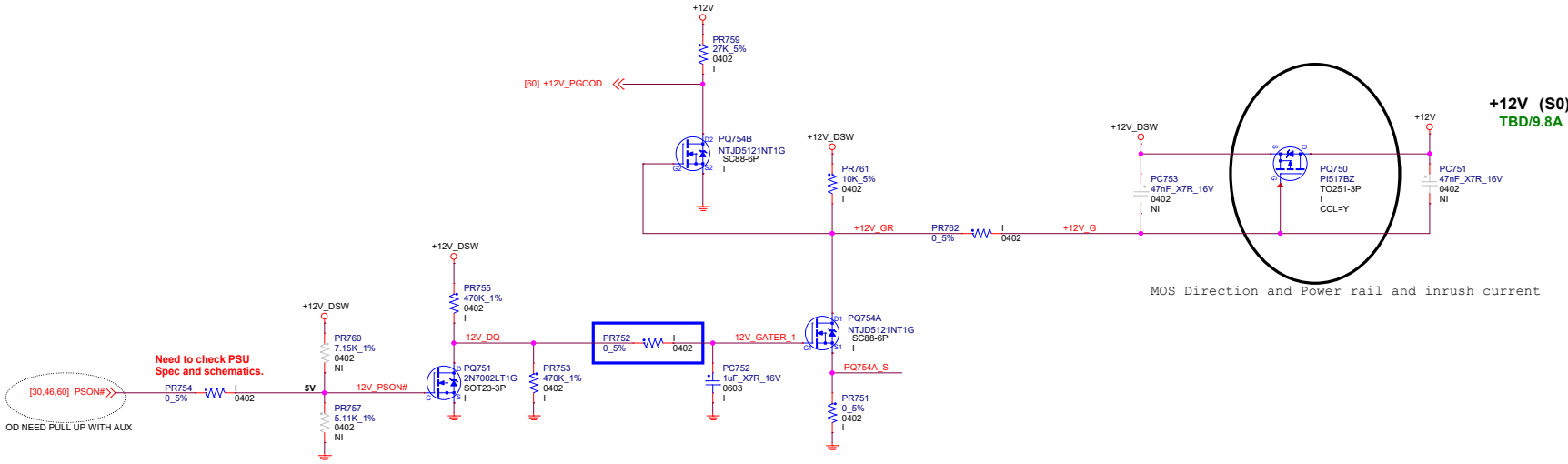
(S0-S5)



Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG	
Foxconn WuHan China	Phone: 027-59603888 Fax:
Title: +5V & +3V3	
Size: Custom	Document Number: B365_SFF
Rev: SVT	
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)	Sheet 60 of 65


+VPP
TBD/2.24A (DDR4)
+3V3_S5
PR566
10K_5%
0402
+2V5_VPP
+VPP_EN
PC565
100nF_X7R_16V
0402
PR564
10K_5%
0402
NI
+5V_S5
PR567
10_5%
0603
PC562
1uF_X7R_16V
0603
PC560
10uF_X7R_6.3V
0805
+VPP_FB
VIN2
VIN1
FB
VOUT1
VOUT2
EN
POK
VCNTL
GND
+VPP_POK
+VPP_VCNTL
PU560
APL5934KAI-TRG
CCL=Y
PJP560
SHORT PAD
NOBOM
10X8Mil
PC561
0805
22uF_X5R_6.3V
PC564
0805
22uF_X5R_6.3V
PU410 IC Pd=3w
RqJA=40～C/W
actual
Pd=(3.3-2.5)*2.24=1.792w
Current limit=4.7A
PR565
14.3K_1%
0402
+VPP_FB_RC
PR561
0_5%
0603
+VPP_FB_C
PC563
56pF_NPO_50V
0402
NI
Vout=0.8*(PR565+PR563)/PR563
=0.8*(14.3K+6.65K)6.65K
=2.52V
PR563
6.65K_1%
0402
+VPP BLEED OFF
PR560
100_5%
0402
NI
+VPP_BLEED_R
PQ560
2N7002LT1G
SOT23-3P
NI
+VPP_BLEED_G1
+3V3_ALW
PR562
10K_5%
0402
PQ561
2N7002LT1G
SOT23-3P
PQ562
2N7002LT1G
SOT23-3P
PR568
10K_5%
0402
NI
PC567
100nF_X7R_16V
0402
NI
[13,21,33,40,45,58] SLP_S4#_VRM
PR569
0_5%
0402
+VPP_BLEED_G2
+5V_DUAL_S3
PR574
43K_1%
0402
+VPP_EN_G
PQ563
2N7002LT1G
SOT23-3P
PC566
1uF_X5R_16V
0603
FOXCONN
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:
Title
+2V5_VPP
Size
A3
Document Number
B365_SFF
Rev
SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)
Sheet 61 of 65

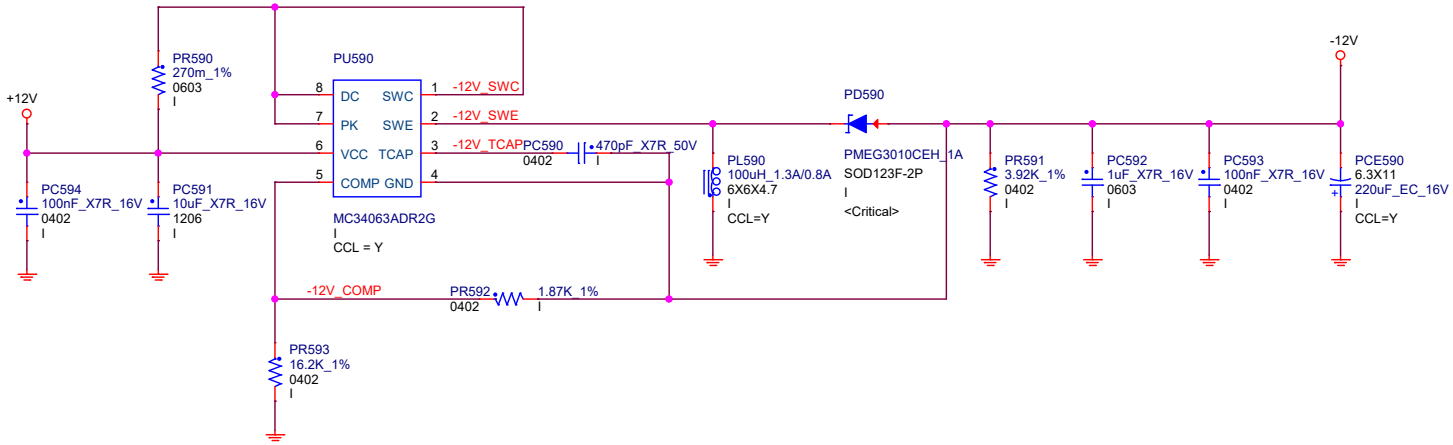
+12V



Hon Hai Precision Industry Co. Ltd.		
Foxconn NPCEBG		
Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: +12V		
Size: Custom	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 62 of 65

-12V

Vout= -12V
TBD/0.019A



FOXCONN®	Hon Hai Precision Industry Co. Ltd.	
Foxconn NPCEBG Foxconn WuHan China	Phone: 027-59603888 Fax:	
Title: -12V		
Size: B	Document Number: B365_SFF	Rev: SVT
Page Modified: Friday, July 05, 2019 17:10:33 (UTC/GMT)		Sheet 63 of 65

SDV to SIT change List(EE Part)

Schematic Information Update

Page1

- Update "PROJECT INFORMATION"
  * PHASE: SIT (VER:0.3) 2019/06/19
  * BOM : Waiting

ALL Page

-Title Block
  * Rev : SIT

Schematic Change

- PCB Change
  * Keep SDV PCB

- Schematics & BOM Change
  * Remove 2n source part of USB Power SW without discharge circuit APL3551DBI-TRG
  * "NI" USB Discharge Circuit Q305,Q304,Q303,Q302,Q13,R492,R382
  * Change RS232 Driver U31 from SN75185DBR to GD75232DBR
  * Change B365 PCH P/N from 210134V00-187-G to 210134V00-187-H
  * Change LPT Termination U3 to URCZ1284G-02-SQ8-R
  * Change AJ1,2,3 and SW1,2 Package item to DIP
  * "NI" C247 (IUSB PWRSW 22uF)
  * "NI" R131 (SATALED PU)

  * C160,C161 change to 27pF (for 24MHz)
  * add C112,C113 (2.2uF for VREFCA)
  * add 3V3 discharge circuit install SQ3,SR107
  * change AR49,AR51 to 56_1% Ohm for front combo jack out

Layout Change

  * No Change

SIT to SVT change List(EE Part)

* Remove PROTO Parts from BOM
* Change PCB Ver to V1.0
* Change XDP footprint for MP
* Change BIOS ROM to SMD
* change Aj1,2,3 and SW1,2 to SMD

Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 65. Changelist EE

Size: Custom | Document Number: B365_SFF | Rev: SVT

SDV phase change List(DC Part)

20190507
1 } change PR523 value to 1.02k for +1v0_PCH
2 } change PR524 value to 4.02k for +1v0_PCH
3 } change PR516 value to 6.04k for +1v0_PCH
4 } remove +1V8_S5 part

20190508
1 } PL605 change from MMD-06CZ-R68M-V1-B3 to WSSPG0603-R68M-AG of MAGIC for VCCSA

20190514
1 } PCE210,PCE220,PCE230,PCE250,PCE470,PCE510,PCE903,PCE904 change from APSF160ETD271MH08S to APSG160ETD271MF08J for automation

20190517
1 } PCE605 change from I to NI for cost down

FOXCONN®
Hon Hai Precision Industry Co. Ltd.
Foxconn NPCEBG
Foxconn WuHan
China
Phone: 027-59603888
Fax:

Title: 65. Changelist EE

Size	Document Number	Rev
A3	B365_SFF	SVT