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MSI CONFIDENTIAL

HP Superman/Spiderman/Shazam REV.X4

(HP SCH P/N:)

uATX(230 mm X 244 mm)

CPU:

FT3b

(MS-7938 10)

Superman	Spiderman	Shazam	Description
753932-001	753929-001	753933-001	PCA,SSS
753930-000	753930-000	753930-000	SCH,SSS
753931-001	753931-001	753931-001	PCB,SSS
0x2240	0x2240	0x2240	SSID

OnBoard Chipset:

AZALIA Codec: Realtek ALC 221

LAN: Realtek RTL8151GH-CG 10/100/1000 NIC

SIO: Nuvoton NPCD379H

Flash ROM: 64 Mb

Main Memory:

DDRIII (1066/1333/1600/1866MHz) \* 2 (SINGLE Channel)

Expansion Slots:

PCI Express (X16) Slot \* 1(x4 signal)

PCI Express (X1) Slot \* 3

PWM:

Controller: ISL62771

Controller: NCP1589L

Other:

SATA \*2

USB3.0 Front\*2

USB2.0 \*8(Rear\*4 Front\*4)

DP PORT\*1

VGA PORT \*1

PRINT Header \*1

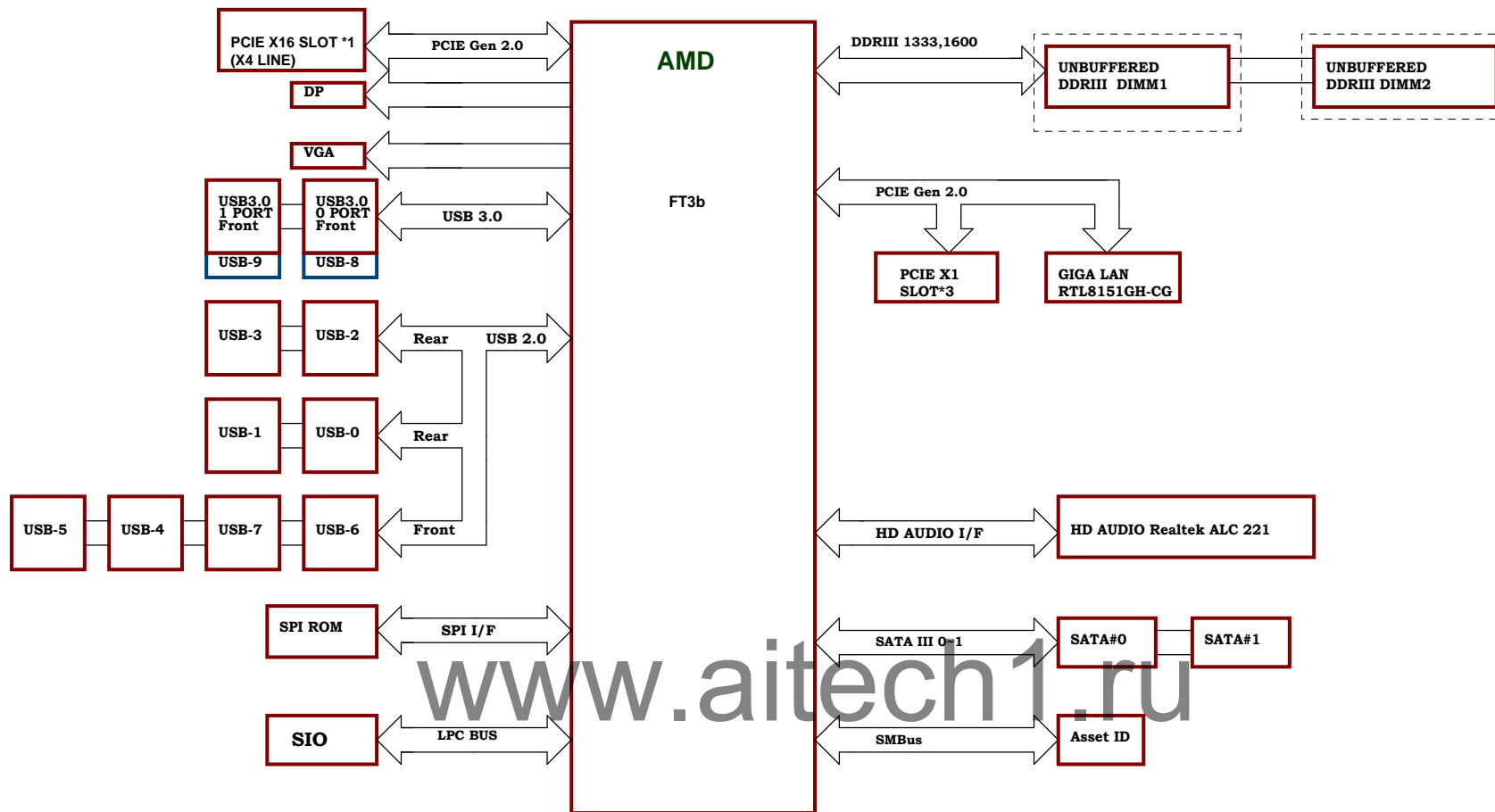
COM PORT \*1

COM Header \*1


BOM DISTRIBUTION RULE

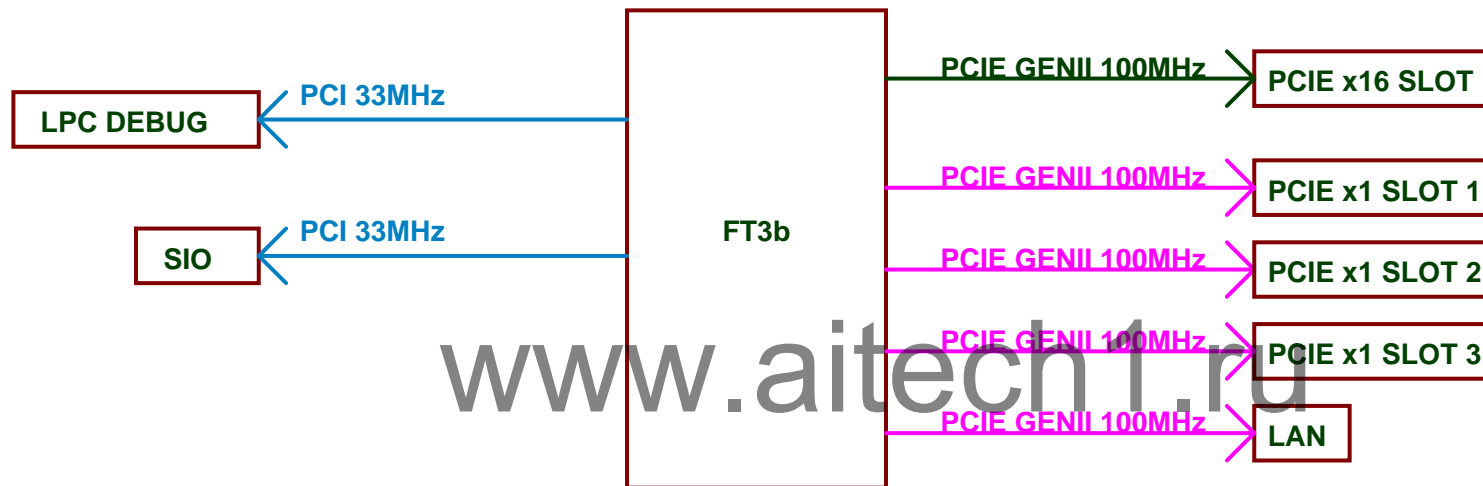
Superman,Spiderman,Shazam

(BOM,BOM,BOM)




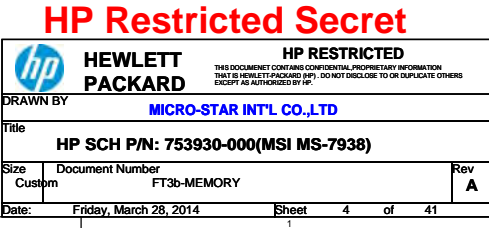
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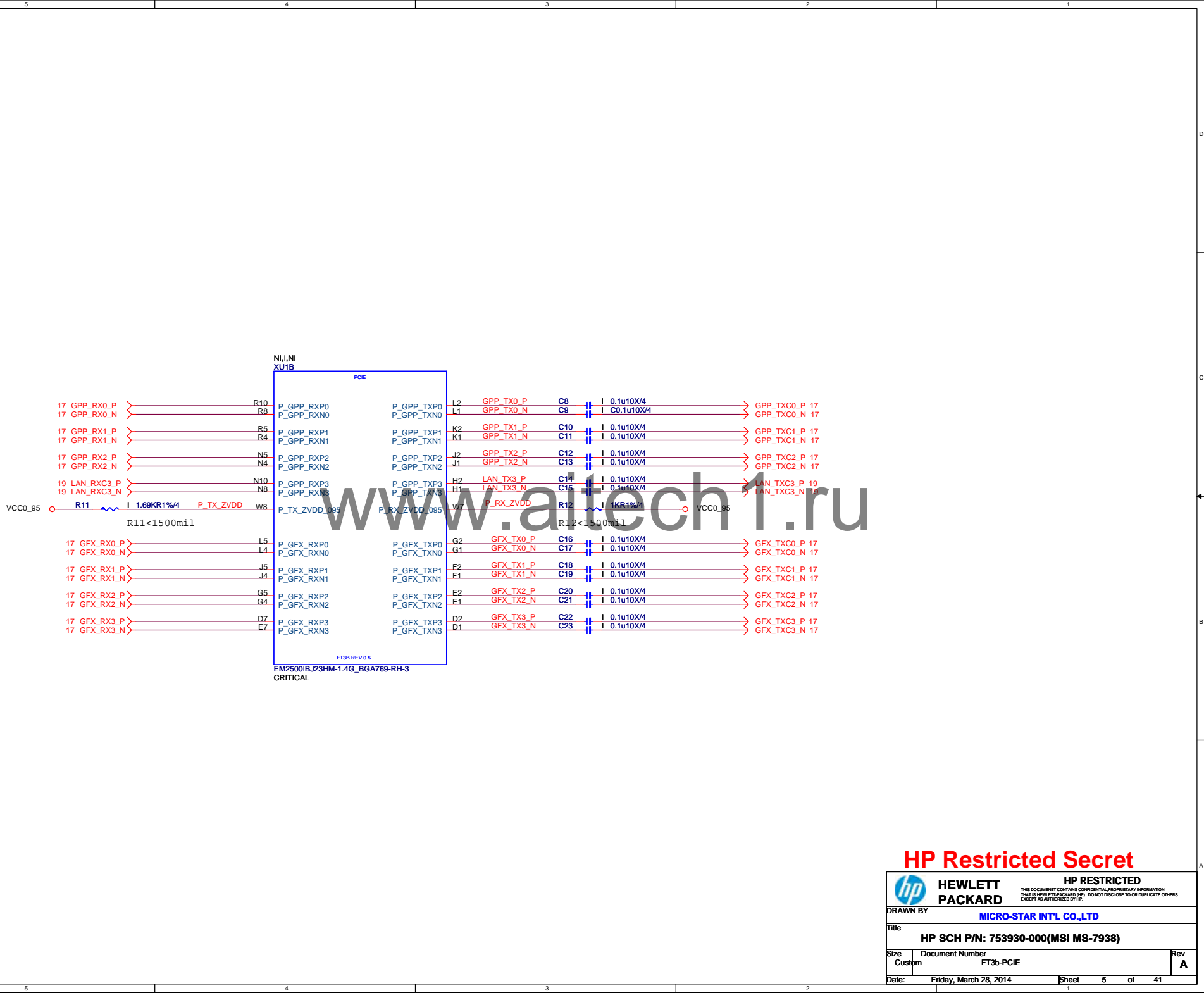
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Custom					<b>A</b>
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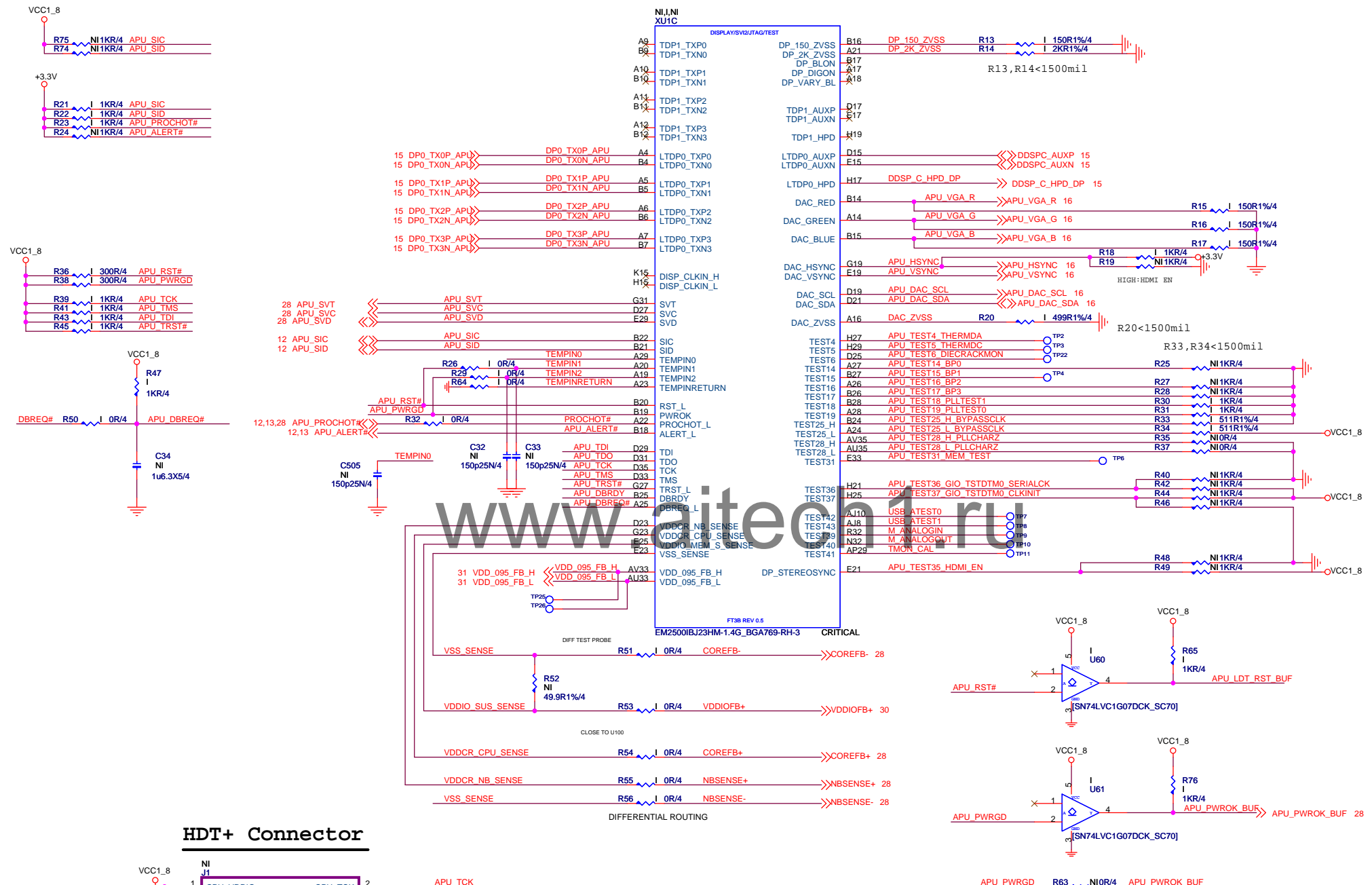
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Custom					<b>A</b>
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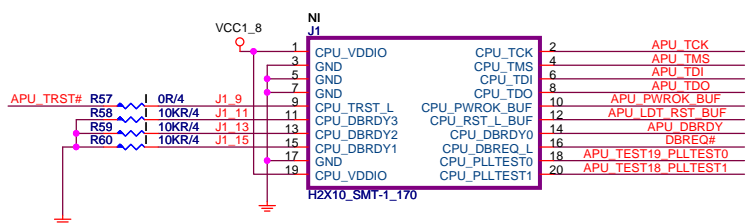


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		FT3b-PCIE			<b>A</b>
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### HDT+ Connector



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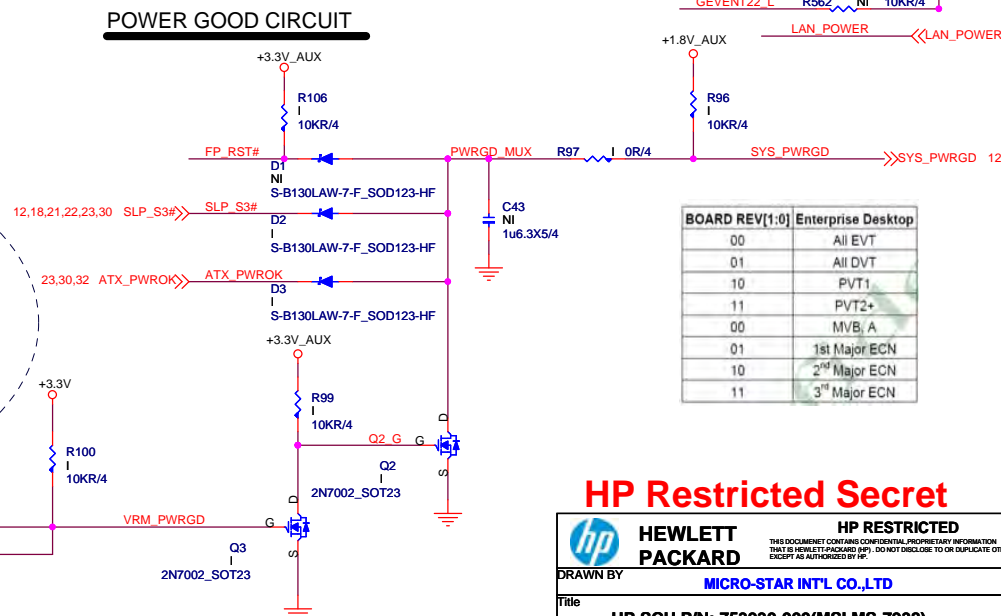
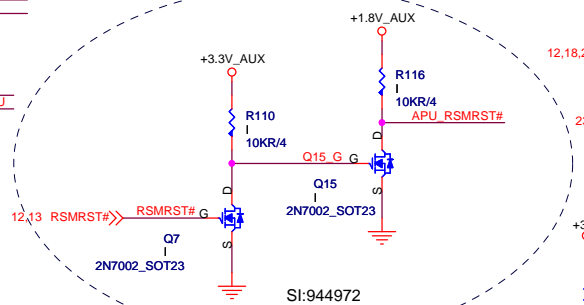
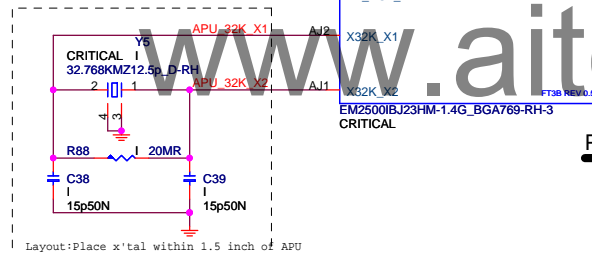
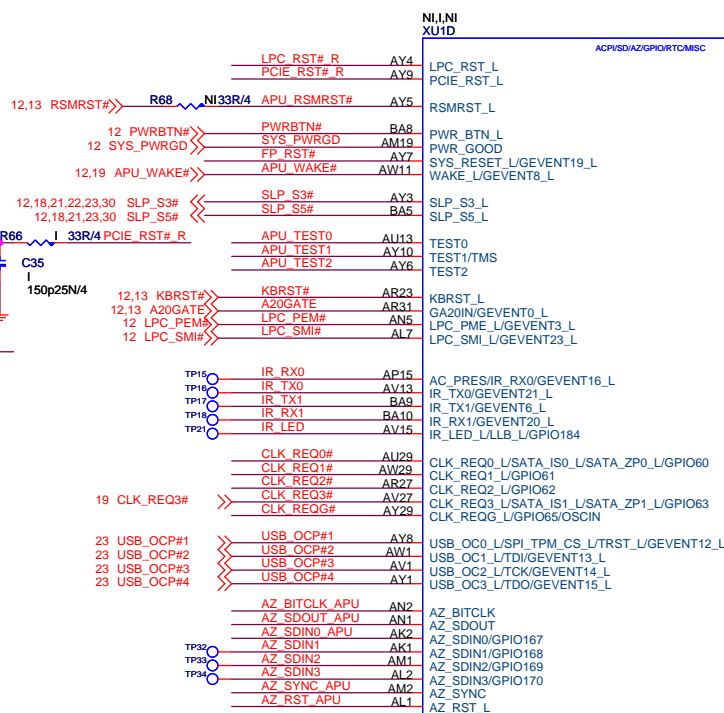
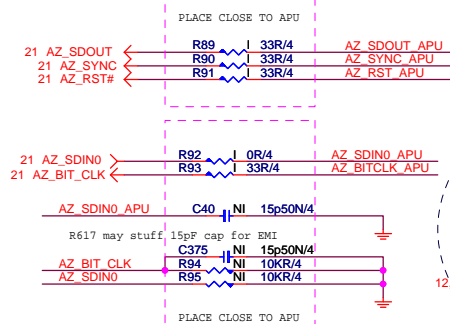
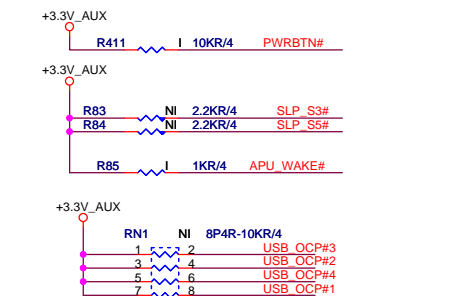
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**Size** Custom **Document Number** FT3b-DISPLAY **Rev** A

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BOARD REV[1:0]	Enterprise Desk
00	All EVT
01	All DVT
10	PVT1
11	PVT2+
00	MVB, A
01	1st Major ECN
10	2 <sup>nd</sup> Major ECN
11	3 <sup>rd</sup> Major ECN

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**HP SCH P/N: 753930-000(MSI MS-7938)**

Size

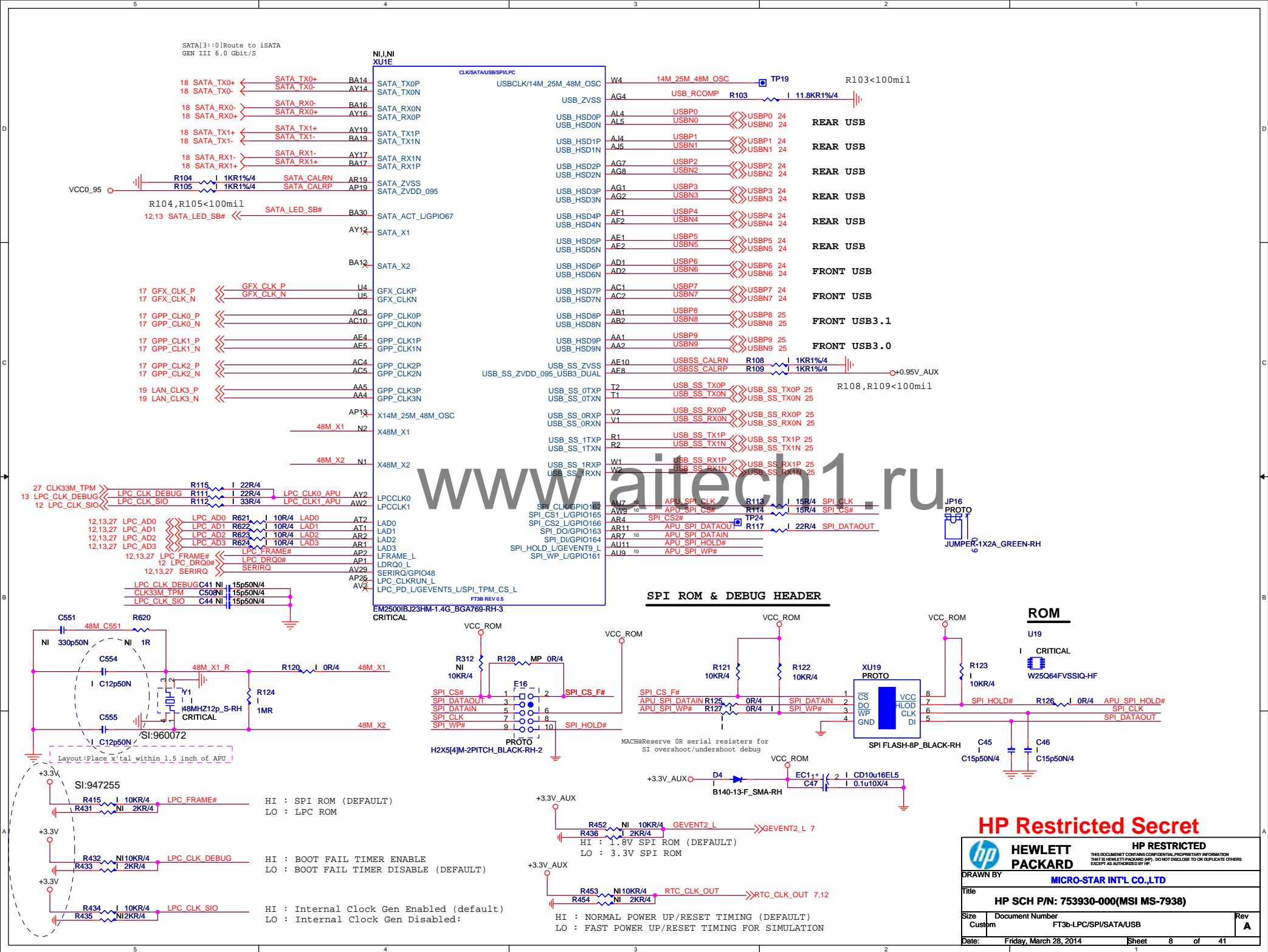
Document Number	
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C

Document Number: **FT3b-ACPI/GPIO**

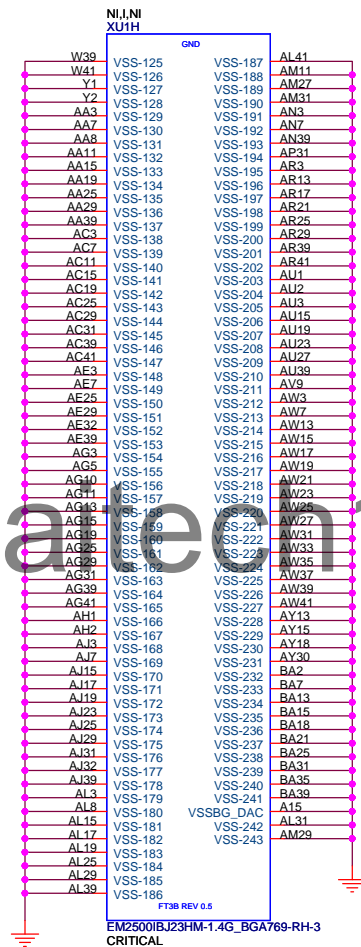
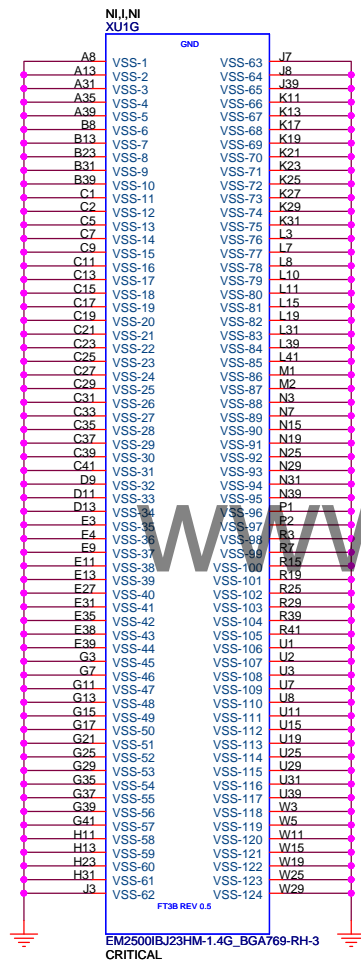
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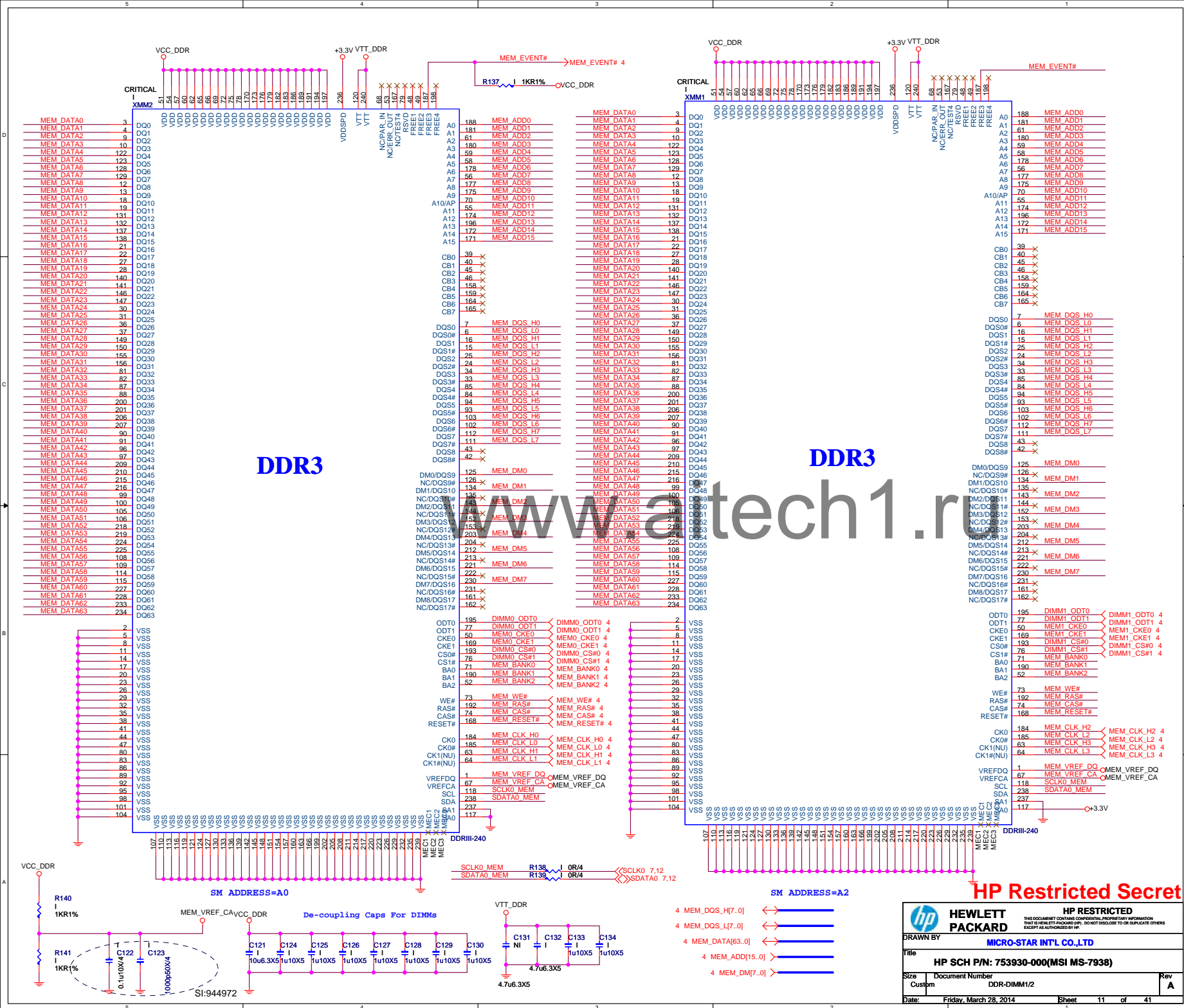






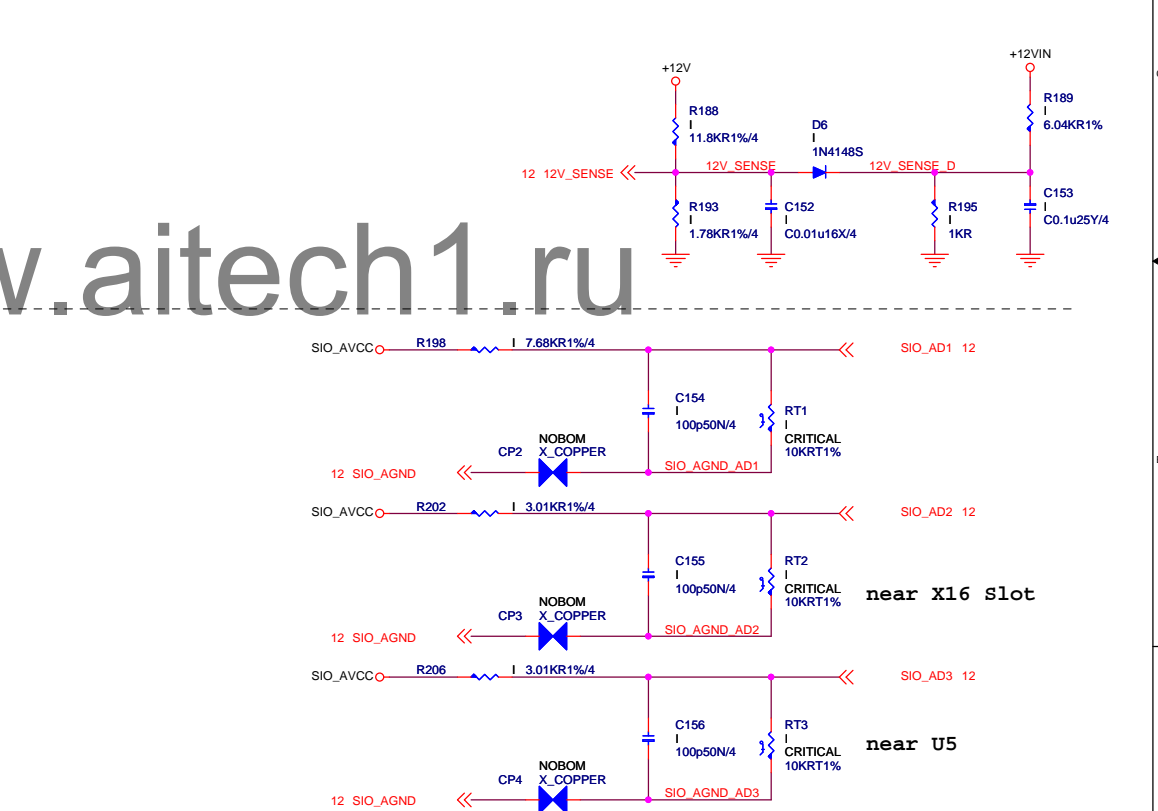
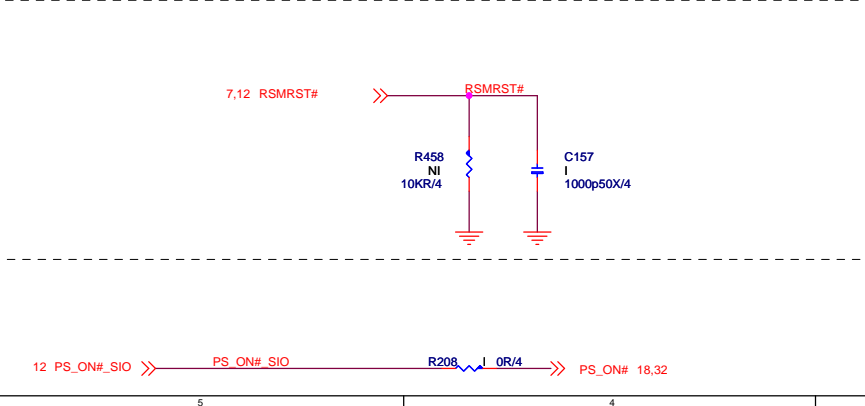
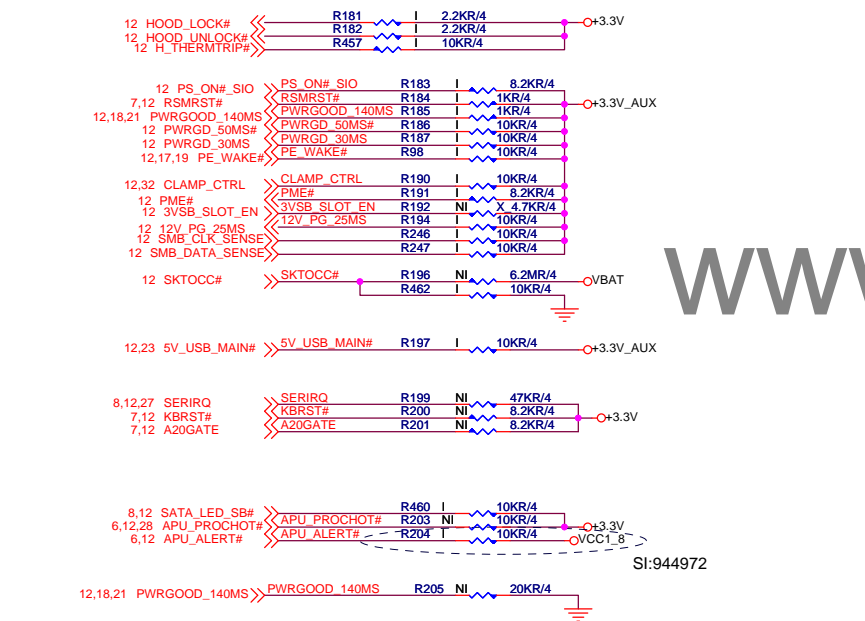
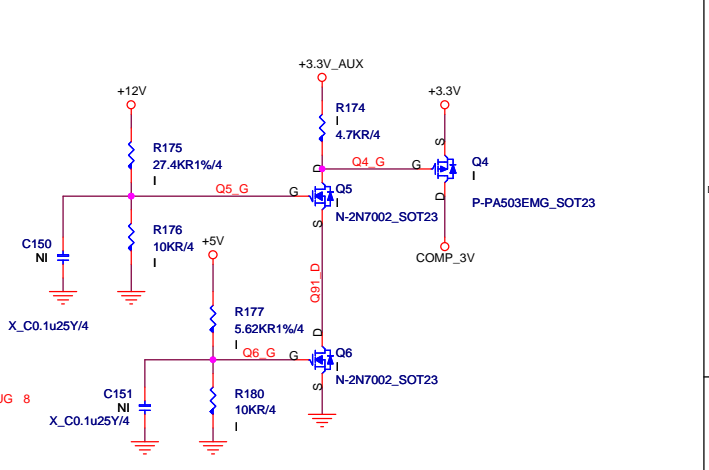
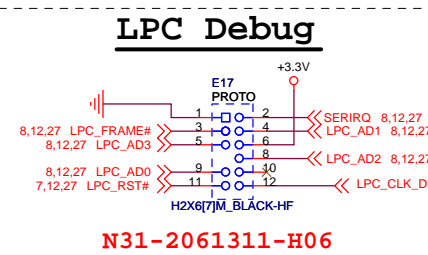
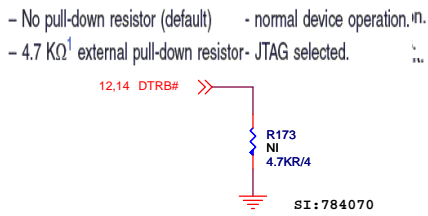
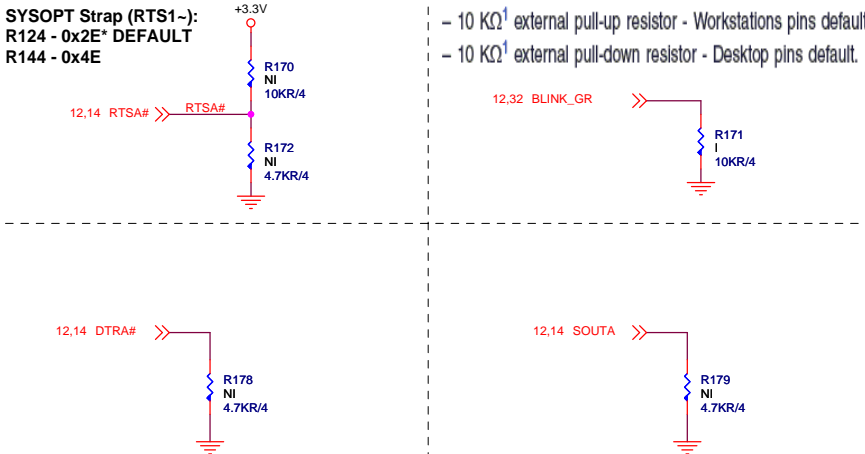
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SYSOPT Strap (RTS1-):  
R124 - 0x2E\* DEFAULT  
R144 - 0x4E



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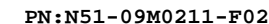
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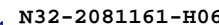
Size: Custom Document Number: SIO- PULL UP/DOWN/PS\_ON Rev: A

Date: Friday, March 28, 2014 Sheet: 13 of 41

## SI: 892604/892605



PN:N31-2131261-H06



Pin #	Signal Name	Signal Name	Pin #
1	DTR#	RXD	2
3	CTS#	DSR#	4
5	TXD	RI#	6
7	GND	GND	8
9	+5 V	+3.3 VAUX	10
11	RTS#	COMM B DETECT#	12
13	DCD#	-12 V (THRU DIODE)	14
15	+12 V (THRU DIODE)	KEY	16

pull up resistor at S/B inside

RIA# 12

NR1A#

NR1A#

1N4148S

R212 2.2K R/4

R214 1K R1% / 4

C177 0.01uF 16V/4

Q72 3904\_SOT23

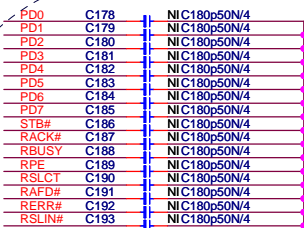
+3.3V\_AUX

R211 8.2K R/4

RIA#

RIA# 12

SI-1010041

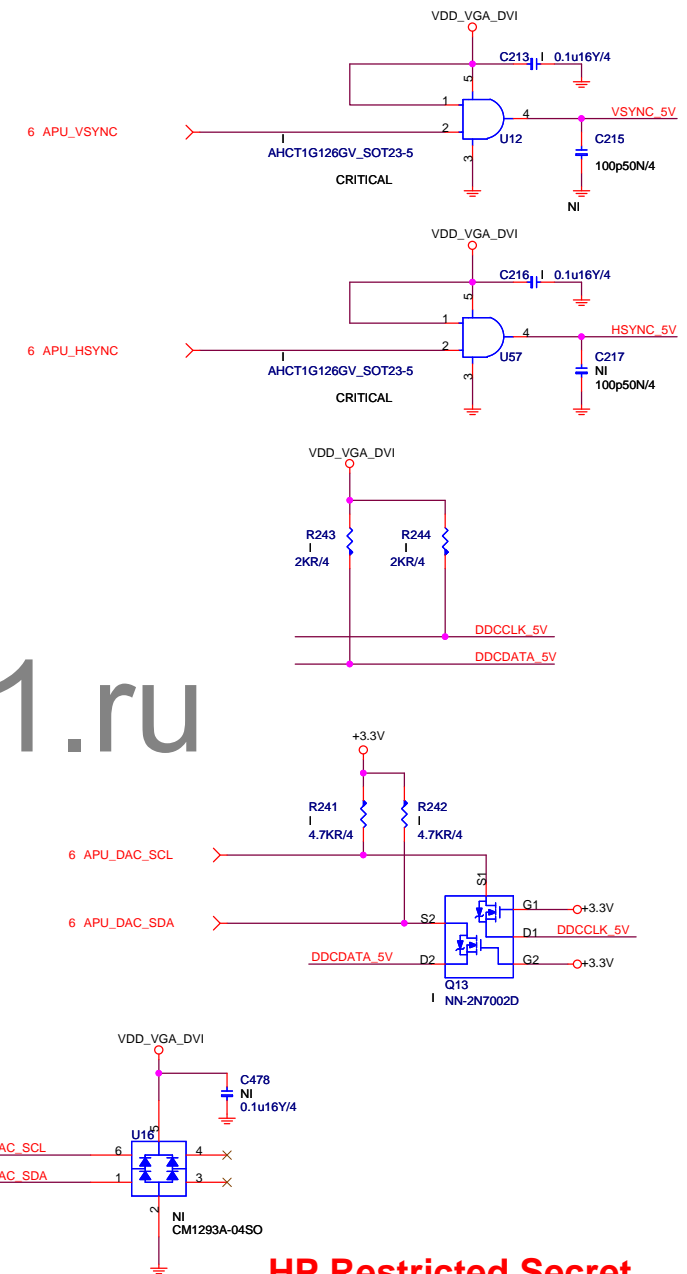
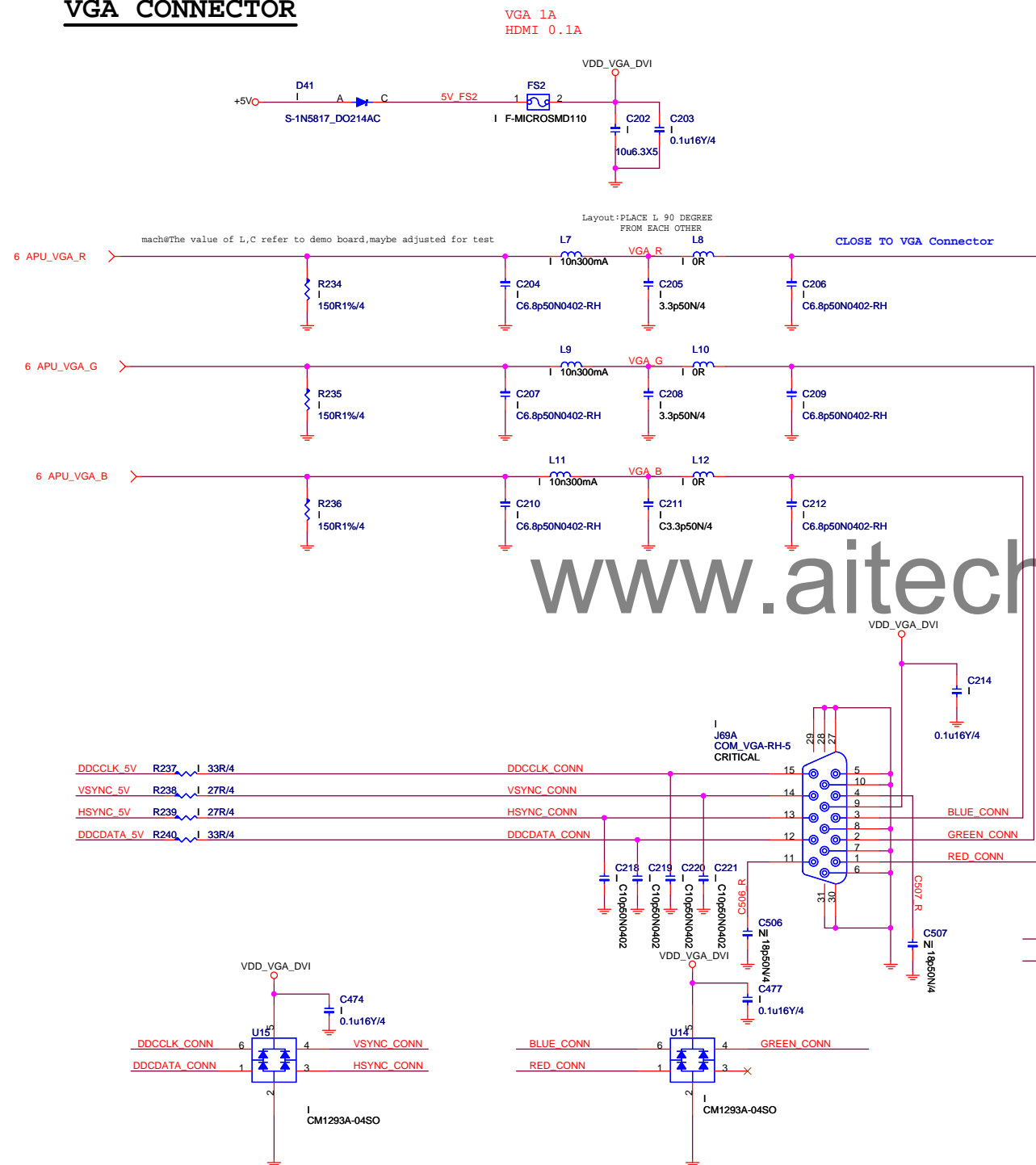
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Date:	Friday, March 28, 2014	Sheet 14 of 41

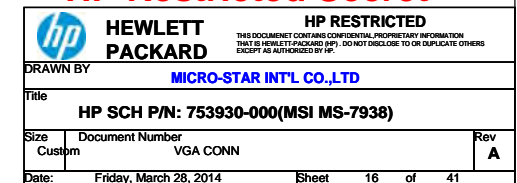




## VGA CONNECTOR

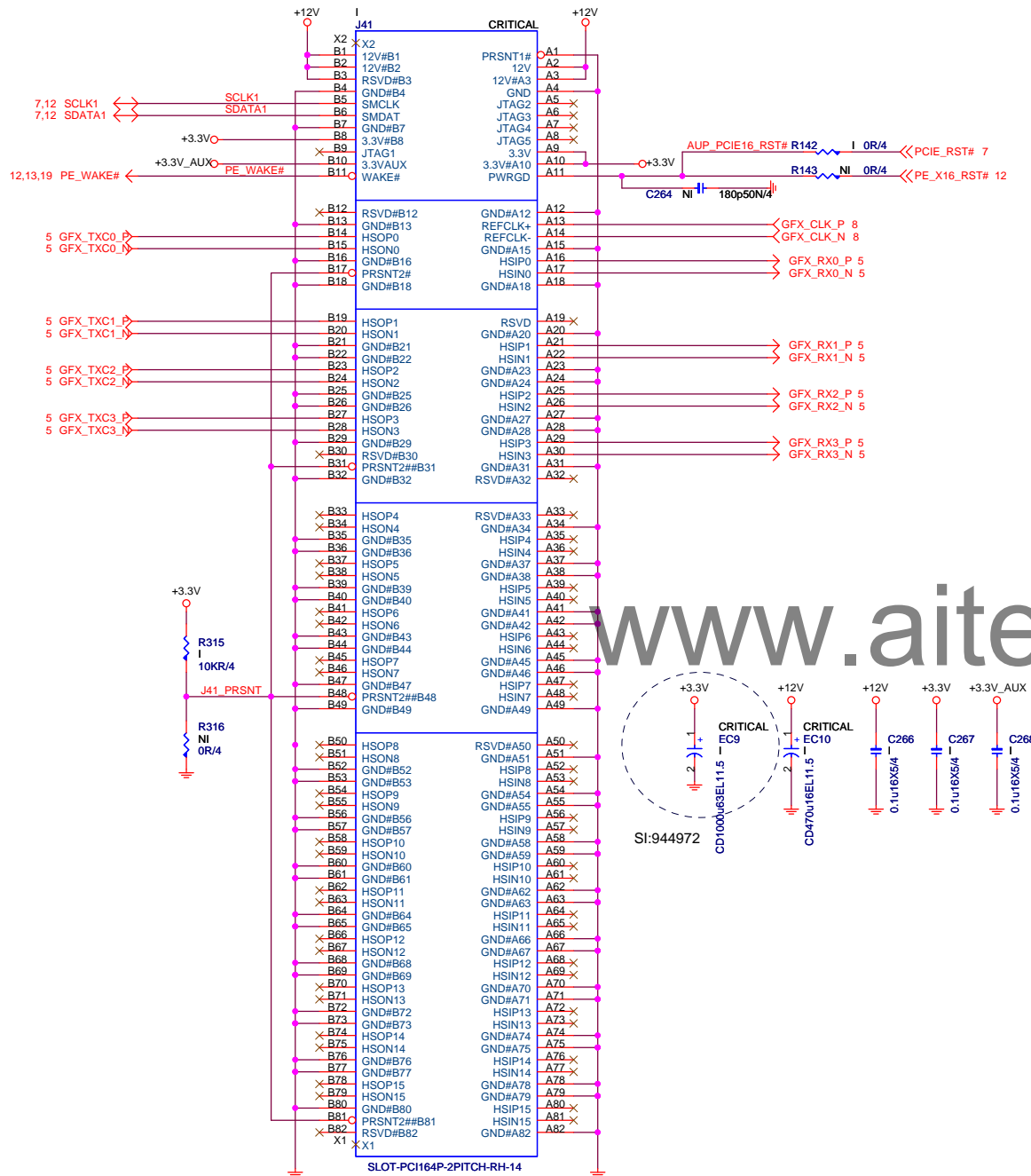


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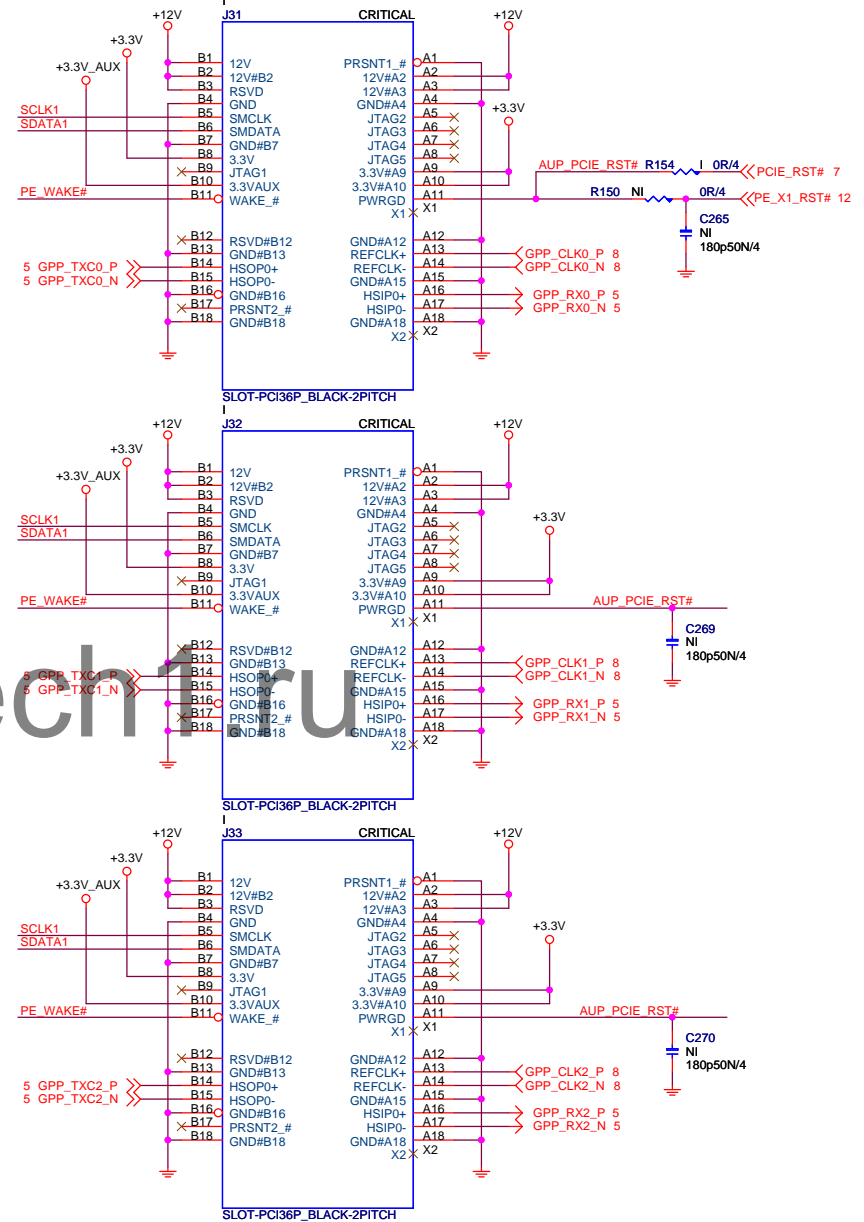




# PCI EXPRESS X16 Slot



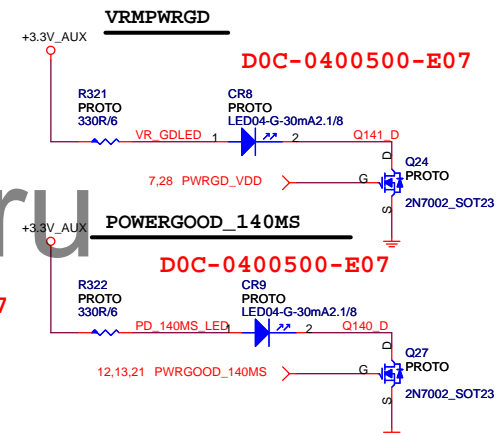
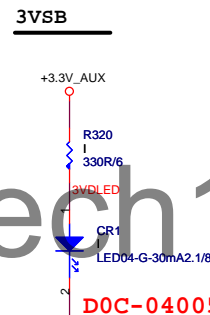
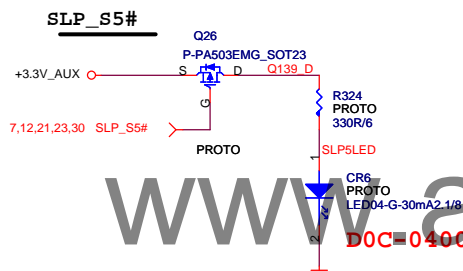
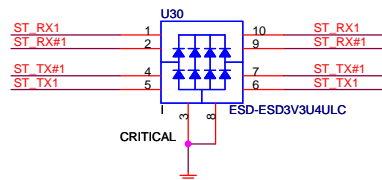
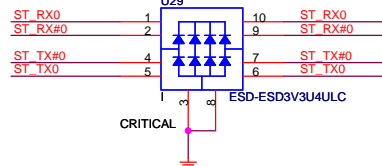
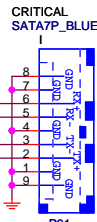
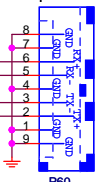
# PCI EXPRESS X1 Slot




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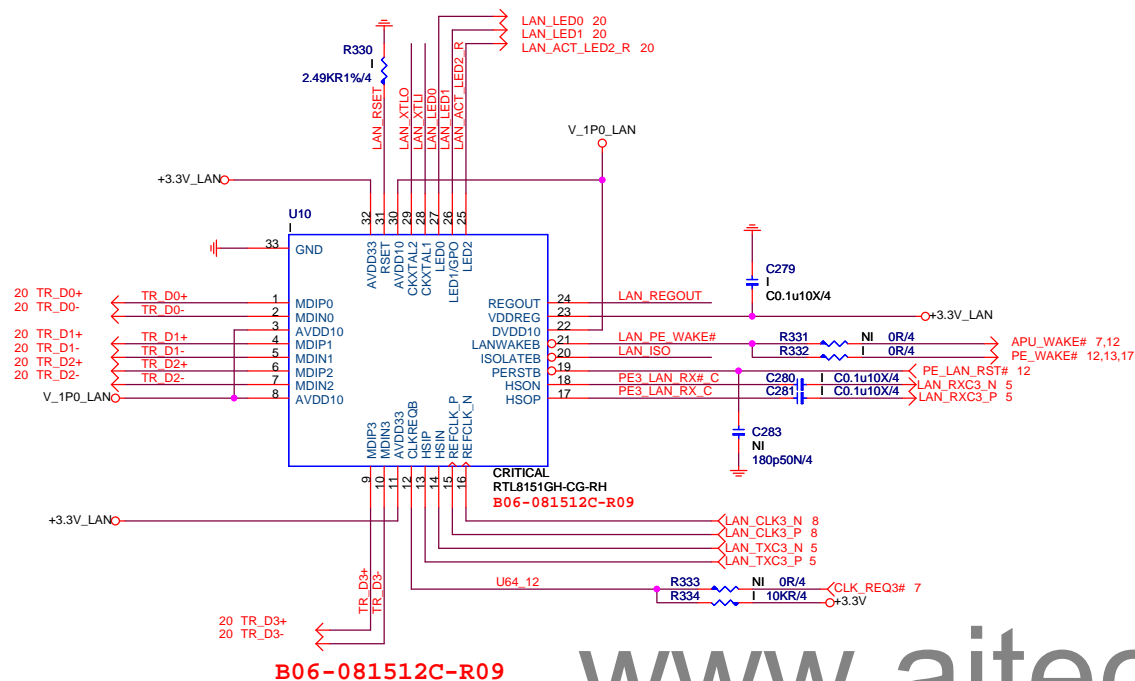
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Custom	PCI16X&PCI1X	A	
Date:	Friday, March 28, 2014	Sheet	17 of 41

CRITICAL  
SATA7P\_DARKBLUE



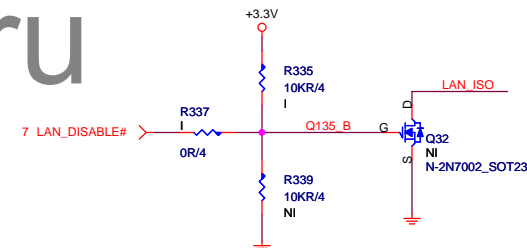
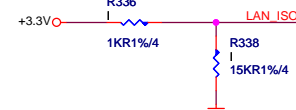
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## Gigabit LAN RTL8151GH-CG



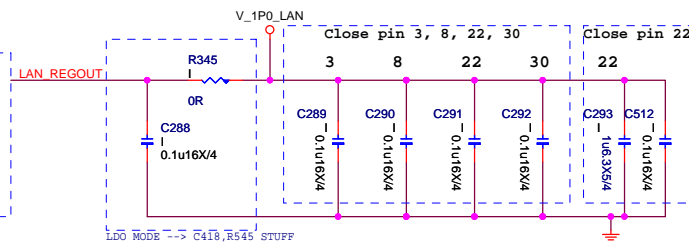
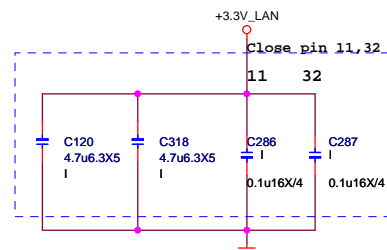
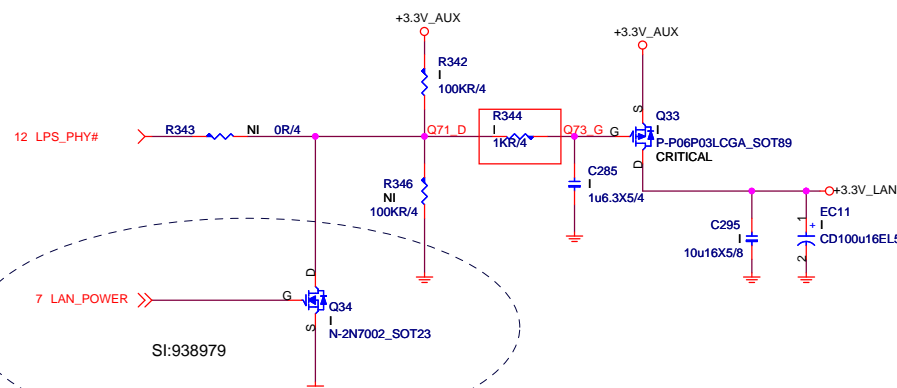
## LAN Power

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(58mA+289mA)



### Place Near Pin

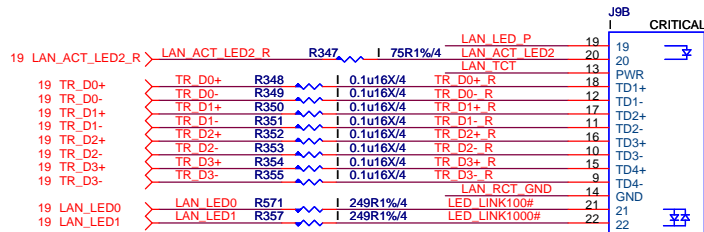
### Place Near Pin



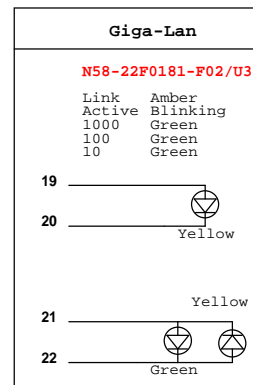
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Size	Document Number	Rev	
Custom	Gigabit LAN-RTL8151GH-CG	A	
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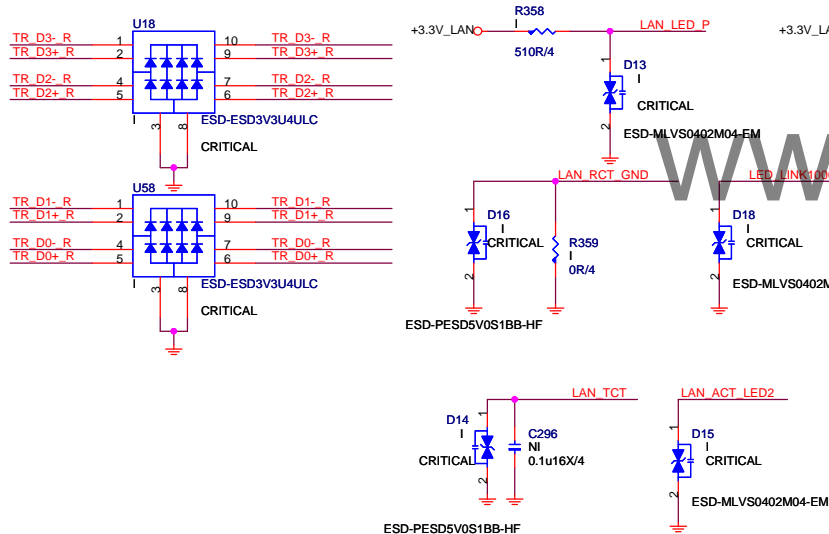
## LAN Connector



N58-22F0181-F02/U30



## ESD

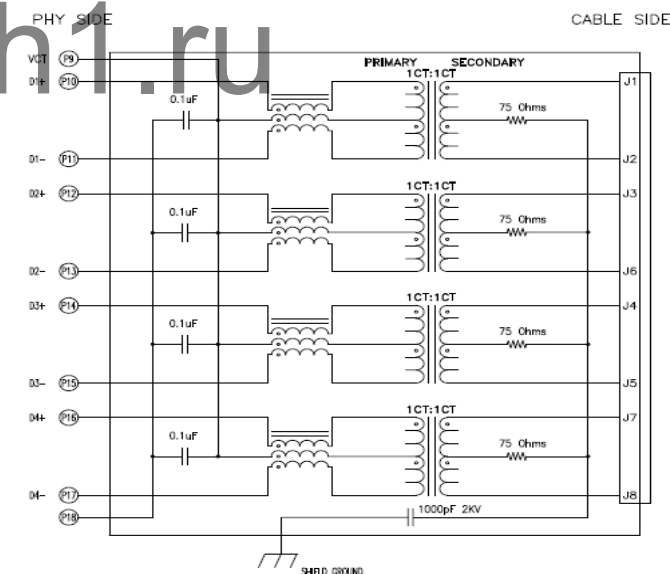


D13, D15, D17, D18  
D0G-3010510-I05  
AVL:D0G-2950500-SI0

D14, D16,  
D0G-3500510-N47  
AVL:D0G-1500500-SI0

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

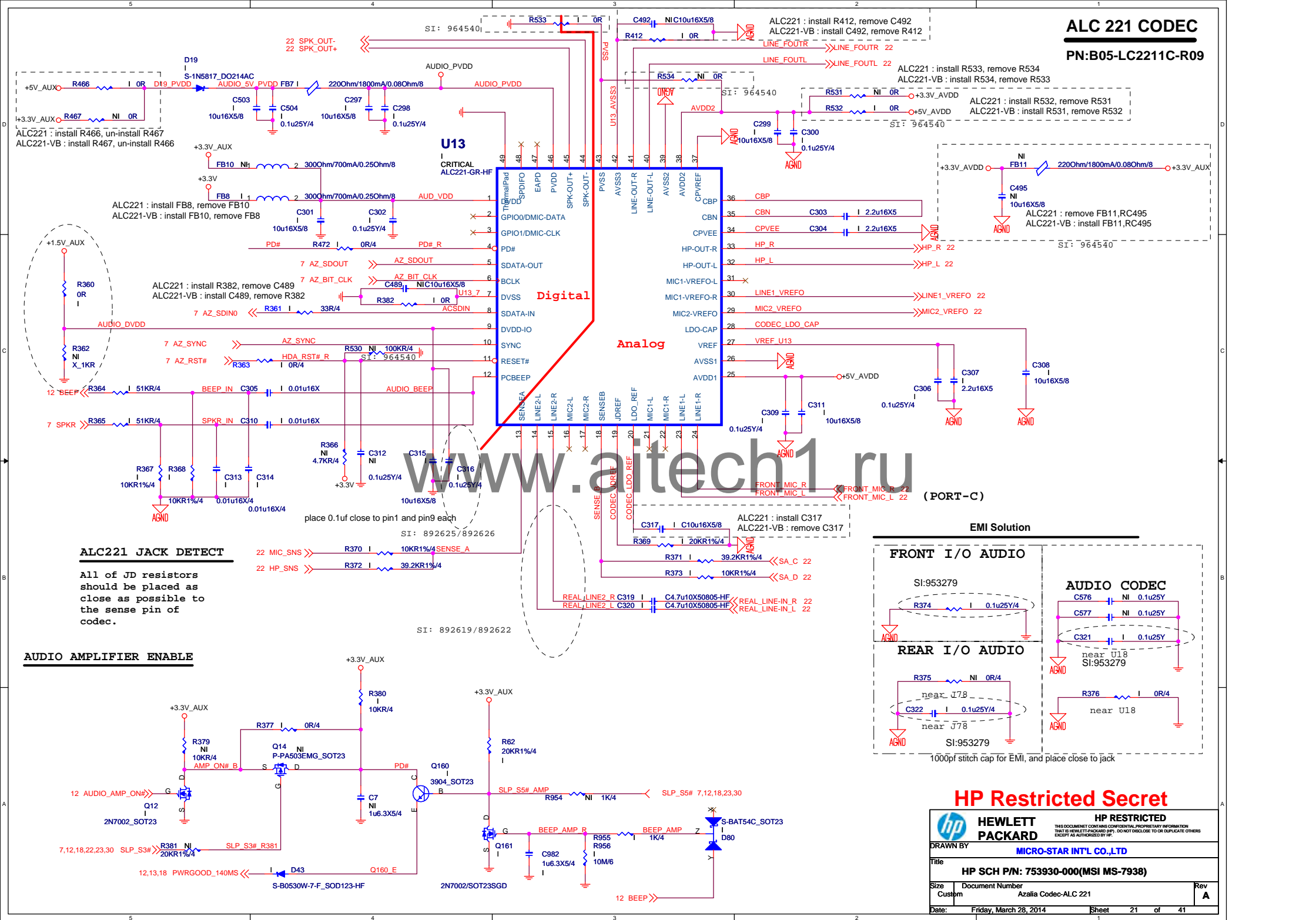


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# ALC 221 CODEC

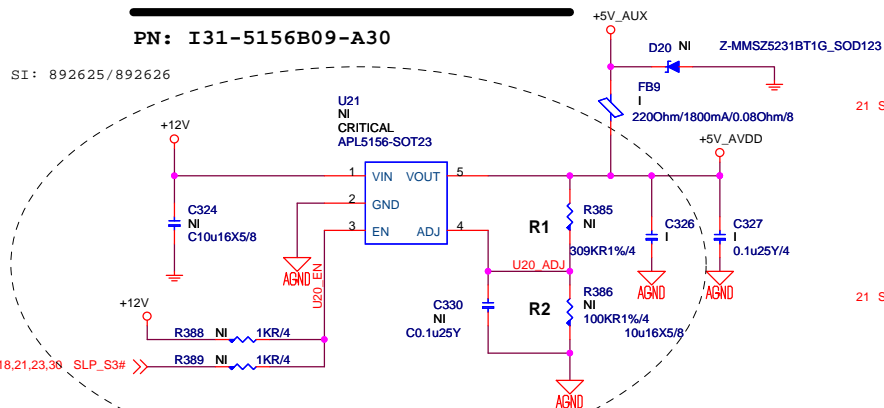
PN:B05-LC2211C-R09



# AUDIO CODEC REGULATORS

PN: I31-5156B09-A30

SI: 892625/892626



# SPEAKER HEADER

P/N:N32-1020521-H06

TABLE 14  
SPEAKER HEADER DEFINITION

	P6
SPEAKER-	1
SPEAKER+	2

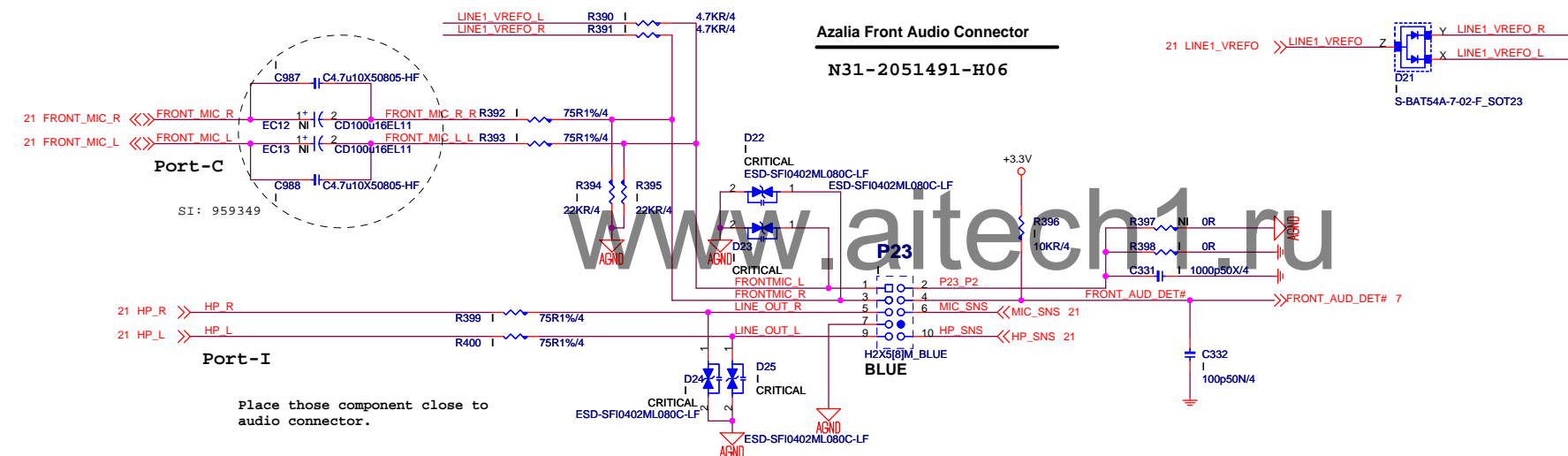
SPK+- TRACE WIDTH

Speaker 4 ohm ==> 40mils

Speaker 8 ohm ==> 20mils

# Azalia Front Audio Connector

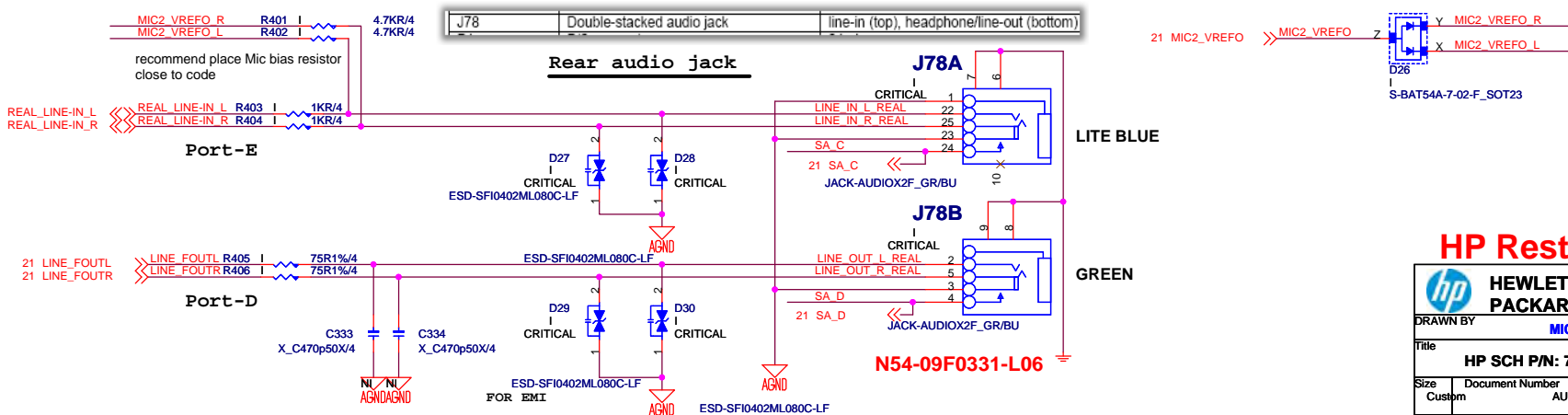
N31-2051491-H06



Place those component close to audio connector.

# Rear audio jack

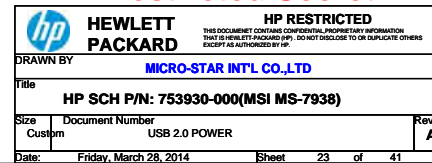
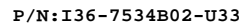
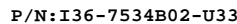
J78 Double-stacked audio jack line-in (top), headphone/line-out (bottom)



HP Restricted Secret

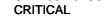
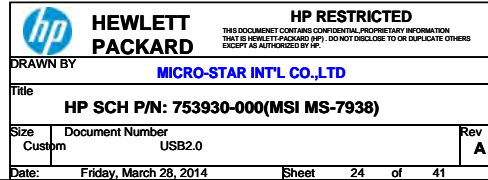
<b>hp</b> HEWLETT PACKARD		HP RESTRICTED	
DRAWN BY		MICRO-STAR INT'L CO.,LTD	
Title		HP SCH P/N: 753930-000(MSI MS-7938)	
Size	Document Number	AUDIO CONNECTOR	
Custom			
Date:	Friday, March 28, 2014	Sheet	22 of 41
		Rev	A

P/N: I36-7534B02-U33



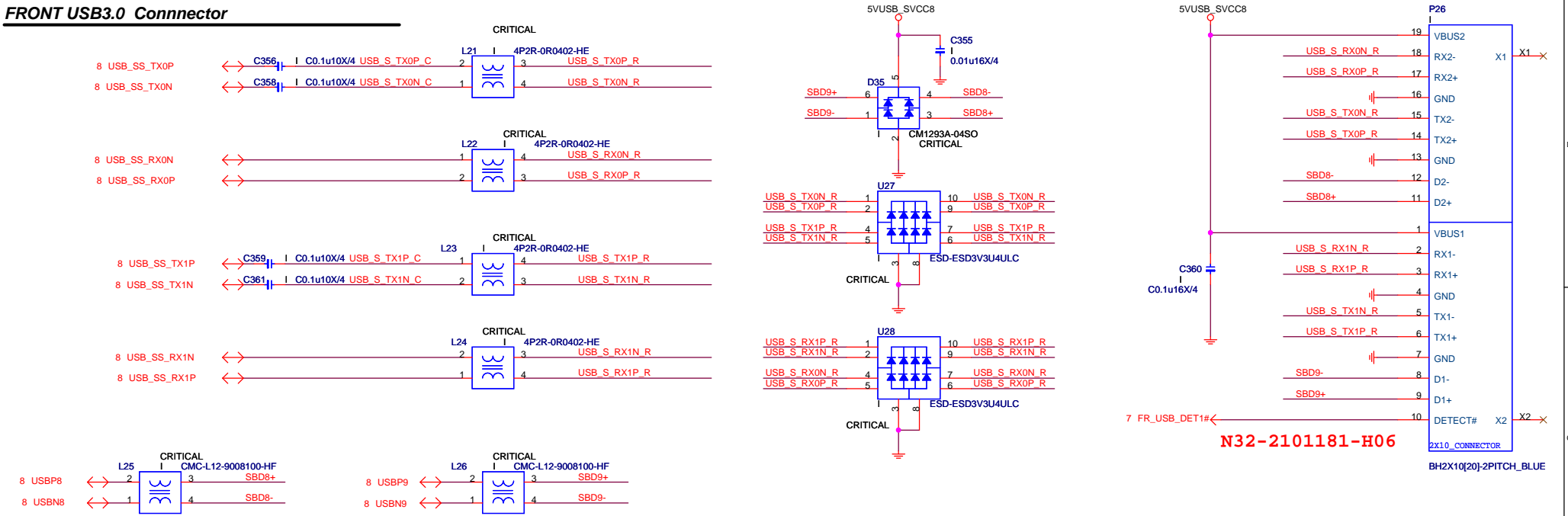


### Internal USB 2.0 Header Pin Description

 **HEWLETT** **HP RESTRICTED**



FRONT USB3.0 Connector



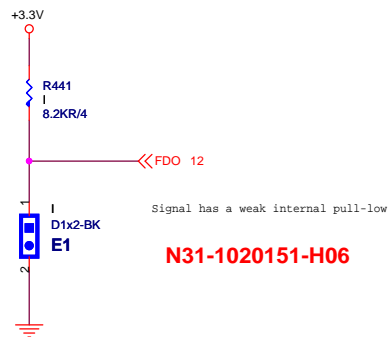
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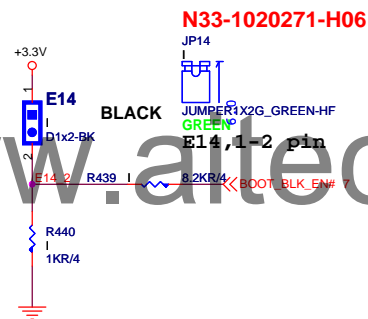
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## Flash Descriptor Override Header

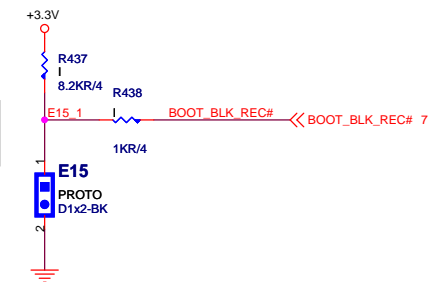
### FLASH DESCRIPTOR OVERRIDE



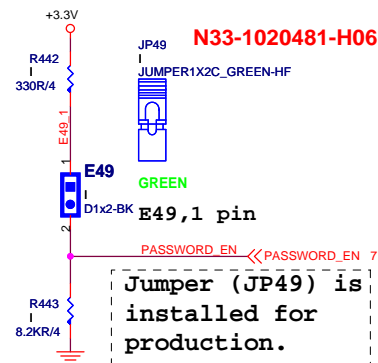
## BOOT BLOCK WRITE JUMPER



## BOOT BLOCK RECOVERY HEADER

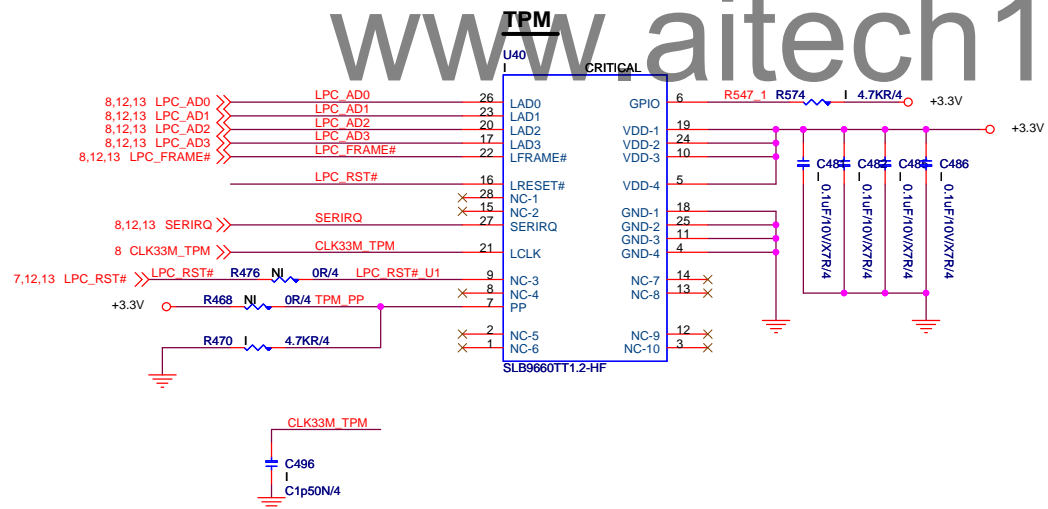
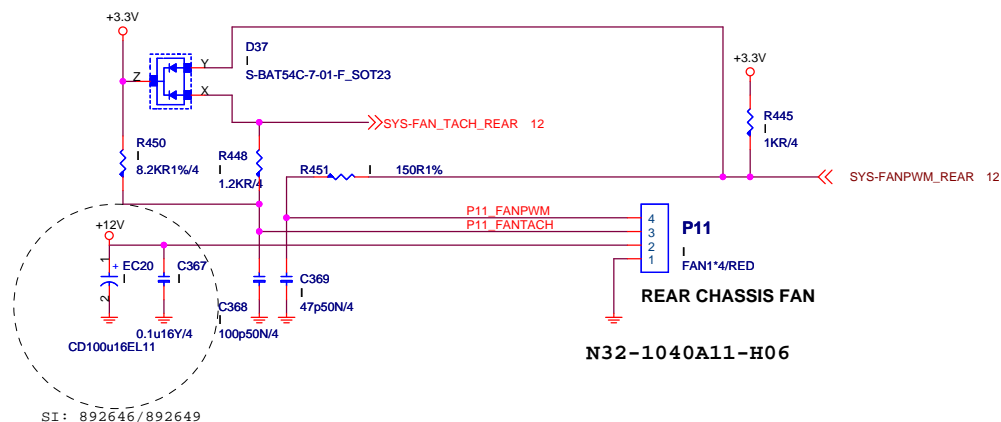



## PASSWORD JUMPER



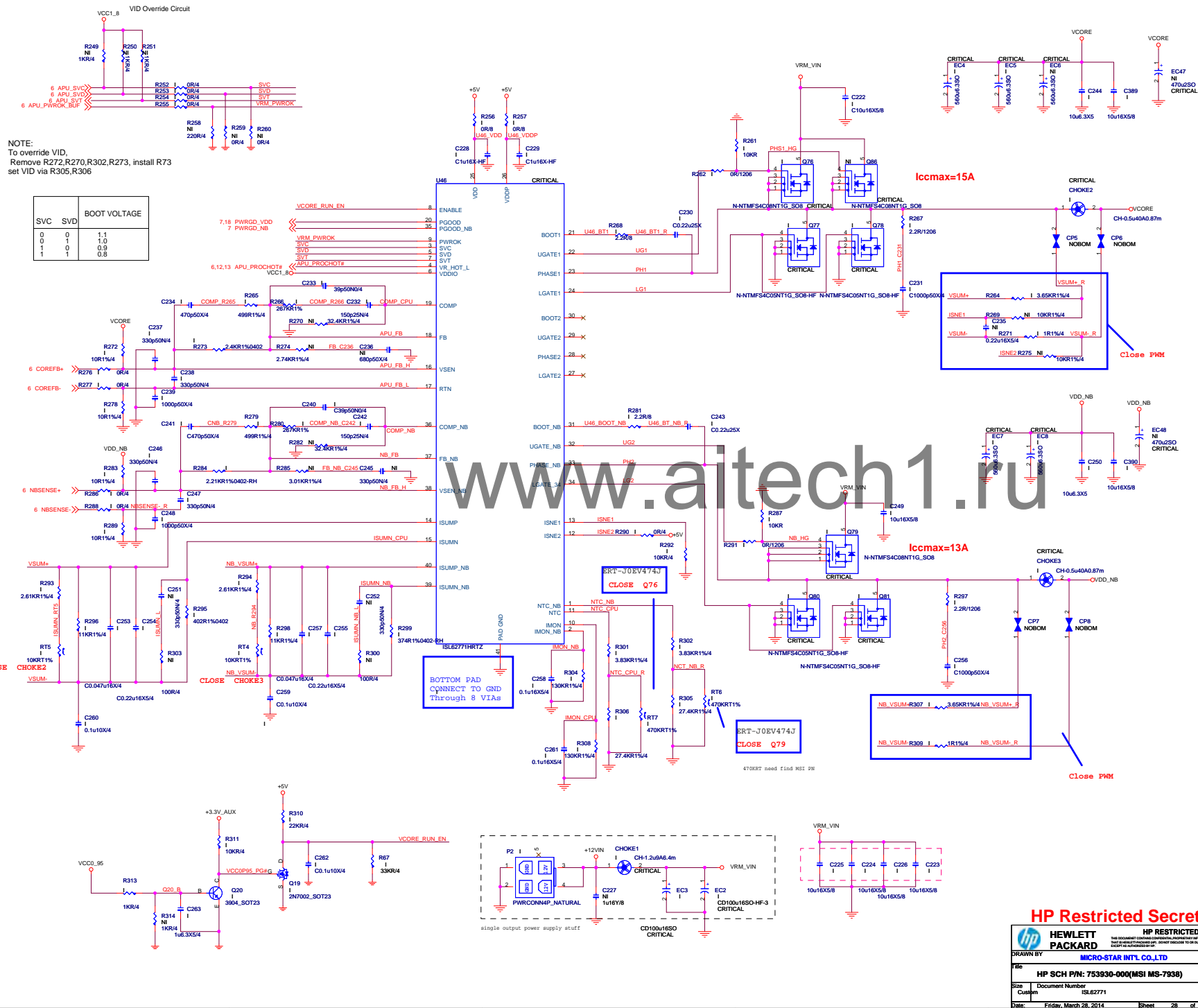
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Size Custom	Document Number FAN	Rev /
Date: Friday, March 28, 2014		Sheet 27 of 41

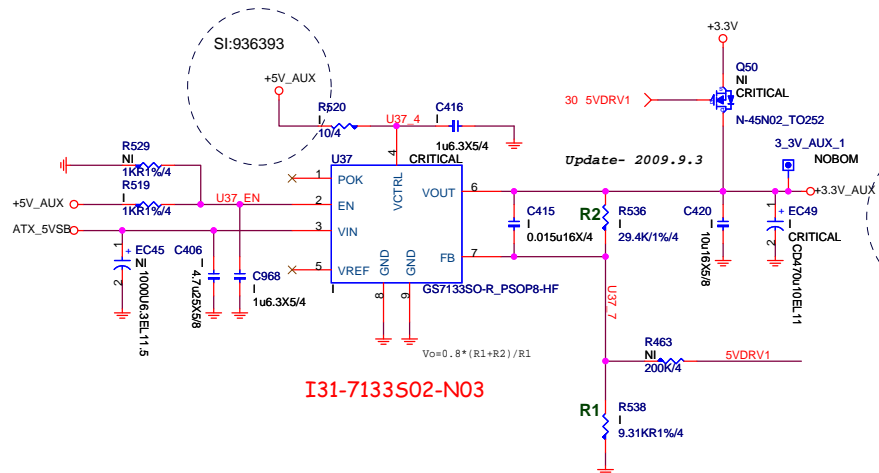
## ISL62771 Schematic for FT3 solution



**HP Restricted Secret**

### 3V Standby Power

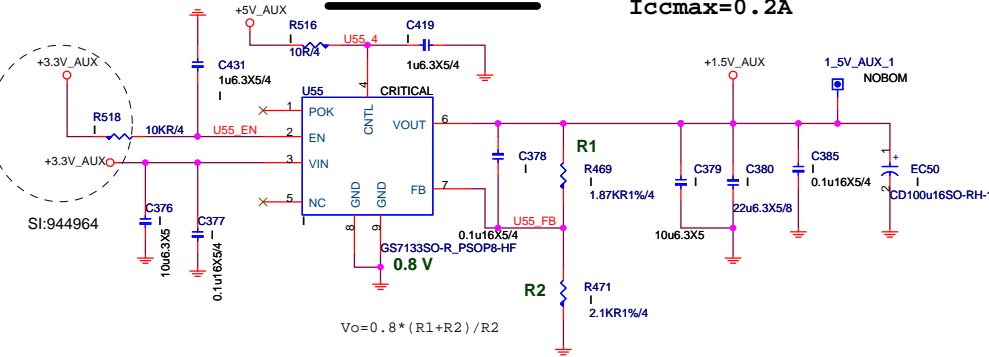
Iccmax=2A



I31-7133S02-N03

### +1.5V\_AUX

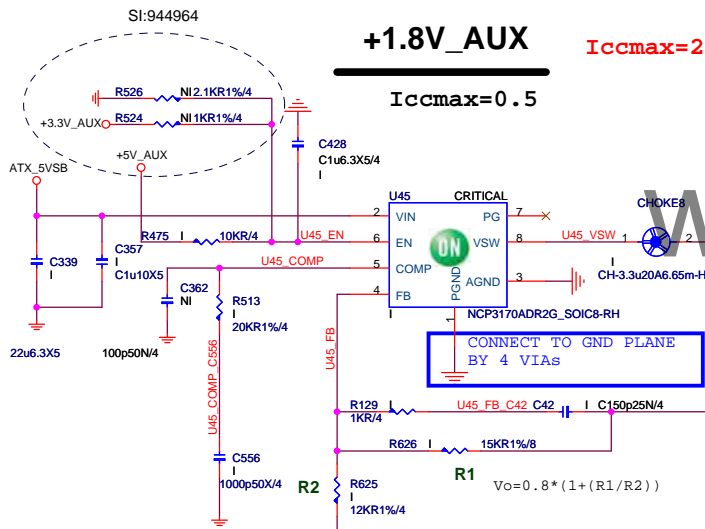
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### +1.8V\_AUX

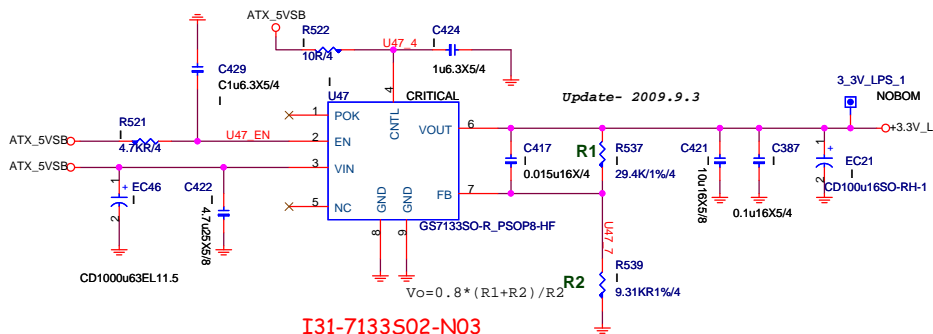
Iccmax=2.1A

Iccmax=0.5



### 3V LPS Power

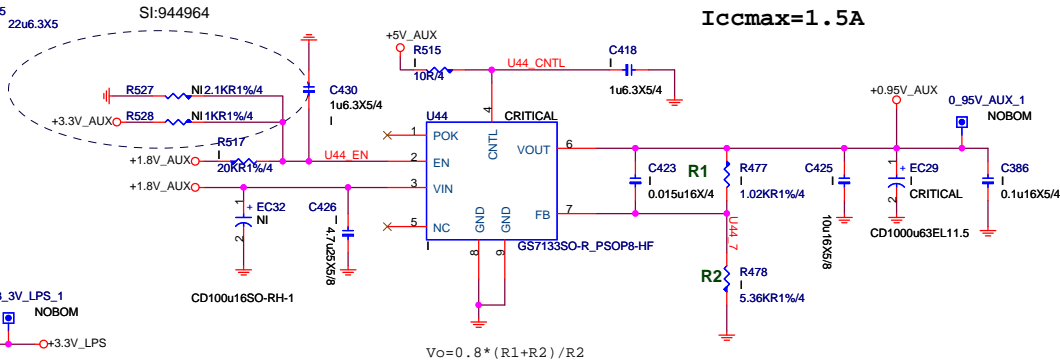
Update- 2009.9.3



I31-7133S02-N03

### +0.95V\_AUX

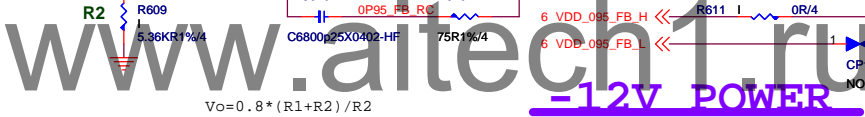
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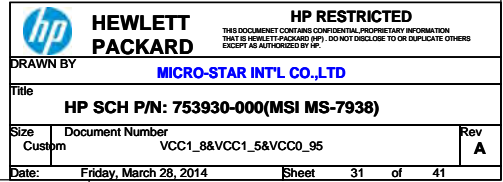
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Size	Custom	Document Number		Rev
Date:		Friday, March 28, 2014		Sheet
				29 of 41



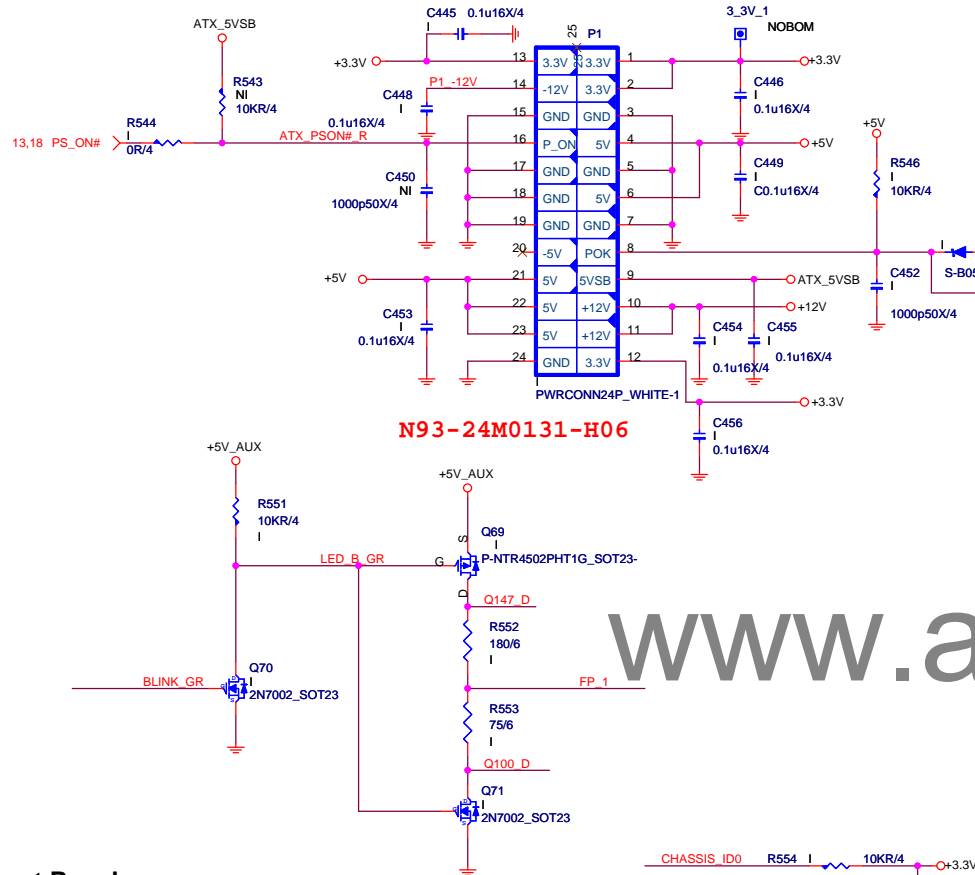

$$V_o = 0.8 * (R_1 + R_2) / R_2$$

## -12V POWER



# ATX Power Connector / Front Panel / LED/DSW

## ATX CONNECTOR



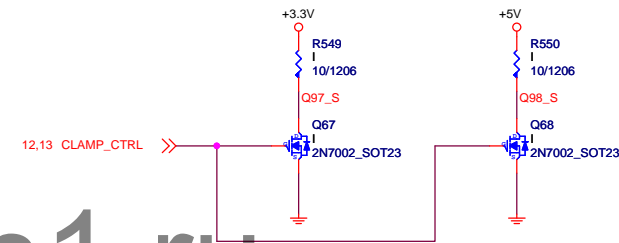
N93-24M0131-H06

## +5V AUX Power Switch Tune ATX\_5VSB inrush current to 2A from 4A

High---Q42 OFF  
Low---Q42 ON

Soft Start

## BLEED-OFF CIRCUIT

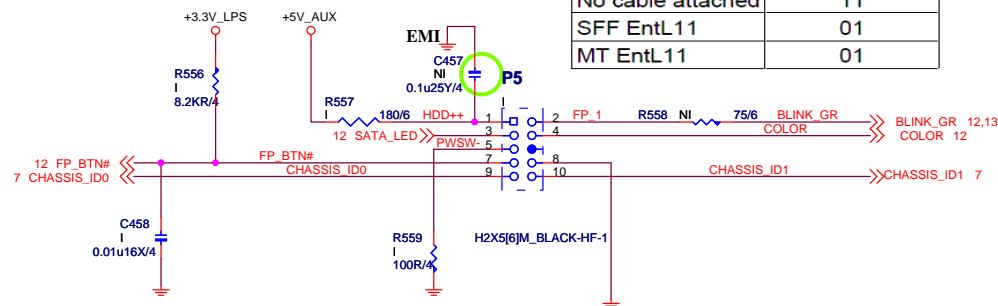


## Front Panel

PN:N31-2051641-H06

## CHASSIS ID[1:0]

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

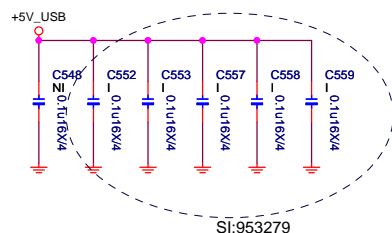
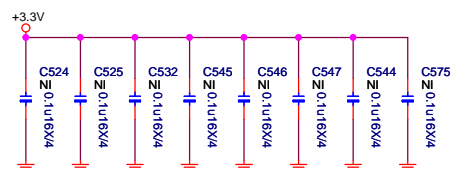
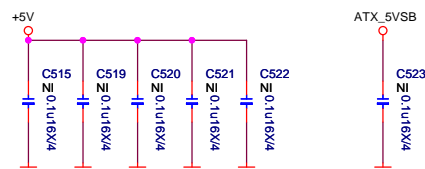
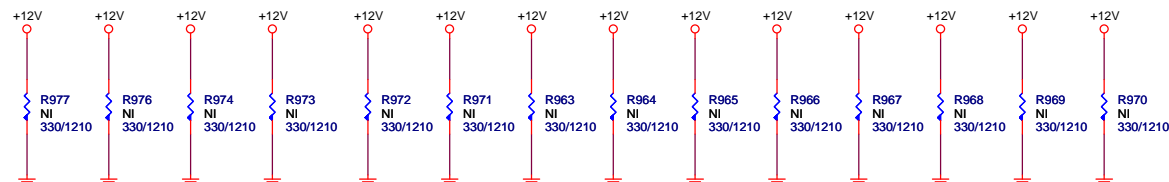
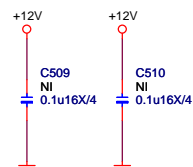
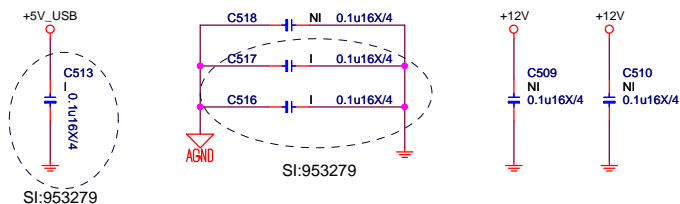
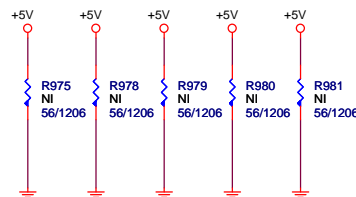
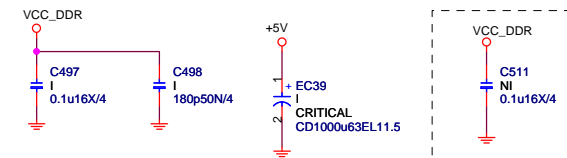


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Custom	ATX/F_Panel/EMI	A	
Date:	Friday, March 28, 2014	Sheet	32 of 41



# EMI CAPs

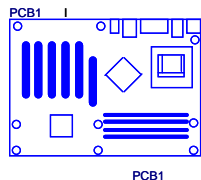


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Custom					A
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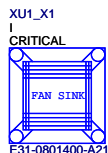
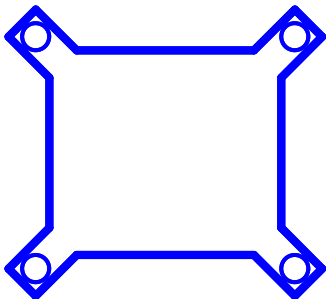
## Manual Parts



PCB1

CRITICAL

XU1\_X2  
CRITICAL  
E93-0000121-A21



## Superman APU BOM OPTION

XU2

A4-6250

AD625JIXJ44JB-2.0G\_BGA769-RH  
I,NI,NI

## Shazam BOM OPTION

XU3

A8-6410

AM6410ITJ44JB-2.0G\_BGA769-RH  
NI,NI,I

## Simulation

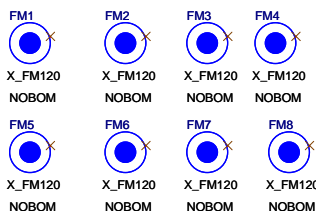


AVL:  
D06-0100161-P52  
D06-0100101-K26

BAT1\_X2  
BAT-CR2032-RH  
CRITICAL

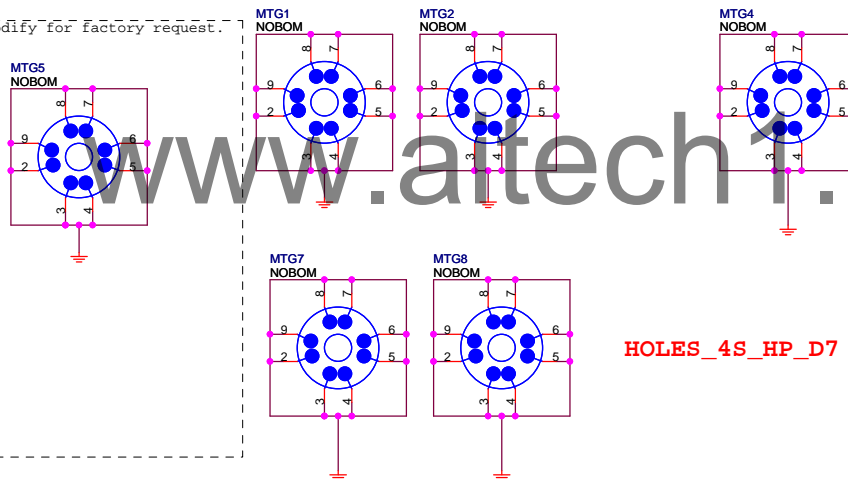
D06-0100101-P01

## Optics Orientation Holes



## Mounting Holes

Modify for factory request.



HOLES\_4S\_HP\_D7

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MICRO-STAR INT'L CO.,LTD

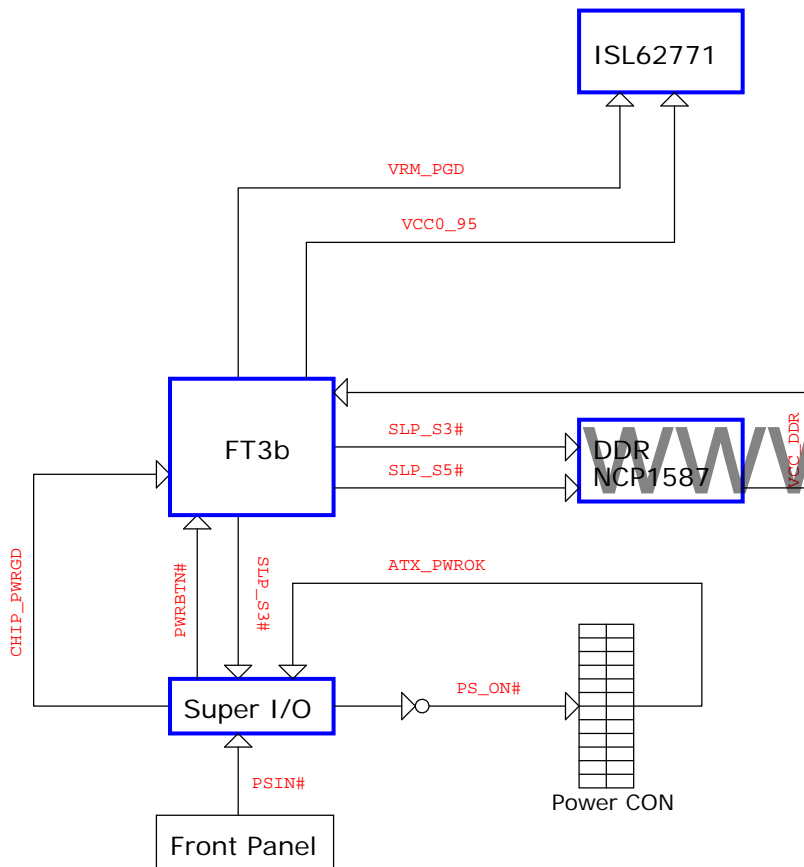
**HP SCH P/N: 753930-000(MSI MS-7938)**

Document Number  
PON

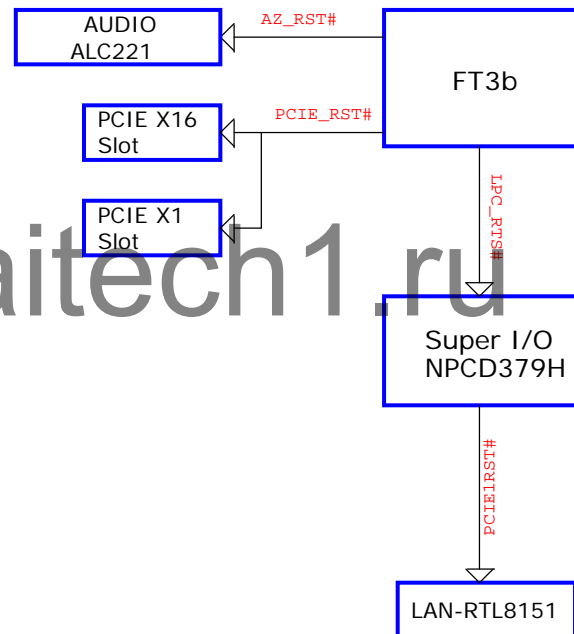
Rev	
A	

Sheet 35 of 41

## PWROK MAP

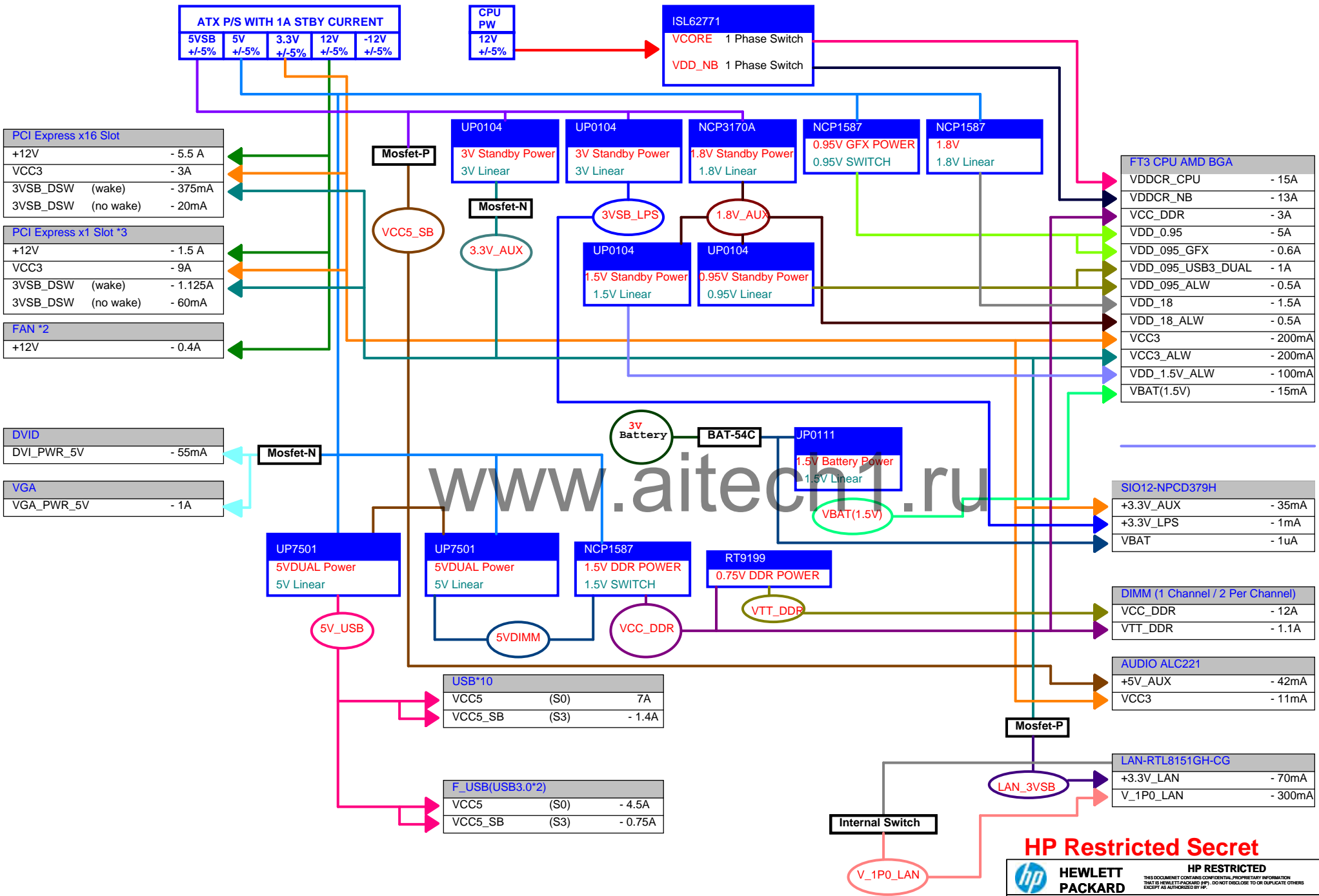


## RESET MAP



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Size	Document Number	Pwrok/Reset	Rev <b>A</b>
Date:	Friday, March 28, 2014	Sheet	36 of 41



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Title		HP SCH P/N: 753930-000(MSI MS-7938)			
Size	Custom	Document Number	Power Map	Rev A	
Date:	Friday, March 28, 2014	Sheet	37	of 41	

APU					
SYSTEM PIN NAME	TYPE	LEVEL	Default I/O State	Integrated Resistor	Net name
GENINT1_L/GPIO32	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BRD_REV0
GENINT2_L/GPIO33	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BRD_REV1
SCL0/GPIP43	I/O	VDD_33	Input, Tristate	—	SCLK0
SD_LED/GPIO45	I/O	VDD_33	Ouput,High	—	NC
SDA0/GPIO47	I/O	VDD_33	Input, Tristate	—	SDATA0
SERIRQ/GPIO48	I/O	VDD_33	Input,PU	8.2Kohm Pullup	SERIRQ
GPIO49	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BRD_ID0
GPIO50	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BRD_ID1
GPIO51	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BRD_ID2
FANOUT0/GPIO52	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC
GPIO55	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC
FANIN0/GPIO56	I/O	VDD_33	Input,PU	8.2Kohm Pullup	COMB_DET#
GPIO57	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CHASSIS_ID0
GPIO58	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CHASSIS_ID1
GPIO59	I/O	VDD_33	Input,PU	8.2Kohm Pullup	FDO
CLK_REQ0_L/GPIO60	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CLK_REQ0#
CLK_REQ1_L/GPIO61	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CLK_REQ1#
CLK_REQ2_L/GPIO62	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CLK_REQ2#
CLK_REQ3_L/GPIO63	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CLK_REQ3#
GPIO64	I/O	VDD_33	Input,PU	8.2Kohm Pullup	PRNTR_DET#
CLK_REQG_L/GPIO65	I/O	VDD_33	Input,PU	8.2Kohm Pullup	CLK_REQG#
SPKR/GPIO66	I/O	VDD_33	Input,PU	—	SPKR
SATA_ACT_L/GPIO67	I/O	VDD_33	Input,PU	8.2Kohm Pullup	SATA_LED_SB#
GPIO68	I/O	VDD_33	Input,PU	8.2Kohm Pullup	FR_USB_DET0#
GPIO69	I/O	VDD_33	Input,PU	8.2Kohm Pullup	FR_USB_DET1#
GPIO70	I/O	VDD_33	Input,PU	8.2Kohm Pullup	FRONT_AUD_DET#
GPIO71	I/O	VDD_33	Input,PU	8.2Kohm Pullup	PASSWORD_EN
SD_CLK/SCLK_2/GPIO73	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC
SD_CMD/SLOAD_2/GPIO74	I/O	VDD_33	Input,PU	8.2Kohm Pullup	LAN_DISABLE#
SD_CD/GPIO75	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BOOT_BLK_REC#
SD_WP/GPIO76	I/O	VDD_33	Input,PU	8.2Kohm Pullup	BOOT_BLK_EN#
SD_DATA0/SDAT1_2/GPIO77	I/O	VDD_33	Input,PU	8.2Kohm Pullup	FR_USB_DET2#
SD_DATA1/SDATO_2/GPIO78	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC
SD_DATA2/GPIO79	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC
SD_DATA3/GPIO80	I/O	VDD_33	Input,PU	8.2Kohm Pullup	NC

SYSTEM PIN NAME	TYPE	LEVEL	Default I/O State	Integrated Resistor	Net name
SPI_WP_L/GPIO161	I/O	VDD_33_ALW	Input,PU	—	APU_SPI_WP#
SPI_CLK/GPIO162	I/O	VDD_33_ALW	Input,PD	10Kohm Pulldown	APU_SPI_CLK
SPI_DO/GPIO163	I/O	VDD_33_ALW	Input,PD	10Kohm Pulldown	APU_SPI_DATAOUT
SPI_DI/GPIO164	I/O	VDD_33_ALW	Input,PD	10Kohm Pulldown	APU_SPI_DATAIN
SPI_CS1_L/GPIO165	I/O	VDD_33_ALW	Input,PU	10Kohm Pullup	APU_SPI_CS#
SPI_CS2_L/GPIO66	I/O	VDD_33_ALW	Input,PU	10Kohm Pullup	SPI_CS2#
AZ_SDIN0/GPIO167	I/O	VDD_33_S	Input,PD	50Kohm Pulldown	AZ_SDIN0_APU
AZ_SDIN1/GPIO168	I/O	VDD_33_S	Input,PD	50Kohm Pulldown	NC
AZ_SDIN2/GPIO169	I/O	VDD_33_S	Input,PD	50Kohm Pulldown	NC
AZ_SDIN3/GPIO170	I/O	VDD_33_S	Input,PD	50Kohm Pulldown	NC
GPIO174	I/O	VDD_33_ALW	Input	—	Pulled-up to VDD_33_ALW
IR_LED_LULLB_L/GPIO184	I/O	VDD_33_ALW	Input,PU	10Kohm Pullup	IR_LED
SCL1/GPIO227	I/O	VDD_33_ALW	Input, Tristate	—	SCLK1
SDA1/GPIO228	I/O	VDD_33_ALW	Input, Tristate	—	SDATA1

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File		HP SCH PIN: 753930-000(MSI MS-7938)			
Rev	D	Document Number	GPIO Table		Rev
Issue	1	Issue Date	26, 2014	Page	39 of 41

Pin	Default Function / Alternate Functions	Buffer Type	Buffer Power Wells	Motherboard Function
1	CLAMP_CTRL	OD <sub>S</sub>	VS <sub>B3</sub>	BLEED OFF CIRCUIT
2	SLP_S4#	IN <sub>TS4</sub>	VS <sub>B3</sub>	SLP_S4#
3	SLP_S5#	IN <sub>TS4</sub>	VS <sub>B3</sub>	SLP_S5#
4	SLP_S3#	IN <sub>TS4</sub>	VS <sub>B3</sub>	SLP_S3#
5	SIOPME#	OD <sub>S</sub> O <sub>4B</sub>	VS <sub>B3</sub>	RI#
6	RSMRST#	O <sub>316</sub>	VS <sub>B3</sub>	RSMRST#
7	PME_IN#	IN <sub>TS</sub>	VS <sub>B3</sub>	PME status
8	BLINK_OR	O <sub>2030</sub>	VS <sub>B3</sub>	Power LED driver
9	COLOR	O <sub>2030</sub>	VS <sub>B3</sub>	Power LED driver
10	VSS	I	GND	GND
11	PWRGD_OUT	OD <sub>S</sub>	VS <sub>B3</sub>	PWRGD_140ms
12	PS_ON#	OD <sub>S</sub>	VS <sub>B3</sub>	PS_ON#
13	TACH1	IN <sub>TS</sub>	VDD3	SYS_FAN_TACH
14	CLOCKI32	IN <sub>TS</sub>	VS <sub>B3</sub>	SUS_CLK_IO
15	3V_AUX_SLOT_ON	O <sub>4B</sub>	VS <sub>B3</sub>	3V_AUX_SLOT_ON
16	VS <sub>B3</sub>	I	PWR	VS <sub>B3</sub>
17	VCORF	I	N/A	VCORF
18	LDRG#	O <sub>PC1</sub>	VDD3	LDRG#
19	LAD3	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	LAD3
20	LAD0	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	LAD0
21	LAD2	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	LAD2
22	VSS	I	PWR	GND
23	LAD1	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	LAD1
24	SER_IRQ	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	SERIRQ
25	PCI_RESET#	IN <sub>PC1</sub>	VDD3	PLTRST#
26	PCI_CLK	IN <sub>PC1</sub>	VDD3	33MHz
27	LFRANE#	IN <sub>PC1</sub>	VDD3	LFRANE#
28	VS <sub>B3</sub>	I	PWR	VS <sub>B3</sub>
29	OPRST3#	O <sub>14</sub>	VS <sub>B3</sub>	PCIE_X16 RESET#
30	INTRUDER#	IN <sub>TS</sub>	V <sub>BAT</sub>	HOOD_SENSE#
31	5V_USB_CTRL	O <sub>4B</sub>	VS <sub>B3</sub>	5V_USB_EN
32	HDLOCK#	OD <sub>12</sub>	VDD3	HOOD_LOCK#
33	GPIO01	IN <sub>TS</sub> /OD <sub>9</sub> O <sub>4B</sub>	VS <sub>B3</sub>	
34	HDUNLOCK#	OD <sub>12</sub>	VDD3	HOOD_UNLOCK#
35	HD_LED_IN#	IN <sub>TS</sub>	VDD3	Hard Drive LED Input
36	CPU_PRNT1#	IN <sub>TS1</sub>	V <sub>BAT</sub>	CPU detection
37	VBAT	I	PWR	

38	12V_VSB_COMP	IN <sub>COMP2</sub>	VS <sub>B3</sub>	
39	COMP_IN3	IN <sub>COMP3</sub>	VS <sub>B3</sub>	
40	COMP_IN1	IN <sub>COMP1</sub>	VS <sub>B3</sub>	5V voltage monitor
41	COMP_IN2	IN <sub>COMP2</sub>	VS <sub>B3</sub>	12V voltage monitor
42	AVCC	I	PWR	AVCC
43	AD1	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	AD1
44	AD2	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	AD2
45	AD3	IN <sub>PC</sub> /O <sub>PC1</sub>	VDD3	AD3
46	FSPI_STR	IN <sub>TS</sub>	AVCC	FSPI_STR
47	AGND	I	GND	AGND
48	PWBTOUT#	IN <sub>TS4</sub>	VLPS	PWBTOUT#
49	PWBTIN#	IN <sub>TS4</sub>	VLPS	PWBTIN#
50	LPS_WAKE	IN <sub>TS</sub>	VLPS	LPS_WAKE
51	LPS_PHY#	O <sub>4B</sub>	VLPS	LPS_PHY#
52	LPS_ON#	O <sub>4B</sub>	VLPS	LPS_ON#
53	VLPS	I	PWR	VLPS
54	VTT	I	PWR	VTT
55	THERMTRIP#	IN <sub>AGTL</sub>	VTT	THERMTRIP#
56	TSI_SCL	IN <sub>TS</sub> /O <sub>TS1</sub>	VTT	TSI_SCL
57	PROCHOT1#	IN <sub>AGTL</sub> /OD <sub>AGTL24</sub>	VTT	PROCHOT1#
58	PECI	IN <sub>PEC</sub> /O <sub>PEC1</sub>	VTT	PECI
59	PROCHOT2#	IN <sub>AGTL</sub> /OD <sub>AGTL24</sub>	VTT	PROCHOT2#
60	VSS	I	PWR	GND
61	PWM2	OD <sub>12</sub> O <sub>6/12</sub>	VDD3	SYS-FANPWM_REAR
62	HMSCL	IN <sub>TS</sub> /OD <sub>5</sub>	VS <sub>B3</sub>	HMSCL
63	PWM1	OD <sub>12</sub> O <sub>6/12</sub>	VDD3	SYS-FANPWM_FRONT
64	HMSDA	IN <sub>TS</sub> /OD <sub>5</sub>	VS <sub>B3</sub>	HMSDA
65	HD_LED_OUT	OD <sub>16</sub>	VS <sub>B3</sub>	Hard Drive LED Output
66	WAKE_OUT#	OD <sub>12</sub> O <sub>6/12</sub>	VS <sub>B3</sub>	Wake Disable Output
67	GPIO15(EV6#)	IN <sub>TS</sub>	VS <sub>B3</sub>	PCI_Express_Wake#
68	AMP_ON	O <sub>4B</sub>	VS <sub>B3</sub>	AMP_ON
69	AMP_ON#	O <sub>4B</sub>	VS <sub>B3</sub>	AMP_ON#
70	OPRST2#	O <sub>14/14</sub>	VS <sub>B3</sub>	PE_RST#_OUT
71	12V_PG_25MS	OD <sub>6</sub>	VS <sub>B3</sub>	12V_PG_25MS
72	KBDRST#	IN <sub>TS</sub> /OD <sub>14</sub>	VDD3	KBDRST#
73	AUDIO_BEEP	O <sub>4B</sub>	VS <sub>B3</sub>	DIAG Beep
74	TACH2	IN <sub>TS</sub>	VDD3	TACH2
75	VS <sub>B3</sub>	I	PWR	VS <sub>B3</sub>
76	KBDAT	IN <sub>TS</sub> /OD <sub>14</sub>	VDD3	KBDAT
77	MDAT	IN <sub>TS</sub> /OD <sub>14</sub>	VDD3	MSDATA
78	SLIN_ASTRB#	OD <sub>14</sub> O <sub>14/14</sub>	VDD3	RSLIN#
79	KBCLK	IN <sub>TS</sub> /OD <sub>14</sub>	VDD3	KBCLK
80	MCLK	IN <sub>TS</sub> /OD <sub>14</sub>	VDD3	MCLK
81	PD3	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD3
82	PD4	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD4

83	INIT#	OD <sub>14</sub> O <sub>14/14</sub>	VDD3	INIT#
84	VSS	I	PWR	GND
85	PD1	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD1
86	PD6	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD6
87	PD0	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD0
88	PD2	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD2
89	PD7	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD7
90	PD5	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	PD5
91	STB_VWRITE#	OD <sub>14</sub> O <sub>14/14</sub>	VDD3	RSTB#
92	ERR#	IN <sub>TS</sub>	VDD3	RERR#
93	VS <sub>B3</sub>	I	PWR	VS <sub>B3</sub>
94	AFD_DSTRB#	OD <sub>14</sub> O <sub>14/14</sub>	VDD3	RAFD#
95	PE	IN <sub>TS</sub>	VDD3	RPE
96	GA20	IN <sub>TS</sub> /O <sub>14/14</sub>	VDD3	GA20
97	ACK#	IN <sub>TS</sub>	VDD3	RACK#
98	SLCT	IN <sub>TS</sub>	VDD3	RSCT
99	BUST_WAIT#	IN <sub>TS</sub>	VDD3	RBUSY
100	TACH3	INTS	VDD3	TACH3
101	SMB1SDA	SW <sub>SM</sub>	VDD3	SMB_DATA_MAIN
102	PWRGD_PS	IN <sub>TS4</sub>	VS <sub>B3</sub>	PWROK_PS
103	SMB2SDA	SW <sub>SM</sub>	VDD3	SMB_DATA_RESUME
104	PWRGD_O2#	OD <sub>6</sub>	VS <sub>B3</sub>	PWRGD_50MS#
105	PWM3#	OD <sub>12</sub> O <sub>6/12</sub>	VDD3	PSU-FANPWM
106	5V_USB_MAIN#	OD <sub>6</sub>	VS <sub>B3</sub>	5V_USB_MAIN#
107	PWRGD_O1	OD <sub>6</sub>	VS <sub>B3</sub>	PWRGD_30MS
108	VSS	I	PWR	GND
109	SMB1SCL	SW <sub>SM</sub>	VDD3	SMB_CLK_MAIN
110	SMB1#	OD <sub>6</sub>	VDD3	IO_SMI#
111	SMB2SDL	SW <sub>SM</sub>	VDD3	SMB_CLK_RESUME
112	DSR1#	IN <sub>TS</sub>	VDD3	DSRA#
113	RI1#	IN <sub>TS</sub>	VDD3	RIA#
114	CTS1#	IN <sub>TS</sub>	VDD3	CTSA#
115	DCD1#	IN <sub>TS</sub>	VDD3	DCDA#
116	SIN1	IN <sub>TS</sub>	VDD3	SINA
117	RTS1#	O <sub>4B</sub>	VDD3	RTSA#
118	DTR#_BOUT1	O <sub>4B</sub>	VDD3	DTRA#
119	SOUT1	O <sub>4B</sub>	VDD3	SOUTA
120	DCD2#	IN <sub>TS</sub>	VDD3	DCDB#
121	SOUT2	O <sub>4B</sub>	VDD3	SOUTB
122	VS <sub>B3</sub>	I	PWR	VS <sub>B3</sub>
123	DTR#_BOUT2	O <sub>4B</sub>	VDD3	DTRB#
124	RI2#	IN <sub>TS</sub>	VDD3	RIB#
125	RTS2#	O <sub>4B</sub>	VDD3	RTSB#
126	SIN2	IN <sub>TS</sub>	VDD3	SINB
127	DSR2#	IN <sub>TS</sub>	VDD3	DSRB#
128	CTS2#	IN <sub>TS</sub>	VDD3	CTSB#

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Custom	GPIO Table3				<b>A</b>
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SSS X1

(SI number: SSS)

2013/10/25

PAGE 9: Modify VDDIO\_MEM Cap C465,C466,C470,C471,C475,C476 from 0.1uF to 1uF by AMD review.(SI number: SIO998344 )

PAGE 9: Modify VDDIO\_MEM Cap C488,C490 from 10uF to 1uF by AMD review.(SI number: SIO998344 )

PAGE 7: Change R378 from "I" to "NI" by AMD review.(SI number: SIO998344 )

PAGE 13: Change R199 from "I" to "NI" by AMD review.(SI number: SIO998344 )

PAGE 13: Change C204,C207,C210 from "NI" to "I" by AMD review.(SI number: SIO998344 )

PAGE 24: Change EMC devices D32,D34 from "NI" to "I" by AMD review.(SI number: SIO998344 )

PAGE 25: Change EMC devices D35,U27,U28 from "NI" to "I" by AMD review.(SI number: SIO998344 )

2013/10/28

PAGE33: Change R295 from 374ohm to 340ohm(APU15W),Change R295 from 510ohm to 402ohm(APU25W). Change R273 from 2.2kohm to 2kohm(APU15W).Change R273 from 3kohm to 2.4kohm(APU25W) by MSI Power solution. (SI number: SIO998347 )

PAGE33: Change R299 from 309ohm to 243ohm(APU15W),Change R299 from 374ohm to 280ohm(APU25W). Change R284 from 1.82kohm to 1.43kohm(APU15W).Change R284 from 2.21kohm to 1.65kohm(APU25W) by MSI Power solution. (SI number: SIO998347 )

PAGE 26: Modify FDO function connector from XU1 to SIO12 by HP review.(SI number: SIO998351 )

PAGE 8: Remove test pin APU\_48M .(SI number: SIO998354 )

2013/11/4

PAGE 19: Change C120,C318 from "NI" to "I" by LAN chip vendor review.(SI number: SIO1000167 )

PAGE 19: Add C512 for LAN chip power pin22 by LAN chip vendor review.(SI number: SIO1000167 )

PAGE 20: Change R357,R358 from 249ohm,510ohm to 0ohm by LAN chip vendor review.(SI number: SIO1000167 )

PAGE 20: Change R374 from 75ohm to 249ohm by LAN chip vendor review.(SI number: SIO1000167 )

PAGE 15: Change J65 connector from 2 parts to combo.(SI number: SIO1000170 )

2013/11/13

PAGE 18: Add U29,U30 for SATA ESD devices by AMD review.(SI number: SIO998344 )

2013/11/22

PAGE 7: Change R158 from "NI" to "I",R157 from "I" to "NI" for board ID.(SI number: SIO1004991 )

SSS X3

2014/01/17

PAGE 28 : change part laction from P3 to P2 . (SI number: SIO1009346 )

PAGE 24 : remove the P24 front usb connector . (SI number: SIO1010055 )

PAGE 20 : Swap lan led . (SI number: SIO1018271 )

PAGE 15 : Change spec from DVI to DP.(SI number: SIO1018016 )

2014/02/17

PAGE 6 : SERFACTS test with cable from COM1 to COM2 failed.Chnage R212 from 4.7kohn to 2.2kohm,and change R214 from 2.2kohm to 1kohm. (SI number: SIO1010041 )

2014/02/26


PAGE 7 : Modify board REV. ID from 00 to 01.Stuff R168 and remove R163. (SI number: SIO1027782 )

SSS X4

PAGE 7 : Change BRD revision from "All DVT" to "MVB,A" and modify schematic revision to A.Modify R163 from NI to I and modify R168 from I to NI. (SI: SIO1037960)

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