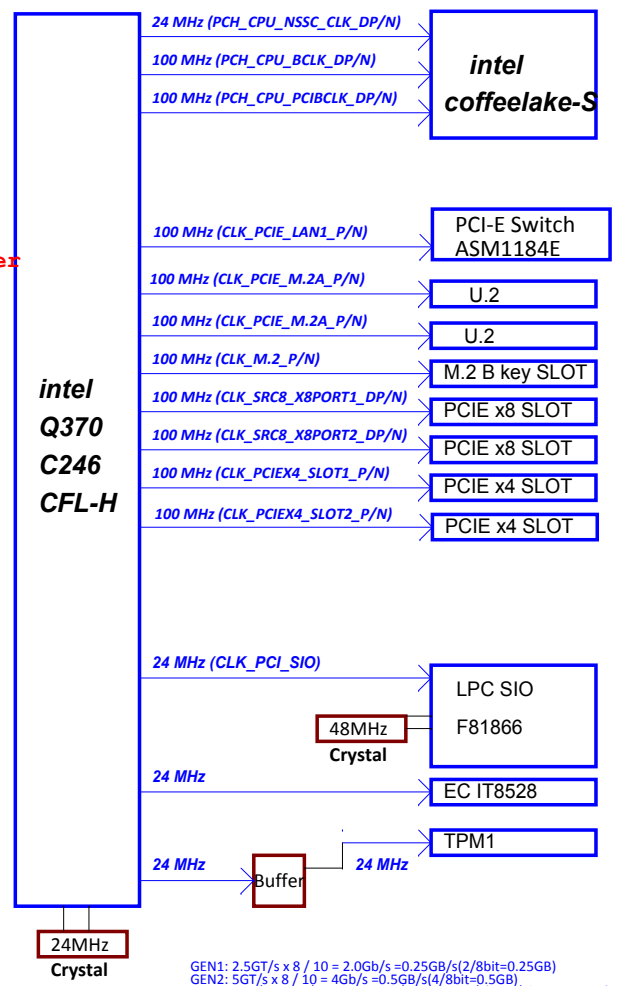


Thermal Reporting on SMLINK1 for PCH and DIMM temperature only



- DP1.2(21.6Gb/s)
- HDMI2.0(18Gb/s)
- HDMI1.4(10.2Gb/s)
- USB3.1 (10Gb/s)/USB 3.1 Gen2
- USB3.0 (5Gb/s)/USB 3.1 Gen1
- USB2.0 (480Mb/s)
- Thunderbolt 3(40Gb/s) =PCIEX4 + DP1.2=40Gb/s
- Thunderbolt 2(20Gb/s)
- Thunderbolt (10Gb/s)

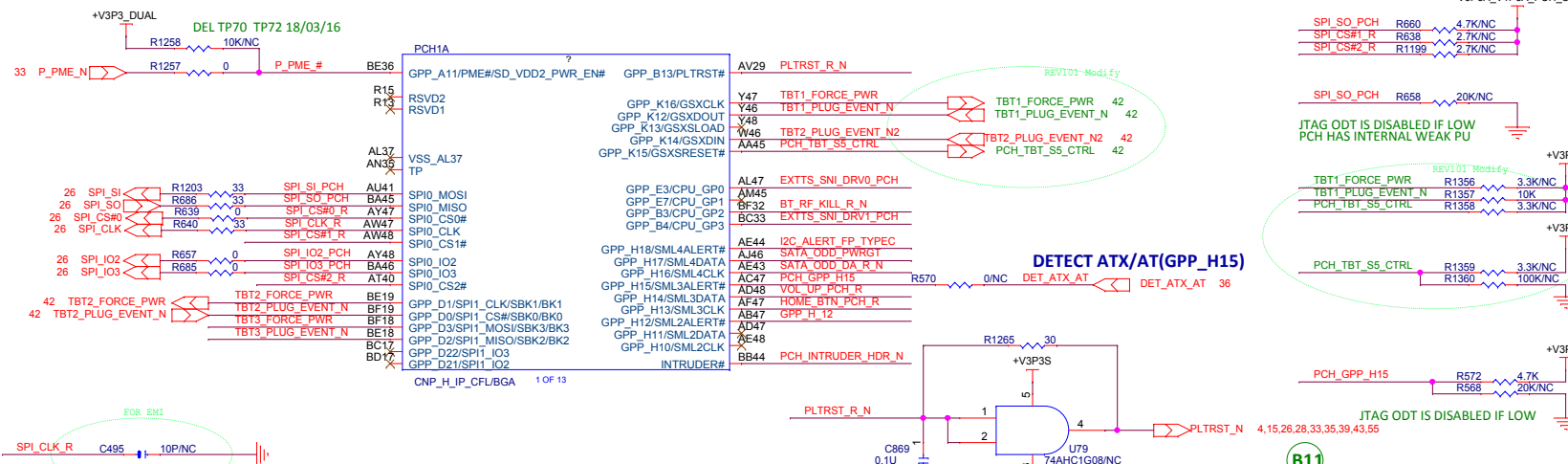
GEN1: 2.5GT/s x 8 / 10 = 2.0Gb/s =0.25Gb/s(2/8bit=0.25GB)
 GEN2: 5GT/s x 8 / 10 = 4Gb/s =0.5Gb/s(4/8bit=0.5GB)
 GEN3: 8GT/s x 128 / 130 = 7.88Gb/s =0.985Gb/s(7.88/8bit=0.985GB)

PCI-E	Max Transfer Rate (GT/s)	Theoretical Bandwidth (Gb/s)				
		x1	x2	x4	x8	x16
Gen1	2.5 GT/s	2.0	4.0	8.0	16	32
Gen2	5 GT/s	4	8.0	16	32	64
Gen3	8 GT/s	7.88	16	32	64	126

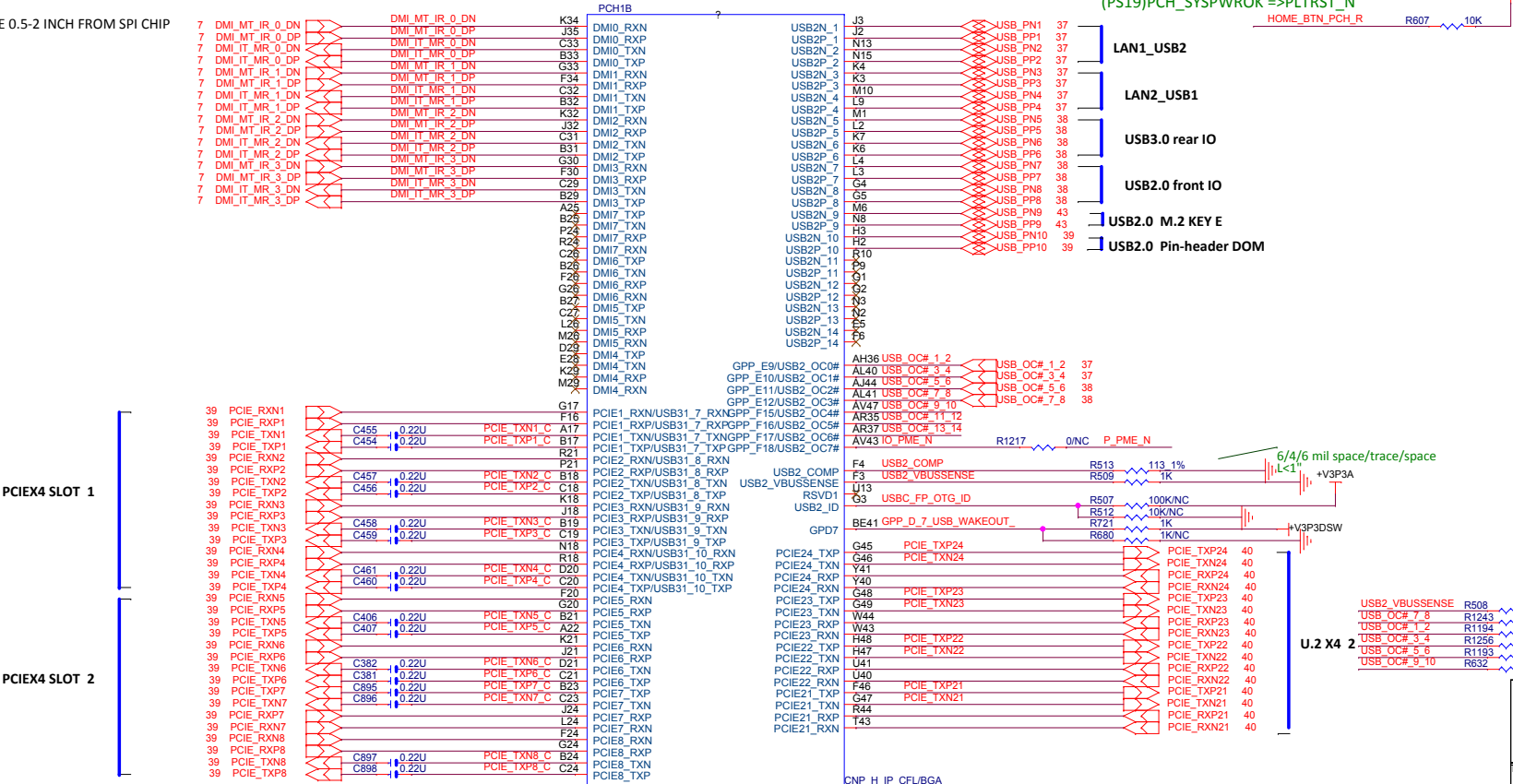
PCI-E	Max Transfer Rate (GT/s)	Theoretical Bandwidth (GB/s)				
		x1	x2	x4	x8	x16
Gen1	2.5 GT/s	0.25	0.5	1.0	2.0	4.0
Gen2	5 GT/s	0.5	1.0	2.0	4.0	8.0
Gen3	8 GT/s	1.0	2.0	3.9	7.9	15.8

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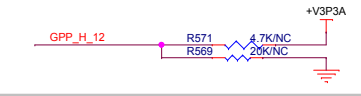
PLACE 0.5-2 INCH FROM SPI CHIP



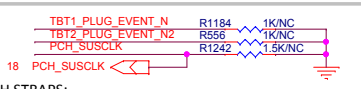
PCIEX4 SLOT 1

PCIEX4 SLOT 2

ESPI_FLASH SHARING MODE	
GPP_H_12	
0	MASTER ATTACHED FLASH SHARING (default) PCH INTERNAL WEAK PD
1	SLAVE ATTACHED FLASH SHARING

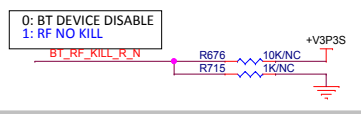


THUNDERBOLT HEADER	
FRC_PWR	
0	NORMAL MODE(Default)
1	FLASH UPDATE/SECURITY MODE
CIO_PE	
0	TB CABLE PLUGGED IN
1	NO TB CABLE CONNECTED

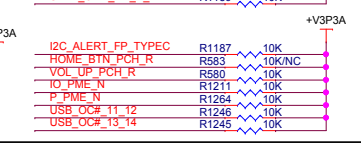
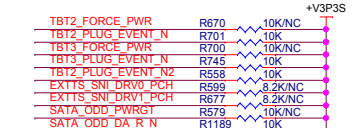


LPT-H STRAPS:
SUSCLK:0D PLL VR ENABLE DISABLED WHEN SAMPLED LOW
GPP_G_14_GSXND:DMI AC COUPLING FULL VOLTAGE MODE WHEN SAMPLED LOW

0:	CONSENT STRAP IS ENABLED
1:	PCH HAS INTERNAL WEAK PU



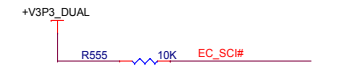
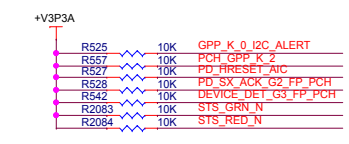
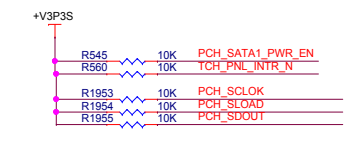
0: BT DEVICE DISABLE
1: RF NO KILL



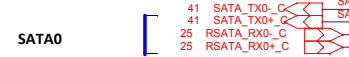
Title: Q370_DMI/PCI/USB2 (1,2)			
Size:	Document Number:	Rev: 1.00	
PAC-2000MB-Q370			
Date:	Thursday, April 11, 2019	Sheet:	16 of 65

GPP_E0	SATA0/PCIE11	S_SATA1 or M.2
GPP_E1	SATA1/PCIE12	S_SATA2 or M.2
GPP_E2	SATA2/PCIE15	S_SATA3
GPP_F0	SATA3/PCIE16	S_SATA4
GPP_F1	SATA4/PCIE17	S_SATA5
GPP_F2	SATA5/PCIE18	S_SATA6

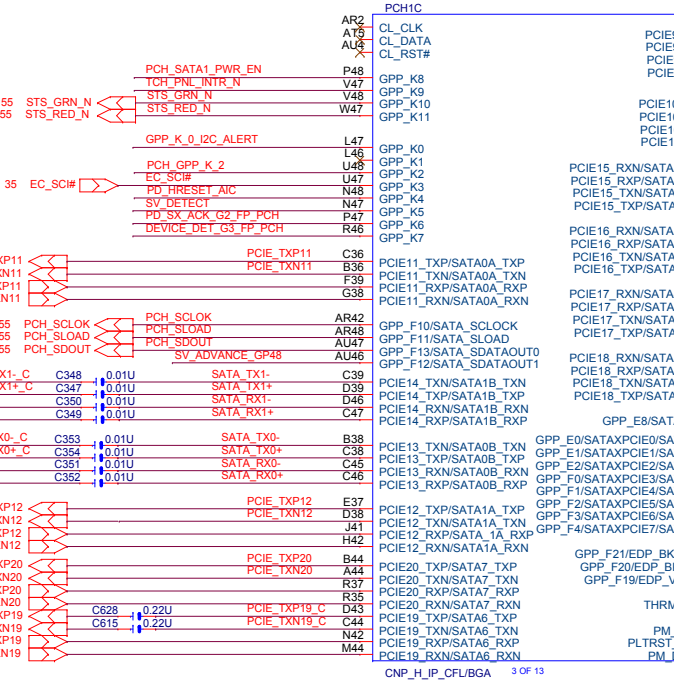
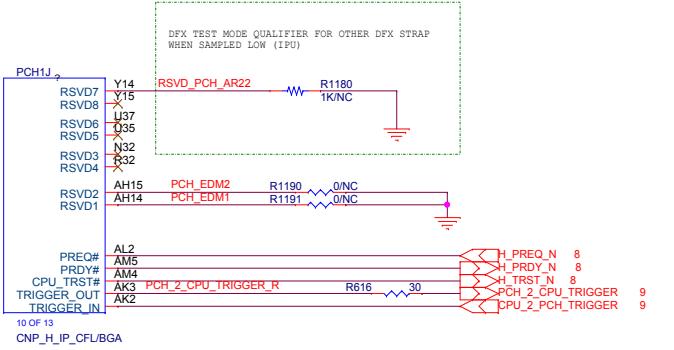
MOUNTED FOR LPT-H INTERPOSER



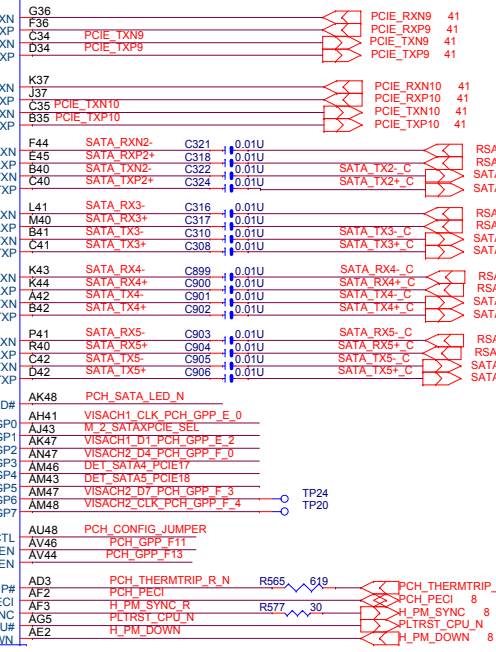
U.2 X4 1-2



U.2 X4 1-3



Keeping SATA traces 20 mils from any vias on the motherboard whenever possible



U.2 X4 1-1

SATA2

SATA3

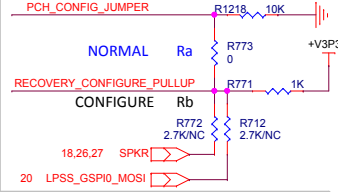
SATA4

SATA5

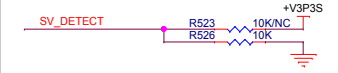
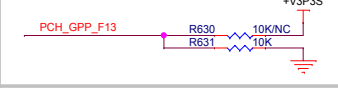
PCH CONFIG JUMPER

2 GND VIAS For PCIe2

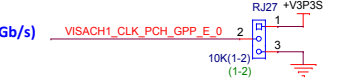
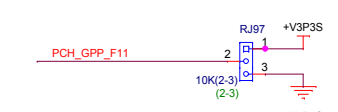
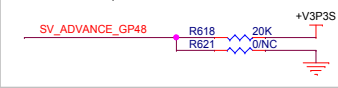
RECOVER/CONFIGURE HEADER	
Ra	NORMAL (Default)
Rb	CONFIGURE
JUMPER REMOVED	RECOVERY



GFX SELECT TABLE	
GP39	GFX STYLE
0	NORMAL GFX
1	CUSTOMER GFX



SV ADVANCE MENU TABLE	
GP48	BOARD STYLE
1	NORMAL MENU (DEFAULT)
0	SV ADVANCE MENU

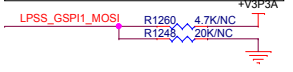


Title		Q370_SATA/PCIE (3,10)	
Size		Document Number	
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THERE IS A WEAK 150K PU ON THIS NET IF SAMPLED HIGH, LPC IS SELECTED ELSE SPI PCH HAS INTERNAL WEAK PD

BOOT SELECT STRAP

0: SPI (PCH HAS INTERNAL WEAK PD)
1: LPC

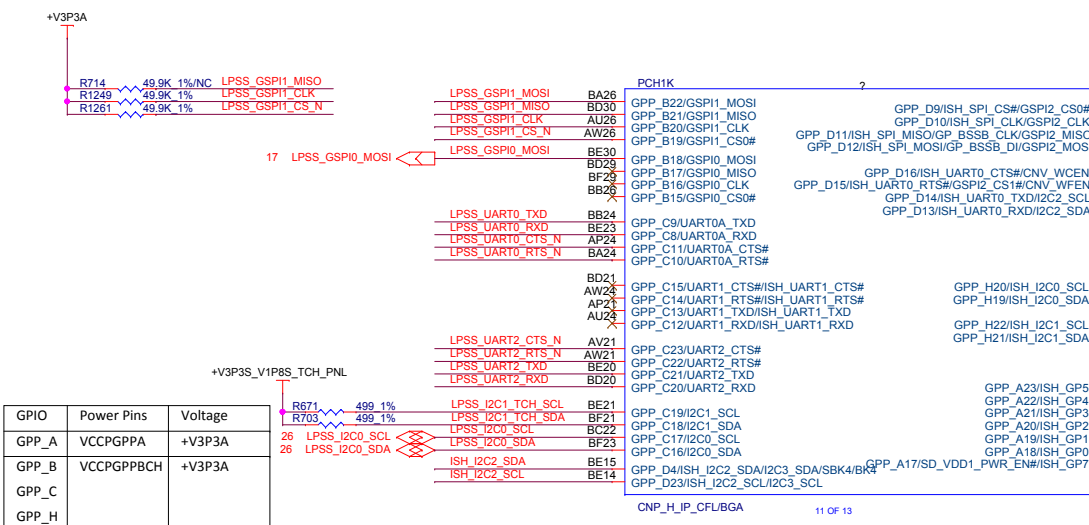


BOOT SELECT STRAP

0: REBOOT (PCH HAS INTERNAL WEAK PD)
1: NO REBOOT

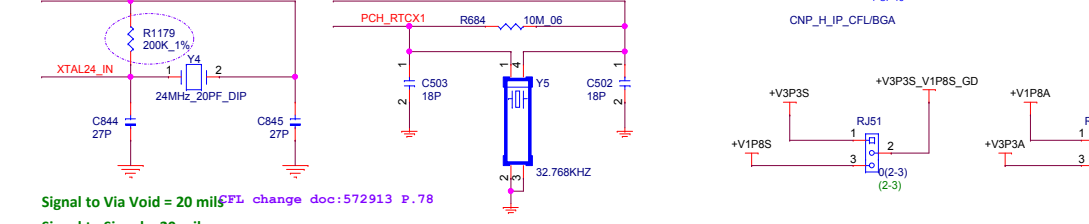
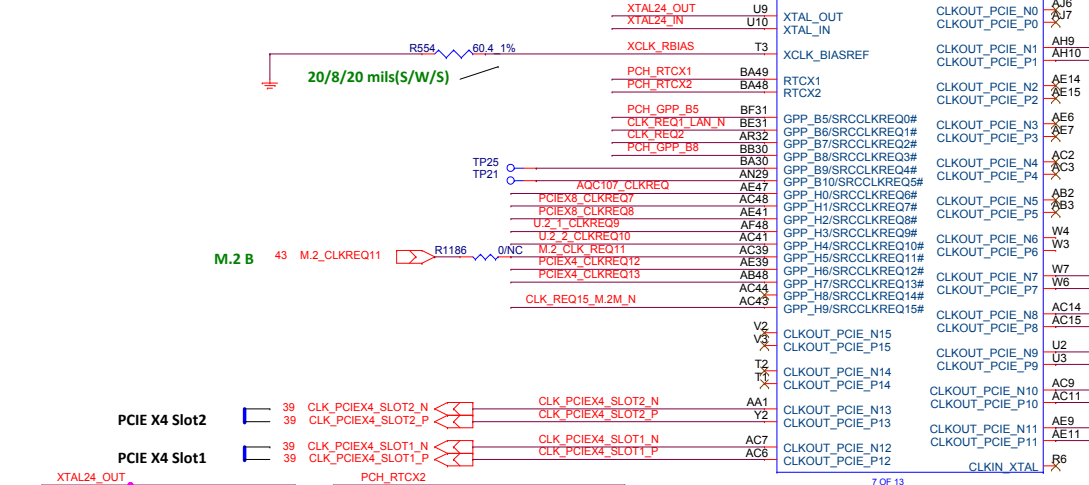


STUFFED Rx FOR LPT-H INTERPOSER

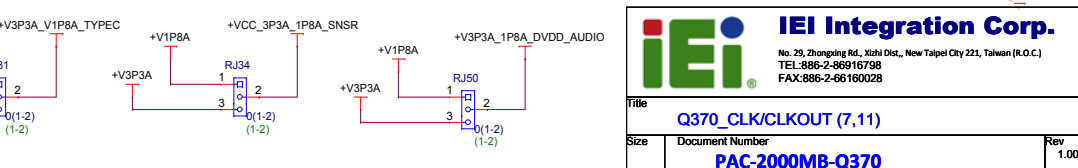
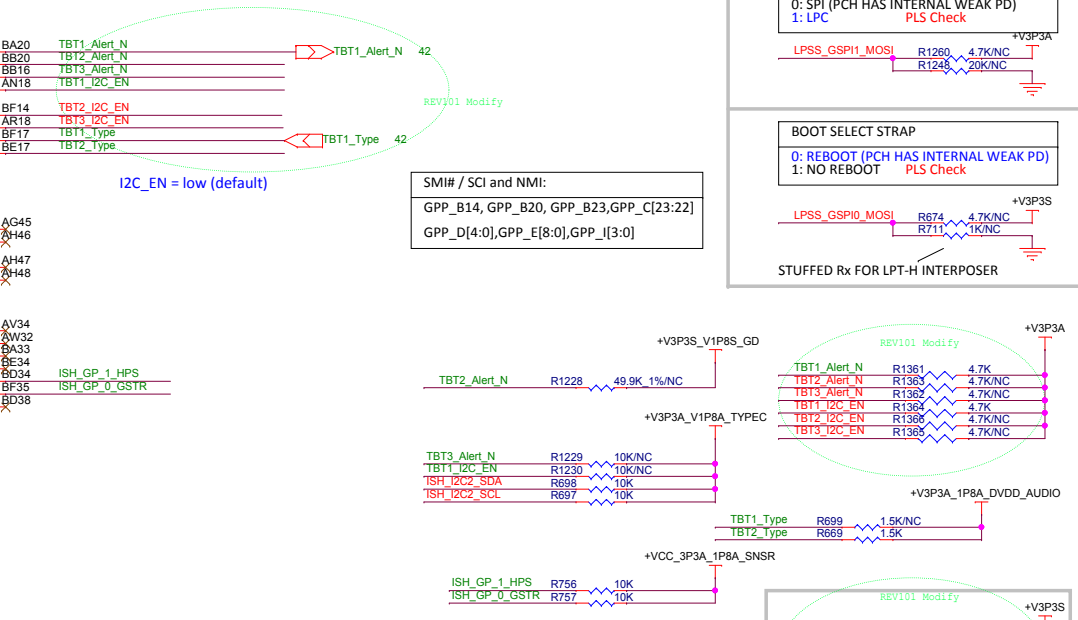


GPIO	Power Pins	Voltage
GPP_A	VCCPGPPA	+V3P3A
GPP_B	VCCPGPPBCH	+V3P3A
GPP_C		
GPP_H		
GPP_D	VCCPGPPD	+V3P3A
GPP_E	VCCPGPEF	+V3P3A
GPP_F		
GPP_G	VCCPGPPG	+V3P3A
GPP_I	VCCPRIM_3P3	+V3P3A
GPD	VCCDSW_3P3	+V3P3DSW

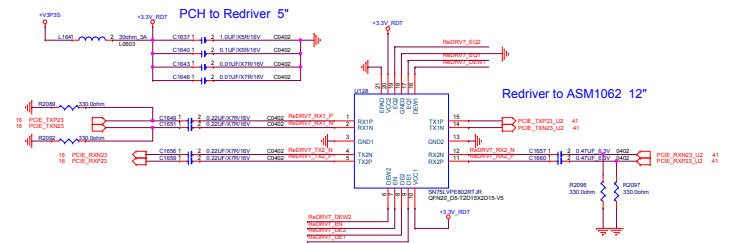
24 MHz to CPU
100 MHz to CPU



Signal to Via Void = 20 mils FL change doc:572913 P.78
Signal to Signal = 20 mils

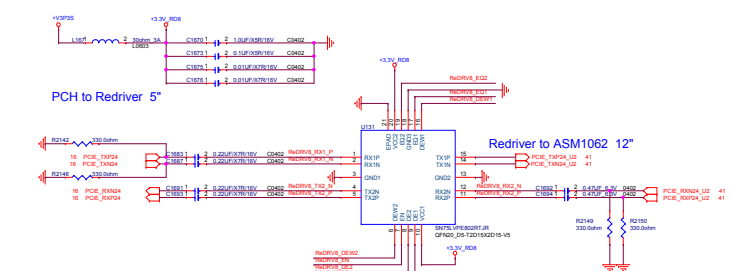
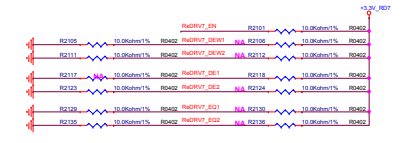


Title: Q370_CLK/CLKOUT (7,11)		
Size: Document Number	PAC-2000MB-Q370	
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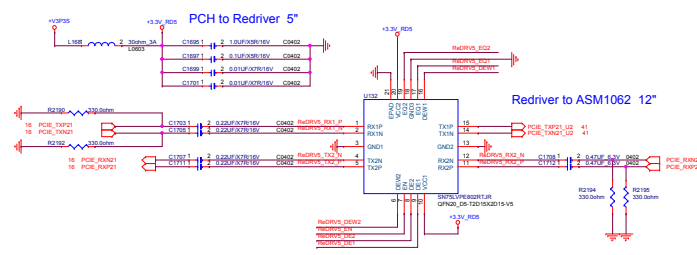
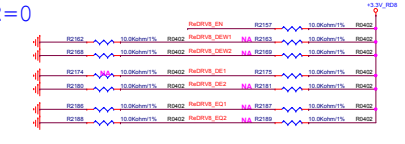
EQ1=0 DE1=1 DEW1=0
EQ2=0 DE2=0 DEW2=0

DE/EQEN have internally tied to VCC2



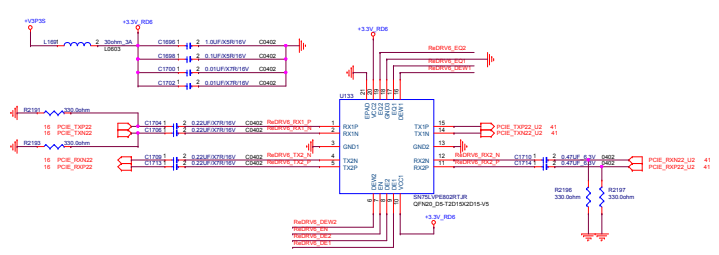
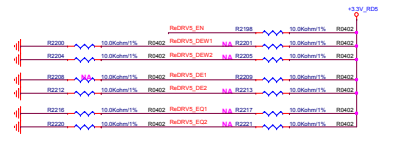
EQ1=0 DE1=1 DEW1=0
EQ2=0 DE2=0 DEW2=0

DE/EQEN have internally tied to VCC2



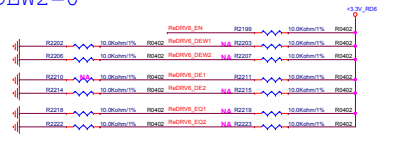
EQ1=0 DE1=1 DEW1=0
EQ2=0 DE2=0 DEW2=0

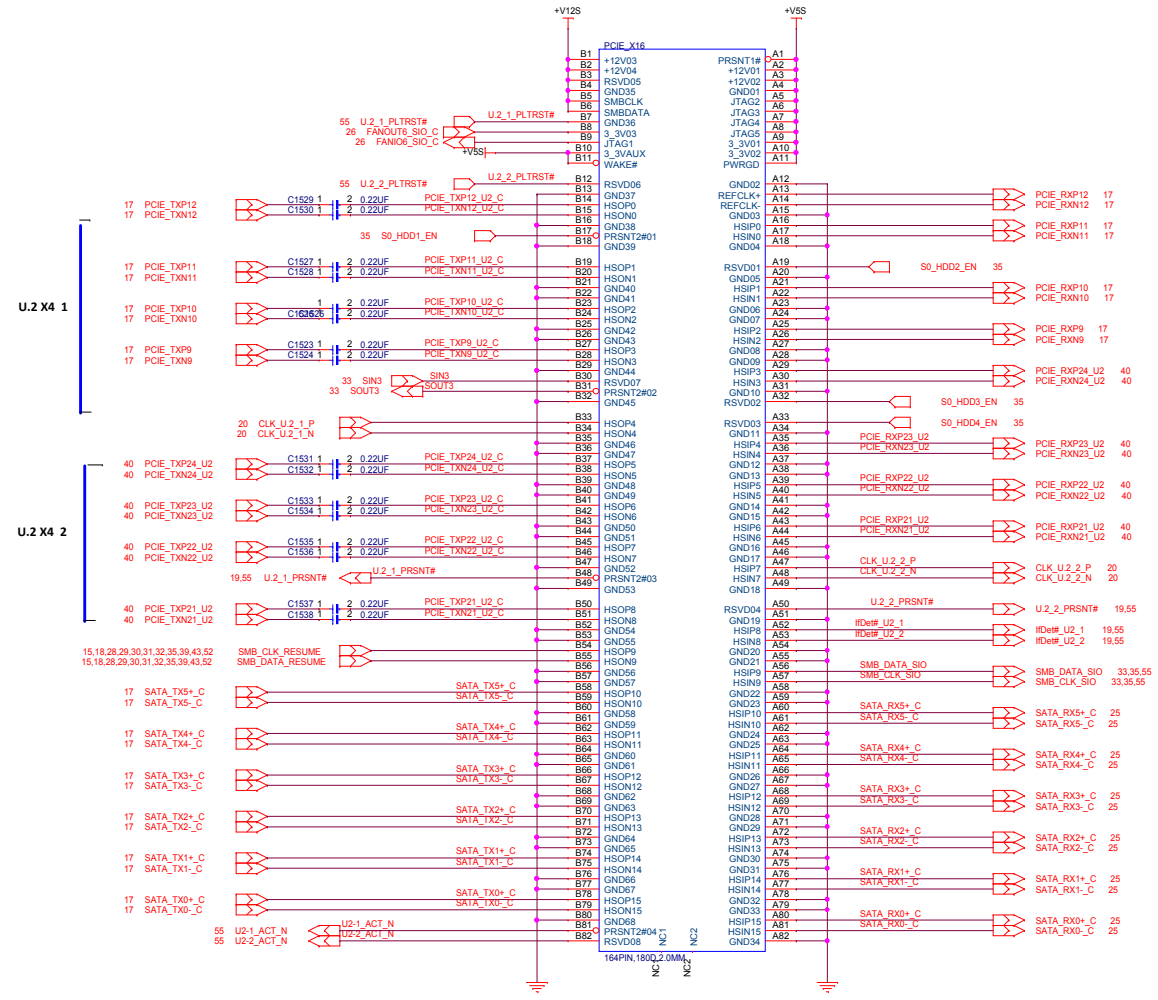
DE/EQEN have internally tied to VCC2



EQ1=0 DE1=1 DEW1=0
EQ2=0 DE2=0 DEW2=0

DE/EQEN have internally tied to VCC2





U.2 X4 1

U.2 X4 2

U.2 X4 1

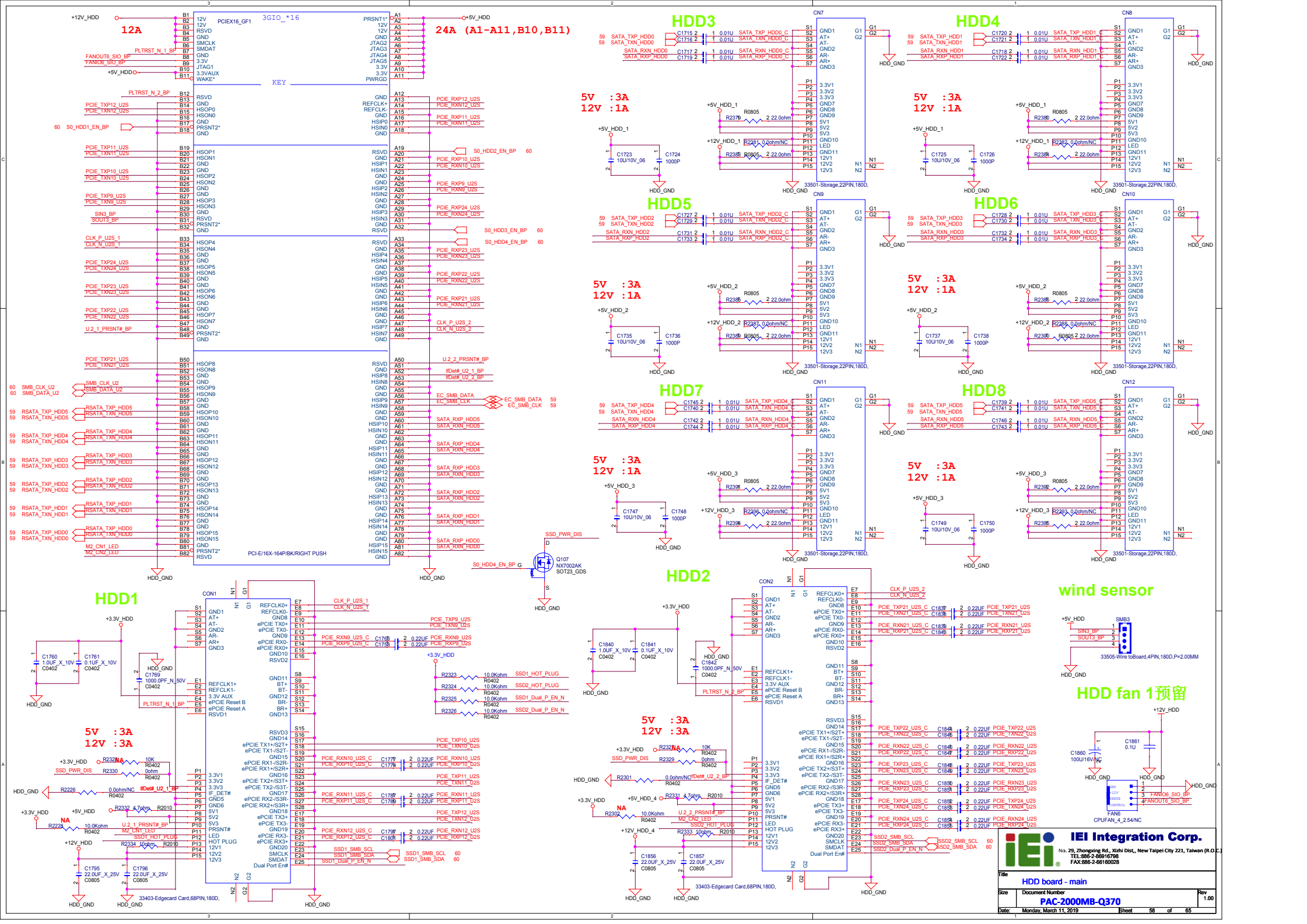
U.2 X4 2

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Title: **PCIEX16 Goldfinger**

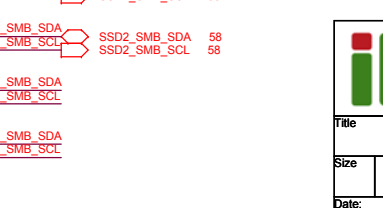
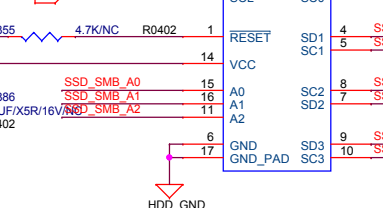
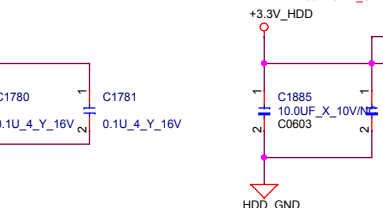
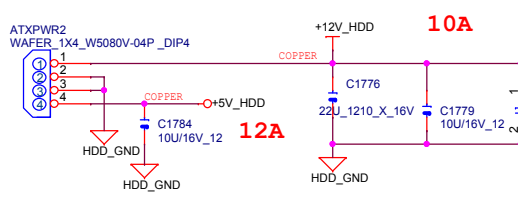
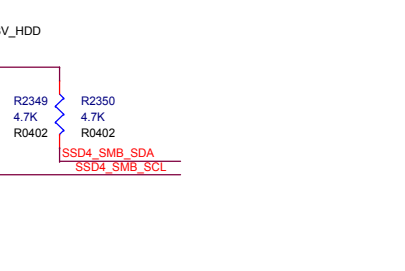
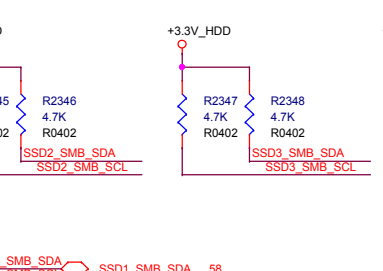
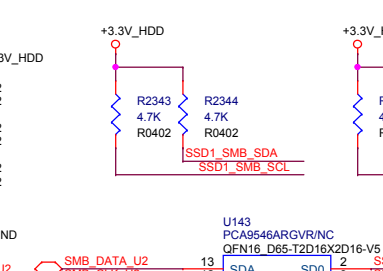
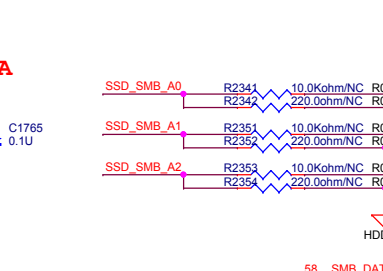
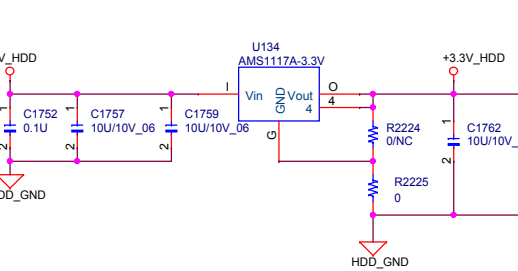
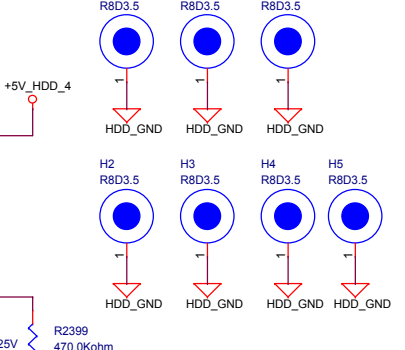
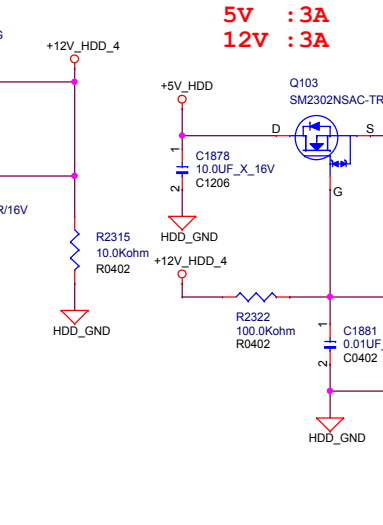
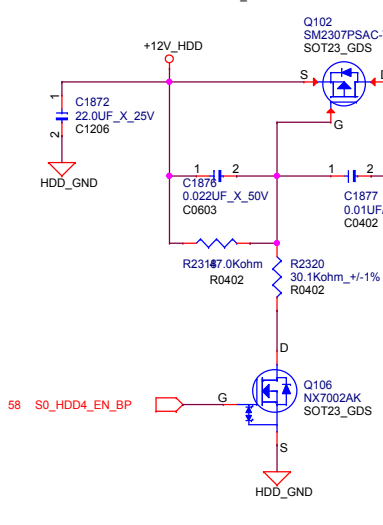
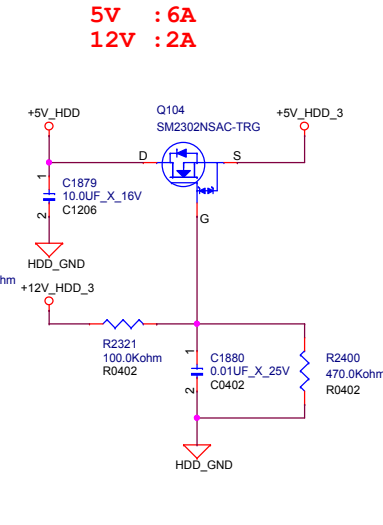
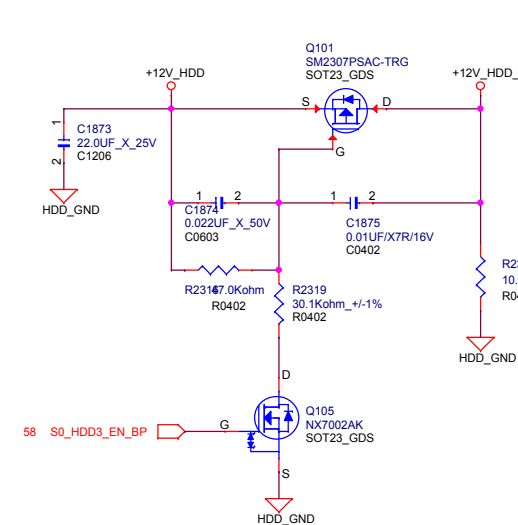
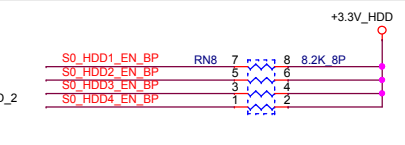
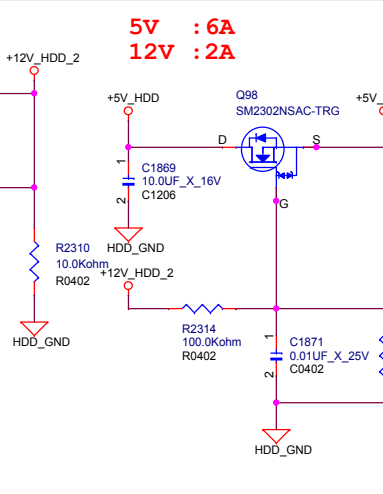
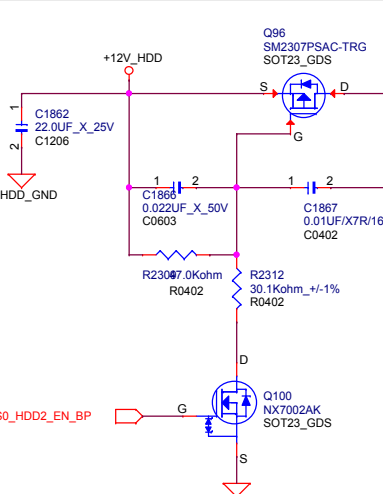
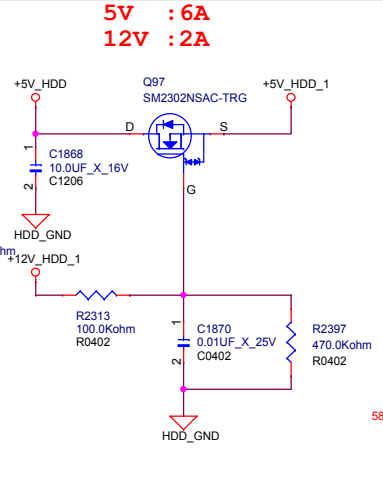
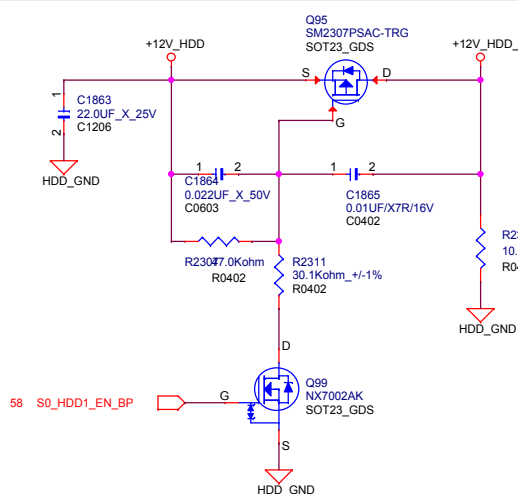
Size: Document Number **PAC-2000MB-Q370** Rev: 1.00

Date: Monday, March 11, 2019 Sheet: 41 of 65



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Title	HDD board - main	
Size	Document Number	Rev
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Title HDD board - Power
Size Document Number PAC-2000MB-Q370
Date Tuesday, April 02, 2019 **Sheet** 60 of 65 **Rev** 1.00