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HP Modena REVX1 (HP SCH P/N:803190-000)

(220 mm X 195 mm)

(MS-G013 0B)

CPU: Intel Haswell Processor

System Chipset: Intel Lynx Point Chipset

OnBoard Chipset:

- AZALIA Codec: Realtek ALC 221-VB
- LAN: Realtek RTL8111HSH-CG 10/100/1000 NIC
- SIO: Nuvoton NPCD379H
- Flash ROM: 64 Mb

Main Memory: DDRIII (1333/1600MHz) * 2 (Dual Channel)

Expansion Slots: PCI Express (X16) Slot * 1
PCI Express (X1) Slot * 1

PWM: Controller: ISL95816HRZ
Controller: NCP1587GDR2G


Other: SATA *2
USB3.0 *2 (Front*2)
USB2.0 *7 (Rear*6 Intrenal*1)
DP PORT*1
VGA PORT *1
COM PORT *1

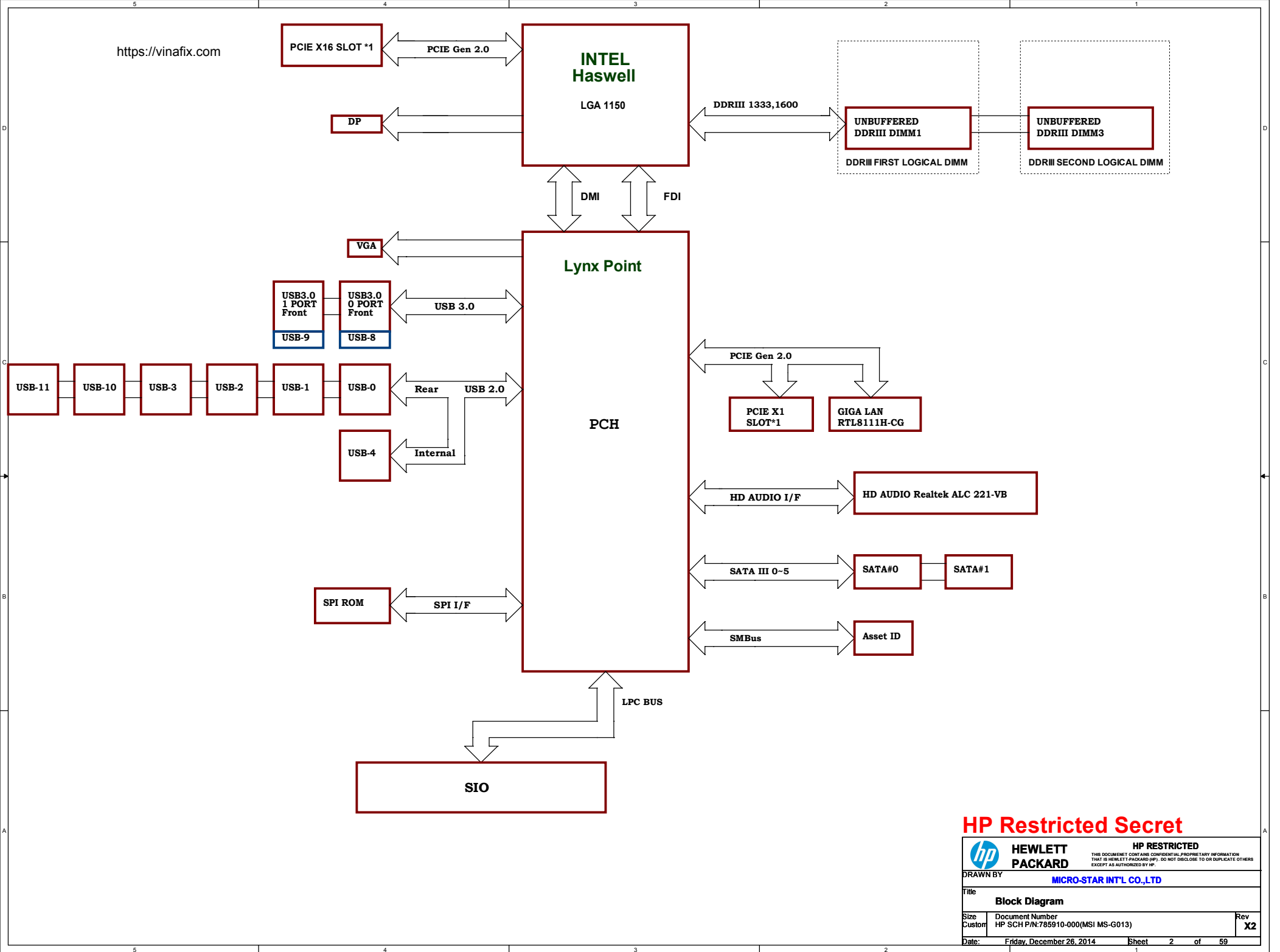
HP P/N	Description
803189-001	MBD, MODENA, SHARK BAY H81, SFF
803189-501	ASSY MBD MODENA SHB H81 SFF W8Std
803189-601	ASSY MBD MODENA SHB H81 SFF W8Pro
803189-701	ASSY MBD MODENA SHB H81 SFF WES8

SSID: 8105

BOM DISTRIBUTION RULE
MODENA
(BOM)

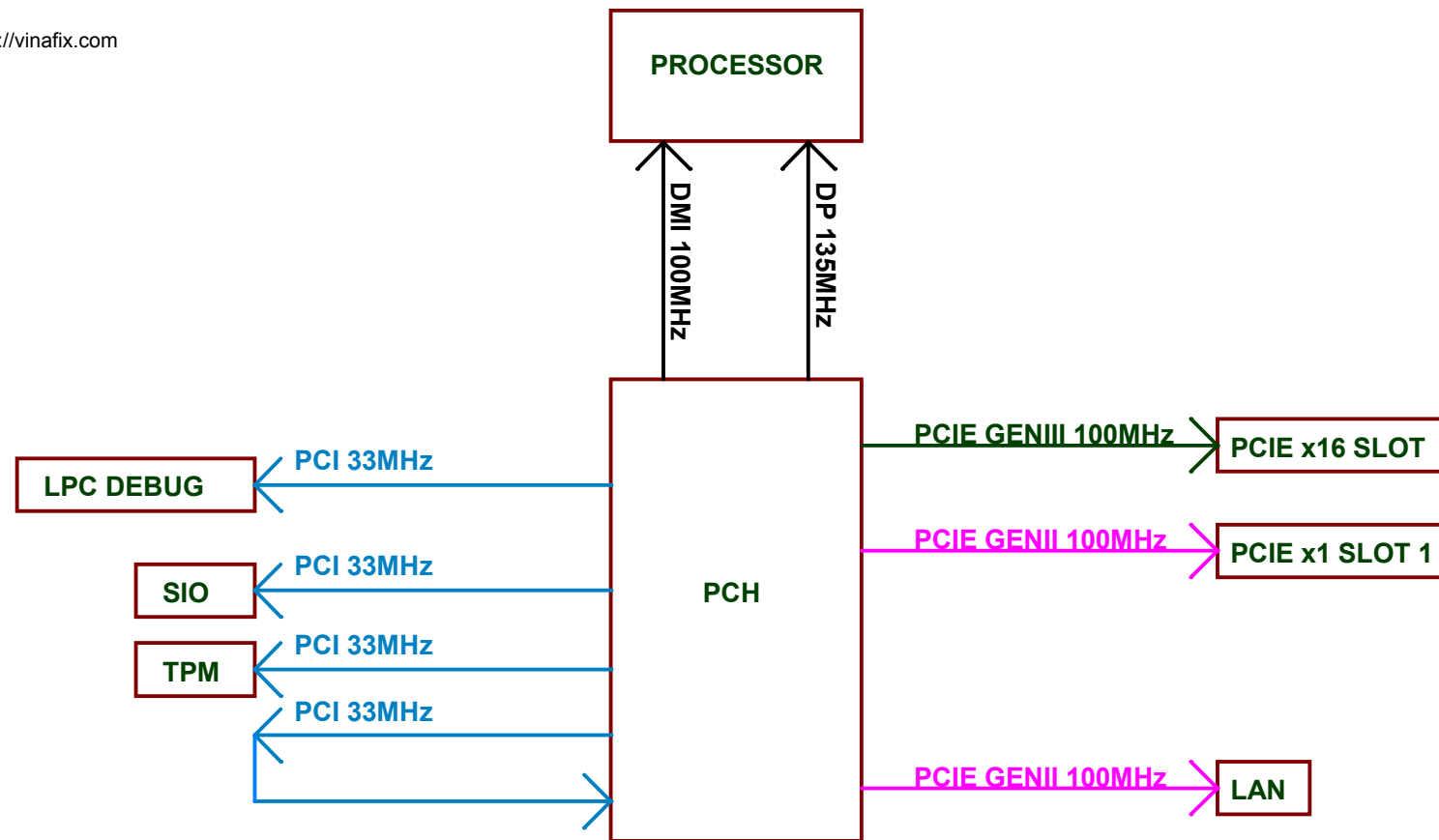
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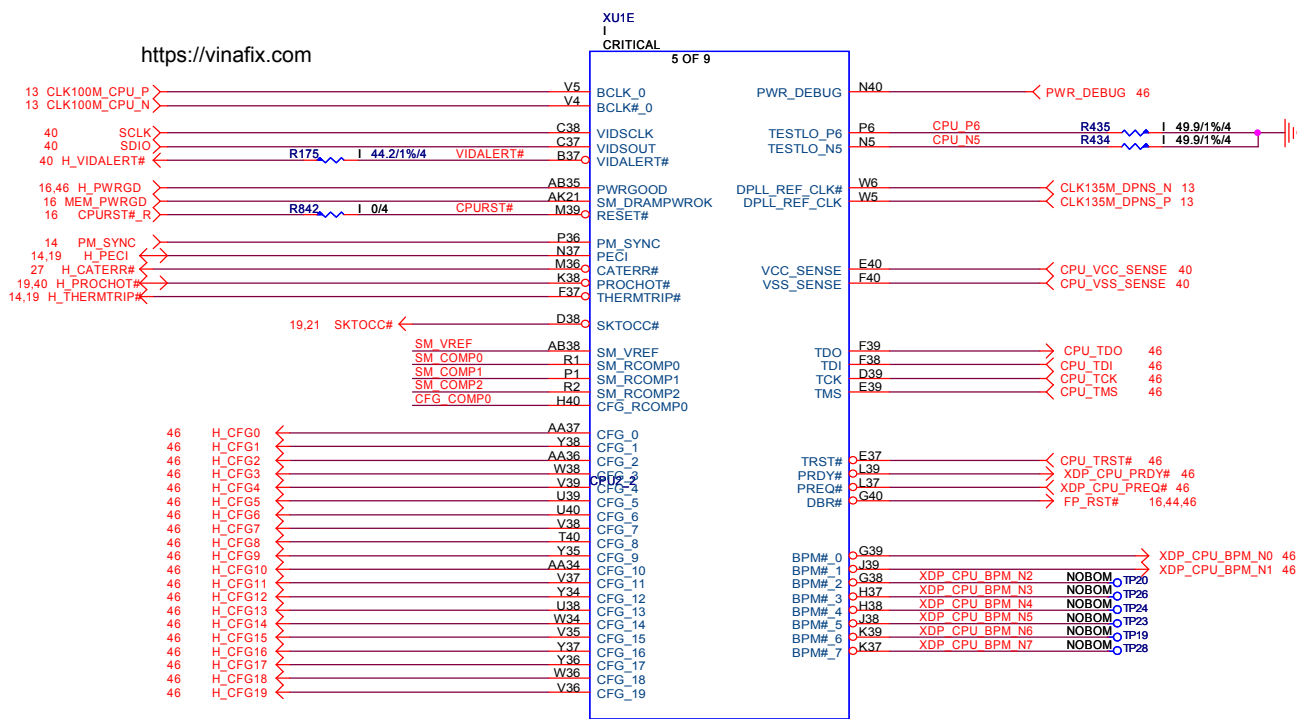
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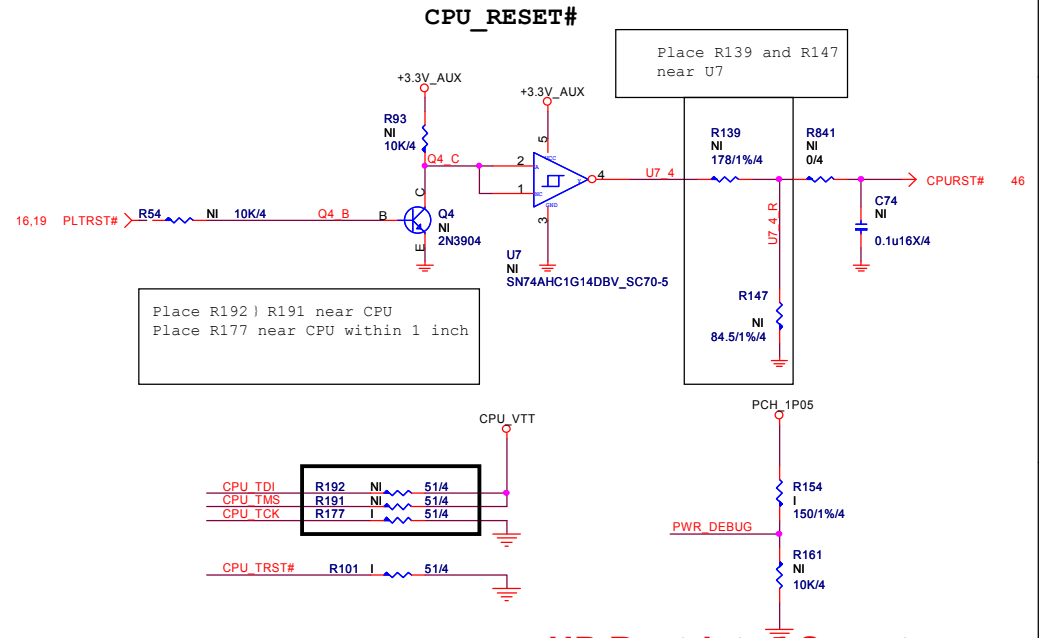
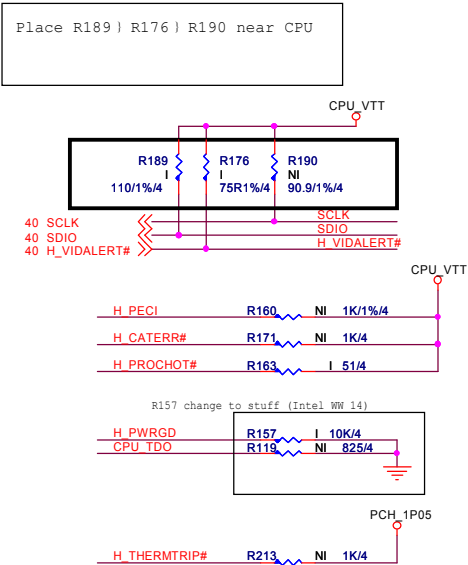
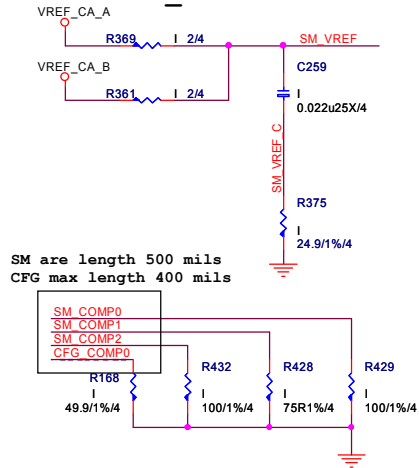
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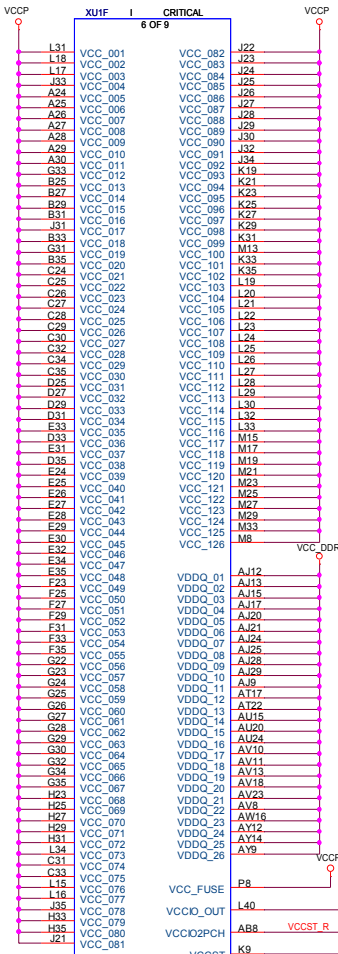
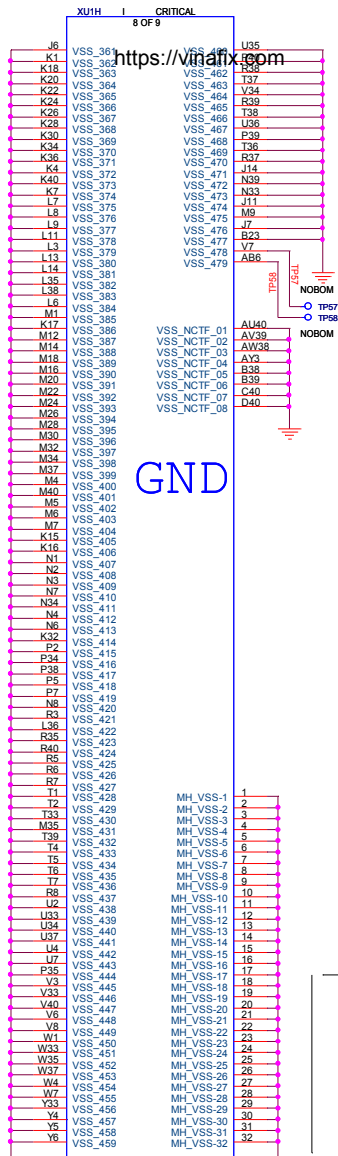
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MEM_VREF Control

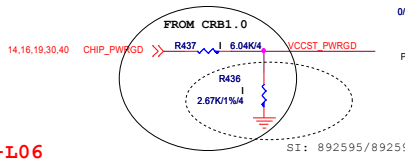


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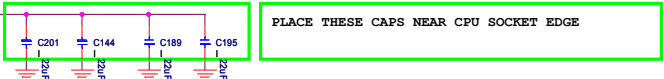
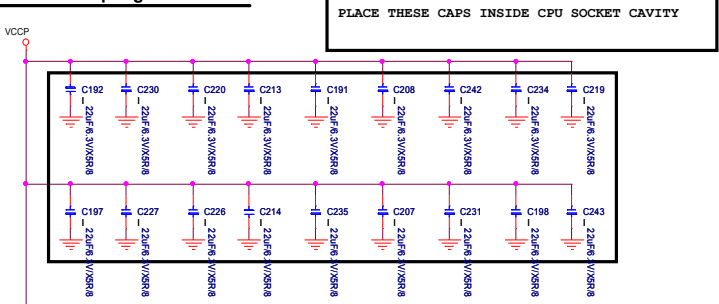
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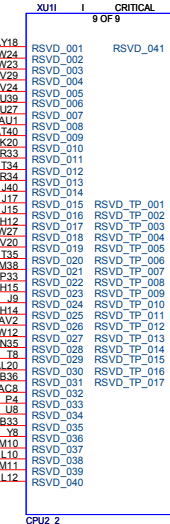
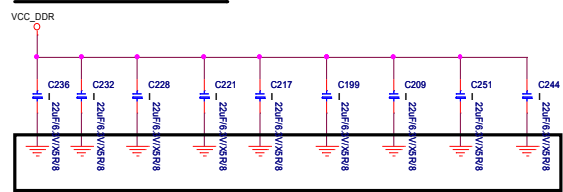
CPU2_2
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AVL:N12-150A020-F02



VCCP-Decoupling

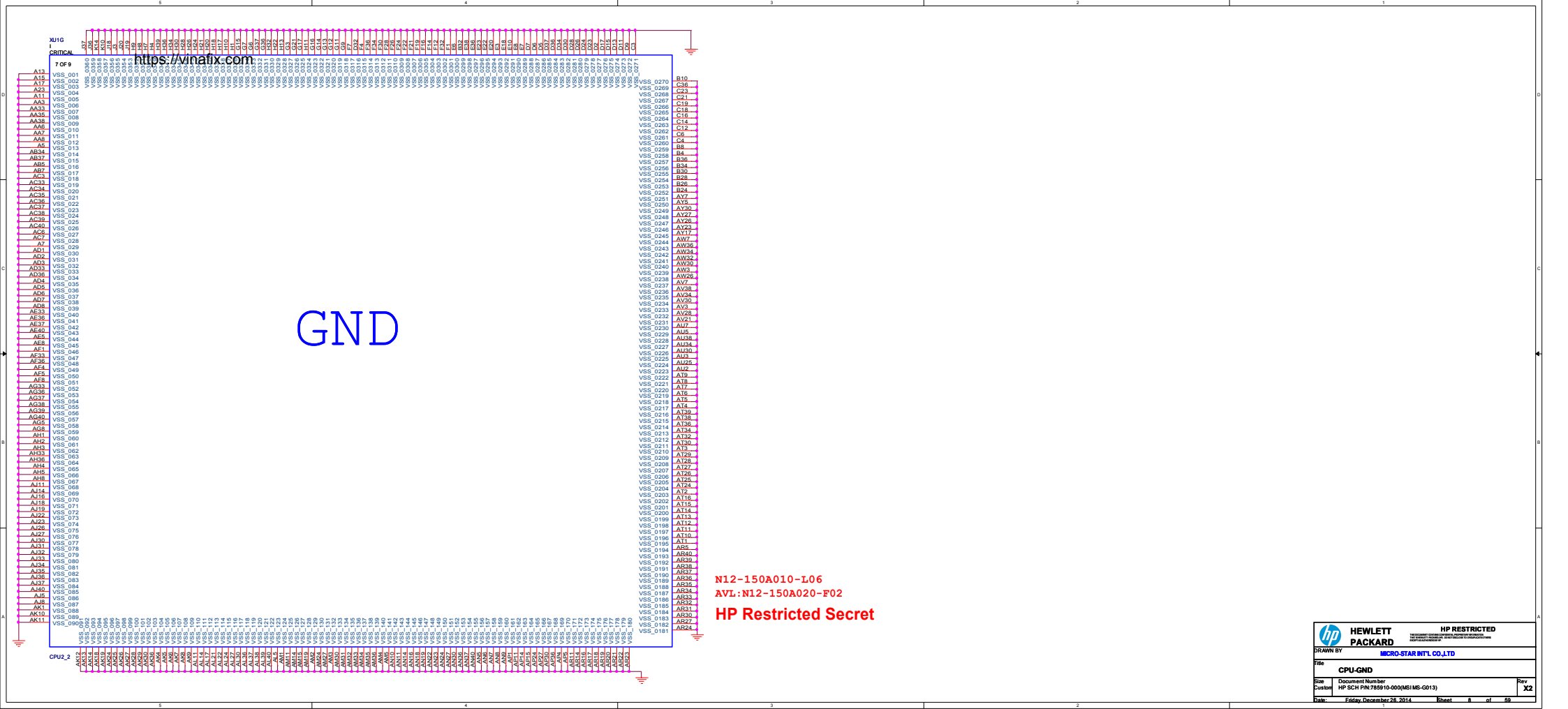


VCC_DDR-Decoupling




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N12-150A010-L06
AVL:N12-150A020-F02
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1

DDR3 DIMM_A2

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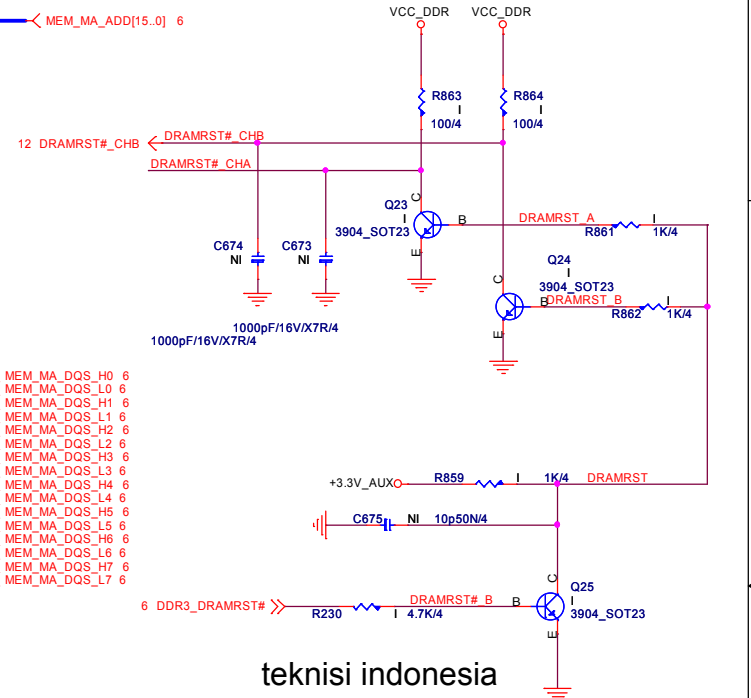
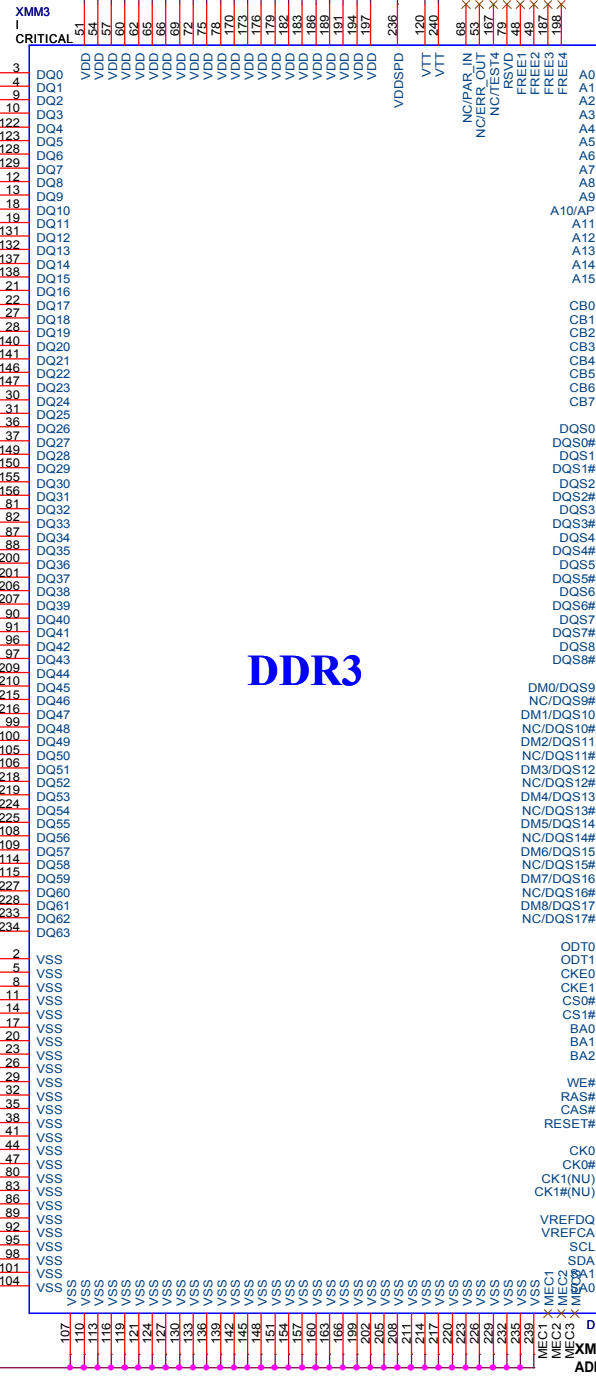
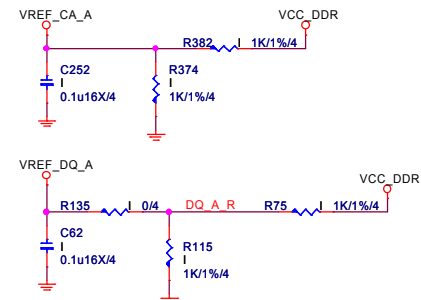
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VCC_DDR +3.3V VTT_DDR

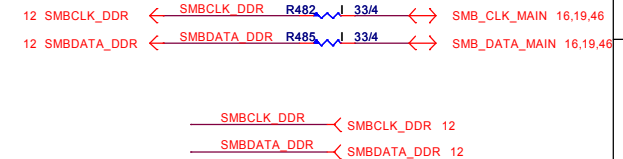
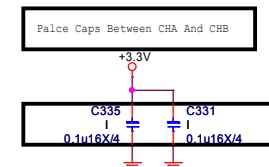
BLACK COLOR
N13-2401591-F02

DIMM SPD	
DIMM	Address [7:0]
XMM1	A0h
XMM3	A4h

DDR3




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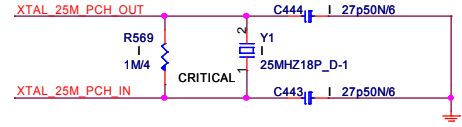
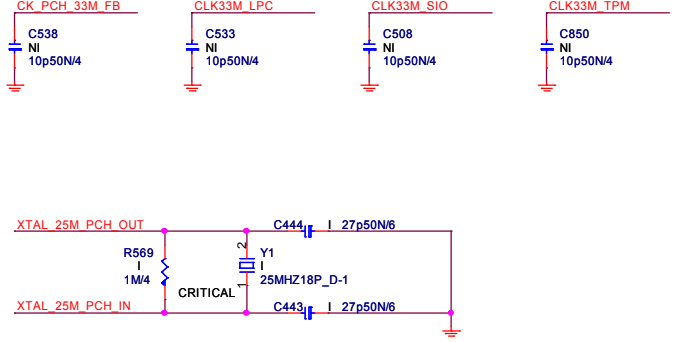
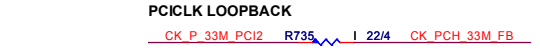
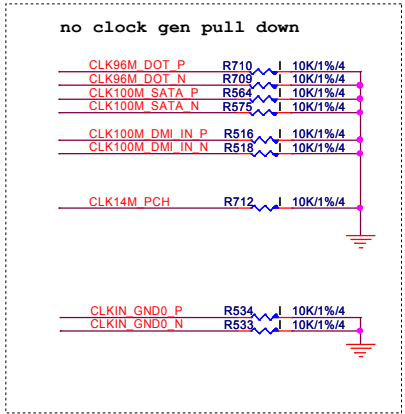
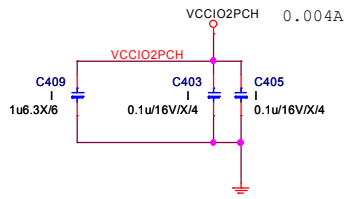
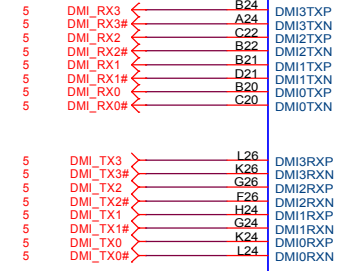
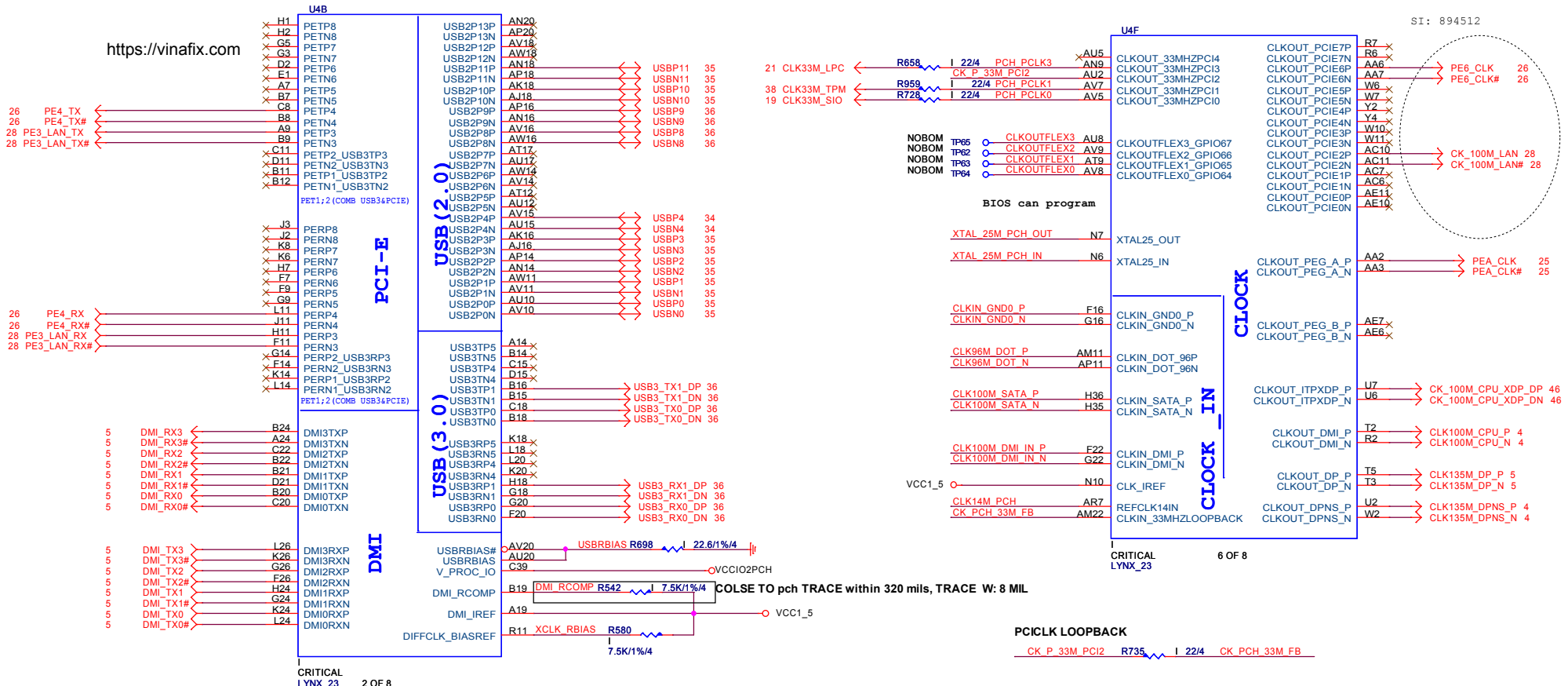


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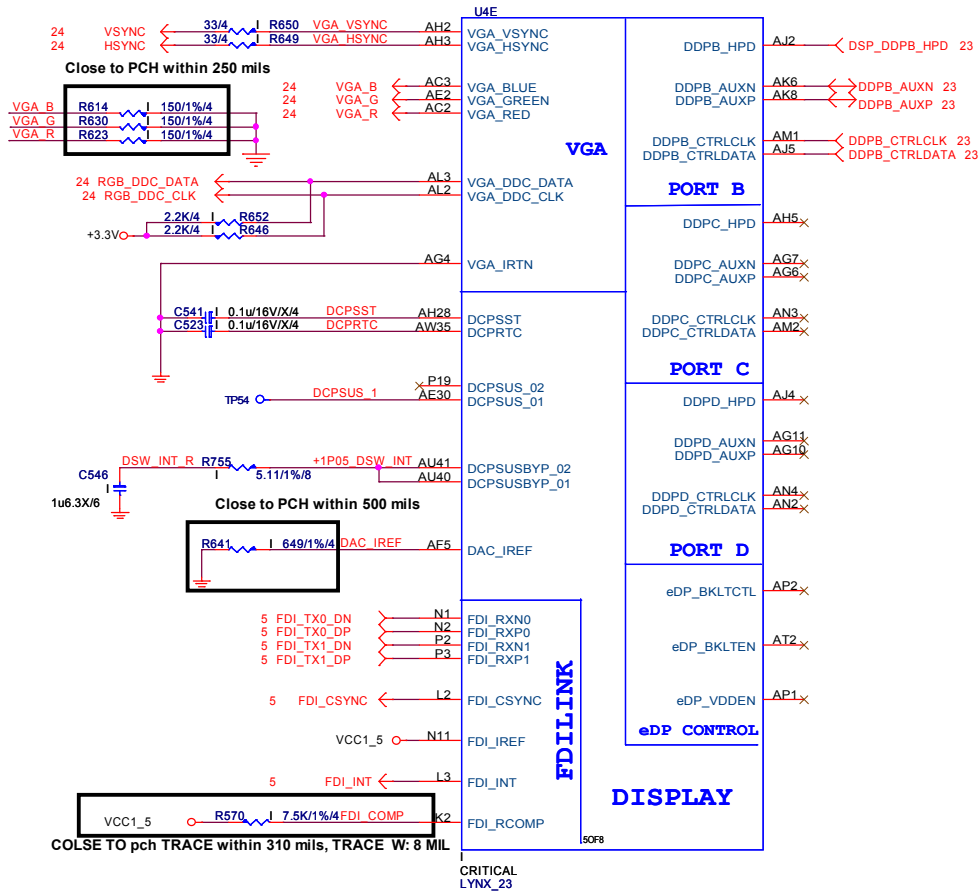
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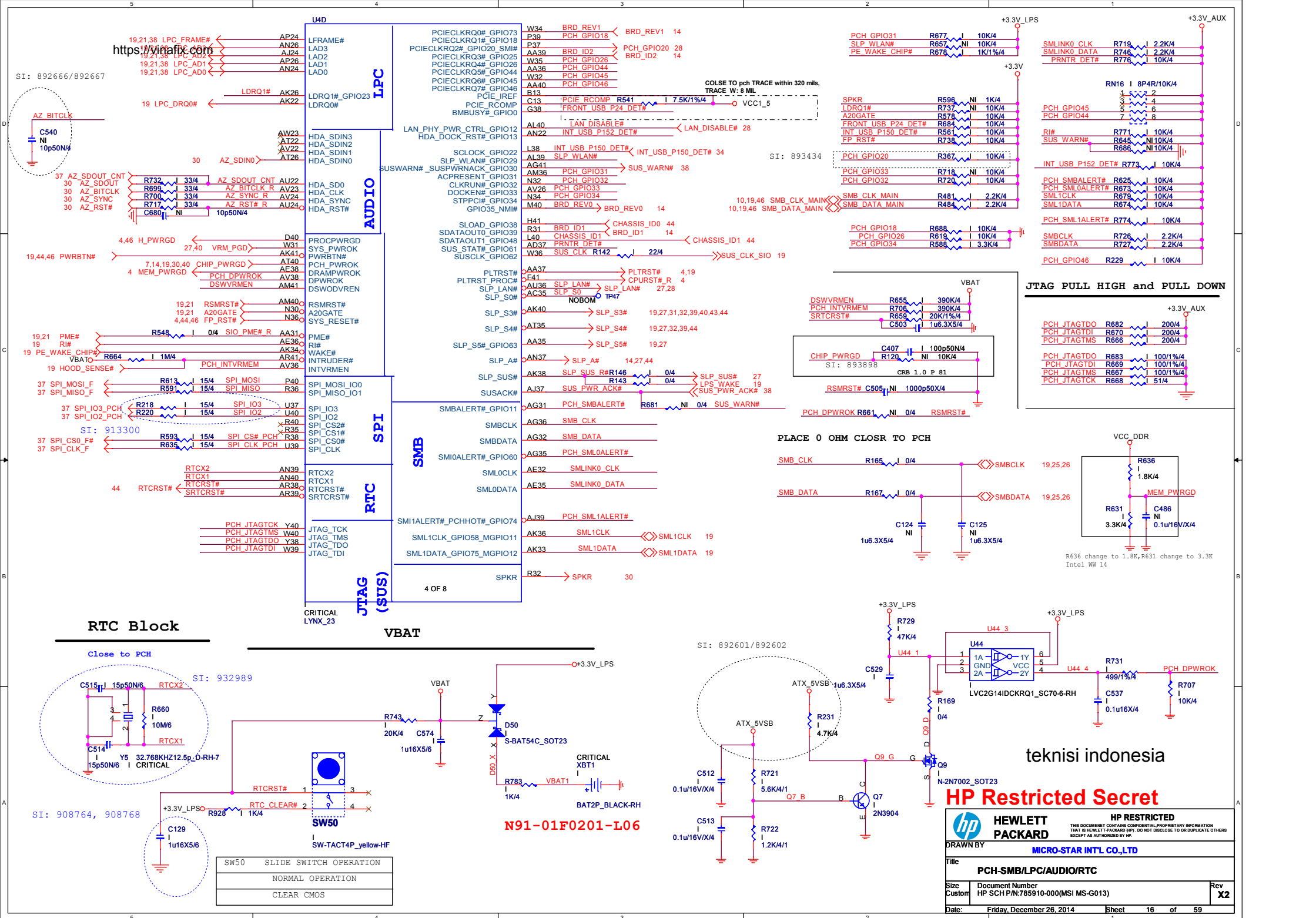
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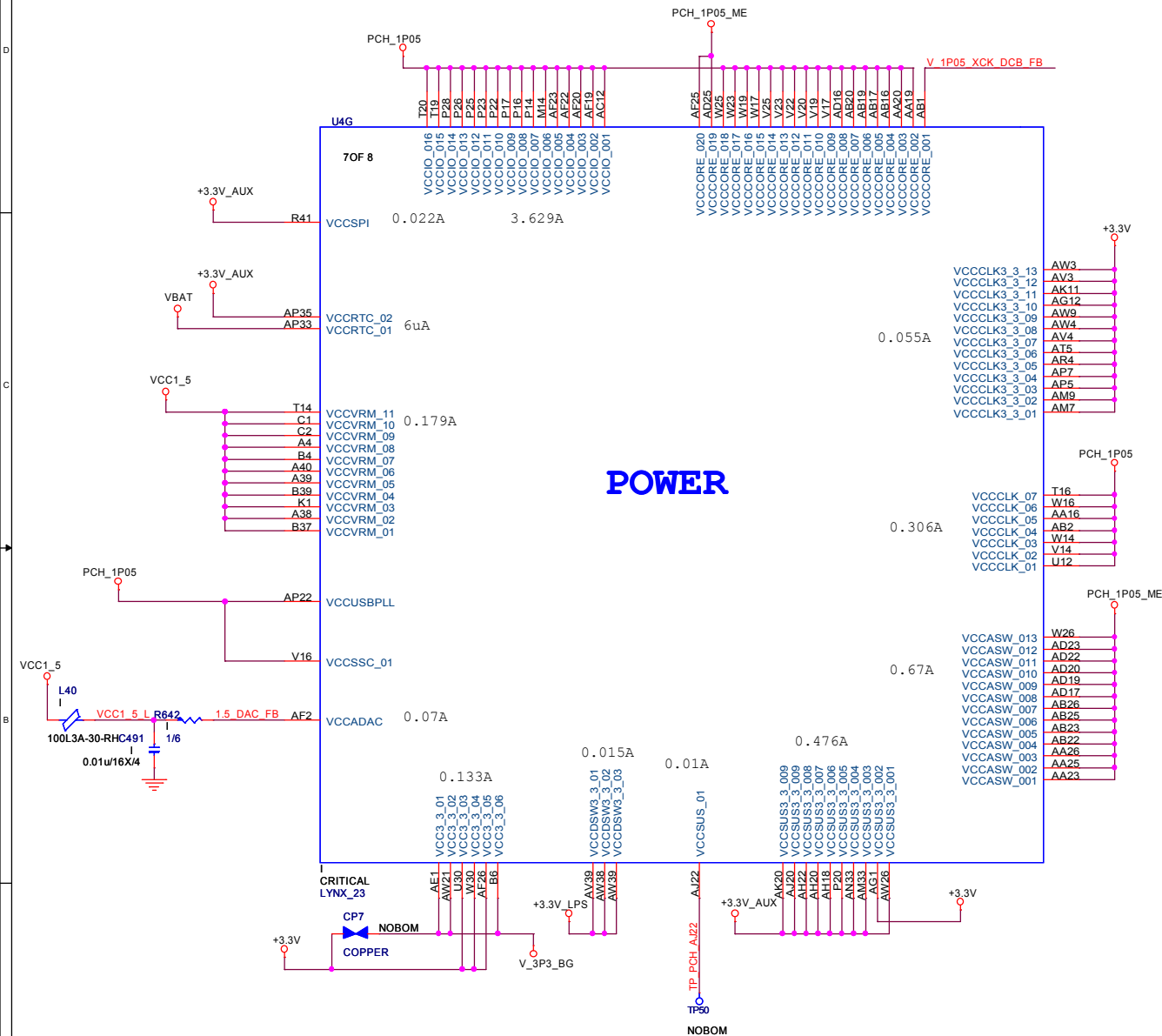
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Place C283 } C237 near P14, P16, P17, P26, P28
C285 near M14 C288 near U12 C289 near W14
C291 near AB2 C295 near V16 C297 near AA16, W16
C300 near AP22, AF19

Place C303 near AV4, AR4, AT5, AP5
C634 near AG1 C633 near W30 C304 near AF26

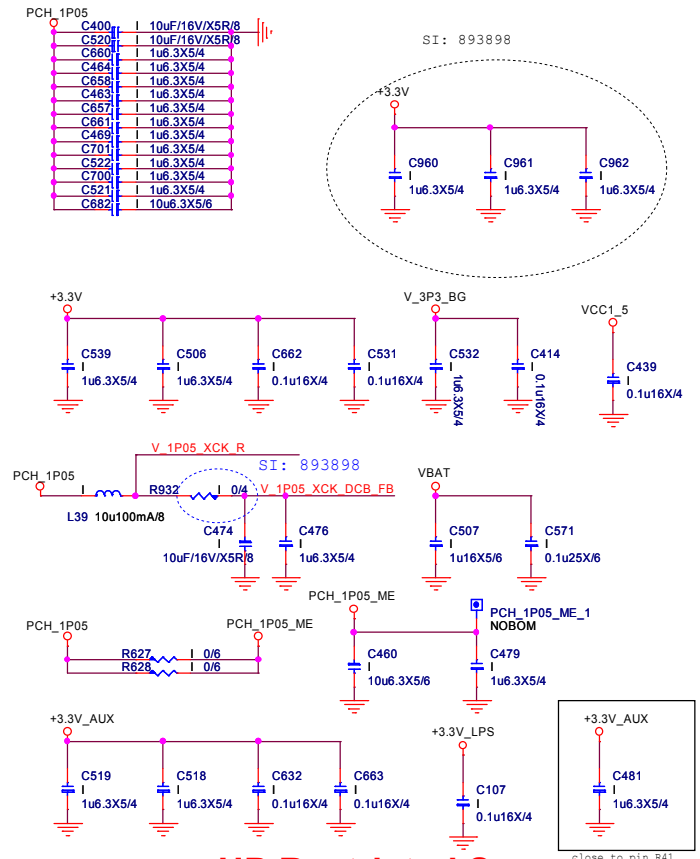
Place C630 near AN33 C301 near AK20
C631 near AW26 C302 near AP35

Place C635 near T14

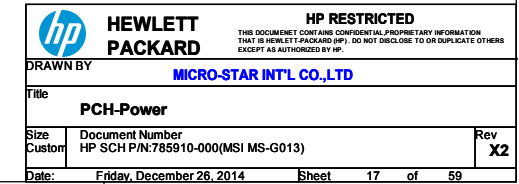
Place C636 near AW39

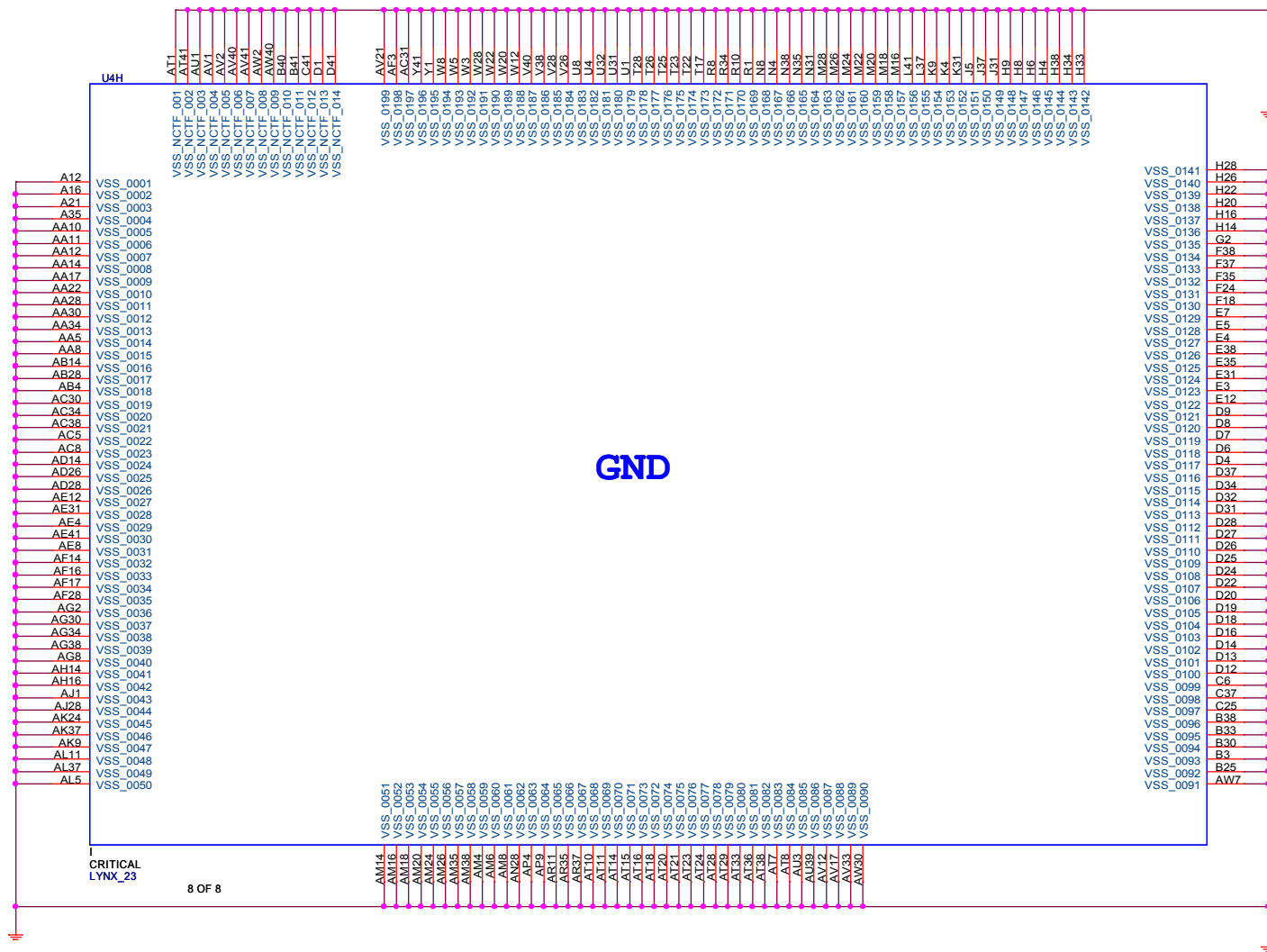
Place C312 } C311 near AD17, AD19

Place C306 near AW21 C632 near B6




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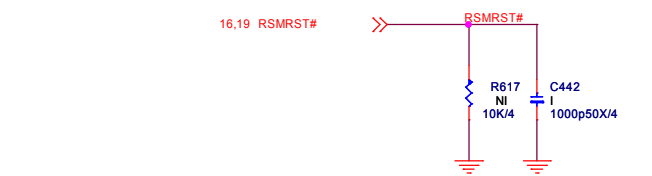
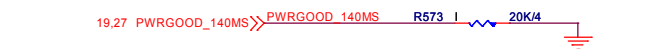
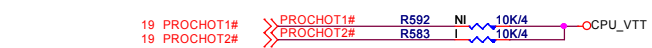
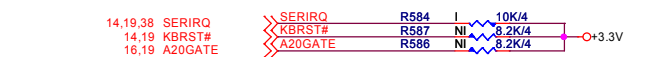
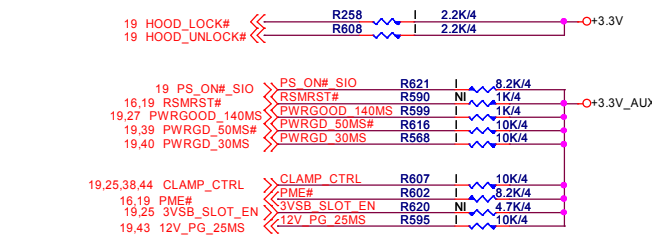
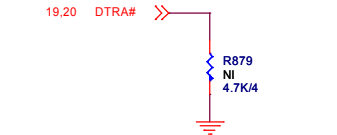
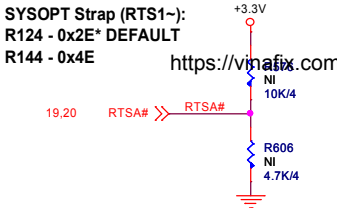




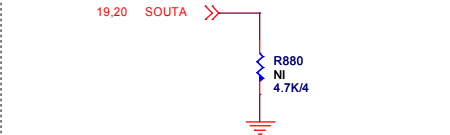
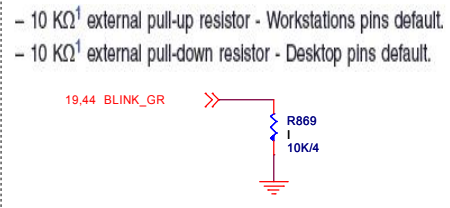
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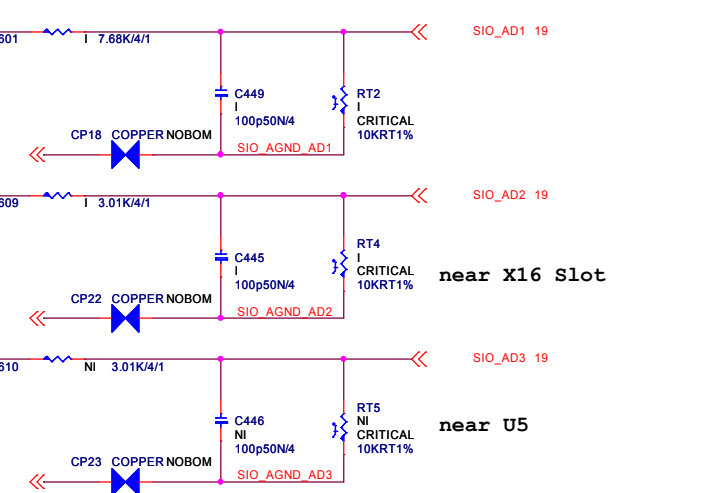
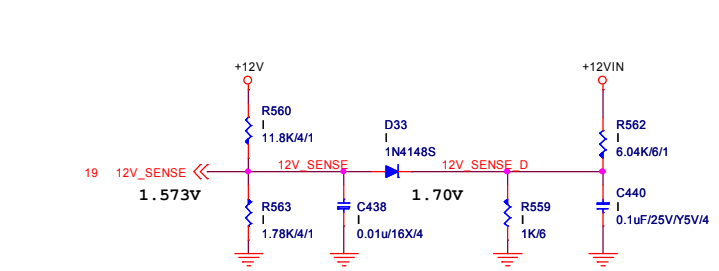
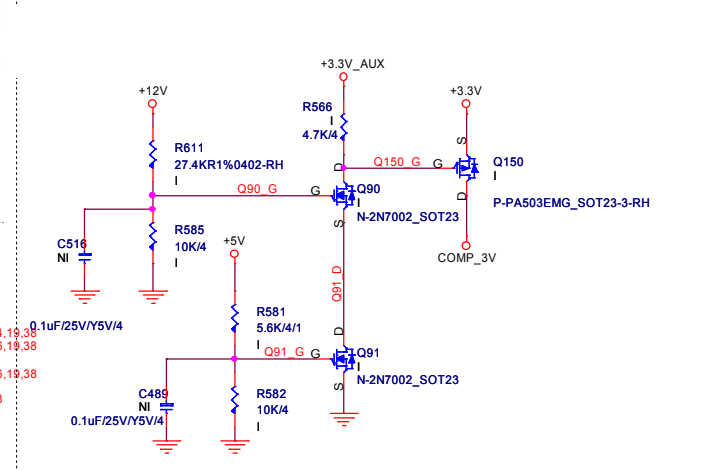
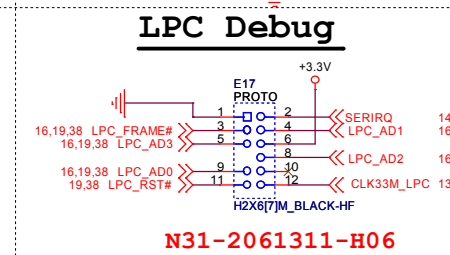
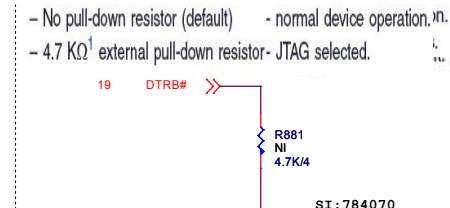
SYSOPT Strap (RTS1-):
R124 - 0x2E* DEFAULT
R144 - 0x4E



- 10 K Ω external pull-up resistor - Workstations pins default.
- 10 K Ω external pull-down resistor - Desktop pins default.



- No pull-down resistor (default) - normal device operation.
- 4.7 K Ω external pull-down resistor- JTAG selected.



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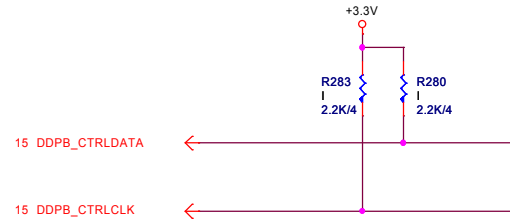
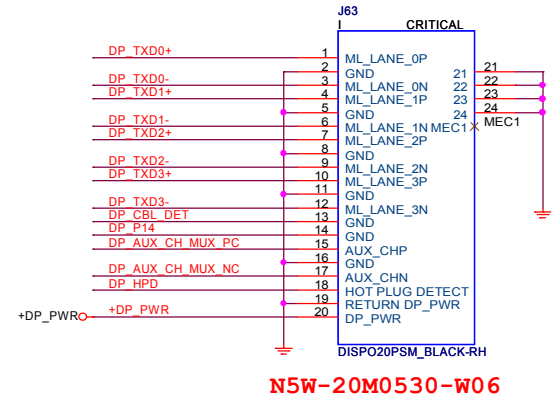
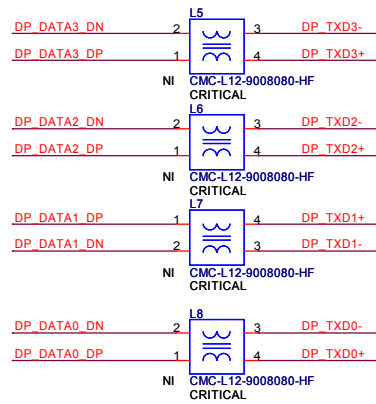
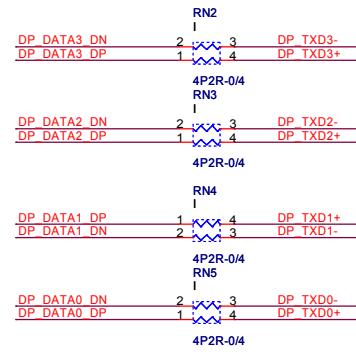
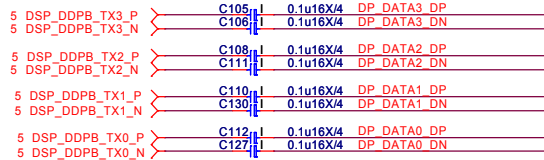
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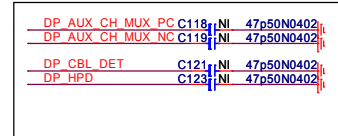
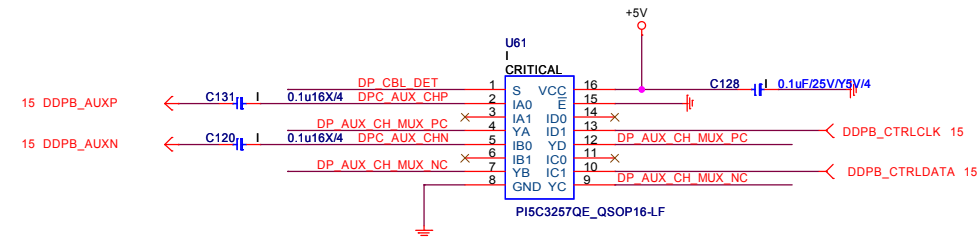
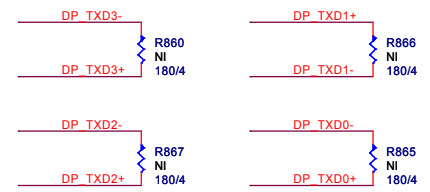
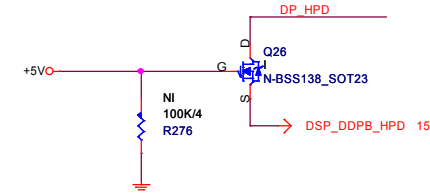
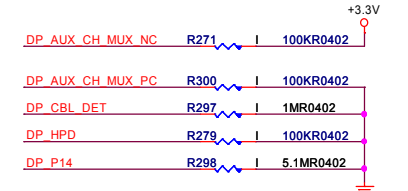
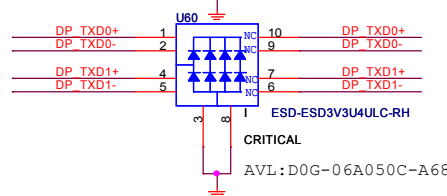
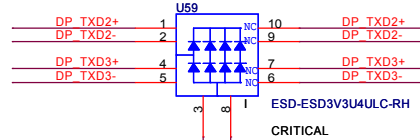
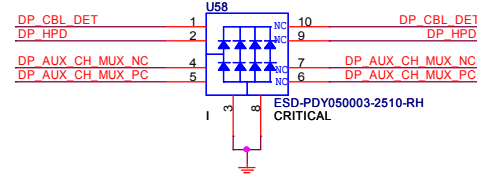
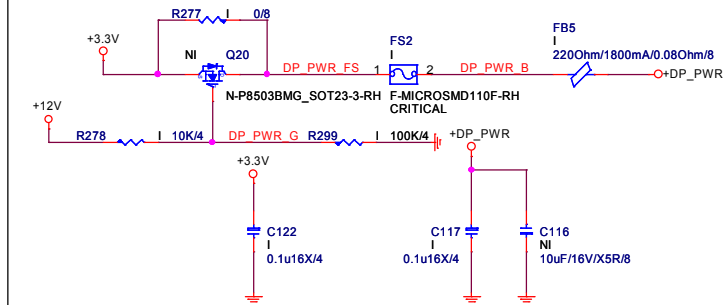
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Title		Reserved			
Size	Document Number			Rev	
Custom	HP SCH P/N:785910-000(MSI MS-G013)			X2	
Date:		Friday, December 26, 2014		Sheet	22 of 59

Display conn


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DP POWER

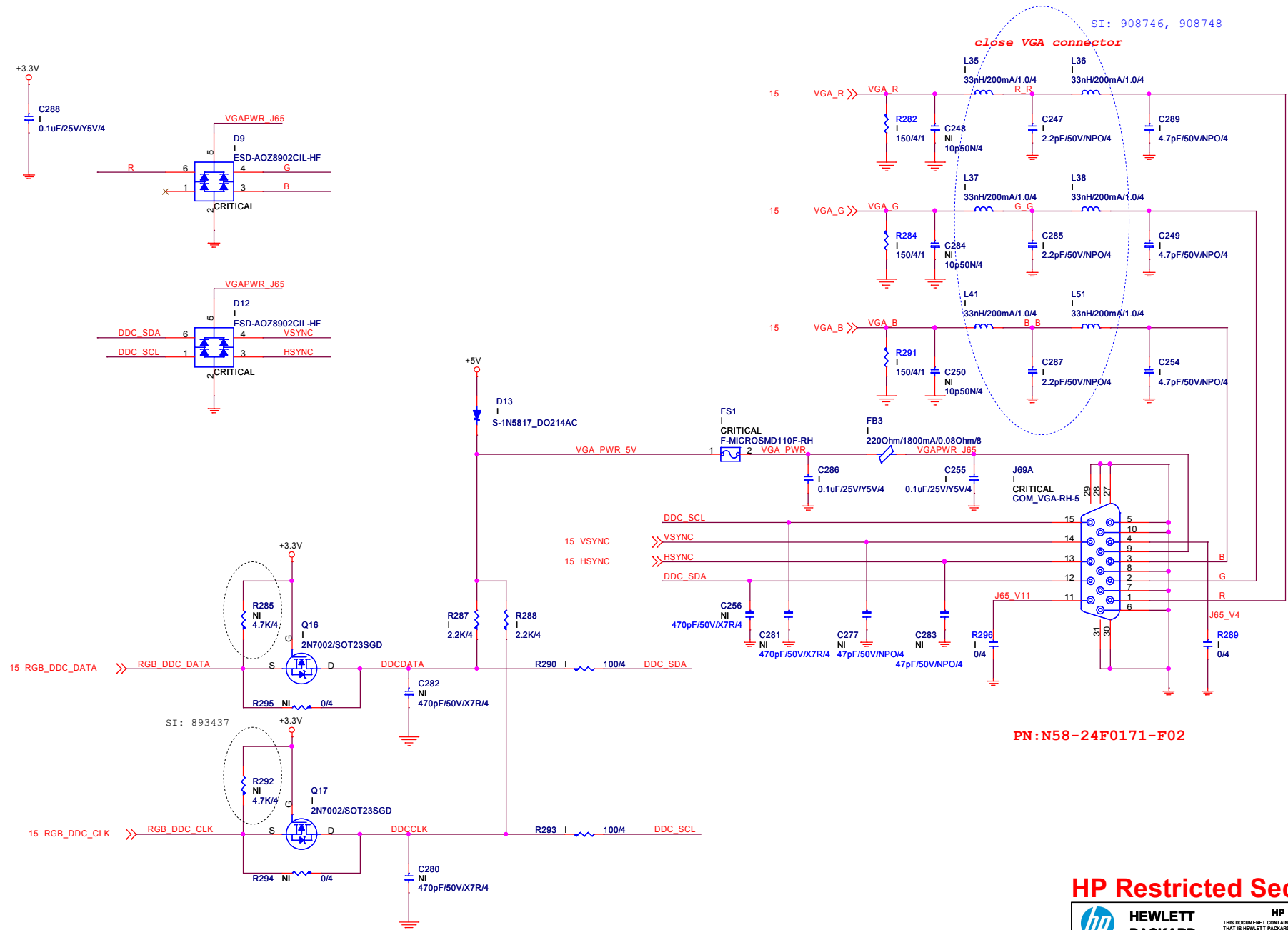


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Title DP Port CONN					
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Date:	Friday, December 26, 2014		Sheet	23	of 59

VGA CONN BLOCK

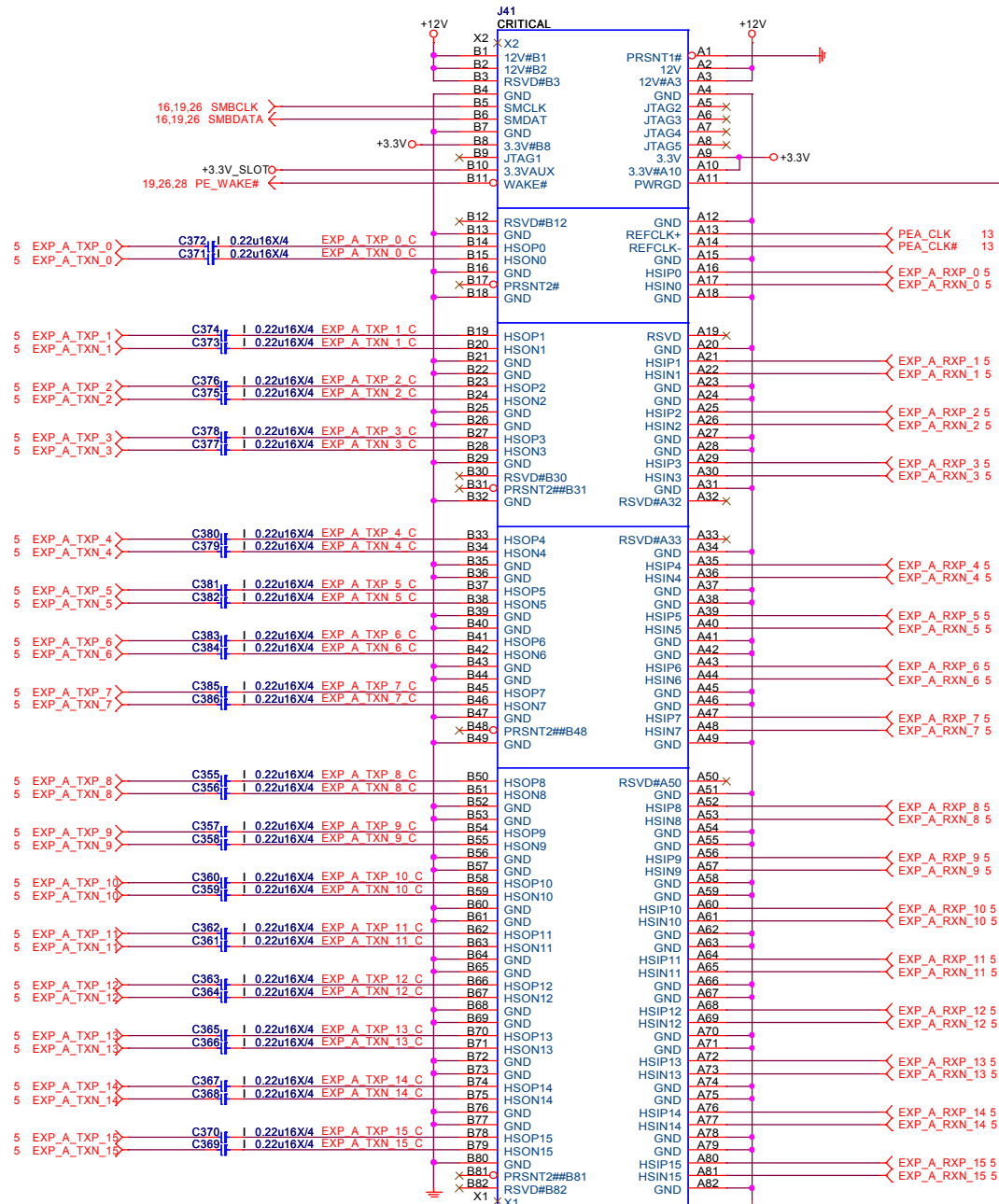
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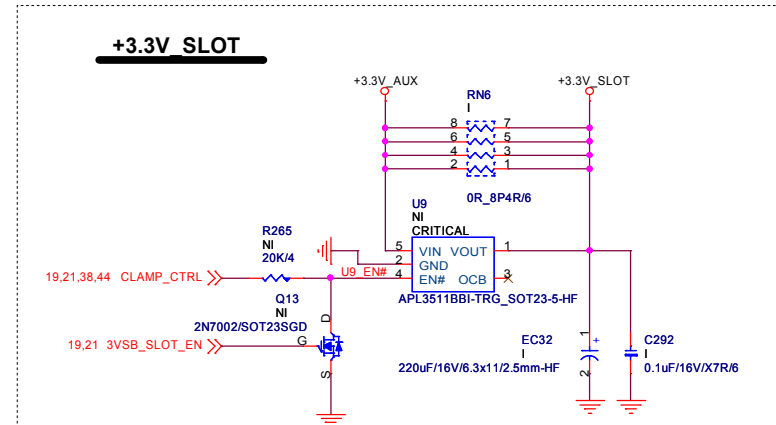
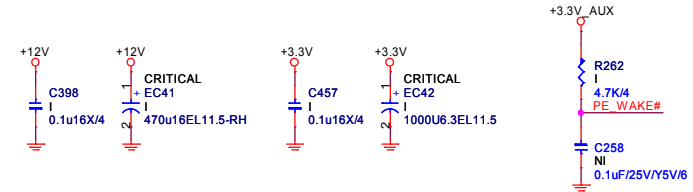
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Title		VGA CONN			
Size	Document Number				Rev
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Date:	Friday, December 26, 2014		Sheet	24	of 59

PCI EXPRESS X16 SLOT



SLOT-PCI164P_BLACK-2PITCH-RH-20

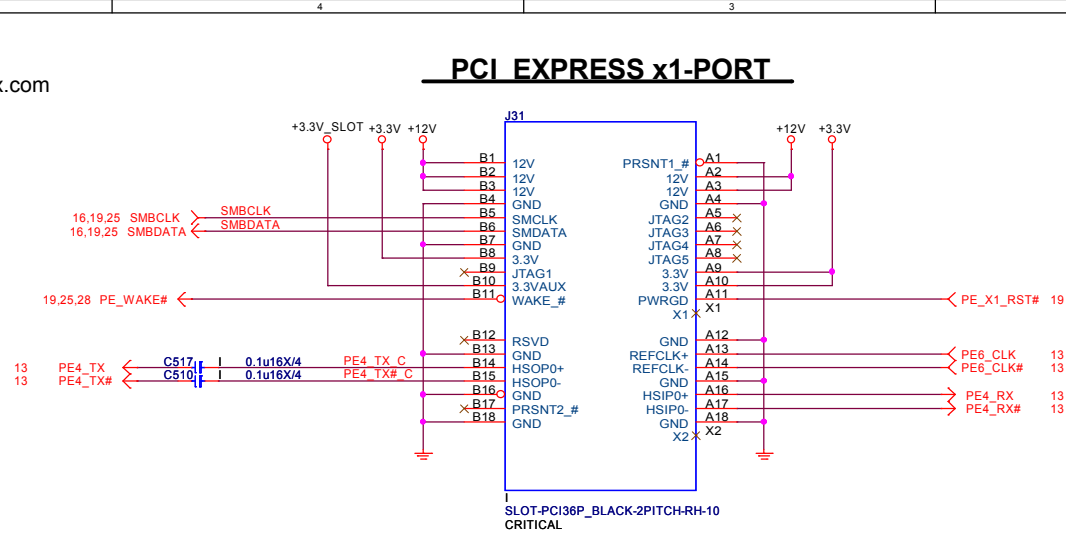
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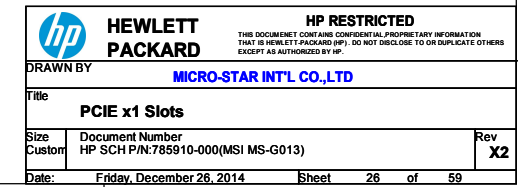
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Title: PCIE x16 Slot					
Size	Document Number				Rev
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Date:	Friday, December 26, 2014				Sheet 25 of 59

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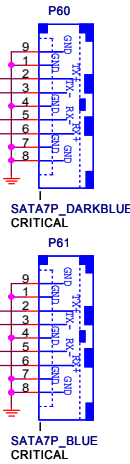
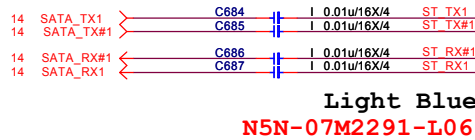
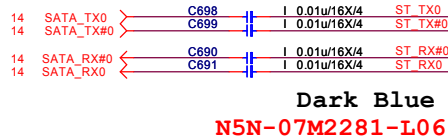
PCI EXPRESS x1-PC			
J31			
B1	12V	PRSNRT1_#	A1
B2	12V	12V	A2
B3	12V	12V	A3
B4	GND	GND	A4
B5	SMCLK	JTAG2	A5
B6	SMDATA	JTAG3	A6
B7	GND	JTAG4	A7
B8	3.3V	JTAG5	A8
B9	JTAG1	3.3V	A9
B10	3.3VAUX	3.3V	A10
B11	WAKE_#	PWRGD	A11
		X1	X1
B12	RSVD	GND	A12
B13	GND	REFCLK+	A13
B14	HSOP0+	REFCLK-	A14
B15	HSOP0-	GND	A15
B16	GND	HSIP0+	A16
B17	PRSNRT2_#	HSIP0-	A17
B18	GND	GND	X2
		X2	X2
I SLOT-PCI36P_BLACK-2PITCH-RH-10 CRITICAL			
N11-0360381-L06			

HP Restricted Secret



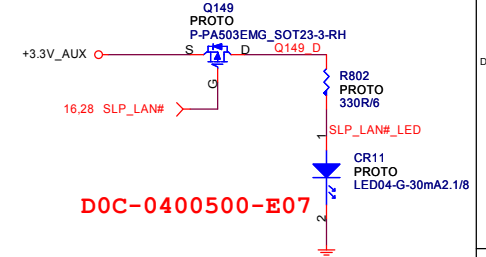
SATA Connector

https://vinafix.com

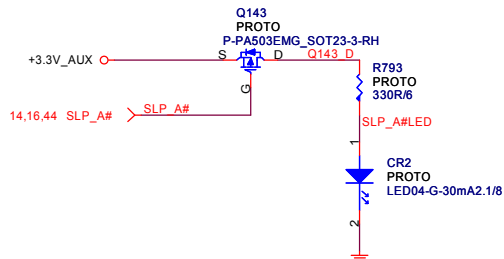


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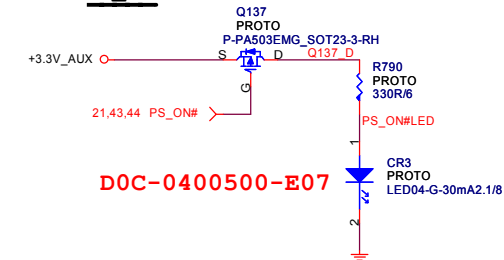
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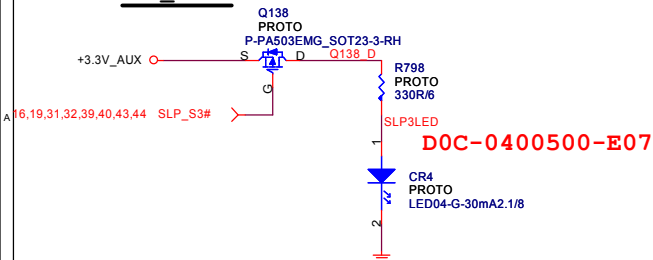
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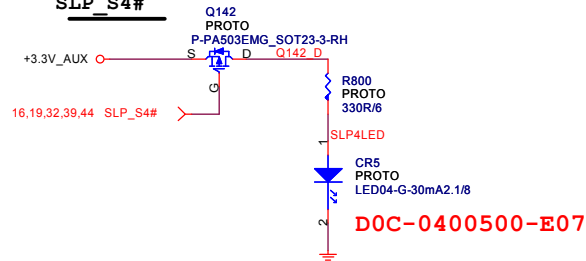
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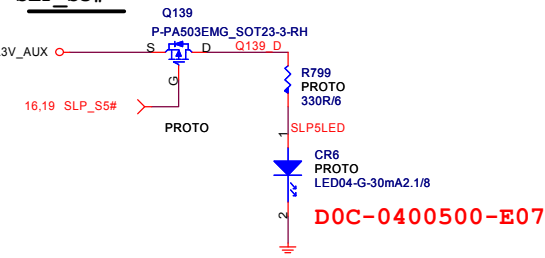
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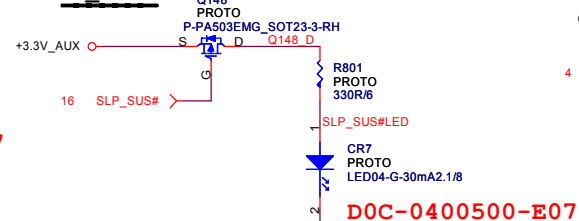
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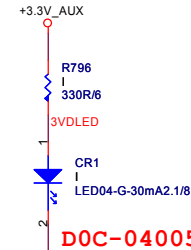
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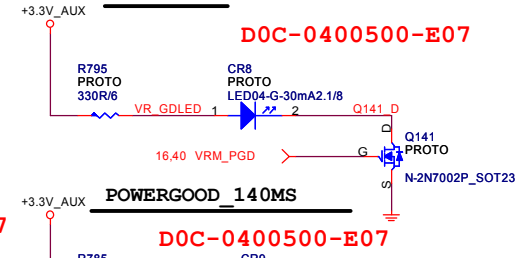
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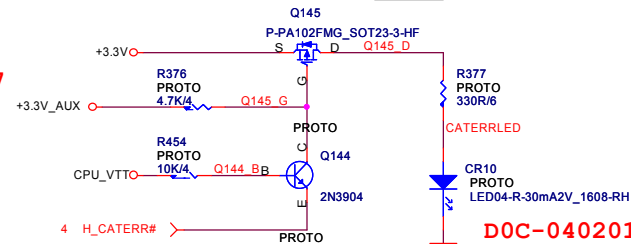
3VSB




VRMPWRGD



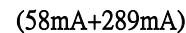
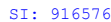
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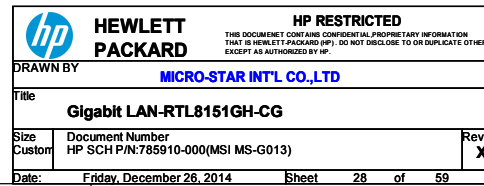
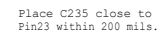
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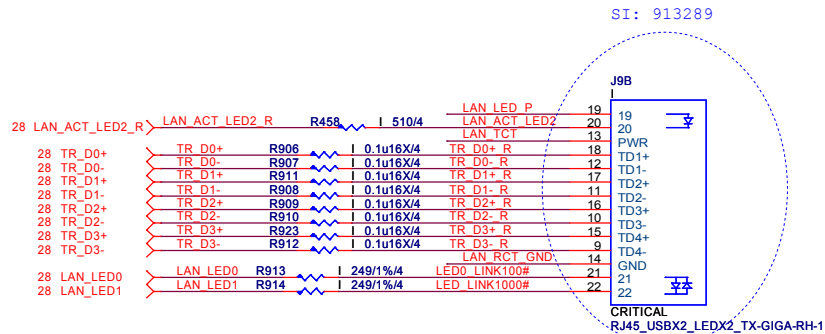
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Size	Custom	Document Number		Rev	
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Date:	Friday, December 26, 2014	Sheet	27	of	59

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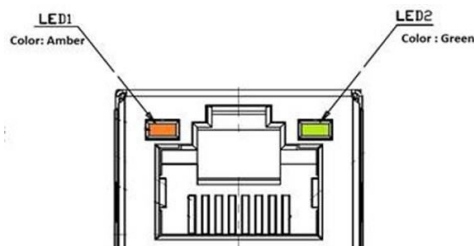
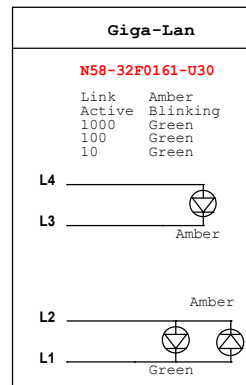


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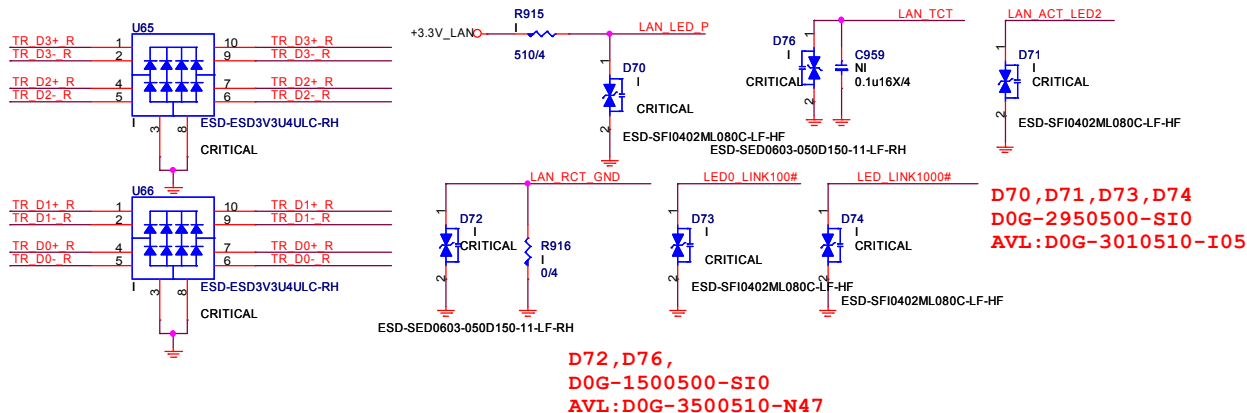




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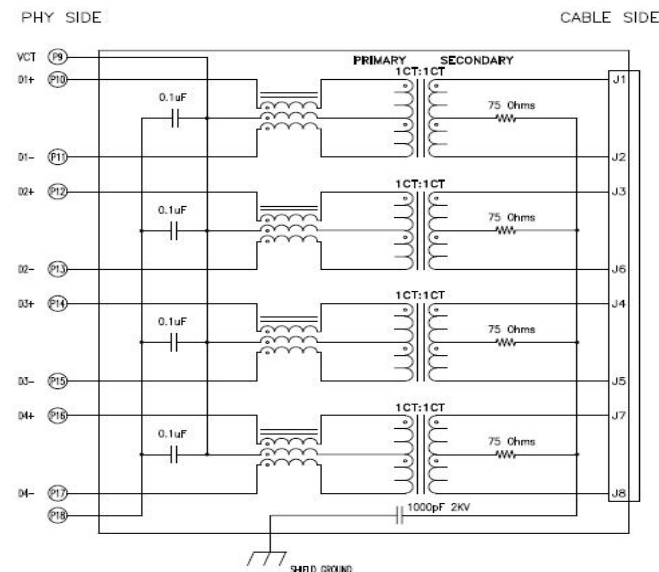


ESD



WOL ON	Speed	Active/Idle Mode		
		S0	S3/S4	S5
Active LED	1G Bit	Blink Amber	Blink Amber	Blink Amber
	100M Bit	Blink Amber	Blink Amber	Blink Amber
	10M Bit	Blink Amber	Blink Amber	Blink Amber
Link Speed LED	1G Bit	Green	Green	Green
	100M Bit	Green	Green	Green
	10M Bit	Green	Green	Green
WOL OFF		S0	S3/S4	S5
Active LED	1G Bit	Blink Amber	OFF	OFF
	100M Bit	Blink Amber	OFF	OFF
	10M Bit	Blink Amber	OFF	OFF
Link Speed LED	1G Bit	Green	OFF	OFF
	100M Bit	Green	OFF	OFF
	10M Bit	Green	OFF	OFF
Link OFF		S0	S3/S4	S5
Active LED	1G Bit	OFF	OFF	OFF
	100M Bit	OFF	OFF	OFF
	10M Bit	OFF	OFF	OFF
Link Speed LED	1G Bit	OFF	OFF	OFF
	100M Bit	OFF	OFF	OFF
	10M Bit	OFF	OFF	OFF

SCHEMATIC



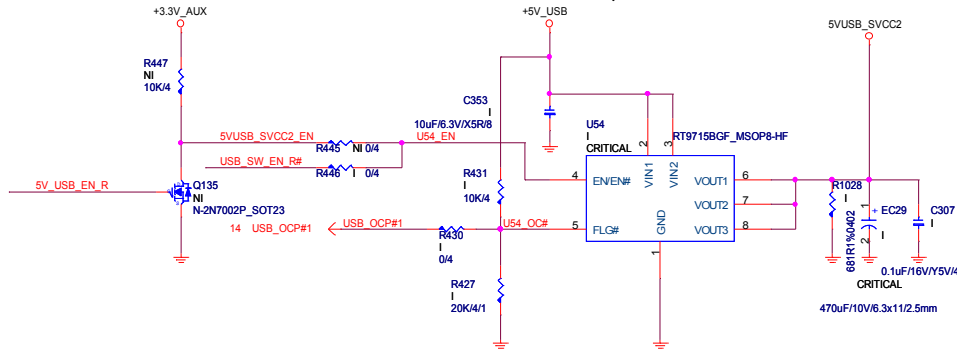
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Size Custom	Document Number HP SCH P/N: 785910-000 (MSI MS-G013)		Rev X2
Date:	Friday, December 26, 2014	Sheet	29 of 59

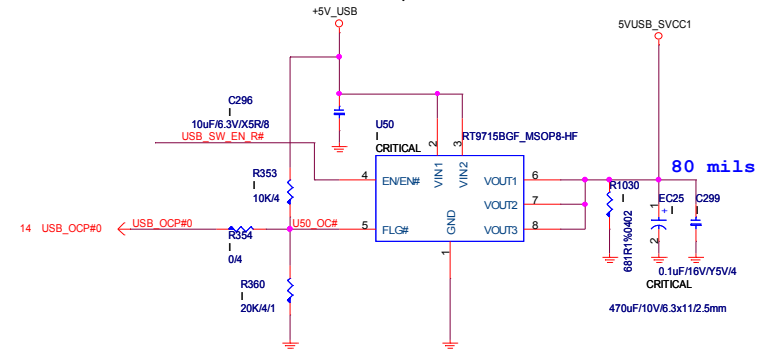
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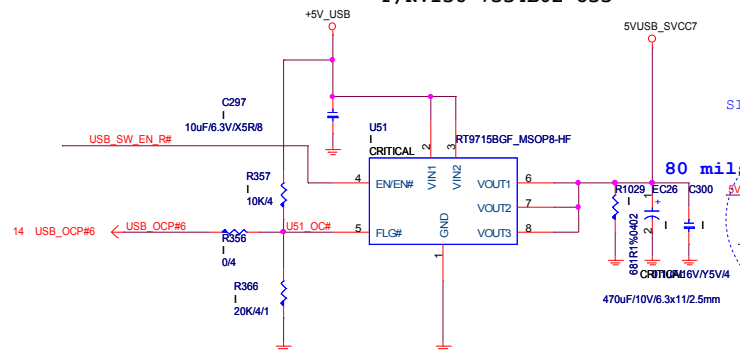
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POWER CIRCUIT FOR USB PORT 0,1 P/N: I36-7534B02-U33



POWER CIRCUIT FOR USB PORT 10,11 P/N: I36-7534B02-U33



SI: 908728

SI: 892628/892629

SI: 911783, 911786

80 mils

CRITICAL

CRITICAL

CRITICAL

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CRITICAL

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CRITICAL

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CRITICAL

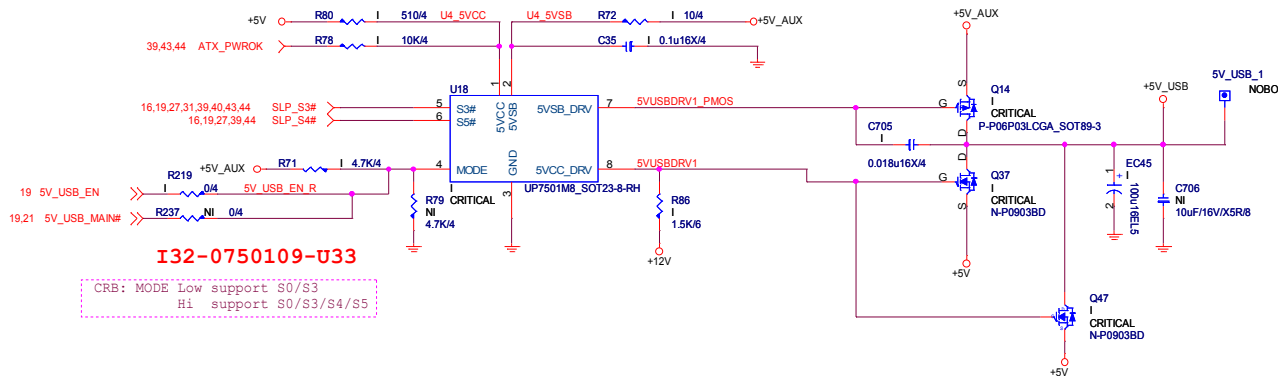
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CRITICAL

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USB POWER



I32-0750109-U33

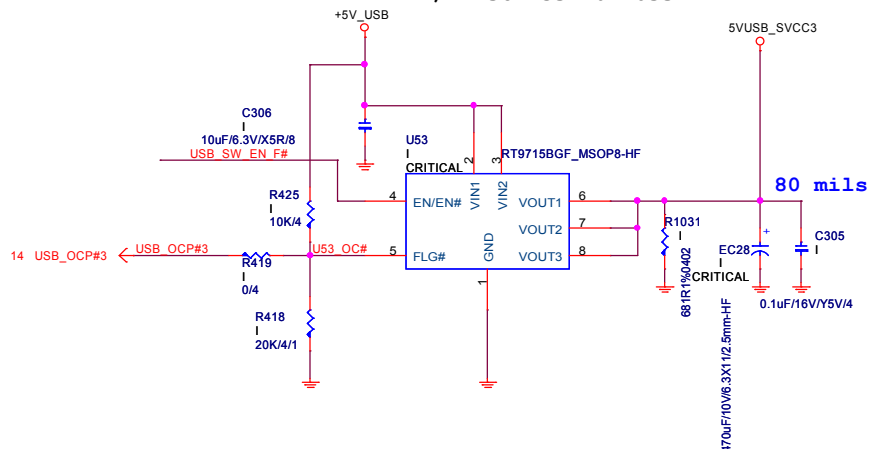
CRB: MODE Low support S0/S3
Hi support S0/S3/S4/S5

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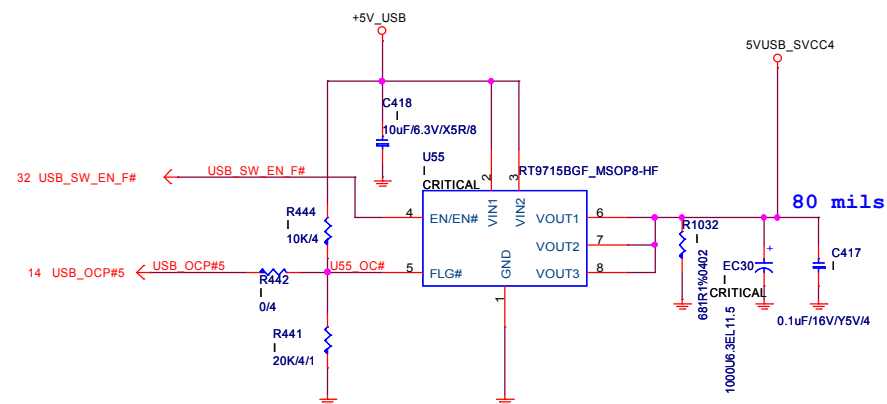
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		MICRO-STAR INT'L CO.,LTD			
file					
Rear USB POWER					
Size	Document Number				Rev
Custom	HP SCH P/N:785910-000(MSI MS-G013)				X2
Date:	Friday, December 26, 2014	Sheet	32	of	59

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POWER CIRCUIT FOR USB PORT 4,5 P/N: I36-7534B02-U33



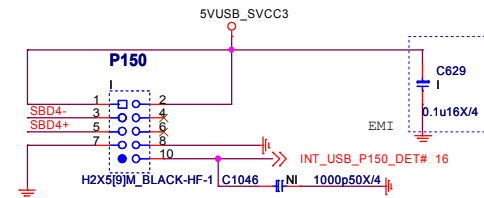
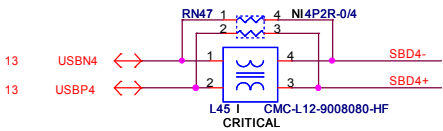
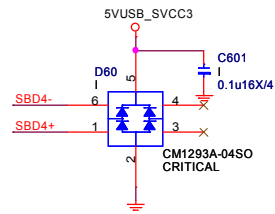
POWER CIRCUIT FOR USB PORT 8,9 P/N: I36-7534B02-U33



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Size	Document Number				Rev
Custom	HP SCH P/N:785910-000(MSI MS-G013)				X2
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Internal USB Connector For USB Port 4



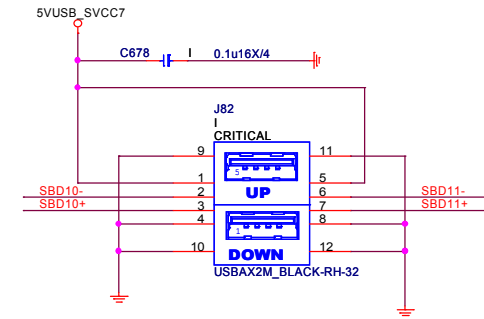
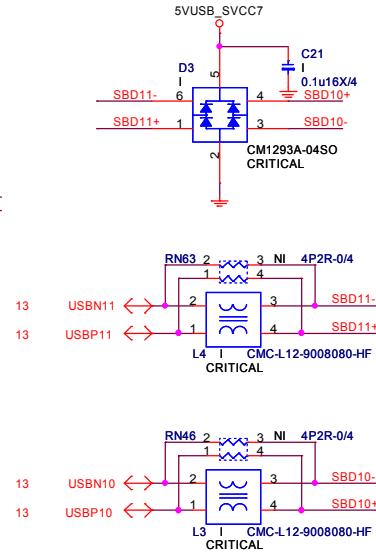
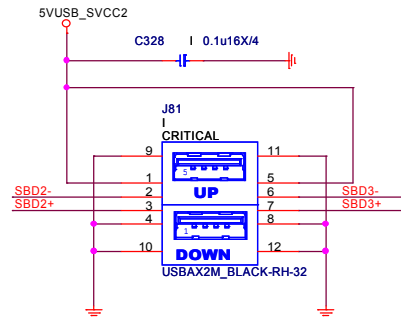
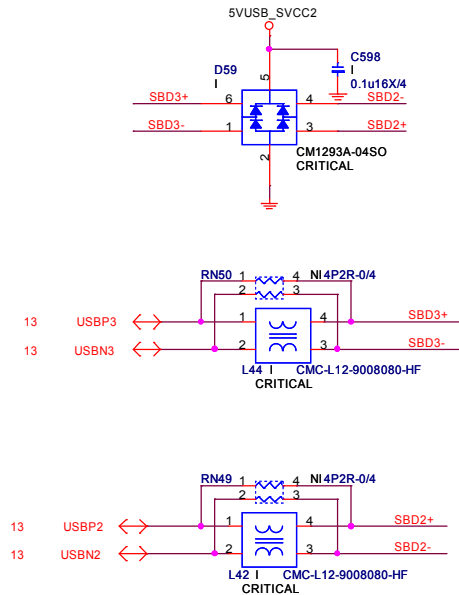
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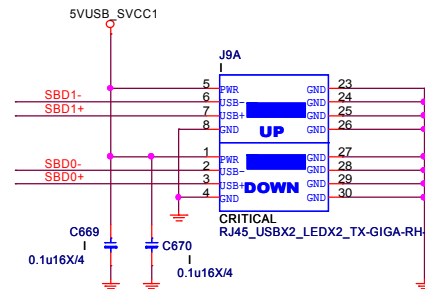
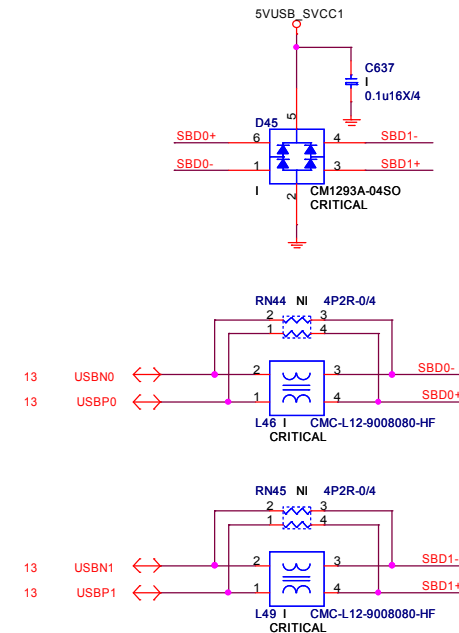
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Title USB2.0			
Size	Document Number		Rev
Custom	HP SCH P/N:785910-000(MSI MS-G013)		X2
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Rear USB Connector For USB Port 2/3

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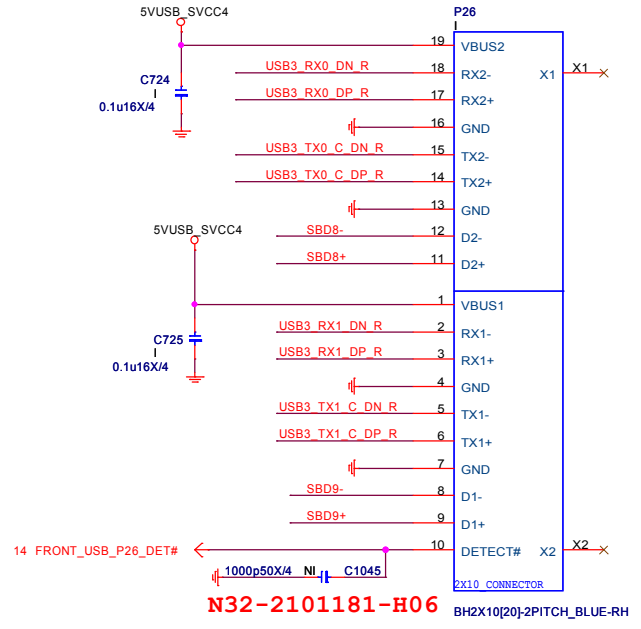
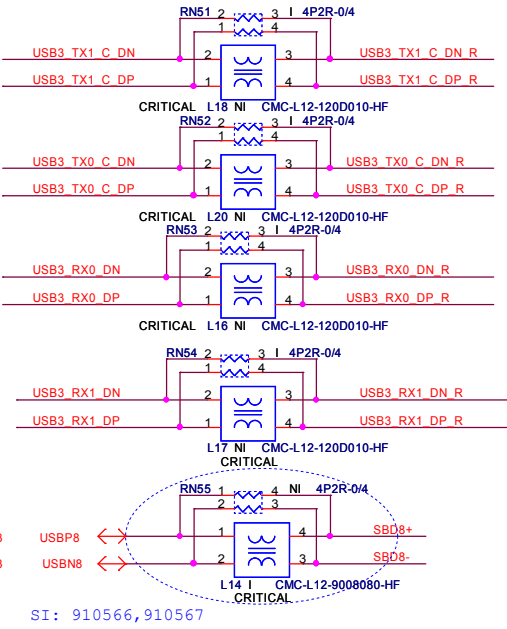
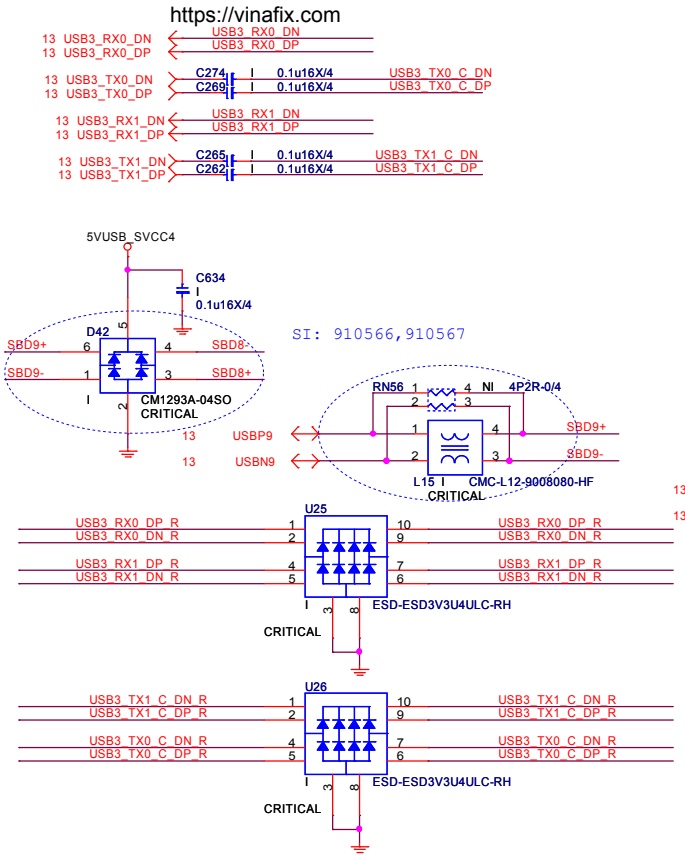
Rear USB Connector For USB Port 0/1



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Title Rear USB 2.0			
Size	Document Number		Rev
Custom	HP SCH P/N:785910-000(MSI MS-G013)		X2
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FRONT USB3.0 Connector For USB3.0 Port 1 / 2

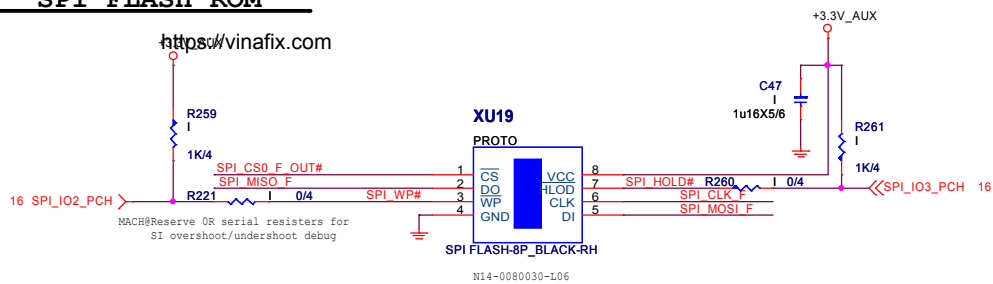


The six USB 3.0 pairs can be mapped with any USB 2.0 pair to a given connector but ACPI tables and BIOS should be updated to reflect the USB 2.0 to USB 3.0 pair mapping., DG PAGE 159

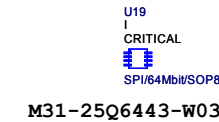
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Title Front USB 3.0					
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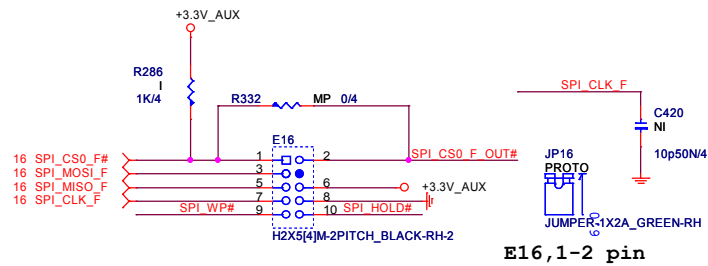
SPI FLASH ROM



BIOS

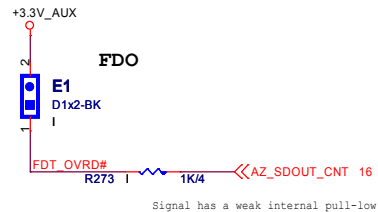


SPI DEBUG PROT



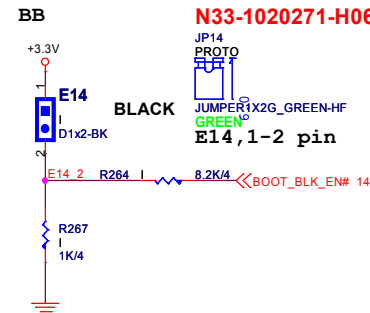
Flash Descriptor Override Header (ME_DIS)

FLASH DESCRIPTOR OVERRIDE

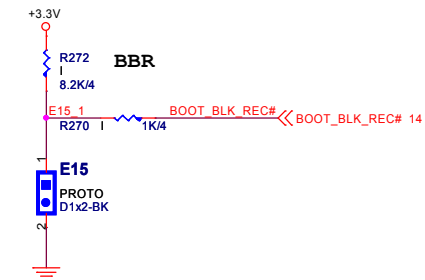


N31-1020151-H06

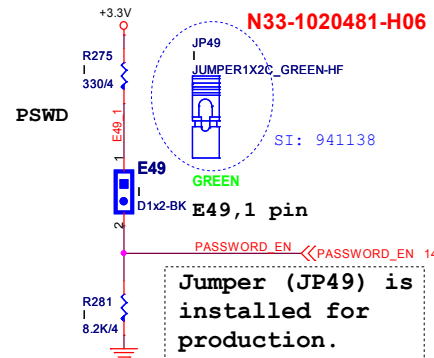
BOOT BLOCK WRITE JUMPER



BOOT BLOCK RECOVERY HEADER



PASSWORD JUMPER



Jumper (JP49) is installed for production.

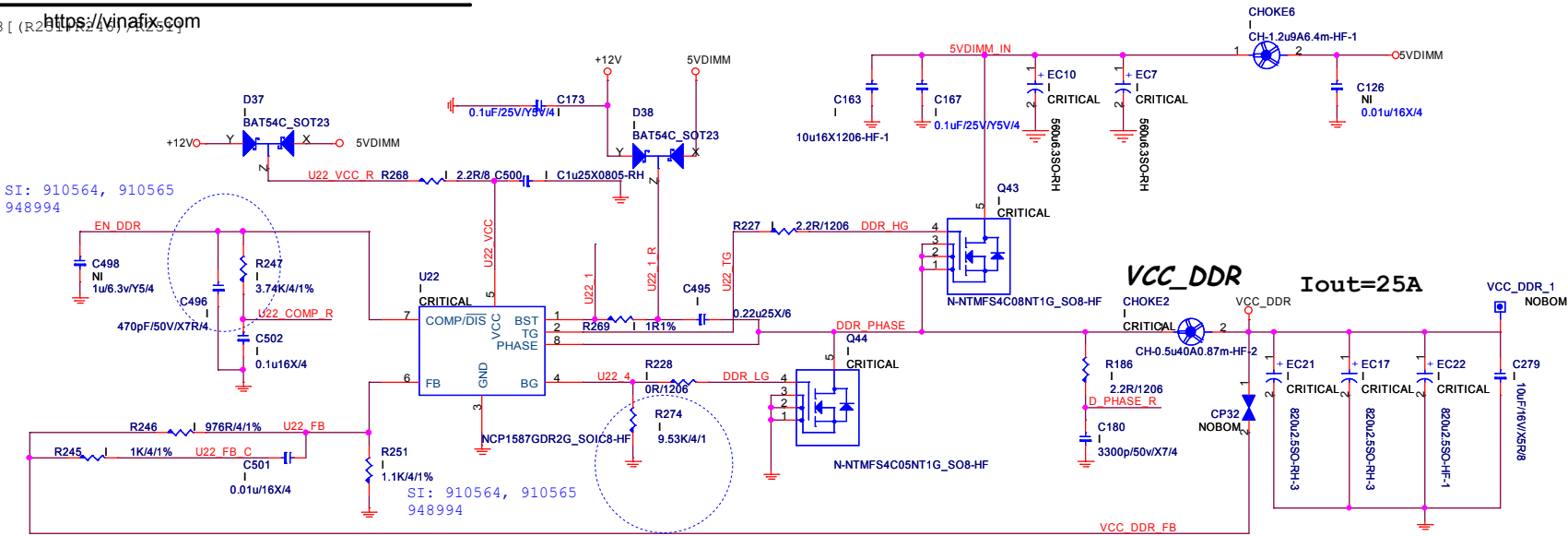
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Size		Document Number		X2	
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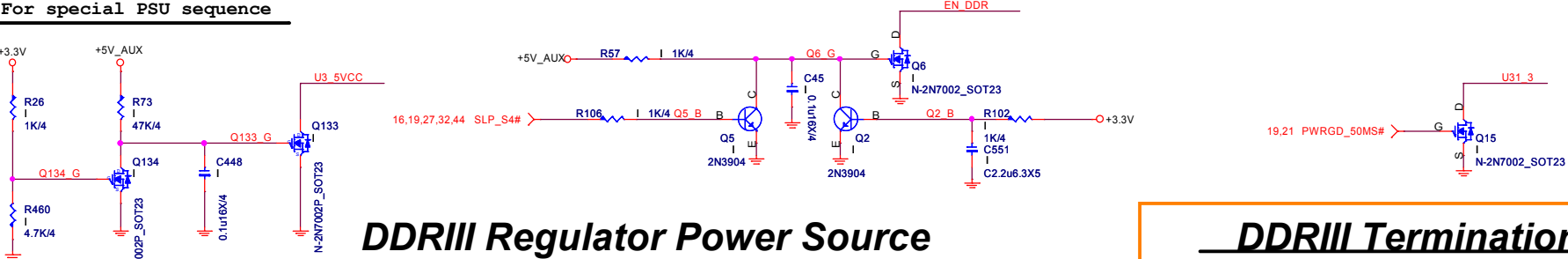
DDRIII DIMM Power

$V_{out} = 0.8 \cdot [(R251 \parallel R245) / R251]$

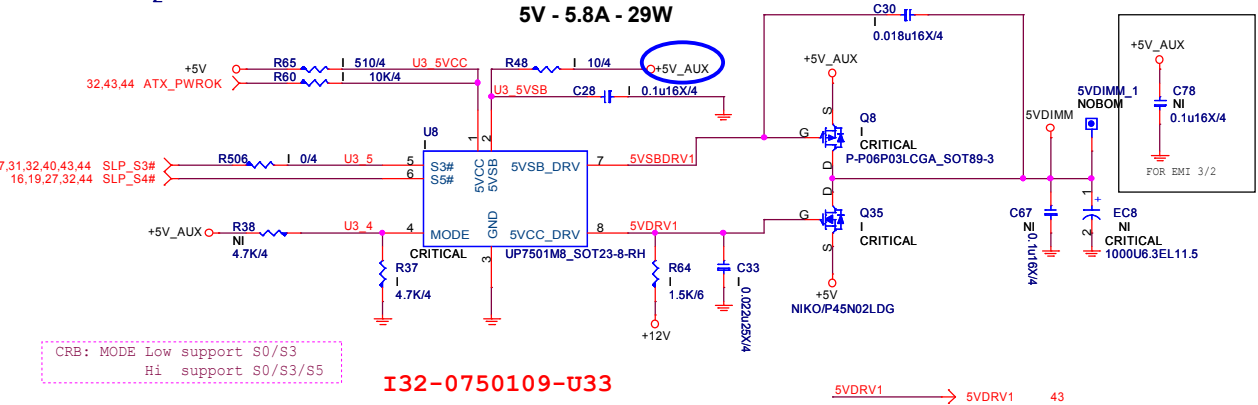
https://vinafix.com



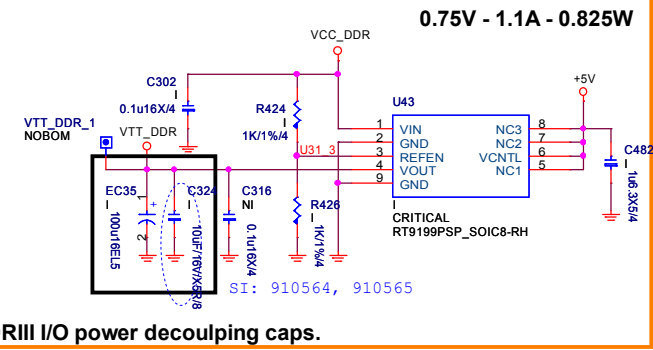
For special PSU sequence



DDRIII Regulator Power Source



DDRIII Termination Power



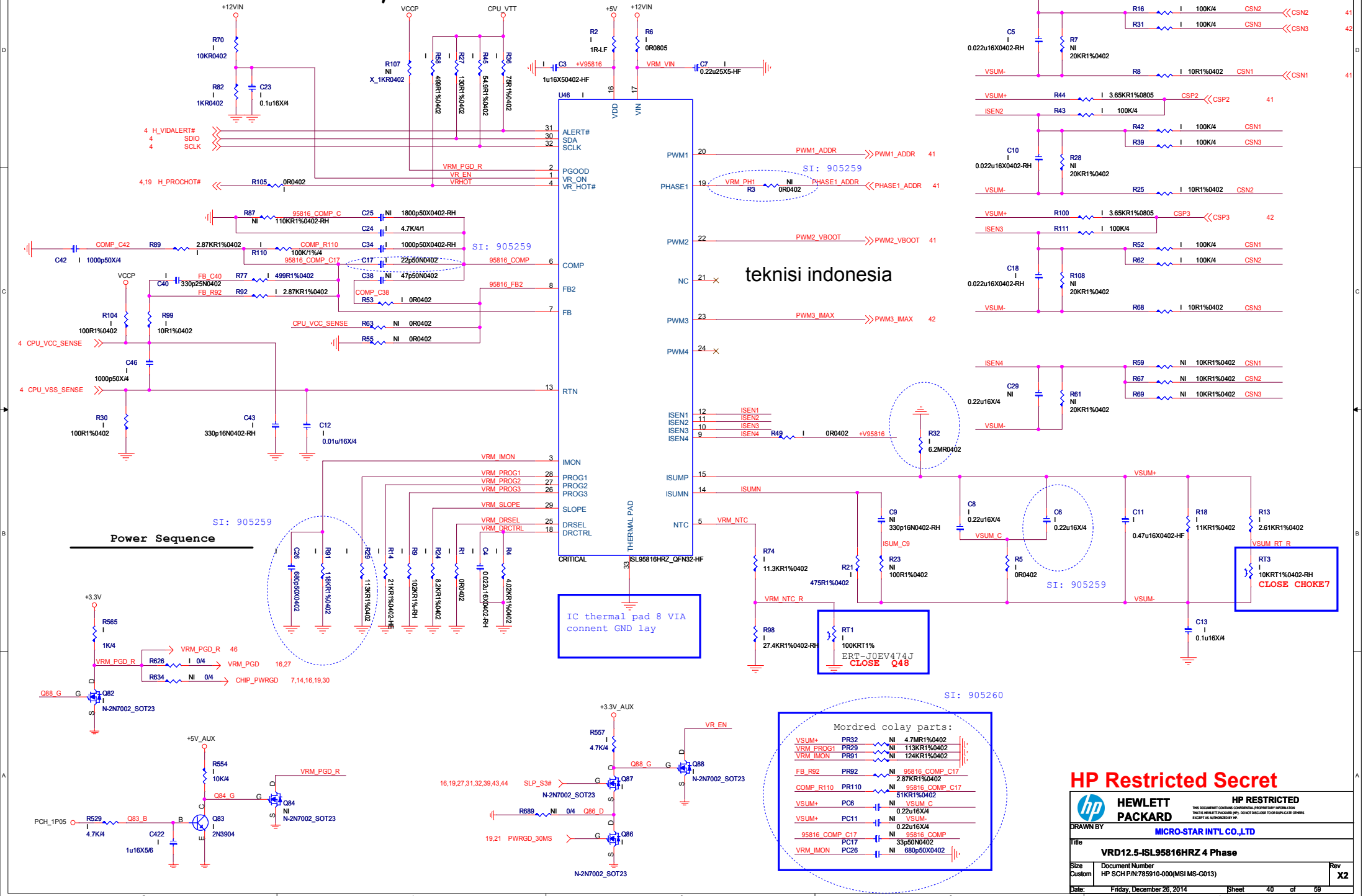
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Size		Document Number		X2	
Custom		HP SCH P/N:785910-000(MSI MS-G013)			
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SharkBay VR12.5 Power Circuit - 4 Phase

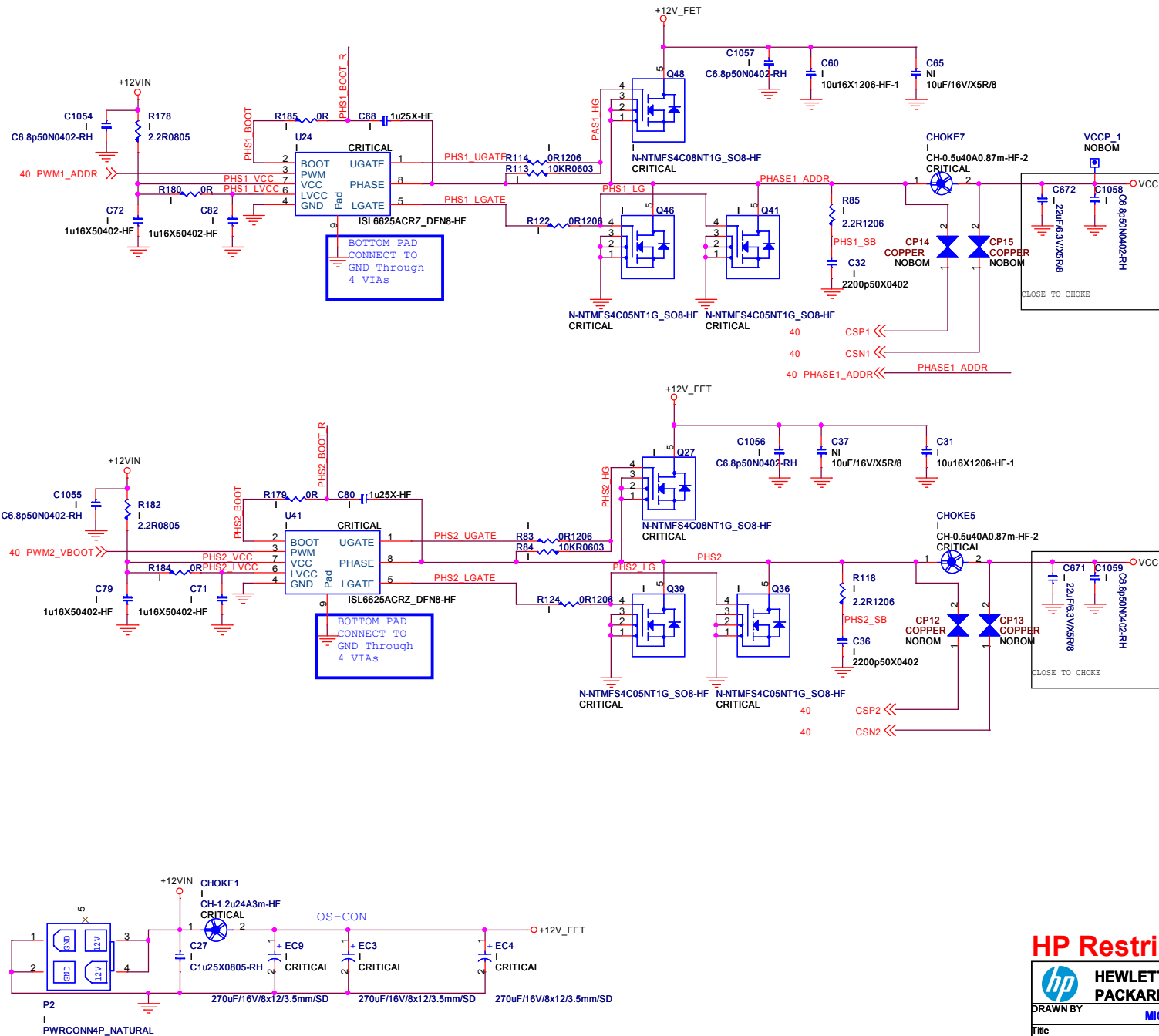
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SharkBay VR12.5 Power Circuit - 4 Phase



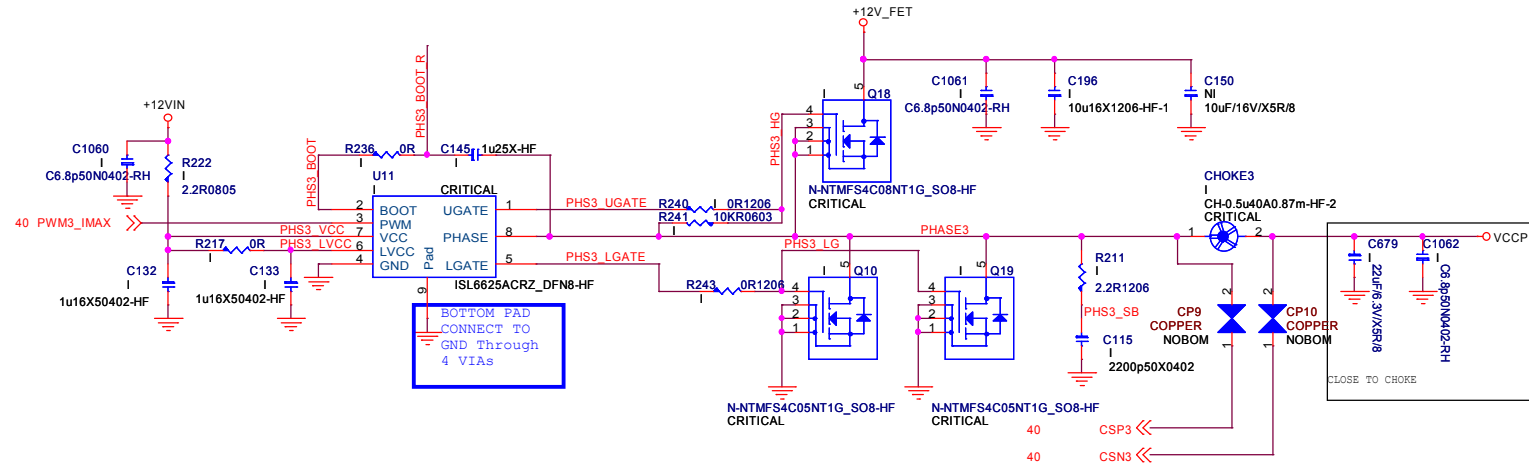
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Title VRD12.5-ISL95816HRZ 4 Phase			
Size Custom	Document Number HP SCH P/N:785910-000(MSI MS-G013)	Rev X2	
Date Friday, December 28, 2014	Sheet 40	of 59	



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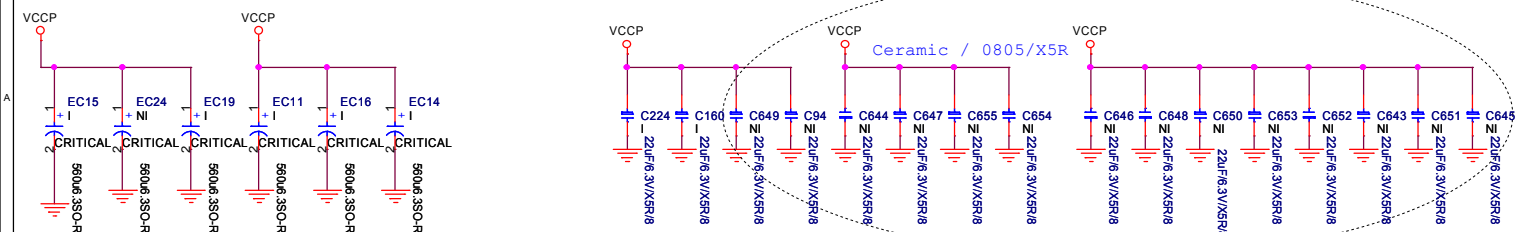
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Title		VCCP-1	
Size	Document Number	Rev	
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C71-5610611-N07

SI: 893441

Ceramic / 0805/X5R

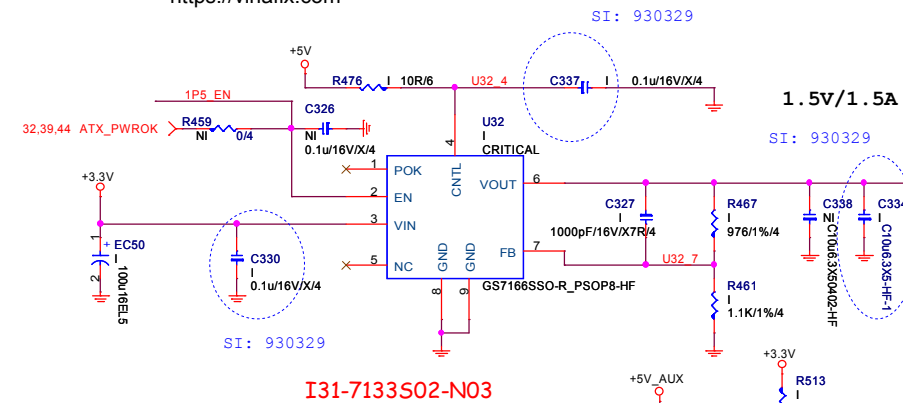


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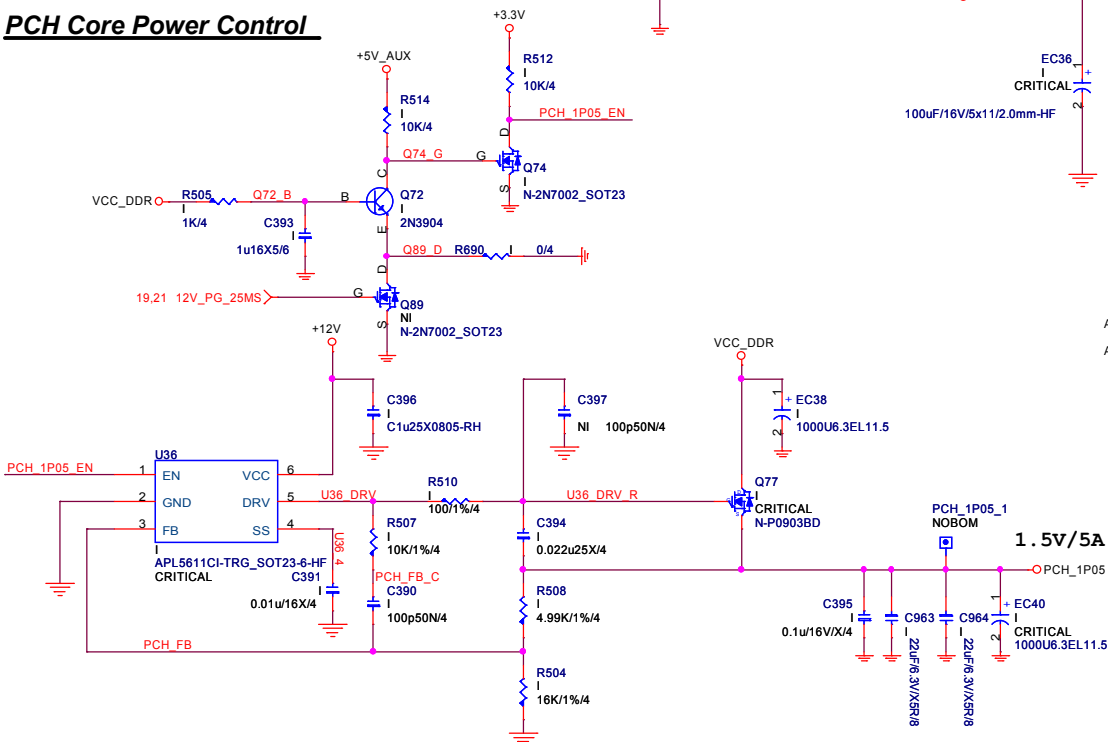
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Title VCCP-2				
Size Custom	Document Number HP SCH P/N:785910-000(MSI MS-G013)			Rev X2
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1.5V Power

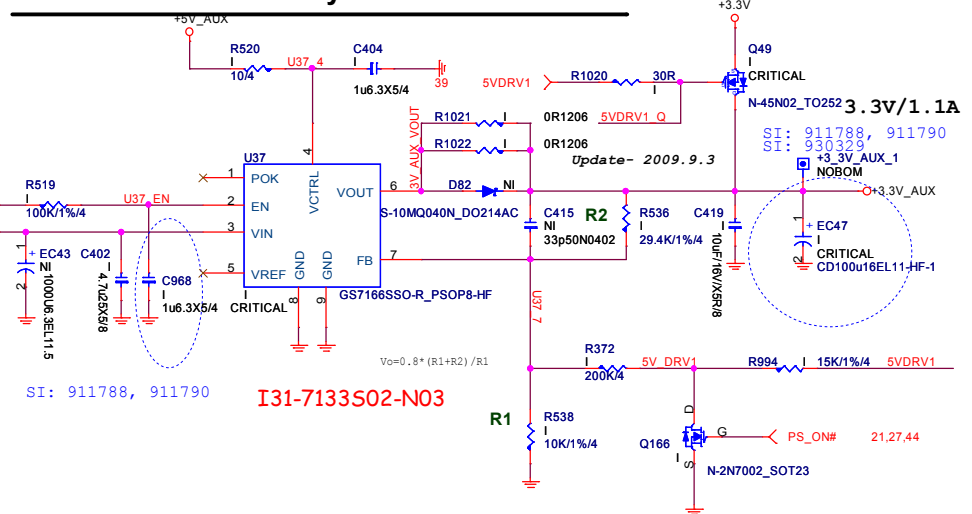
https://vinafix.com



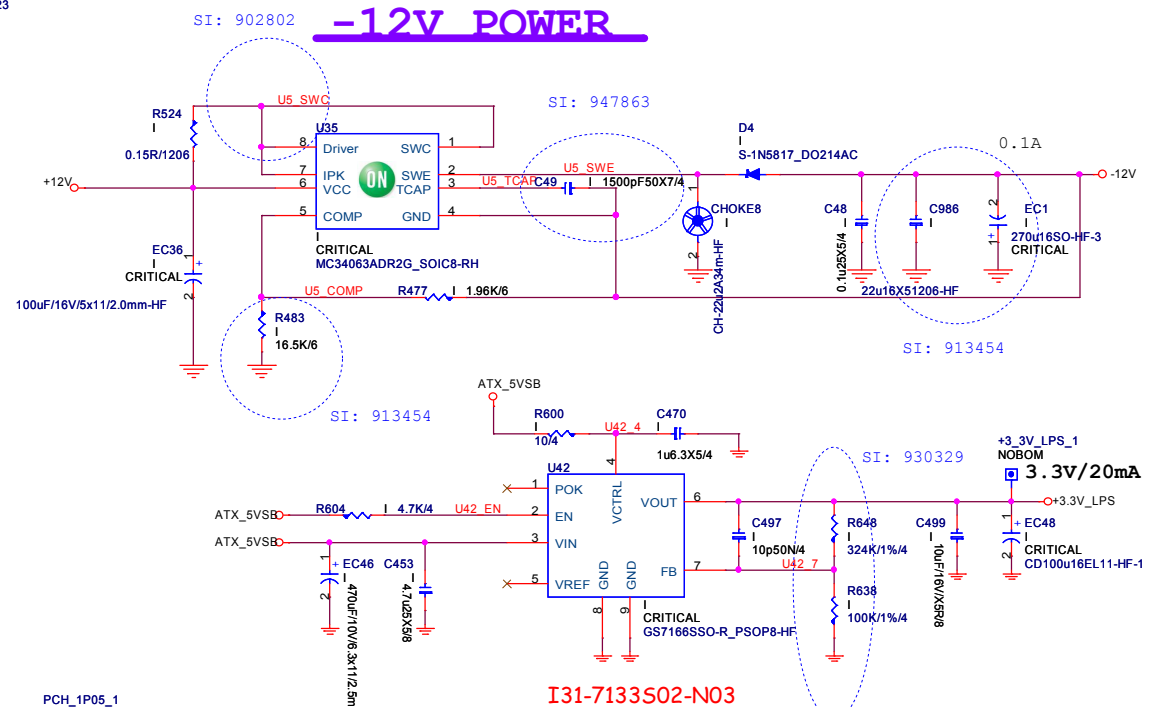
PCH Core Power Control




3V Standby Power



-12V POWER

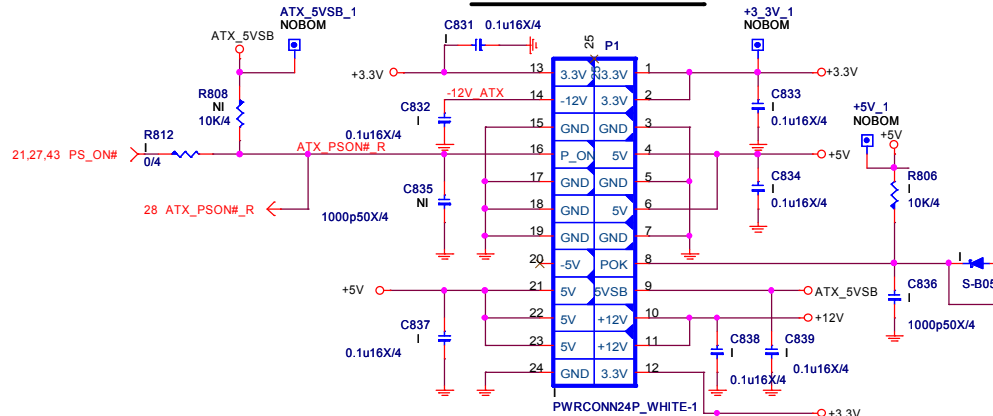


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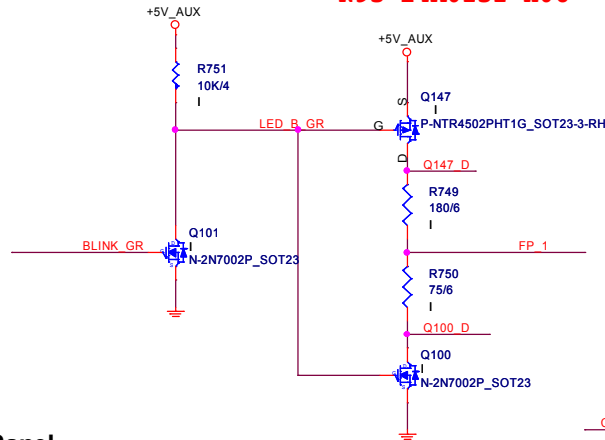
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Title		PCH & ME Core Power			
Size	Document Number	HP SCH P/N:785910-000(MSI MS-G013)			Rev
Custom					X2
Date:	Friday, December 26, 2014	Sheet	43	of	59

ATX Power Connector / Front Panel / LED/DSW

ATX CONNECTOR

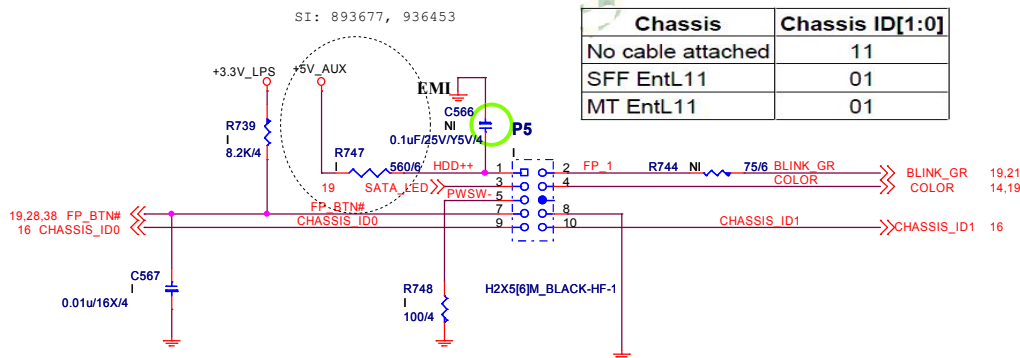


N93-24M0131-H06



Front Panel

PN:N31-2051641-H06

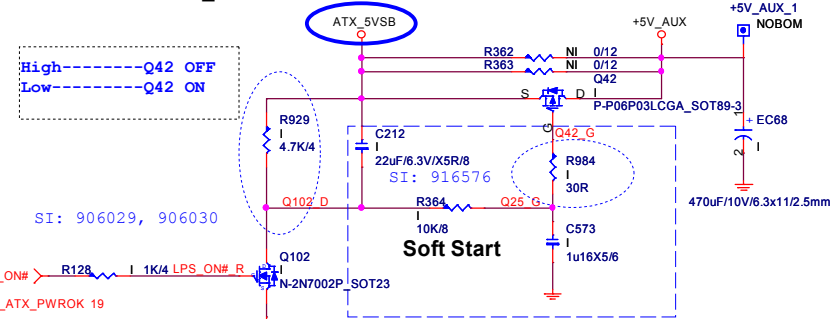


CHASSIS ID[1:0]

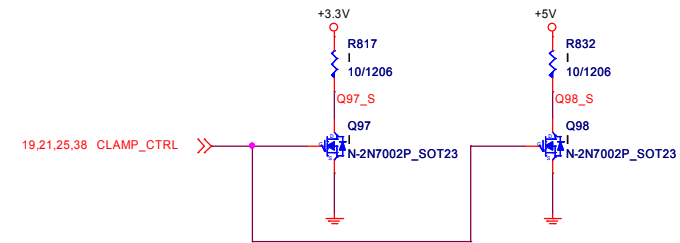
Chassis	Chassis ID[1:0]
No cable attached	11
SFF EntL11	01
MT EntL11	01

+5V AUX Power Switch

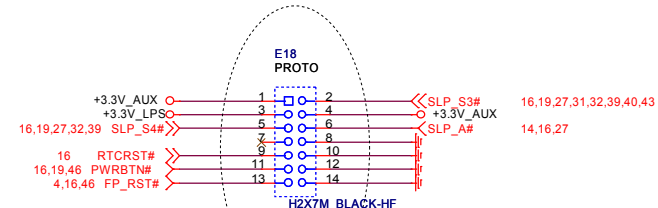
Tune ATX_5VSB inrush current to 2A from 4A



BLEED-OFF CIRCUIT



SI: 892659/892663

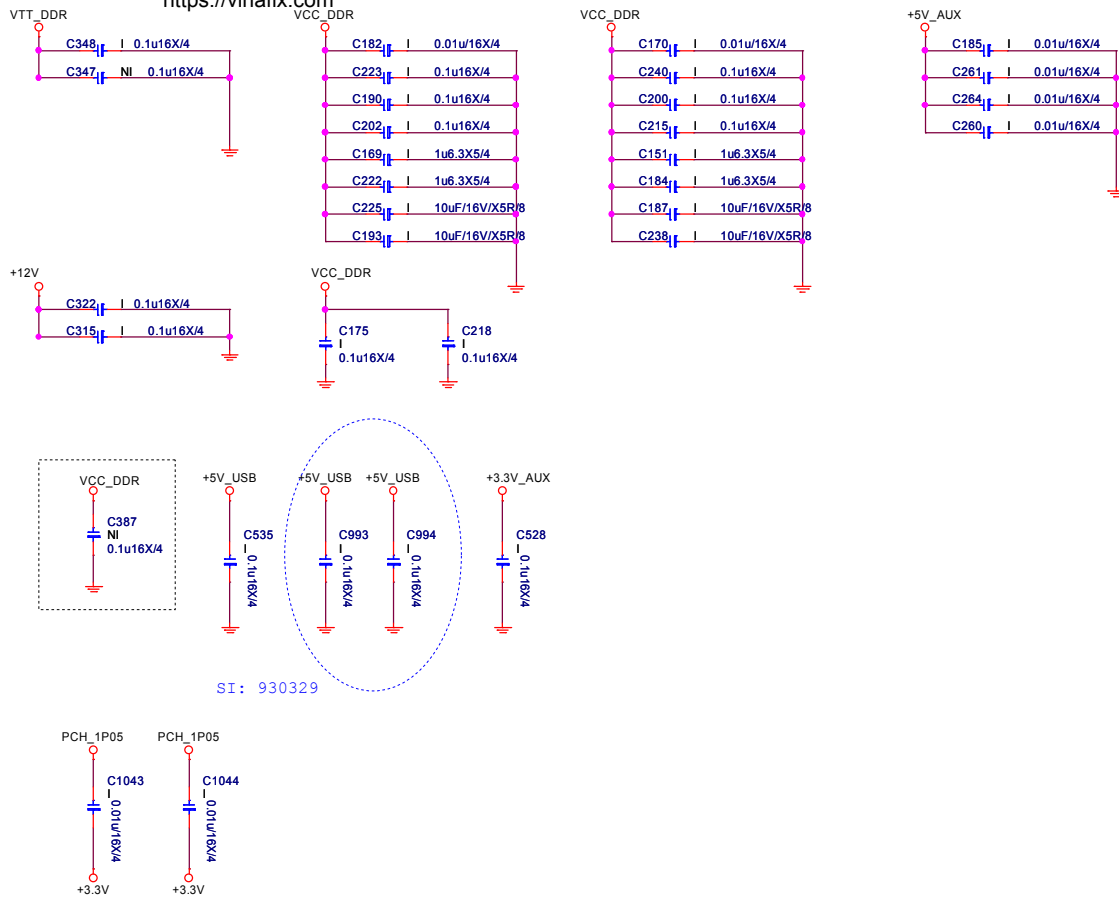


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EMI CAPs

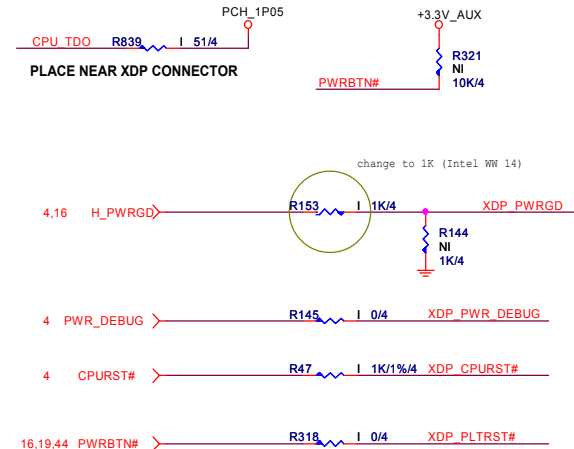
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Size Custom	Document Number HP SCH P/N:785910-000(MSI MS-G013)				Rev X2
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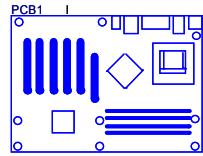
4 H_CFG[19..0] ↔ H_CFG[19..0]



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Title CPU/PCH/DMI XDP		
Size Custom	Document Number HP SCH P/N 785910-000 (MSI MG-G013)	Rev X2
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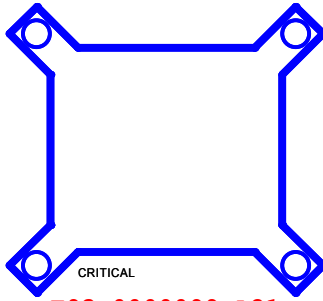
Manual Parts



CRITICAL PCB1

P80-0G0130A-G37
AVL: P80-0G0130A-E48

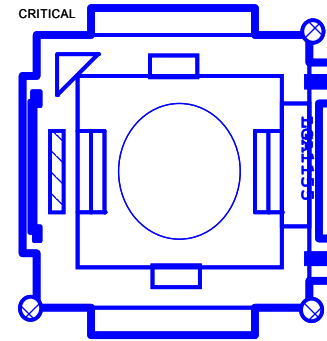
XU1_X2
E93-0000099-A21



CRITICAL

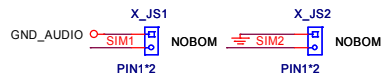
E93-0000099-A21
AVL: E22-B009010-C22

XU1_X1
CPU SOCKET I
CRITICAL

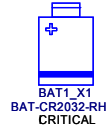


E21-AC71010-L06
AVL: E21-7826010-F02

Simulation



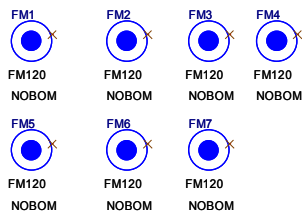
AVL:
D06-0100161-F52
D06-0100101-K26



BAT1_X1
BAT-CR2032-RH
CRITICAL

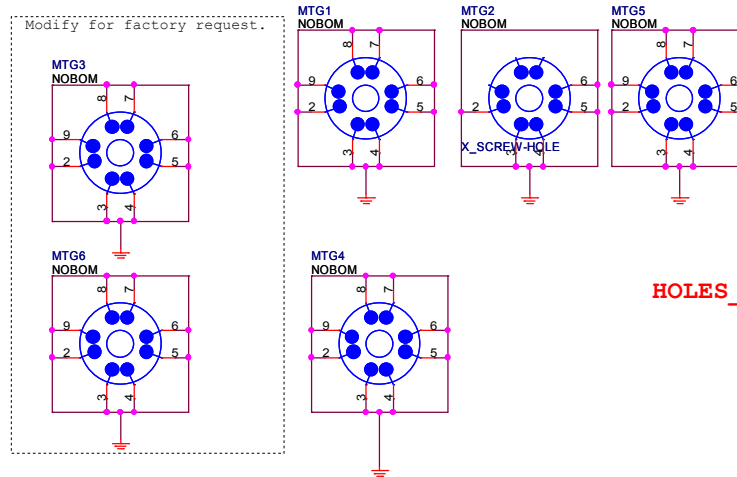
D06-0100101-P01

Optics Orientation Holes



Mounting Holes

Modify for factory request.




HOLES_4S_HP_D7_2

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Size	Document Number		Rev X2
Custom	HP SCH P/N:785910-000(MSI MS-G013)		
Date:	Friday, December 26, 2014		Sheet 48 of 59

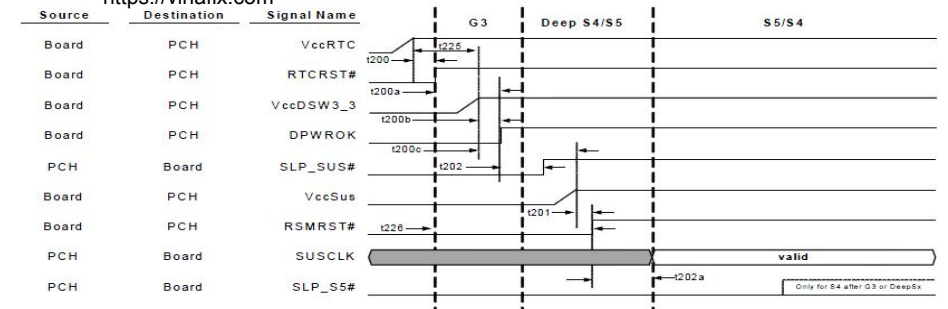
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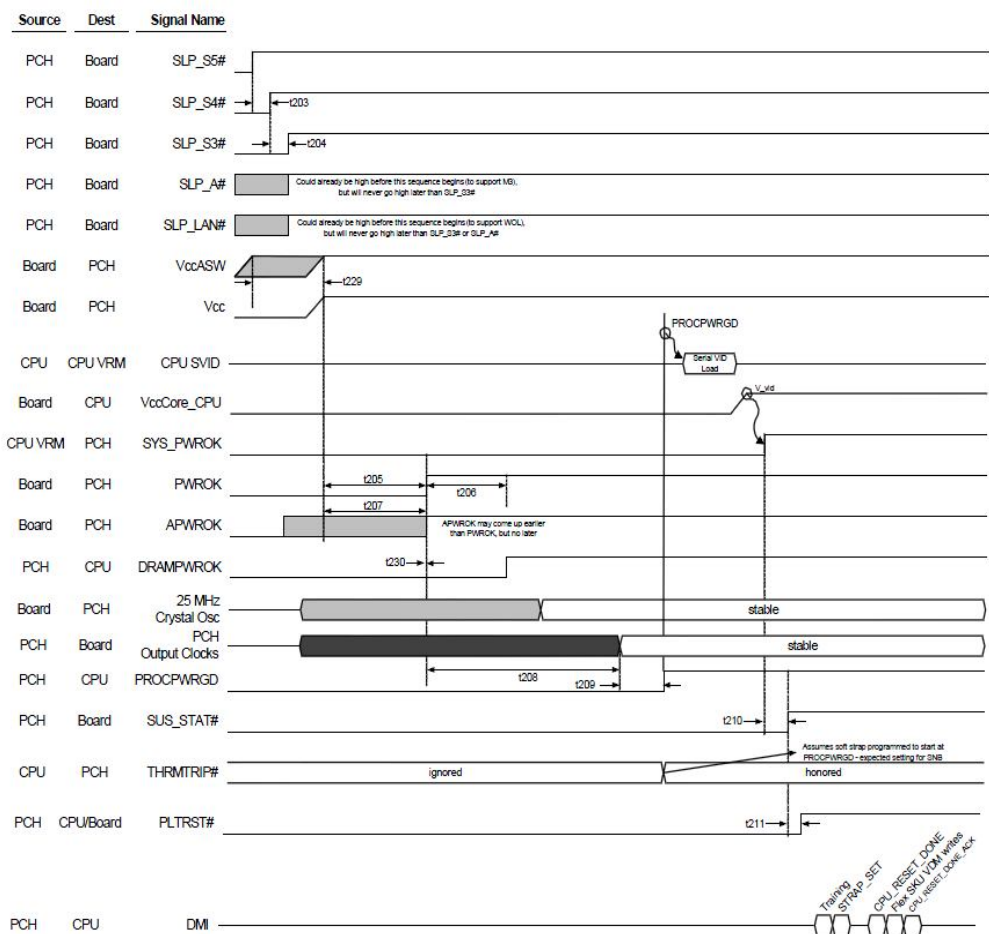
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Title		PCI SLOT	
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G3 w/RTC Loss to S4/S5 (With Deep Sx Support) Timing Diagram

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S5 to S0 Timing Diagram



G3-S5

ATX_5VSB

+3.3V_LPS

SLP_SUS#

LPS_ON#

+5V_AUX

+3.3V_AUX

RSMRST#

S5-S0

PWBTIN#

PWBTOUT#

SLP_S5/S4/S3

PSON#

+12V/+5V/+3.3V

VCC1_5/VCC_DDR

PCH_1P05

CHIP_PWRGD

MEM_PWRGD

H_PWRGD

VCCCP

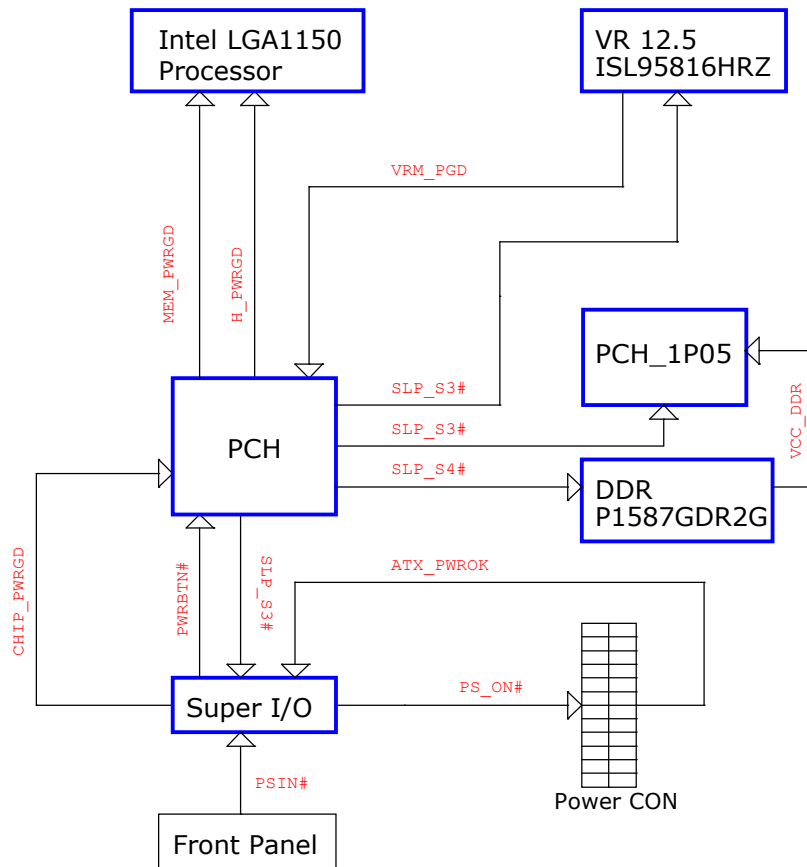
PLTRST#

teknisi indonesia

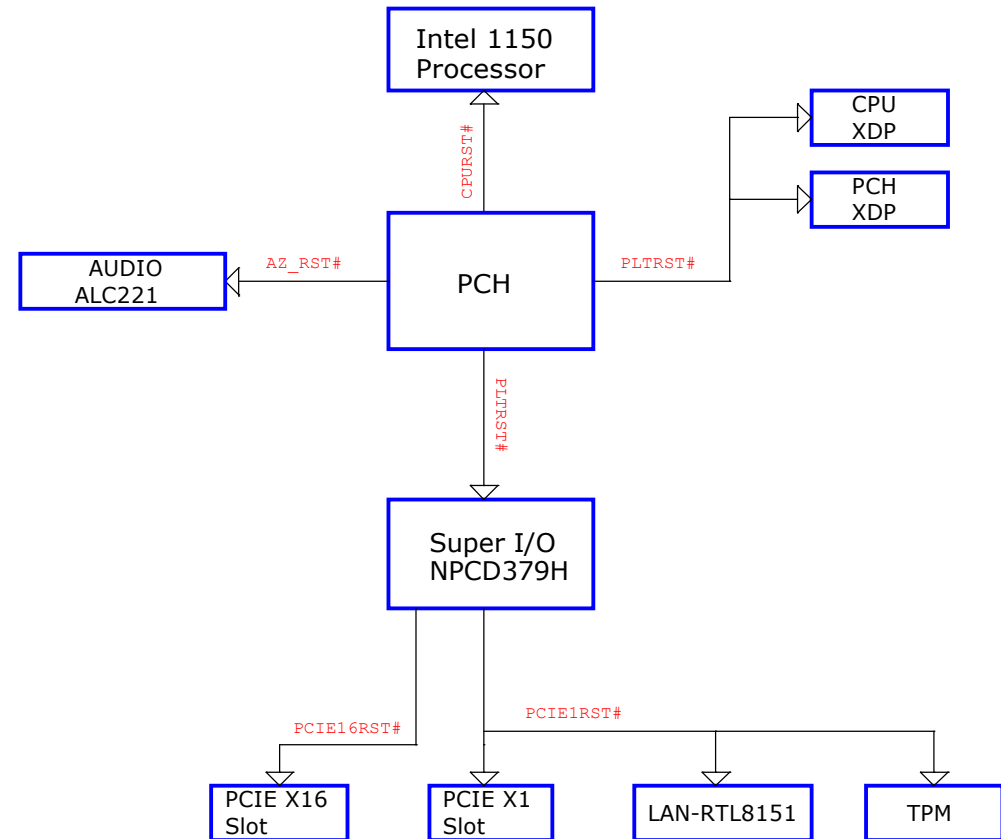
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Title		PON			
Size Custom	Document Number HP SCH P/N: 785910-000(MSI MS-G013)				Rev X2
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PWROK MAP



RESET MAP



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Custom					X2
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ATX P/S WITH 1A STBY CURRENT			
5VSB	5V	3.3V	12V
+/-5%	+/-5%	+/-5%	+/-5%

CPU PW	
12V	+/-5%

ISL95816HRZ	
VCCP	VRD12.5
3 Phase Switch	

PCI Express x16 Slot	
+12V	- 5.5 A
+3.3V	- 3A
+3.3V_AUX (wake)	- 375mA
+3.3V_AUX (no wake)	- 20mA

PCI Express x1 Slot *1	
+12V	- 1.0 A
+3.3V	- 6A
+3.3V_AUX (wake)	- 0.75A
+3.3V_AUX (no wake)	- 40mA

FAN *2	
+12V	- 0.6A

COM PORT *1	
-12V	- 0.2A

UP7501	
5VDUAL Power	5V Linear

+5V_USB

USB(USB2.0*7)	
5V_USB	- 3.5A

USB(USB3.0*2)	
5V_USB	- 3.6A

PS2 *2	
5V_USB	- 1A

Mosfet-P

+5V_AUX

GS7133SO-R	
3V Standby Power	3V Linear

+3.3V_AUX

+3.3V_LPS

GS7133SO-R	
3V Always Power	3V Linear

VCC_DDR

APL5811CI-TRG+MOS	
PCH_1P05 POWER	1.05V Linear

PCH_1P05

Haswell CPU Intel LGA 1150	
VCCP	- 75A
VCC_DDR	- 4.2A
PCH_1P05	- mA

Lynx Point PCH	
PCH_1P05	- 5A
PCH_1P05_ME	- 1A
VCC1_5	- 0.25A
+3.3V	- 188mA
VBAT	- 6uA
+3.3V_AUX	- 261mA
+3.3V_LPS	- 15mA

SIO12-NPCD379H	
+3.3V_AUX	- 35mA
+3.3V_LPS	- 1mA
CPU_VTT	- 5mA
VBAT	- 1uA

DIMM (2 Channel / 2 Per Channel)	
VCC_DDR	- 12A
VTT_DDR	- 1.1A

LAN RTL8111H-CG	
+3.3V_LAN	- 70mA
V_1P0_LAN	- 300mA

AUDIO ALC221	
+5V_AUX	- 41mA
+3.3V	- 23mA


Internal Switch

3V Battery

Internal Switch

V_1P0_LAN

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Custom	HP SCH P/N:785910-000(MSI MS-G013)				X2				
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PCH

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GPIO	I/O/NC	Power	Tol	Default	MB Function
GPIO[0]	I/O	Main	3.3V	GPI	FRONT_USB_P24_DET#
GPIO[1]	I/O	Main	3.3V	GPI	PCH_GPIO1
GPIO[2]	I/O	Main	5V	GPI	PCH_GPIO2
GPIO[3]	I/O	Main	5V	GPI	PCH_GPIO3
GPIO[4]	I/O	Main	5V	GPI	PCH_GPIO4
GPIO[5]	I/O	Main	5V	GPI	PCH_GPIO5
GPIO[6]	I/O	Main	3.3V	GPI	IO_SMI#
GPIO[7]	I/O	Main	3.3V	GPI	PCH_GPIO7
GPIO[8]	I/O	Resume	3.3V	GPO	PCH_GPIO8
GPIO[9]	I/O	Resume	3.3V	Native	USB_OCP#5
GPIO[10]	I/O	Resume	3.3V	Native	USB_OCP#6
GPIO[11]	I/O	Resume	3.3V	Native	PCH_SMBALERT#
GPIO[12]	I/O	Resume	3.3V	Native	LAN_DISABLE#
GPIO[13]	I/O	Resume	3.3V	GPI	INT_USB_P151_DET#
GPIO[14]	I/O	Resume	3.3V	Native	GPIO14
GPIO[15]	I/O	Resume	3.3V	GPO	PCH_GPIO15
GPIO[16]	I/O	Main	3.3V	GPI	PCH_GPIO16
GPIO[17]	I/O	Main	3.3V	GPI	PCH_GPIO17
GPIO[18]	I/O	Main	3.3V	Native	PCH_GPIO18
GPIO[19]	I/O	Main	3.3V	GPI	PCH_GPIO19
GPIO[20]	I/O	Main	3.3V	Native	PCIECLKREQ2#
GPIO[21]	I/O	Main	3.3V	GPI	FRONT_AUD_DET#
GPIO[22]	I/O	Main	3.3V	GPI	INT_USB_P150_DET#

GPIO[23]	I/O	Main	3.3V	Native	LDRQ1#
GPIO[24]	I/O	Resume	3.3V	GPO	PCH_GPIO24
GPIO[25]	I/O	Resume	3.3V	Native	BRD_ID2
GPIO[26]	I/O	Resume	3.3V	Native	PCH_GPIO26
GPIO[27]	I/O	DSW	3.3V	GPI	PCH_LAN_WAKE#
GPIO[28]	I/O	Resume	3.3V	GPO	PCH_GPIO28
GPIO[29]	I/O	Resume	3.3V	Native	SLP_WLAN#
GPIO[30]	I/O	Resume	3.3V	GPI	PCH_SUSWARN#
GPIO[31]	I/O	DSW	3.3V	GPI	PCH_GPIO31
GPIO[32]	I/O	Main	3.3V	GPO	PCH_GPIO32
GPIO[33]	I/O	Main	3.3V	GPO	PCH_GPIO33
GPIO[34]	I/O	Main	3.3V	GPI	PCH_GPIO34
GPIO[35]	I/O	Main	3.3V	GPO	BRD_REV0
GPIO[36]	I/O	Main	3.3V	GPI	PCH_GPIO36

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Size	Document Number				Rev
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5
4
3
2
1
<https://vinafix.com>


PCH

GPIO

	I/O/NC	Power	Tol	Default	MB Function
GPIO[37]	I/O	Main	3.3V	GPI	PCH_GPIO37
GPIO[38]	I/O	Main	3.3V	GPI	CHASSIS_ID0
GPIO[39]	I/O	Main	3.3V	GPI	BRD_ID1
GPIO[40]	I/O	Resume	3.3V	Native	USB_OCP#1
GPIO[41]	I/O	Resume	3.3V	Native	USB_OCP#2
GPIO[42]	I/O	Resume	3.3V	Native	USB_OCP#3
GPIO[43]	I/O	Resume	3.3V	Native	USB_OCP#4
GPIO[44]	I/O	Resume	3.3V	Native	PCIECLKREQ5#
GPIO[45]	I/O	Resume	3.3V	Native	PCH_GPIO45
GPIO[46]	I/O	Resume	3.3V	Native	PCH_GPIO46
GPIO[48]	I/O	Main	3.3V	GPI	CHASSIS_ID1
GPIO[49]	I/O	Main	3.3V	GPI	PCH_GPIO49
GPIO[50]	I/O	Main	3.3V	GPI	PCH_GPIO50
GPIO[51]	I/O	Main	3.3V	GPO	PCH_GPIO51
GPIO[52]	I/O	Main	3.3V	GPI	PCH_GPIO52
GPIO[53]	I/O	Main	3.3V	GPO	PCH_GPIO53
GPIO[54]	I/O	Main	3.3V	GPI	BOOT_BLK_EN#
GPIO[55]	I/O	Main	3.3V	GPO	PCH_GPIO55
GPIO[57]	I/O	Resume	3.3V	GPI	PCH_GPIO57
GPIO[58]	I/O	Resume	3.3V	Native	SML1CLK
GPIO[59]	I/O	Resume	3.3V	Native	USB_OCP#0
GPIO[60]	I/O	Resume	3.3V	Native	PCH_SML0ALERT#

GPIO[61]	I/O	Resume	3.3V	Native	PRNTER_DET#
GPIO[62]	I/O	Resume	3.3V	Native	SUS_CLK
GPIO[63]	I/O	Resume	3.3V	Native	SLP_S5#
GPIO[64]	I/O	CORE	3.3V	Native	CLKOUTFLEX0
GPIO[65]	I/O	CORE	3.3V	Native	CLKOUTFLEX1
GPIO[66]	I/O	CORE	3.3V	Native	CLKOUTFLEX2
GPIO[67]	I/O	CORE	3.3V	Native	CLKOUTFLEX3
GPIO[68]	I/O	CORE	3.3V	GPI	FRONT_USB_P26_DET#
GPIO[69]	I/O	CORE	3.3V	GPI	COMM_B_DET#
GPIO[70]	I/O	CORE	3.3V	GPI	BOOT_BLK_REC#
GPIO[71]	I/O	CORE	3.3V	GPI	BRD_ID0
GPIO[72]	I/O	DSW	3.3V	Native	PCH_GPIO72
GPIO[73]	I/O	Resume	3.3V	Native	BRD_REV1
GPIO[74]	I/O	Resume	3.3V	Native	PCH_SML1ALERT#
GPIO[75]	I/O	Resume	3.3V	Native	SML1DATA

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Size	Document Number				Rev
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Pin	Default Function / Alternate Functions	Buffer Type	Buffer Power Wells	Motherboard Function
1	CLAMP_CTRL	OD ₆	VS _{B3}	BLEED OFF CIRCUIT
2	SLP_S4#	IN _{TD4}	VS _{B3}	SLP_S4#
3	SLP_S5#	IN _{TD4}	VS _{B3}	SLP_S5#
4	SLP_S3#	IN _{TD4}	VS _{B3}	SLP_S3#
5	SIOPME#	OD ₆ O _{4B}	VS _{B3}	RI#
6	RSMRST#	O ₃₁₆	VS _{B3}	RSMRST#
7	PME_IN#	IN _{TD}	VS _{B3}	PME status
8	BLINK_OR	O ₂₀₂₀	VS _{B3}	Power LED driver
9	COLOR	O ₂₀₂₀	VS _{B3}	Power LED driver
10	VSS	I	GND	GND
11	PWRGD_OUT	OD ₆	VS _{B3}	PWRGD_140ms
12	PS_ON#	OD ₆	VS _{B3}	PS_ON#
13	TACH1	IN _{TD}	VDD3	SYS_FAN_TACH
14	CLOCKI32	IN _{TD}	VS _{B3}	SUS_CLK_I/O
15	3V_AUX_SLOT_ON	O _{4B}	VS _{B3}	3V_AUX_SLOT_ON
16	VS _{B3}	I	PWR	VS _{B3}
17	VCORF	I	N/A	VCORF
18	LDRG#	O _{PC1}	VDD3	LDRG#
19	LAD3	IN _{PC1} O _{PC1}	VDD3	LAD3
20	LAD0	IN _{PC1} O _{PC1}	VDD3	LAD0
21	LAD2	IN _{PC1} O _{PC1}	VDD3	LAD2
22	VSS	I	PWR	GND
23	LAD1	IN _{PC1} O _{PC1}	VDD3	LAD1
24	SER_IRQ	IN _{PC1} O _{PC1}	VDD3	SER_IRQ
25	PCI_RESET#	IN _{PC1}	VDD3	PLTRST#
26	PCI_CLK	IN _{PC1}	VDD3	33MHz
27	LFRANE#	IN _{PC1}	VDD3	LFRANE#
28	VS _{B3}	I	PWR	VS _{B3}
29	GPRST3#	O ₁₄	VS _{B3}	PCIE_X16 RESET#
30	INTRUDER#	IN _{TD}	V _{BAT}	HOOD_SENSE#
31	5V_USB_CTRL	O _{4B}	VS _{B3}	5V_USB_EN
32	HDLOCK#	OD ₁₂	VDD3	HOOD_LOCK#
33	GPIO01	IN _{TD} O _{4B} O _{4B}	VS _{B3}	
34	HDUNLOCK#	OD ₁₂	VDD3	HOOD_UNLOCK#
35	HD_LED_IN#	IN _{TD}	VDD3	Hard Drive LED Input
36	CPU_PRSTNT1#	IN _{TD} L	V _{BAT}	CPU detection
37	VBAT	I	PWR	

38	12V_VSB_COMP	IN _{COMP2}	VS _{B3}	
39	COMP_IN3	IN _{COMP3}	VS _{B3}	
40	COMP_IN1	IN _{COMP1}	VS _{B3}	5V voltage monitor
41	COMP_IN2	IN _{COMP2}	VS _{B3}	12V voltage monitor
42	AVCC	I	PWR	AVCC
43	AD1	IN _{PC1} O _{PC1}	VDD3	AD1
44	AD2	IN _{PC1} O _{PC1}	VDD3	AD2
45	AD3	IN _{PC1} O _{PC1}	VDD3	AD3
46	FSPI_STR	IN _{TD}	AVCC	FSPI_STR
47	AGND	I	GND	AGND
48	PWBTOUT#	IN _{TD4}	VLPS	PWBTOUT#
49	PWBTIN#	IN _{TD4}	VLPS	PWBTIN#
50	LPS_WAKE	IN _{TD}	VLPS	LPS_WAKE
51	LPS_PHY#	O _{4B}	VLPS	LPS_PHY#
52	LPS_ON#	O _{4B}	VLPS	LPS_ON#
53	VLPS	I	PWR	VLPS
54	VTT	I	PWR	VTT
55	THERMTRIP#	IN _{AGTL}	VTT	THERMTRIP#
56	TSI_SCL	IN _{TD} O _{TD}	VTT	TSI_SCL
57	PROCHOT1#	IN _{AGTL} O _{AGTL24}	VTT	PROCHOT1#
58	PECI	IN _{PE} O _{PE}	VTT	PECI
59	PROCHOT2#	IN _{AGTL} O _{AGTL24}	VTT	PROCHOT2#
60	VSS	I	PWR	GND
61	PWM2	OD ₁₂ O _{6/12}	VDD3	SYS-FANPWM_REAR
62	HMSCL	IN _{3B} O ₆	VS _{B3}	HMSCL
63	PWM1	OD ₁₂ O _{6/12}	VDD3	SYS-FANPWM_FRONT
64	HMSDA	IN _{3B} O ₆	VS _{B3}	HMSDA
65	HD_LED_OUT	OD ₁₆	VS _{B3}	Hard Drive LED Output
66	WAKE_OUT#	OD ₁₂ O _{6/12}	VS _{B3}	Wake Disable Output
67	GPIO15(EV6#)	IN _{TD}	VS _{B3}	PCI_Express_Wake#
68	AMP_ON	O _{4B}	VS _{B3}	AMP_ON
69	AMP_ON#	O _{4B}	VS _{B3}	AMP_ON#
70	GPRST2#	O _{14/14}	VS _{B3}	PE_RST#_OUT
71	12V_PG_25MS	OD ₆	VS _{B3}	12V_PG_25MS
72	KBDRST#	IN _{TD} O ₁₄	VDD3	KBDRST#
73	AUDIO_BEEP	O _{4B}	VS _{B3}	DIAG Beep
74	TACH2	IN _{TD}	VDD3	TACH2
75	VS _{B3}	I	PWR	VS _{B3}
76	KBDAT	IN _{TD} O ₁₄	VDD3	KBDAT
77	MDAT	IN _{TD} O ₁₄	VDD3	MSDATA
78	SLIN_ASTRB#	OD ₁₄ O _{14/14}	VDD3	RSLIN#
79	KBCLK	IN _{TD} O ₁₄	VDD3	KBCLK
80	MCLK	IN _{TD} O ₁₄	VDD3	MCLK
81	PD3	IN _{TD} O _{14/14}	VDD3	PD3
82	PD4	IN _{TD} O _{14/14}	VDD3	PD4

83	INIT#	OD ₁₄ O _{14/14}	VDD3	INIT#
84	VSS	I	PWR	GND
85	PD1	IN _{TD} O _{14/14}	VDD3	PD1
86	PD6	IN _{TD} O _{14/14}	VDD3	PD6
87	PD0	IN _{TD} O _{14/14}	VDD3	PD0
88	PD2	IN _{TD} O _{14/14}	VDD3	PD2
89	PD7	IN _{TD} O _{14/14}	VDD3	PD7
90	PD5	IN _{TD} O _{14/14}	VDD3	PD5
91	STB_WWRITE#	OD ₁₄ O _{14/14}	VDD3	RSTB#
92	ERR#	IN _{TD}	VDD3	RERR#
93	VS _{B3}	I	PWR	VS _{B3}
94	AFD_DSTRB#	OD ₁₄ O _{14/14}	VDD3	RAFD#
95	PE	IN _{TD}	VDD3	RPE
96	GA20	IN _{TD} O _{14/14}	VDD3	GA20
97	ACK#	IN _{TD}	VDD3	RACK#
98	SLCT	IN _{TD}	VDD3	RSLCT
99	BUST_WAIT#	IN _{TD}	VDD3	RBUSY
100	TACH3	INTS	VDD3	TACH3
101	SMB1SDA	SW _{3B}	VDD3	SMB_DATA_MAIN
102	PWRGD_PS	IN _{TD4}	VS _{B3}	PWROK_PS
103	SMB2SDA	SW _{3B}	VDD3	SMB_DATA_RESUME
104	PWRGD_O2#	OD ₆	VS _{B3}	PWRGD_50MS#
105	PWM3#	OD ₁₂ O _{6/12}	VDD3	PSU-FANPWM
106	5V_USB_MAIN#	OD ₆	VS _{B3}	5V_USB_MAIN#
107	PWRGD_O1	OD ₆	VS _{B3}	PWRGD_30MS
108	VSS	I	PWR	GND
109	SMB1SCL	SW _{3B}	VDD3	SMB_CLK_MAIN
110	SML#	OD ₆	VDD3	IO_SML#
111	SMB2SDL	SW _{3B}	VDD3	SMB_CLK_RESUME
112	DSR1#	IN _{TD}	VDD3	DSRA#
113	RI1#	IN _{TD}	VDD3	RIA#
114	CTS1#	IN _{TD}	VDD3	CTSA#
115	DCD1#	IN _{TD}	VDD3	DCDA#
116	SIN1	IN _{TD}	VDD3	SINA
117	RTS1#	O _{4B}	VDD3	RTSA#
118	DTR#_BOUT1	O _{4B}	VDD3	DTRA#
119	SOUT1	O _{4B}	VDD3	SOUTA
120	DCD2#	IN _{TD}	VDD3	DCDB#
121	SOUT2	O _{4B}	VDD3	SOUTB
122	VS _{B3}	I	PWR	VS _{B3}
123	DTR#_BOUT2	O _{4B}	VDD3	DTRB#
124	RI2#	IN _{TD}	VDD3	RIB#
125	RTS2#	O _{4B}	VDD3	RTSB#
126	SIN2	IN _{TD}	VDD3	SINB
127	DSR2#	IN _{TD}	VDD3	DSRB#
128	CTS2#	IN _{TD}	VDD3	CTSB#

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Title: GPIO Table3					
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Modena X1

SIO1092565 - [MODENA][X1][SCH] modify schematic by vendor review

2014/10/28

PAGE 30: Add R421.(For HP suggestion)

PAGE 31: Add R455.(prevent power cross moat)

2014/10/30

PAGE 15: Delete TP53.

PAGE 17: C682 change to 10uF.

2014/10/31

PAGE 29:Install R618 for vendor suggestion.

2014/11/3

PAGE 43: delete C411 C416 C423 (Remove excess capacitance)

PAGE 45: delete C490 C493 C494 C527 C966 C298 C41 C666 C667 C676 C677 C965 (EMI cap)

2014/11/4

PAGE 14: Add R486(GPIO69 pull high)

PAGE 21: Add R881(NET DTRB# pull high)

PAGE 23: J64 reference change to J63.(follow PCA spec)

PAGE 30: R391 change to C345.(Vendor suggestion)

2014/11/5

PAGE 29: R458 75ohm change to 510ohm. (Vendor suggestion)

PAGE 45: Add C1044(cross Capacitance)

SIO1092613 - [MODENA][X1][BRD]modify layout by vendor review

SIO1092565 - [MODENA][X1][SCH] modify schematic by vendor review

PAGE 13: H81 spec not has USB12 & USB13,

PAGE 35: H81 spec not has USB12 & USB13,

NET SBD12+、SBD12- change to SBD10+、SBD10- /USBN12、USBP12 change to USBN10、USBP10.

NET SBD13+、SBD13- change to SBD11+、SBD11- /USBN13、USBP13 change to USBN11、USBP11.

SIO1092951 - [MODENA][X1][BRD] modify EMC suggest layout

2014/11/7

PAGE 47: change MTG1、MTG2 footprint for modify MASK.

SIO1093393 - [MODENA][X1][SCH]modify schematic the Modena PCA board ID is confirm that leverage Lancelot to "000"

2014/11/11

PAGE 14: install R637 R662

uninstall R651 R665 for board ID

PAGE 28: uninstall R618 for repeat put high cap.

2014/11/19

Disable parts : D01-5817S0A-P15 ,change to D01-5817S0A-D07.

PAGE 24: D13

PAGE 30: D34,D43

PAGE 43: D4

SIO1096121 - [MODENA][X1][BOM]modify audio bom to fix the no install cpu which the speaker no alarm sound.


2014/11/20

PAGE 30 : R379,R380 value 51K change to 10K.(for Vendor suggestion)

R392,R383 value 10K change to 20K..(for Vendor suggestion)

uninstall R980..(for Vendor suggestion)

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Modena X2

SIOxxxxxxx - [Modena][X2][SCH]

2014/12/08 https://vinafix.com

PAGE 39:CHOKe6 chenage to L04-L2A7751-L65 for power solution.

PAGE 41:CHOKe1 chenage to L04-L2A7761-L65 for power solution.

PAGE 43:CHOKe8 chenage to L04-2207391-L65 for power solution.

EC47,EC48 chenage to C94-1011651-N07 for power solution.

SIO1100009 - [MODENA][X2][SCH] Foxconn RJ45 EMI issue

2014/12/10

PAGE 29: J9 change to N58-22F0181-U30

PAGE 35: J9 change to N58-22F0181-U30

SIO1099250 - [Modena][X2][SCH] Audio malfunction

2014/12/11

PAGE 30: install C343 (0 ohm)

SIO1101956 - [MODENA][X2][BOM]change crystal cap to meet vendor measure

2014/12/15

PAGE28: C942,C943 from 27p to 22p

SIOxxxxxxx - [Modena][X2][SCH]

2014/12/15

PAGE40: C42 from 680 pf to 1000pf.

C8 from 1 uf to 0.22 uf.

R21 from 453 ohm to 475 ohm.

R91 from 113K ohm to 118K ohm.

PAGE43: uninstall C415 for power suggestion.

C334 from 1 uf 0402 to 10 uf 0603.

SIO1103165 - [MODENA][X1][BRD]Change fansink mounting hole.

2014/12/16

PAGE3~PAGE8: XU1 change to footprint for change fansink mounting hole.

SIO1103322 - [MODENA][X2][SCH]the usb power can't bleed off

2014/12/18

PAGE32: Add R1028,R1029,R1030 for bleed off circuit of USB power .

PAGE33: Add R1031,R1032 for bleed off circuit of USB power .

2014/12/19

PAGE14: install R656,uninstall R629 for EVT to DVT.

PAGE19: Add R450 for RIB# pull high.

2014/12/22

PAGE23: install C116 for DP power test.

PAGE32: Add R445,R446,R447,R456,R457,R462,Q135,Q136 for USB leakage.

SIOxxxxxxx - [Modena][X2][SCH]


2014/12/24

PAGE32: EC45 change to C93-10116A1-N07 for replace shorter capacitance

2014/12/26


PAGE30: delete D34 for audio vendor suggestion.

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