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46	RESERVED FOR USB3.0
47	BOM

IH61A-AHS TH61A REV 6.0

CPU:

Intel Sandy/Ivy Bridge processors in LGA1155 Package 95W

System Chipset:

Cugar Point H61

Main Memory:

Dual Channel/DDR-III*2(Max 16GB) 1066/1333

DDR3-1333 /1066 /800

Onboard Device:

Super I/O:IT8728

LAN:Realtek 8111EL

HD Codec:VT1708B 3 jacks

PCI BRIDGE:IT8893E

Power solution:

CPU Voltage Regulators:3phase by ISL6363

AXG voltage Regulators:1phase by ISL6363

VTT voltage Regulators:1Phase by uP6109

DDR voltage Regulators:1Phase by uP6109

Expansion Slots:

PCI EXPRESS 16X SLOT*2

PCI EXPRESS 1X SLOT*2

PCI SLOT*2

REAR IO:

PS/2 +2 layer USB2.0 Port

VGA + COM Port

DVI Port

2 layer USB2.0 + Gb RJ-45 Ports

Audio Jackets

Front I/O:

SATA2 * 4

USB Header * 2

CPU /System1

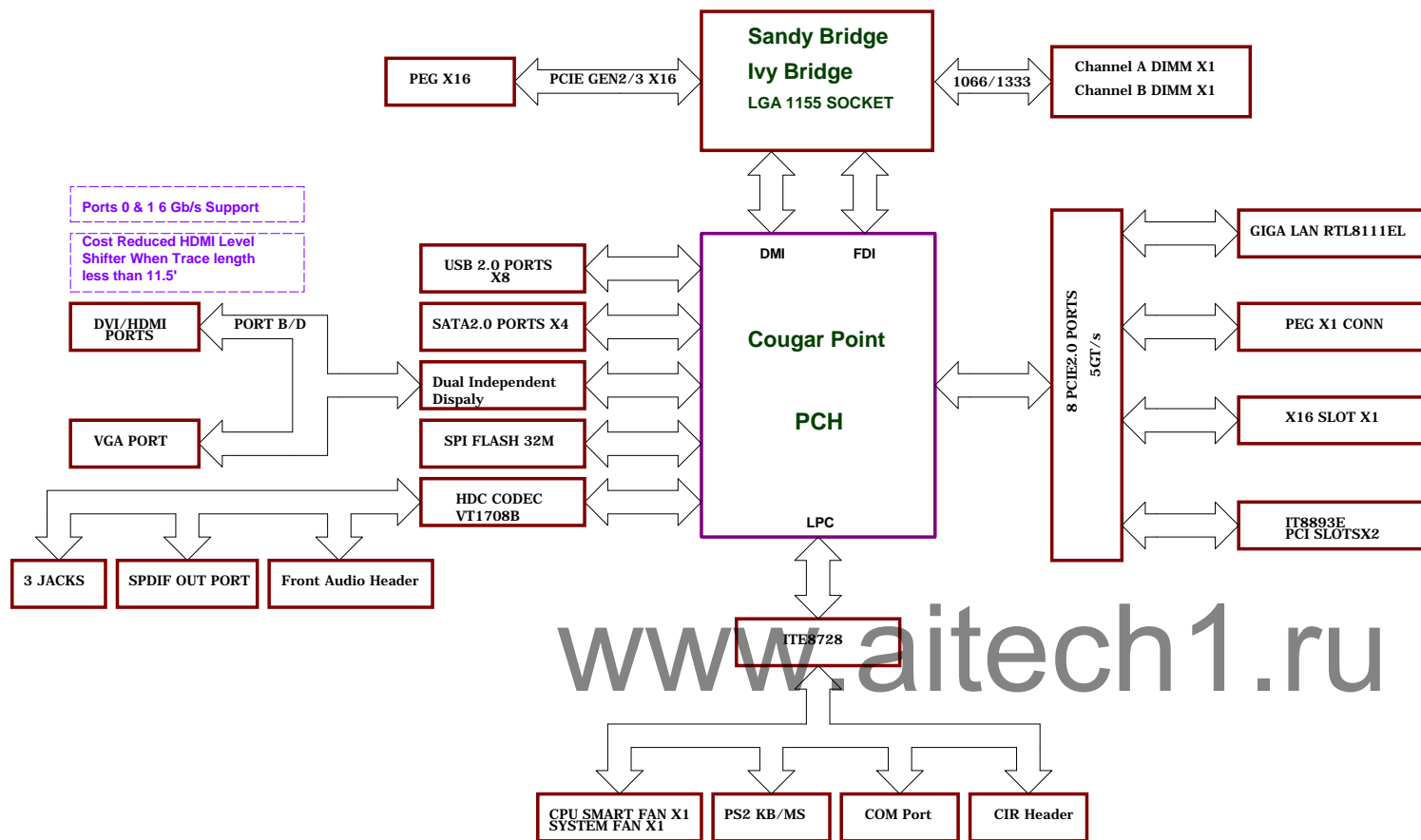
CIR Header

Front Audio Header & SPDIF Out 1

HW Engineer		Date	
HW Leader1		Date	
HW Leader2		Date	


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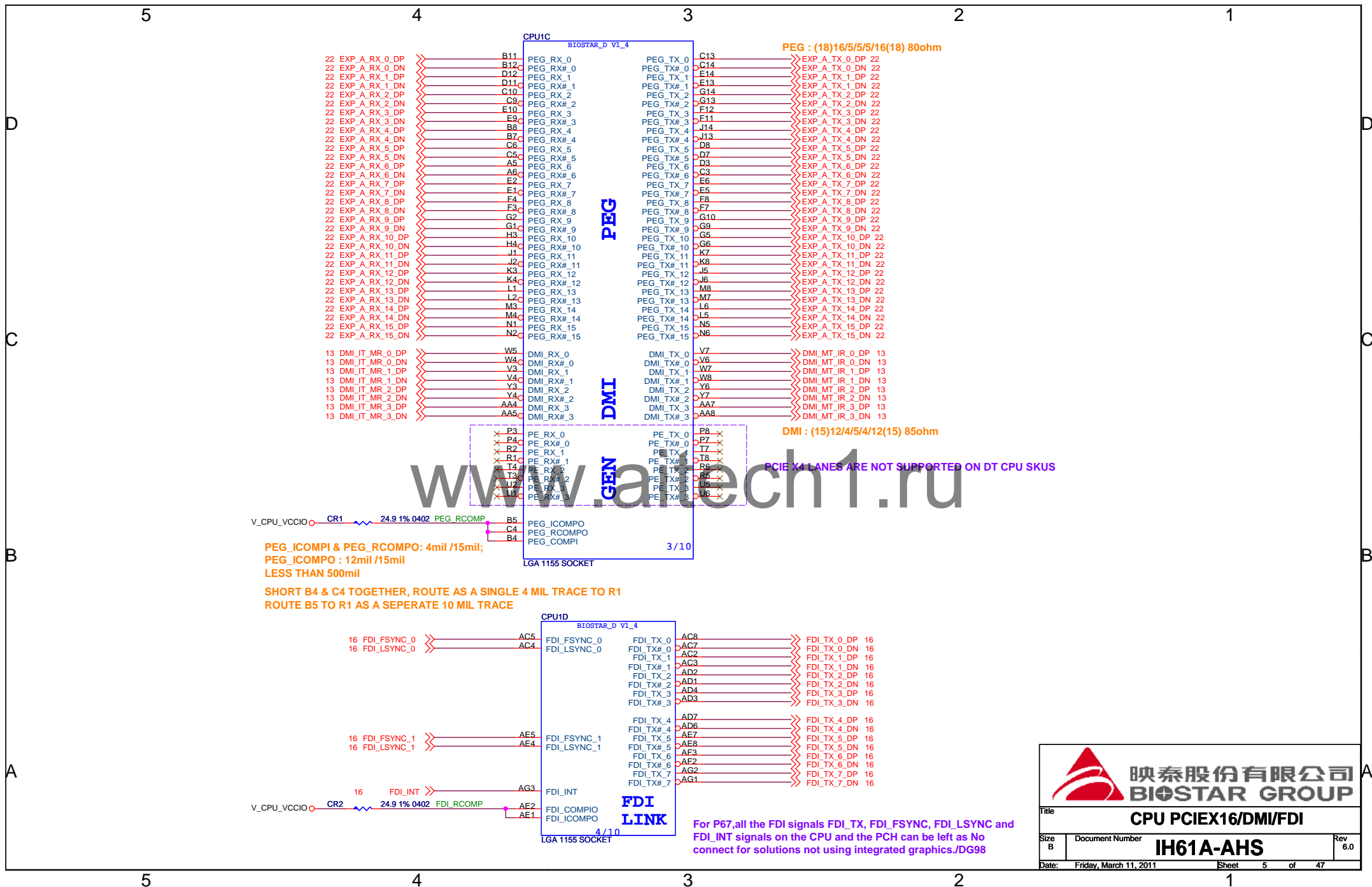
Feature Set	SKU Name(s)					
	Q67	Q65	B65	H67	P67	H61
PCI Express® 2.0 Ports	8	8	8	8	8	6 ⁹
PCI Interface	Yes	Yes	Yes	No ¹⁰	No ¹⁰	No ¹⁰
USB 2.0 Ports	14	14	12 ⁶	14	14	10 ⁷
Total number of SATA ports	6	6	6	6	6	4
• SATA Ports (6 Gb/s, 3 Gb/s, and 1.5 Gb/s)	2 ⁸	1 ⁵	1 ⁵	2 ⁴	2 ⁵	0
• SATA Ports (3 Gb/s and 1.5 Gb/s only)	4	5	5	4	4	4 ⁴
HDMI/DVI/VGA/DisplayPort*/eDP*	Yes	Yes	Yes	Yes	No	Yes
Integrated Graphics Support with PAVP	Yes	Yes	Yes	Yes	No	Yes
Intel® Rapid Storage Technology	AHCI	Yes	Yes	Yes	Yes	No
	RAID 0/1/5/10 Support	Yes	No	No	Yes	No
Intel® AT	Yes	Yes	No	No	No	No
Intel® AMT 7.0	Yes	No	No	No	No	No
Intel® Remote PC Assist Technology - Proactive	Yes	No	Yes	No	No	No
Intel® Remote PC Assist Technology - Reactive	No	No	Yes	Yes	No	No

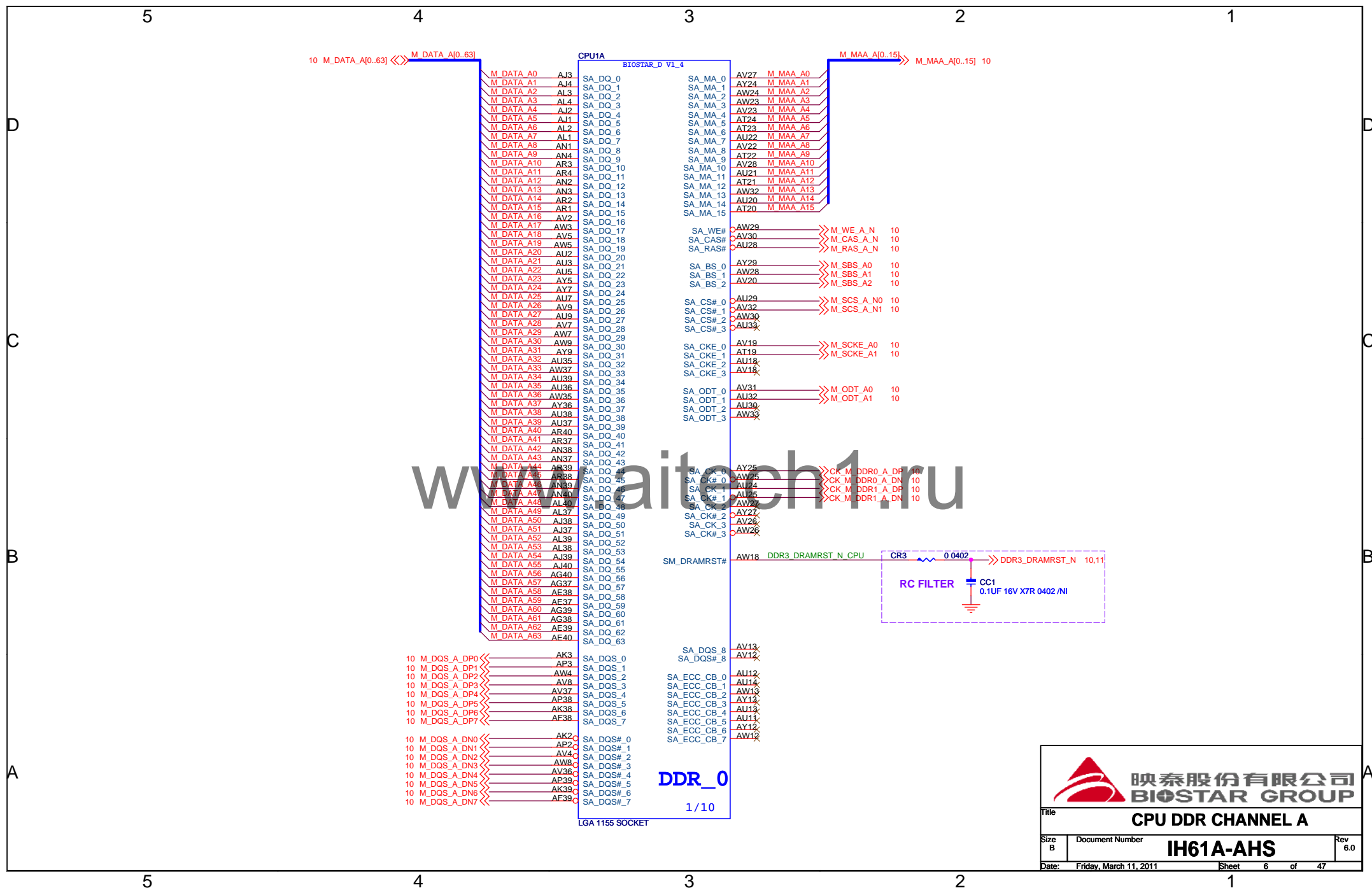
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DQ REMAPPING IMPLEMENTED
TO IMPROVE BREAKOUT AND
MINIMIZE CH-2-CH COUPLING

DQ REMAPPING IMPLEMENTED
TO IMPROVE BREAKOUT AND
MINIMIZE CH-2-CH COUPLING

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TitleCPU DDR CHANNEL A

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B

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5

4

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2

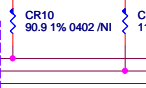
1

FROM CLK GEN.

FROM PCH

V_CPU_VCCIO

VRD12 INTERFACE

42 H_VIDSOK
42 H_VIDSOUT
42 H_VIDALERT_NTBD
NEAR PCH

V_1P8_SFR

CR14 2.2K 0402

H_SNB_N

CC2 0.1UF 16V Y5V 0402

NV_CLE

CR15 4.7K 0402

H_SNB_N

PUT INSIDE THE
CPU SOCKET

V_SM

CR18 1K 1% 0402

SNB_DDR_VREF

CR24 1K 1% 0402

CC3 0.1UF 16V Y5V 0402

NEAR CPU

H_PWRGD

CR32 1K 0402

CC55 0.1UF 16V Y5V 0402 /NI

PCH NO PECI SUPPORTED

CFG6	CFG5	PCIE CONFIG
1	1	1 X 16
1	0	2 X 8
0	1	RESERVED
0	0	X8,X4,X4

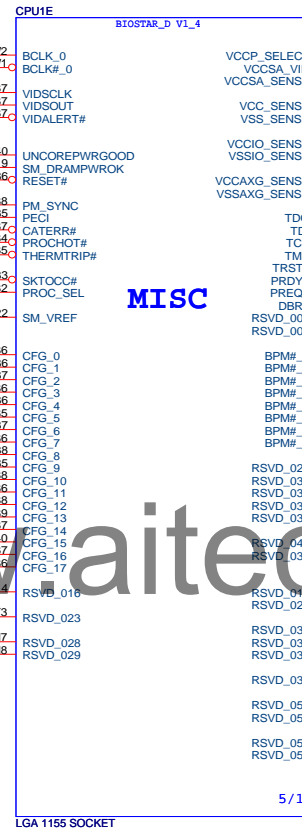
CFG	H	L	DESCRIPTION
2	NORM	RESERVED	PEGLANE REVERSAL[0],X16
5	*	*	SEL0
6	*	*	SEL1

MTP1 1 CK PE 100M MCP_DP
MTP2 1 CK PE 100M MCP_DN
MTP3 1 H_PWRGD
MTP4 1 SM_DROK
MTP5 1 PLTRST_CPU_N

NEAR CPU

MTP80 1 VCCIO_SENSE
MTP81 1 VSSIO_SENSE

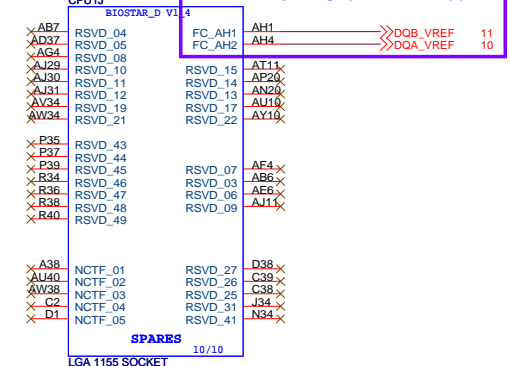
NEAR CPU



MISC

LGA 1155 SOCKET

for Ivy bridge processor support



LGA 1155 SOCKET

V_CPU_VCCIO

H_THERMTRIP_N CR17 51 0402 /NI
H_PROCHOT_N CR19 51 0402
H_CATERR_N CR20 1K 0402 /NI
H_PECI CR22 1K 0402 /NI
H_PWRGD CR23 51 0402 /NI

H_TDI CR21 51 0402
H_TDO CR26 51 0402
H_TMS CR27 51 0402

H_TRST_N CR31 51 0402
H_TCK CR25 51 0402

H_DRAMPWRGD CR34 1K 0402

V_SM

CPU RESET LOGIC



CPU MISC			
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2

1

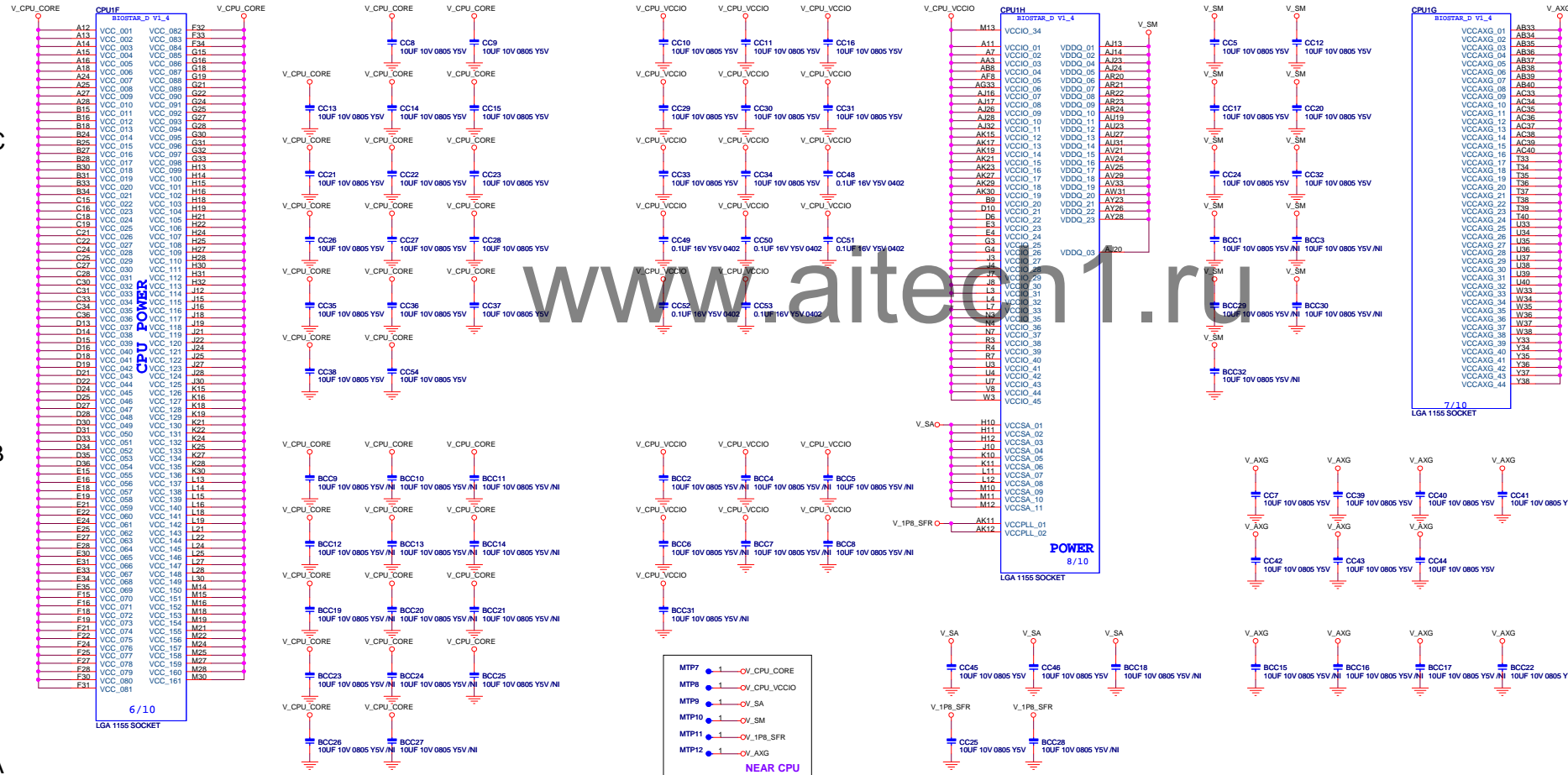
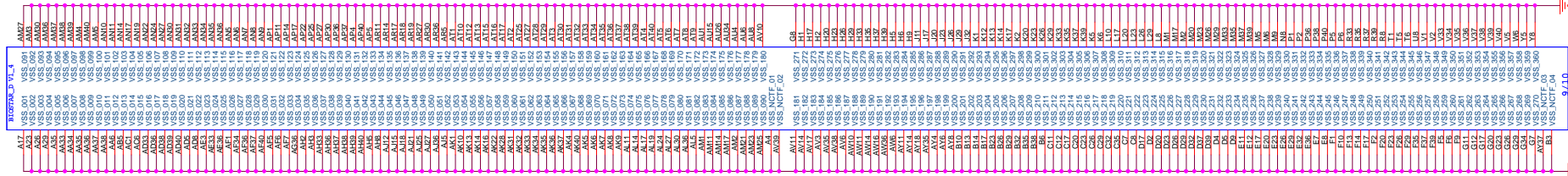
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CPU11
LGA 1155 SOCKET

5

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D

D

C

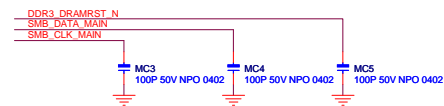
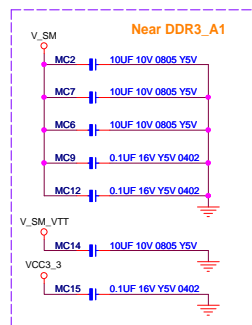
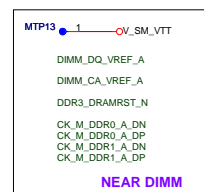
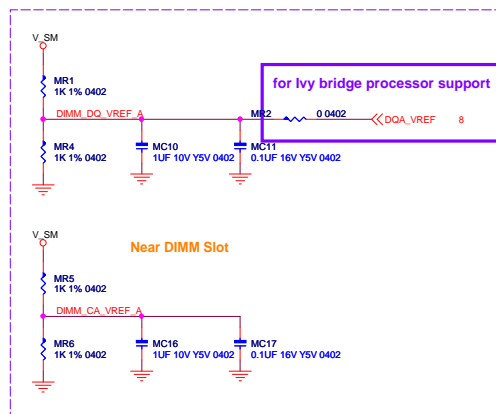
C

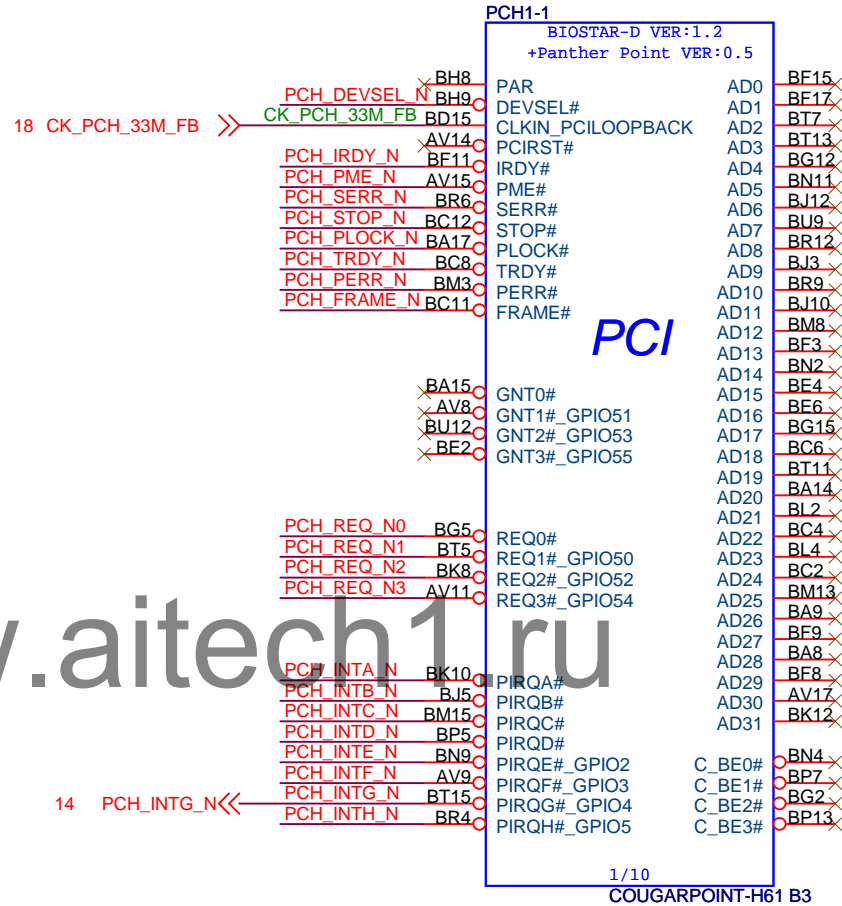
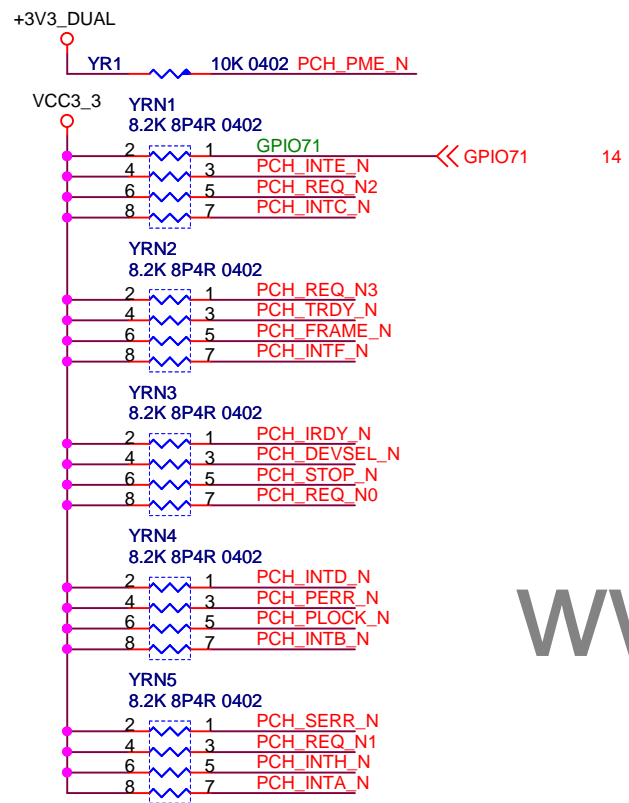
B

B

A

A






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WEAK INTERNAL PULLUPS ON GNT*.DEFAULT SPI BOOT DEVICE

GNT1	GNT0/SATA1GP	BOOT DEVICE
0	0	LPC
0	1	NANO
1	0	PCI
1	1	SPI



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Title

PCH PCI

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D

D

C

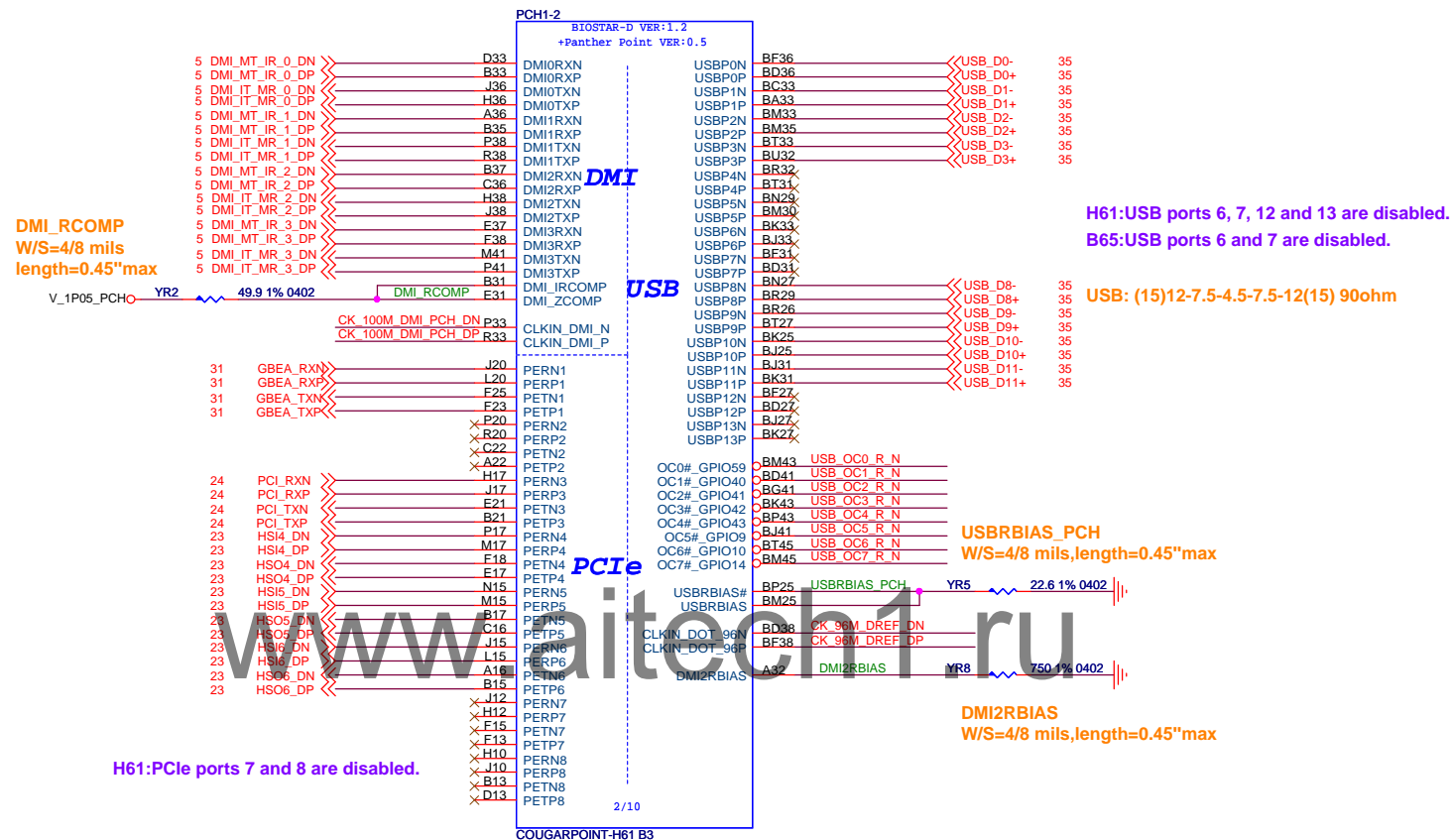
C

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B

A

A



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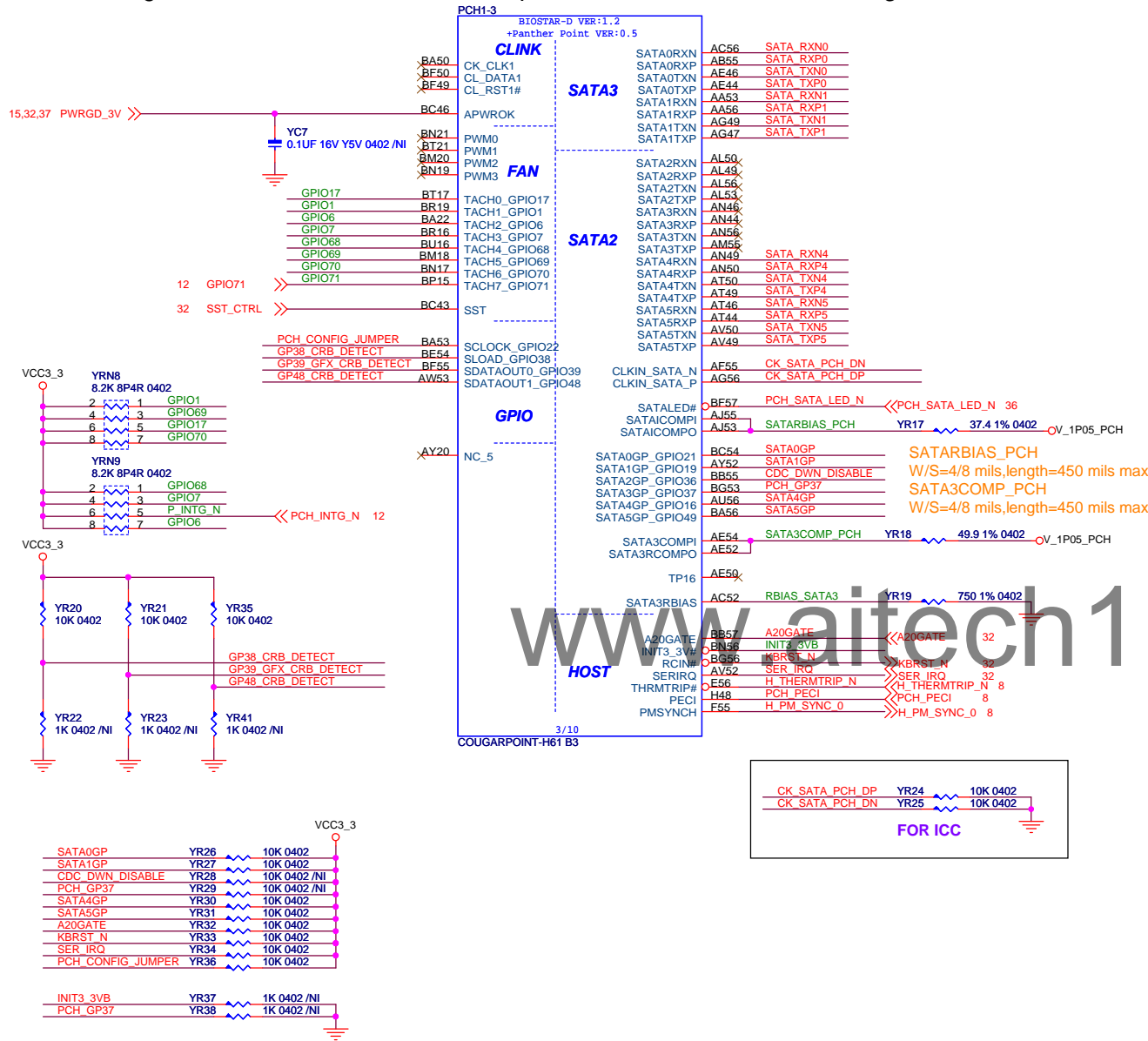
A

D

C

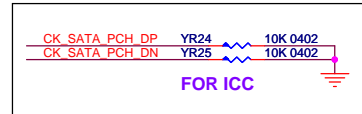
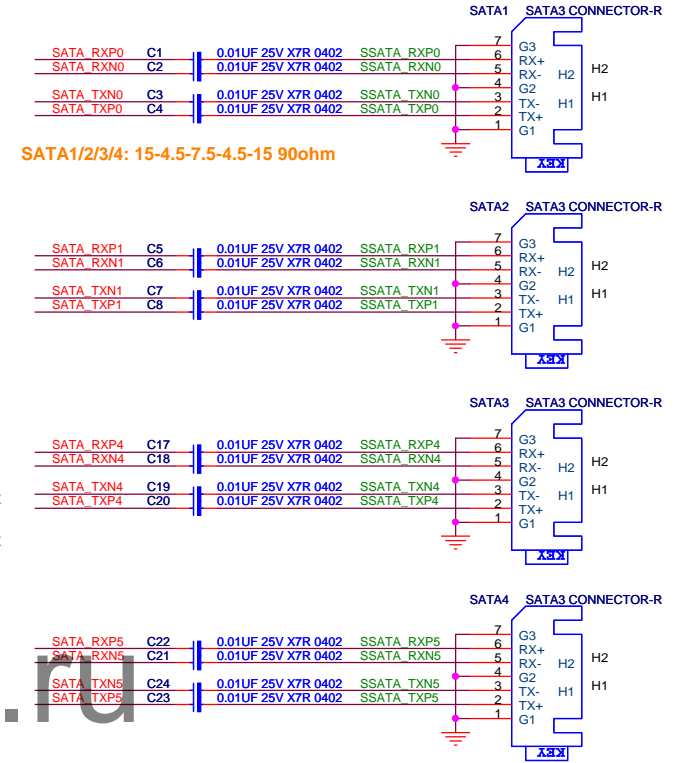
B


A



H61 SKU NOT SUPPORT SATA3.0,AHCI,RAID
H61: SATA2 & SATA3 are disable

SATA1/2/3/4: 15-4.5-7.5-4.5-15 90ohm



	
Title PCH CLINK/SATA/CPU HOST	
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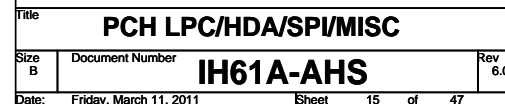
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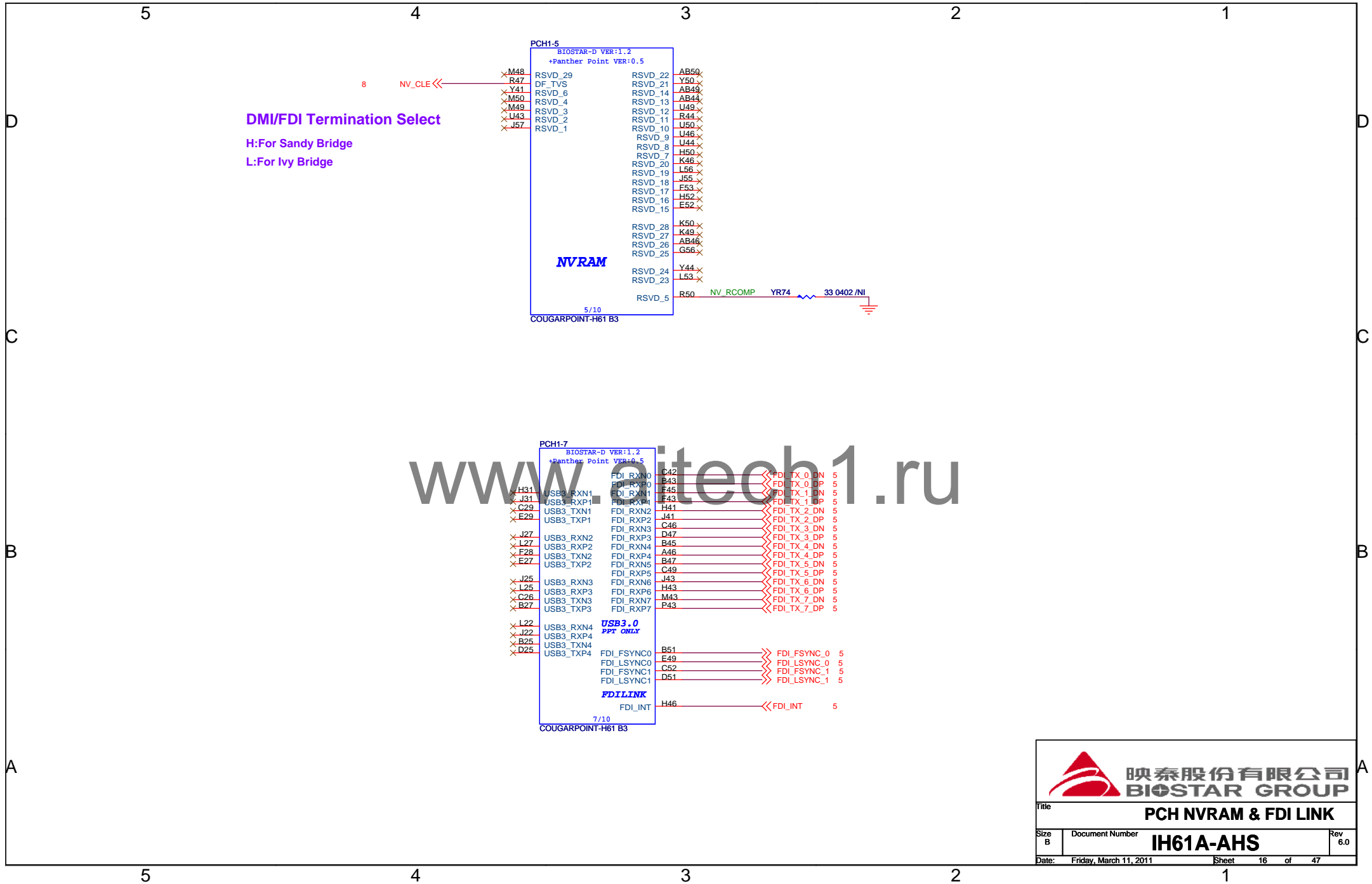
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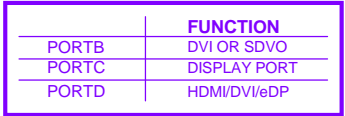
3

2

1







If DisplayPort interface is not implemented, the Main Link, aux channel differential signals and HPD signals can be left as No Connects./DG108



5

4

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2

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D

D

C

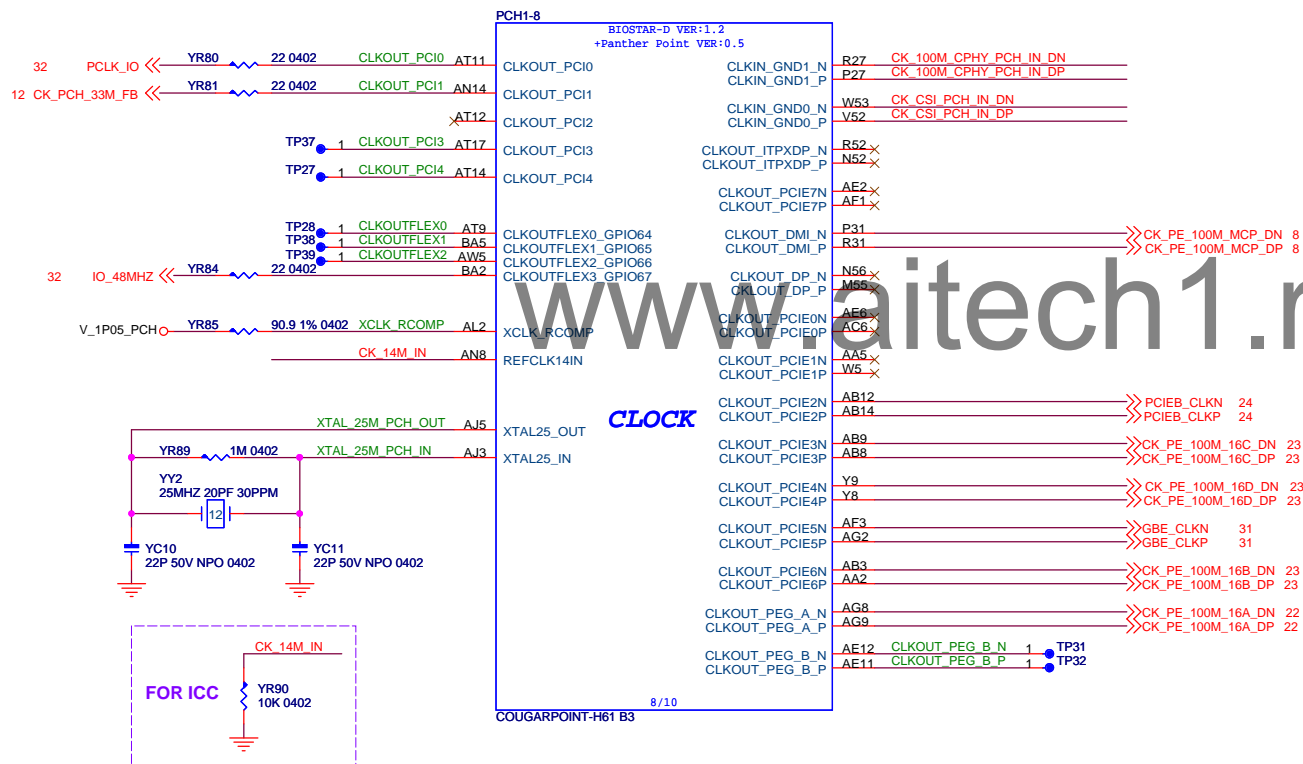
C

B

B

A

A



 映泰股份有限公司 BIOSTAR GROUP		
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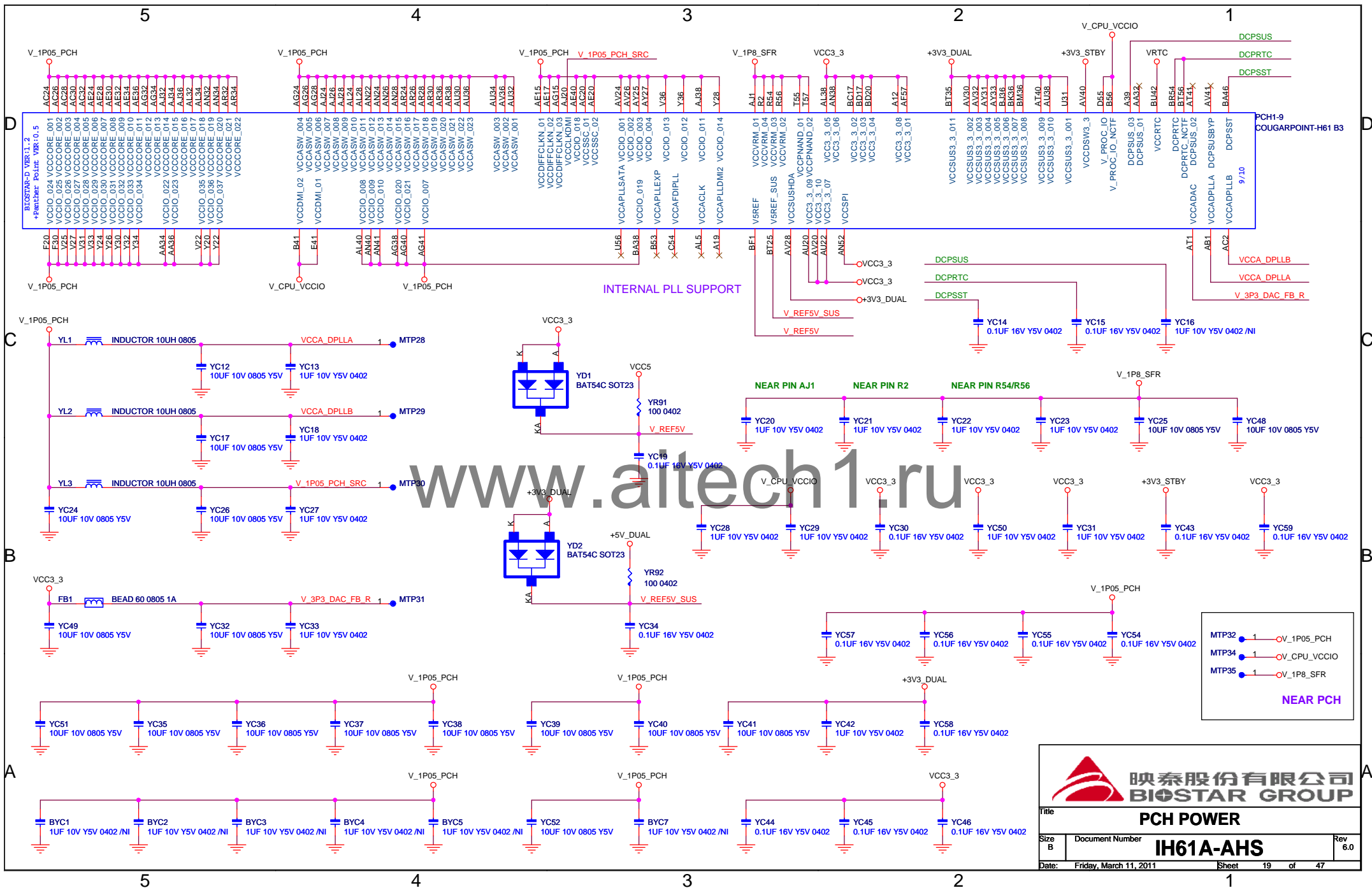
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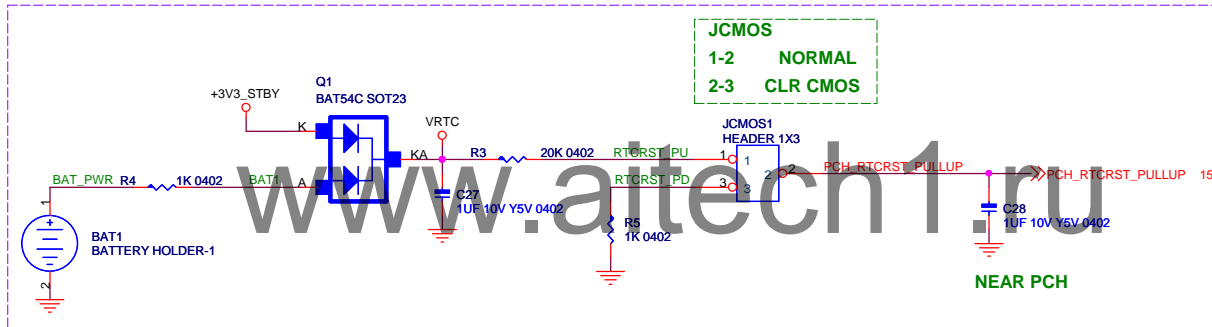
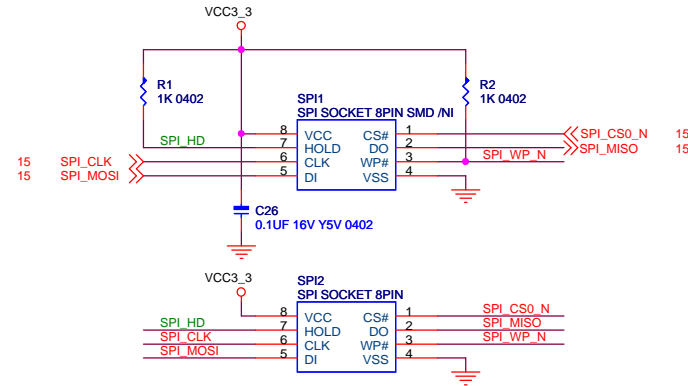
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3

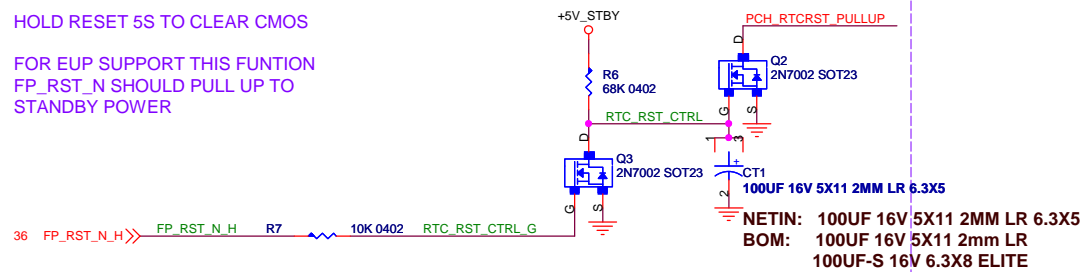
2

1

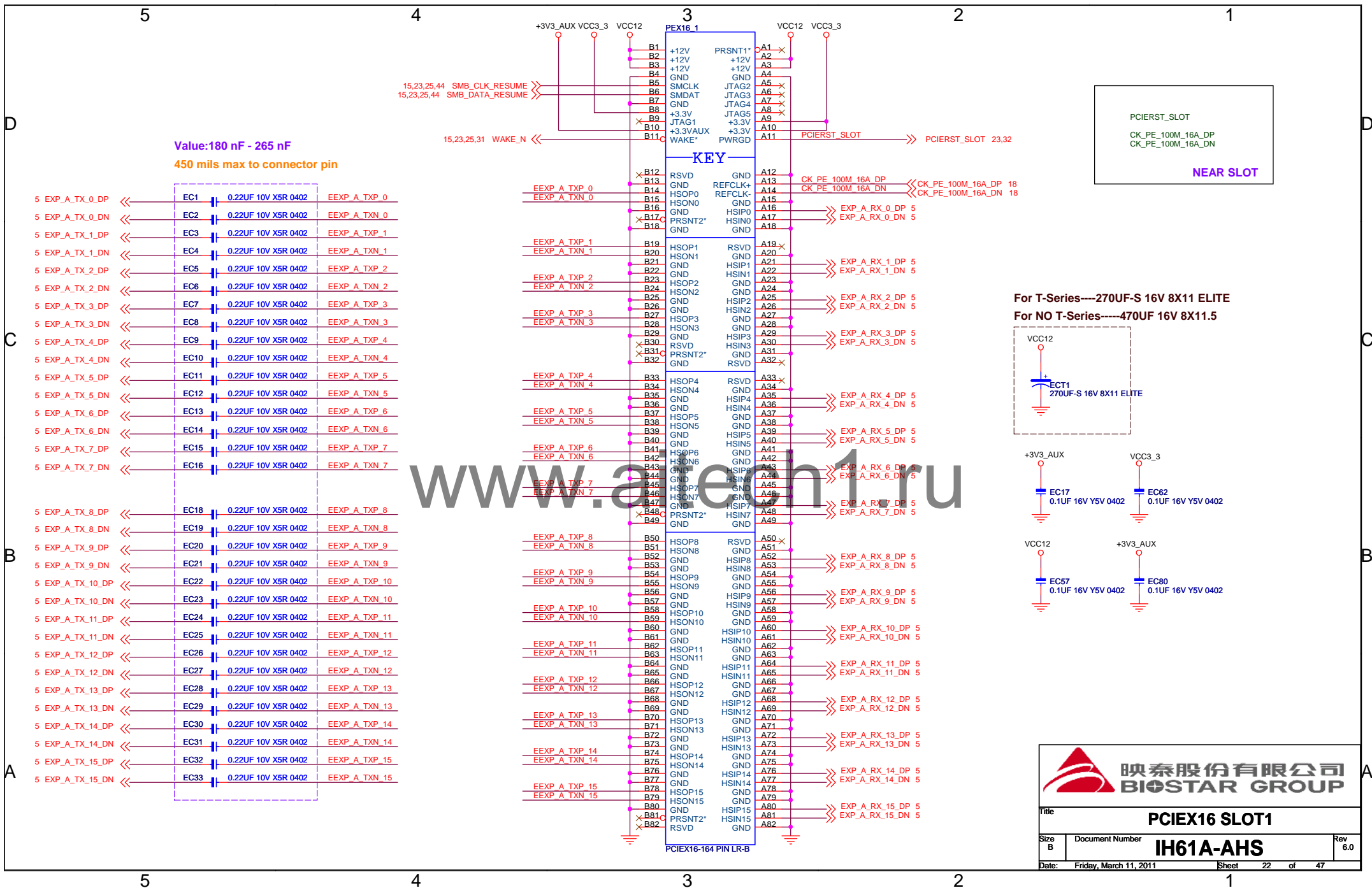


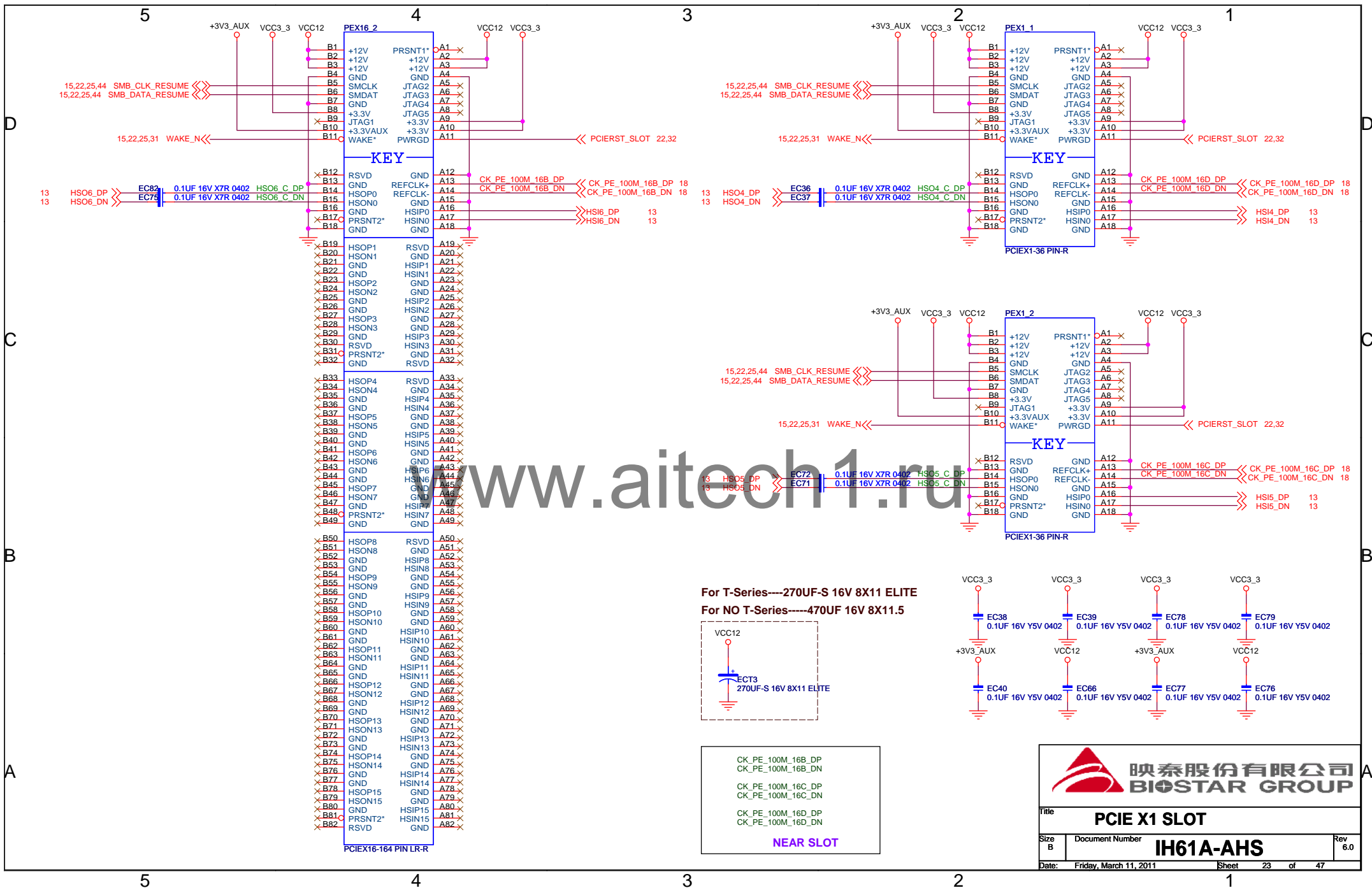


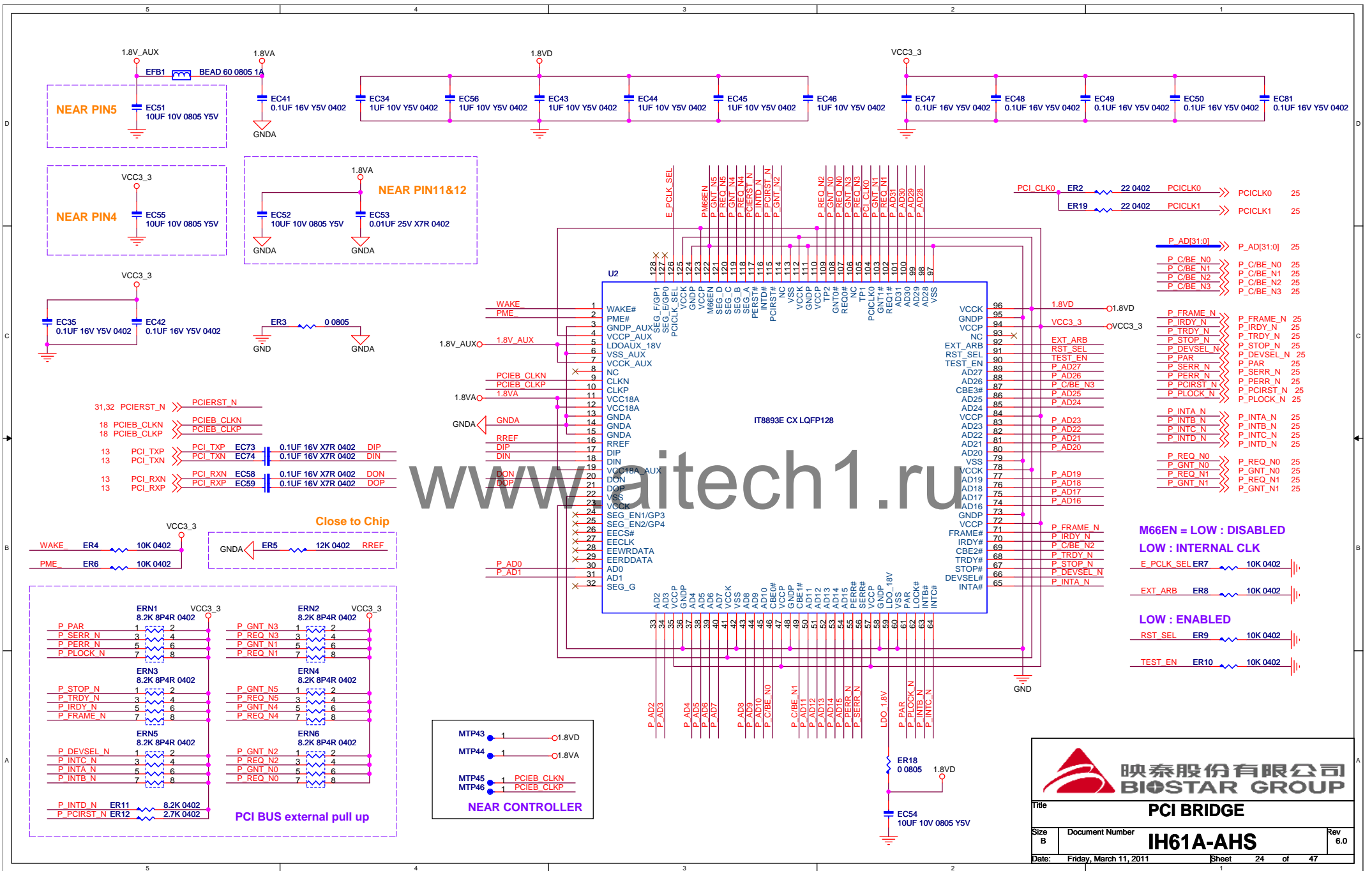
HOLD RESET 5S TO CLEAR CMOS
FOR EUP SUPPORT THIS FUNTION
FP_RST_N SHOULD PULL UP TO
STANDBY POWER

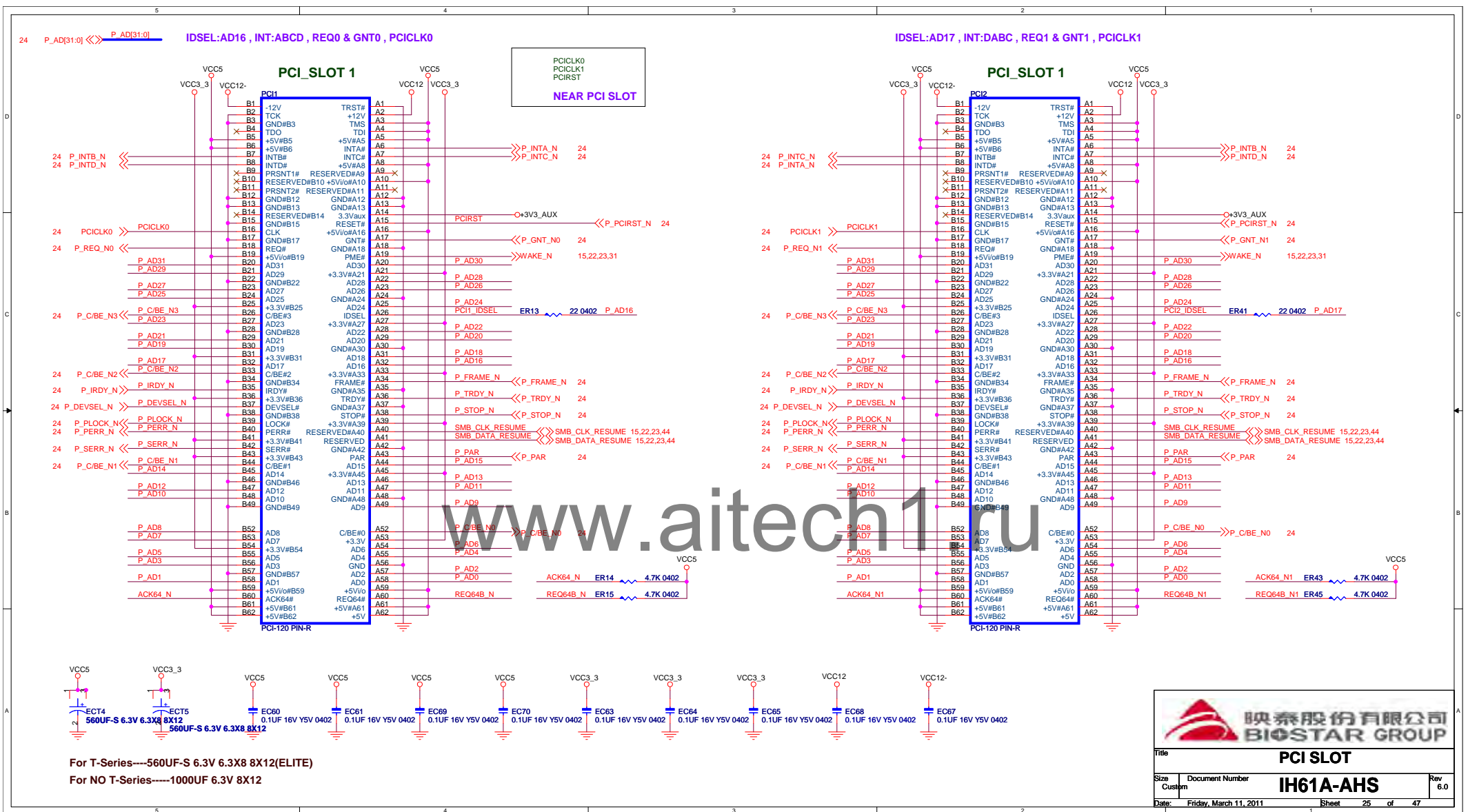


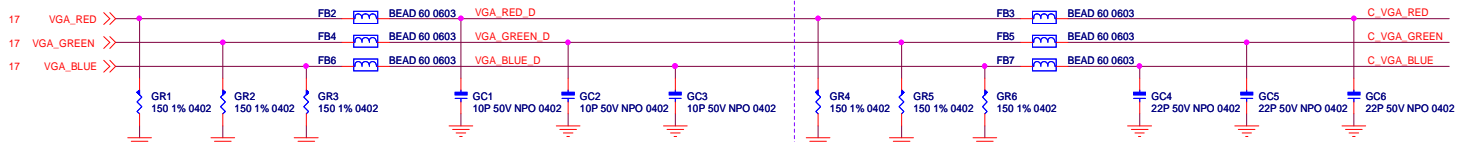
MTP60 1 PCH_RTCRST_PULLUP
MTP95 1 FP_RST_N_H









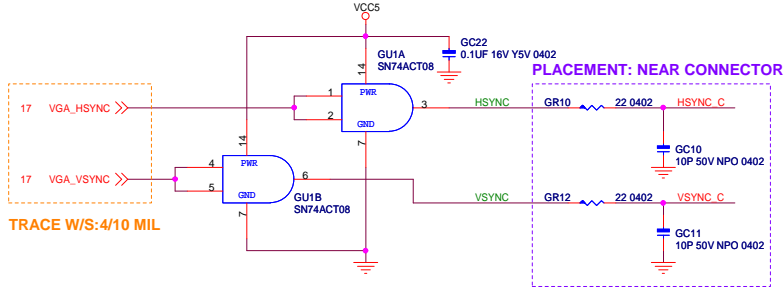


TRACE W/S: 7.5/5 MIL

PLACEMENT: NEAR R/G/B SOURCE

TRACE W/S: 4/25 MIL (4/30 BETTER)

PLACEMENT: NEAR CONNECTOR

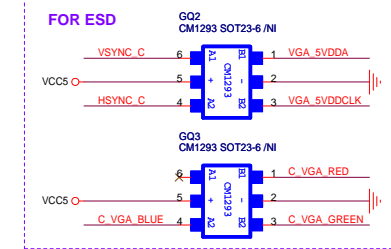
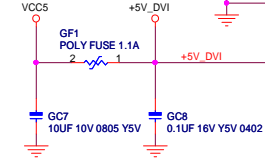
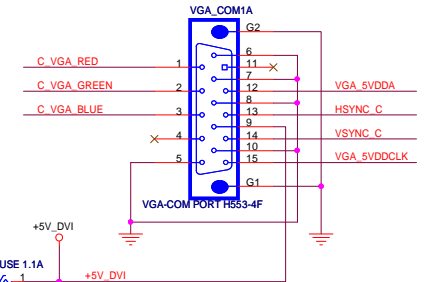


TRACE W/S: 4/10 MIL

PLACEMENT: NEAR CONNECTOR

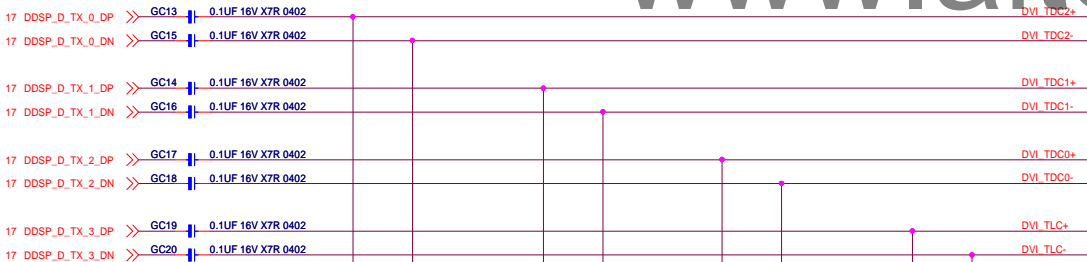
PLACEMENT: NEAR CONNECTOR

PLACEMENT: NEAR CONNECTOR

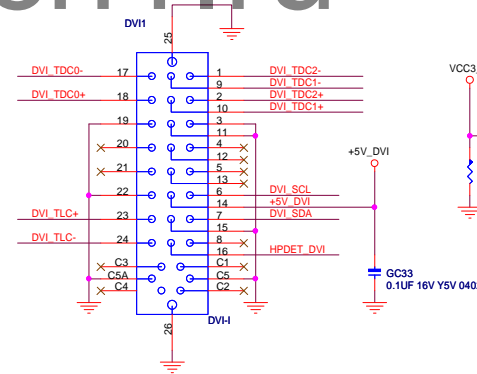


D_SUB

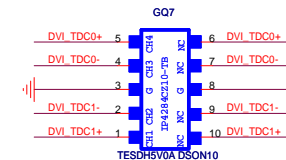
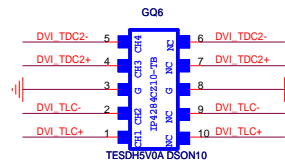
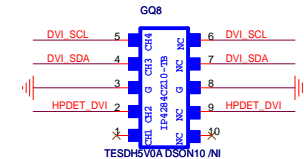
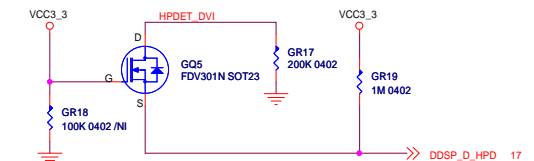
DVI



DVI CONNECTOR



LEVEL SHIFTER
HPD +5V SWITCH TO +3.3V




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Title: **VGA/DVI CONNECTOR**


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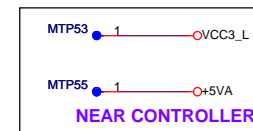
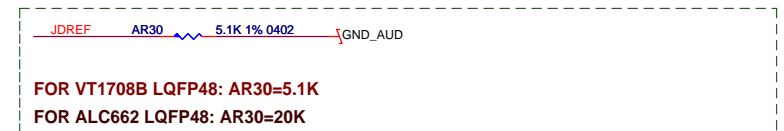
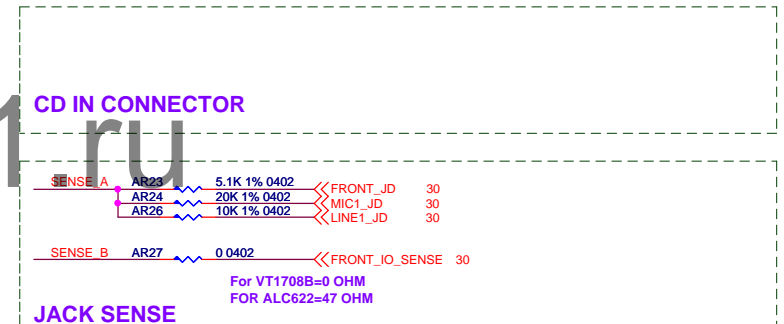
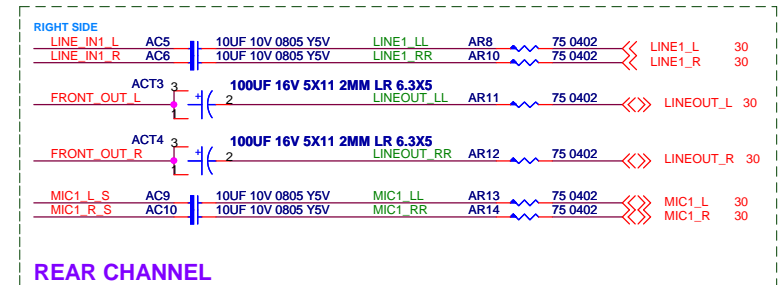
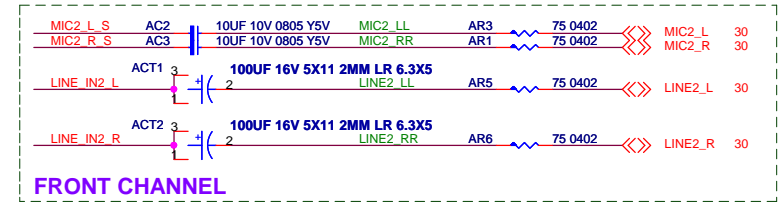
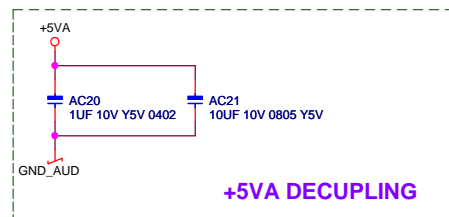
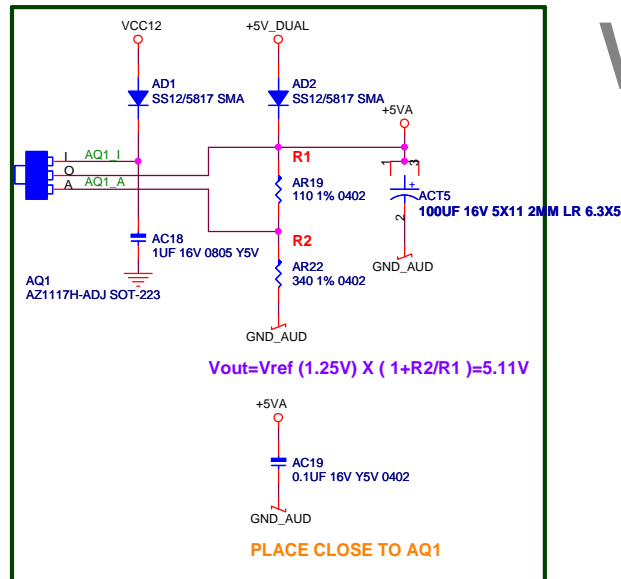
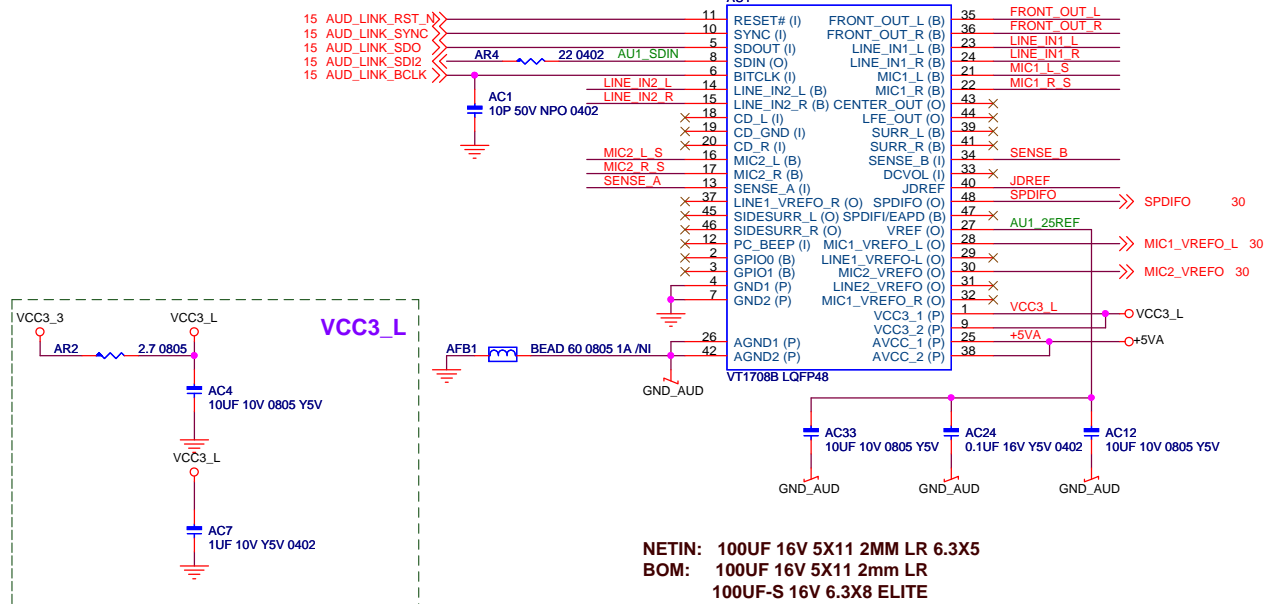
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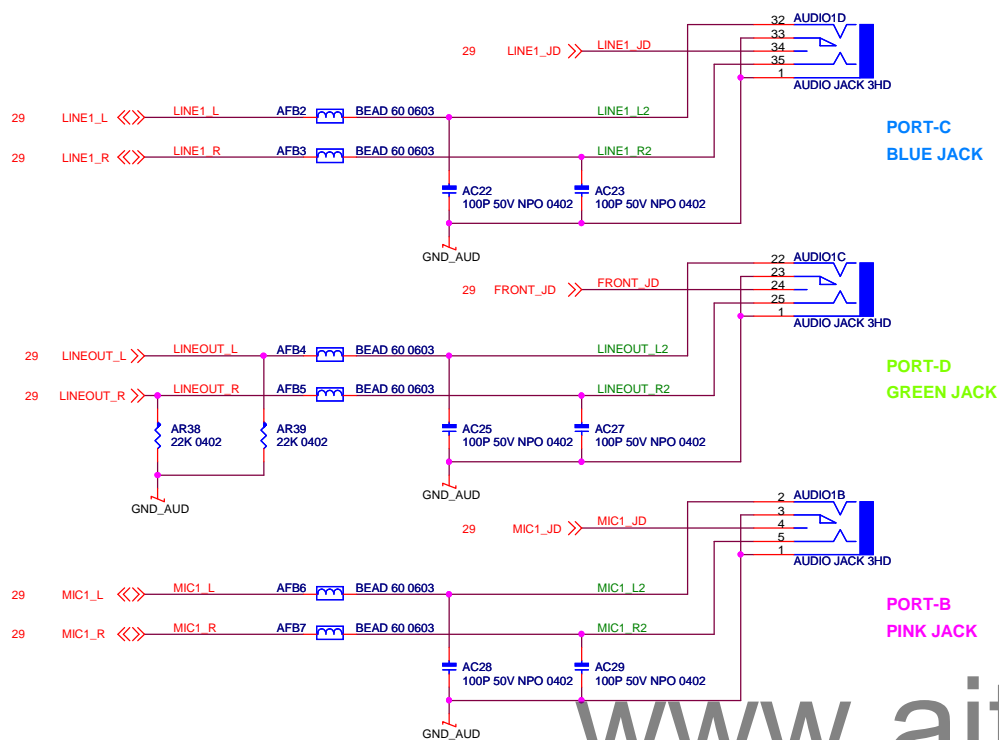
		
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AUDIO PART: A+Reference



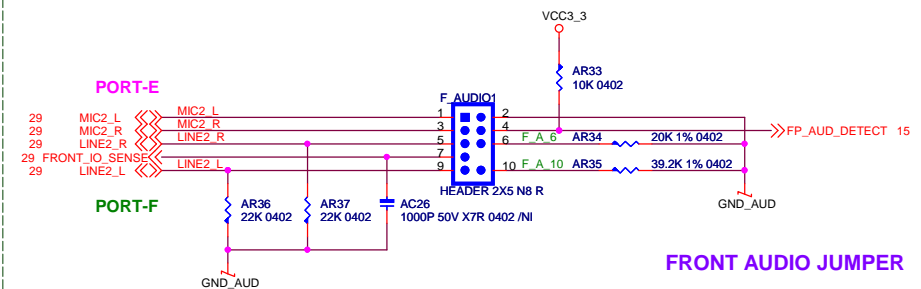


PORT-C
BLUE JACK

PORT-D
GREEN JACK

PORT-B
PINK JACK

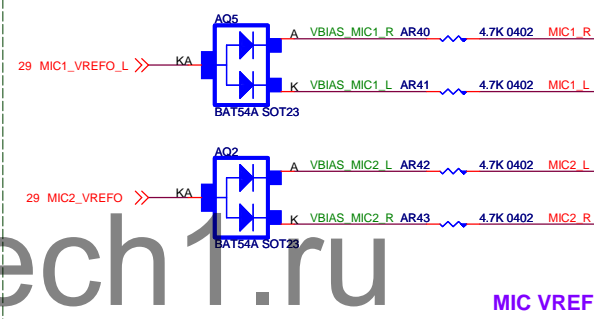
REAR AUDIO JACKS



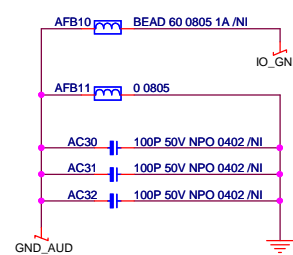
FRONT AUDIO JUMPER



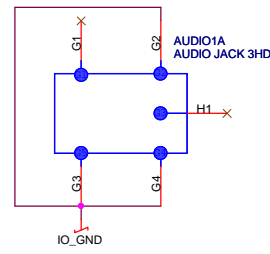
SPDIF CONNECTOR & JUMPER



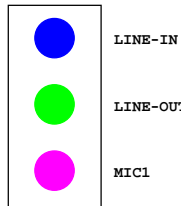
MIC VREF



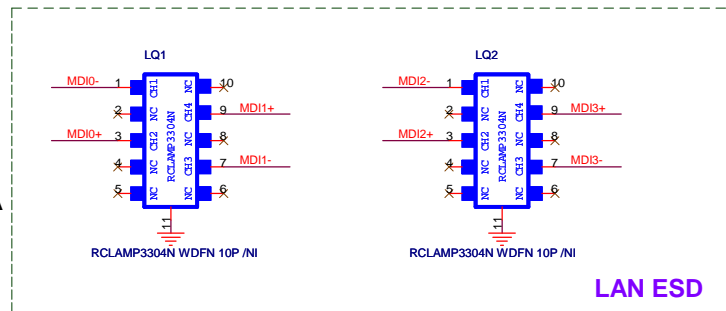
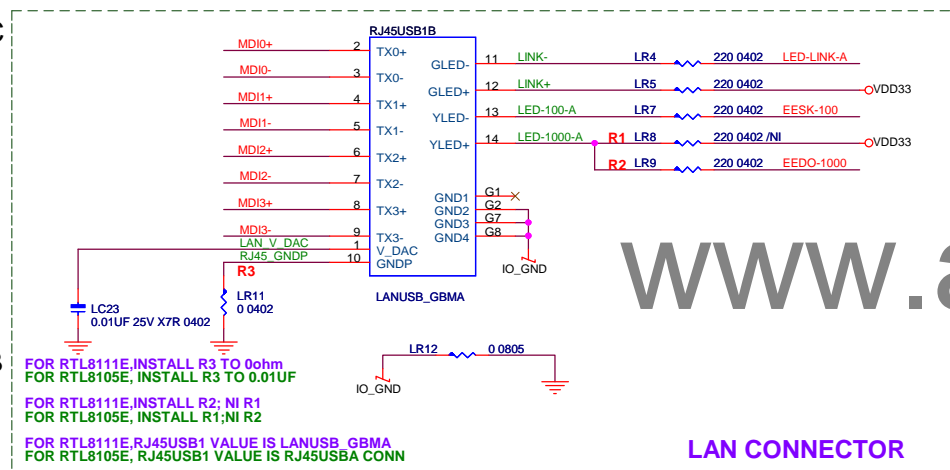
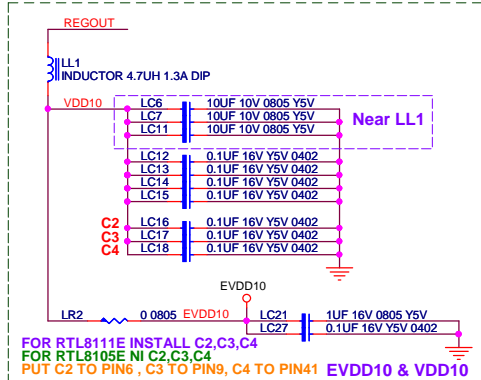
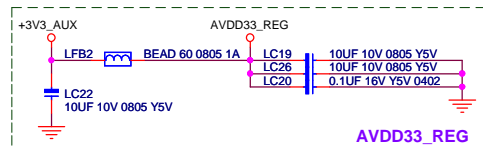
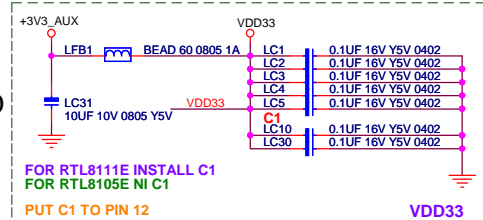
EMI BRIDGE



AUDIO JACKS SHEEL

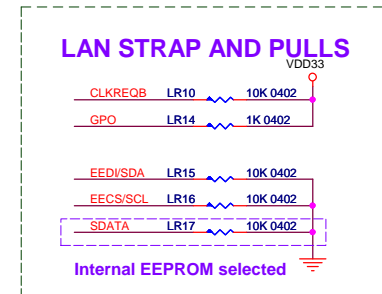
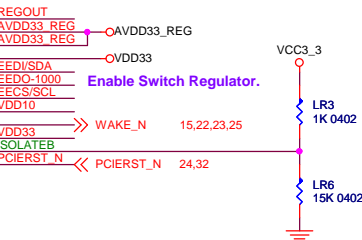
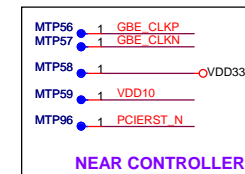
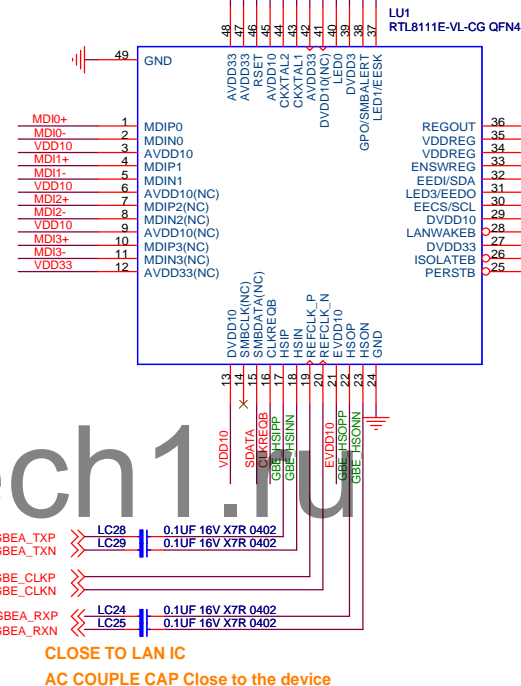
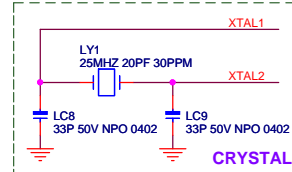


LAN PART: L+Reference



COMPONENT CONTRAST LIST

LAN PARTS	C1	C2	C3	C4	R1	R2	R3	RJ45 CONN
RTL8111E	O	O	O	O	X	O	0ohm	LANUSB_GBMA
RTL8105E	X	X	X	X	O	X	0.01uF	RJ45USBA CONN



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File: ALC 8111E/8105E

Size: Custom Document Number: IH61A-AHS Rev: 6.0

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VCC3_3

SR11 4.7K 0402 RTS1# JP4

SR38 4.7K 0402 SOUT1 JP3

SR50 4.7K 0402 DTR1# JP2

SR55 1K 0402 PCIRSTIN#

SR1 1K 0402 PWRGD 30

SR2 1K 0402 / NI PWRGD 50

SR4 1K 0402 PWRGD 150

SR6 4.7K 0402 ATX_PG

SR5 4.7K 0402 / NI L_FRAME_N

+3V3_STBY

SR3 1K 0402 5VSB_CTRL

+3V3_DUAL

SR7 4.7K 0402 R11#

SR8 4.7K 0402 RI2_SIO

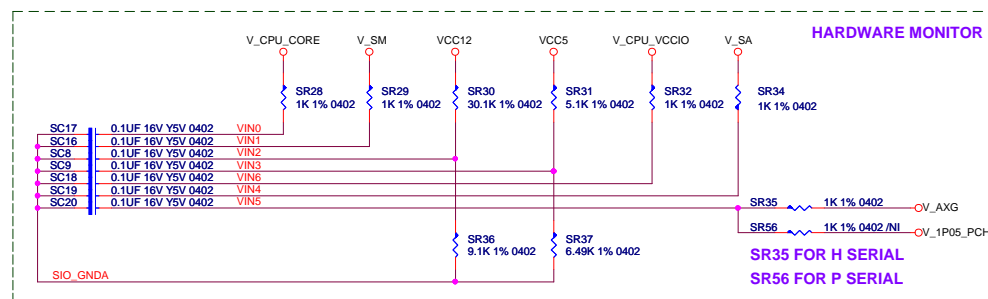
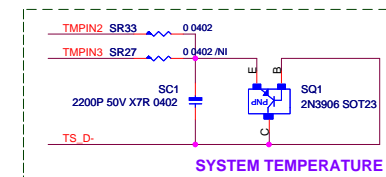
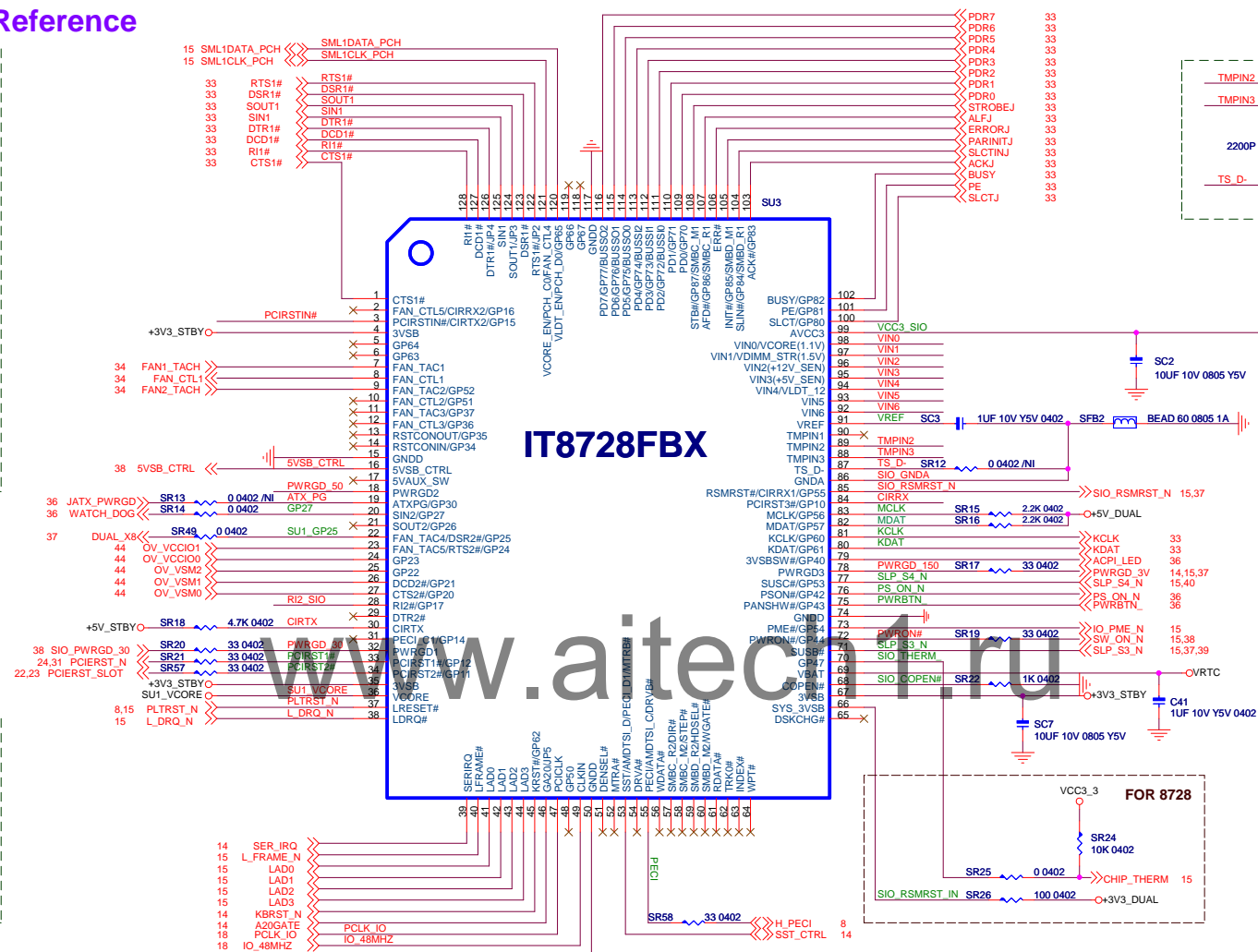
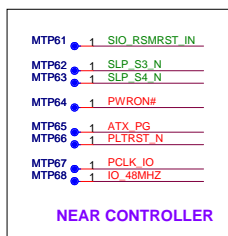
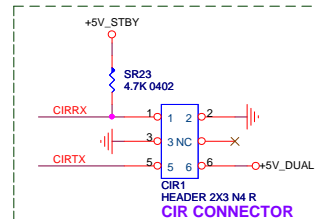
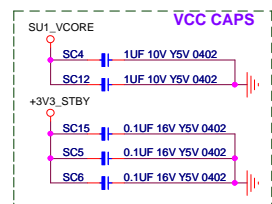
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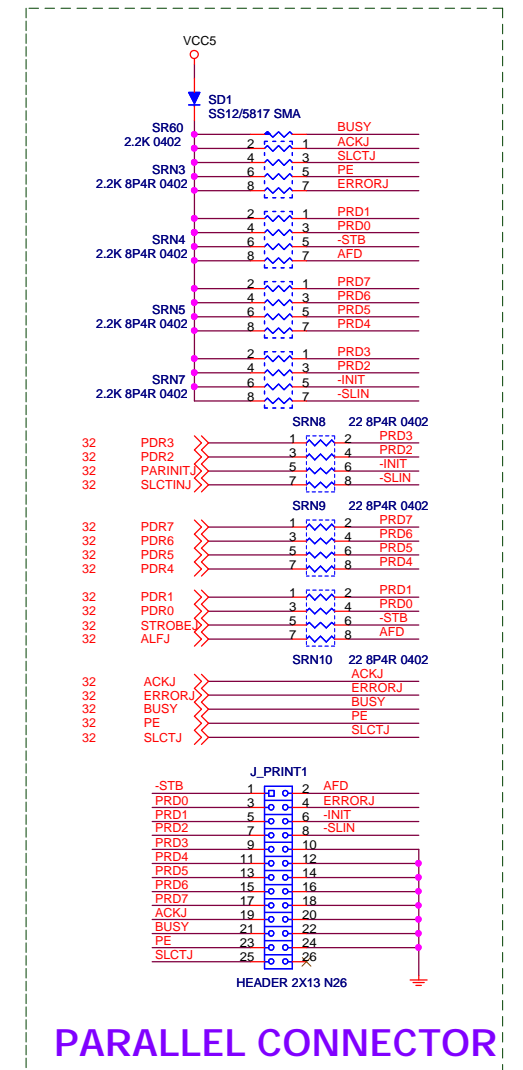
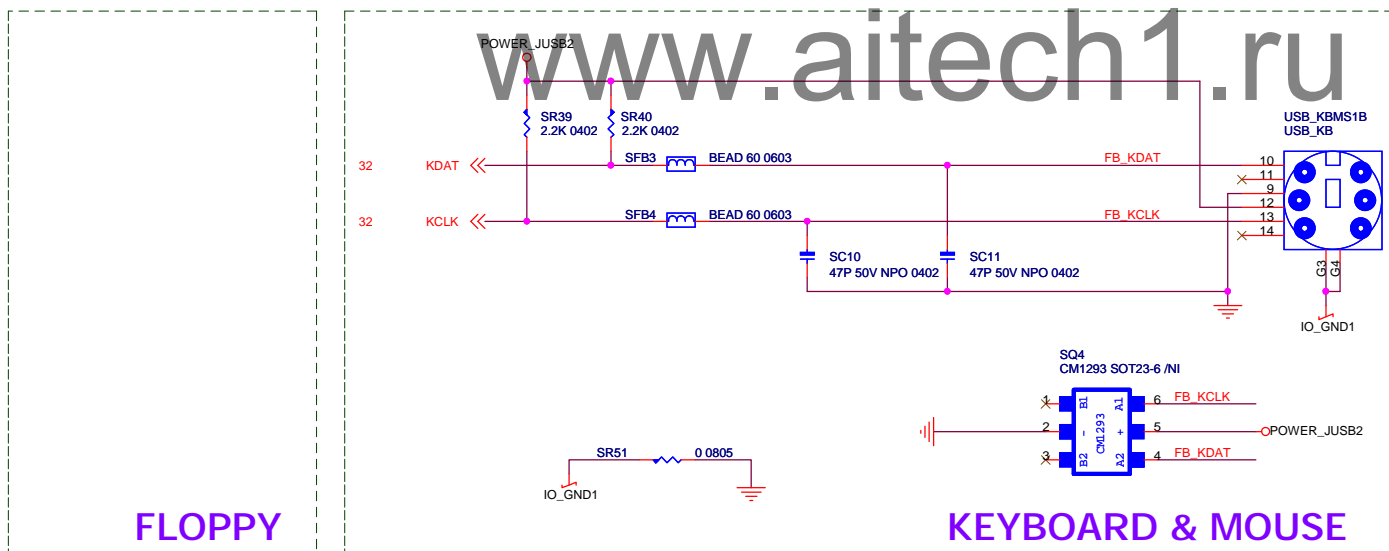
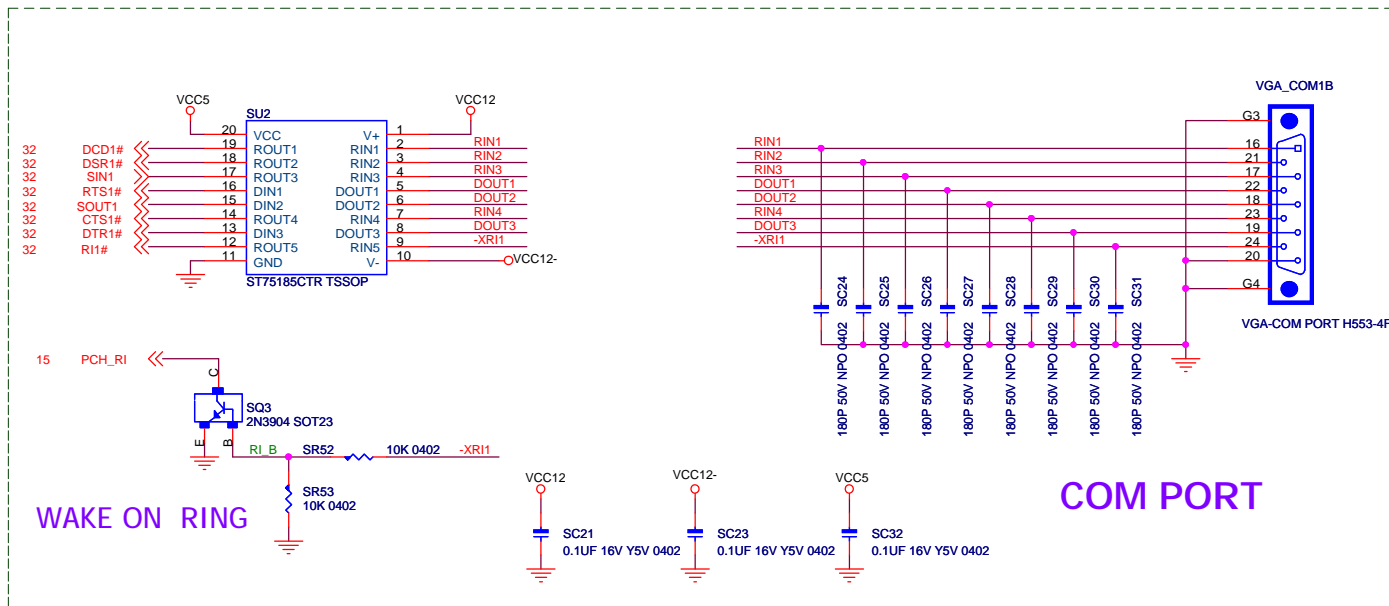
SR10 4.7K 0402 DUAL_X8

+3V3_STBY

SR54 10K 0402 / NI PWRON# JP8

SUPERIO PULLS





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BIOSAR GROUP

Title: **COM / PS2 CONN**

Size: **B**

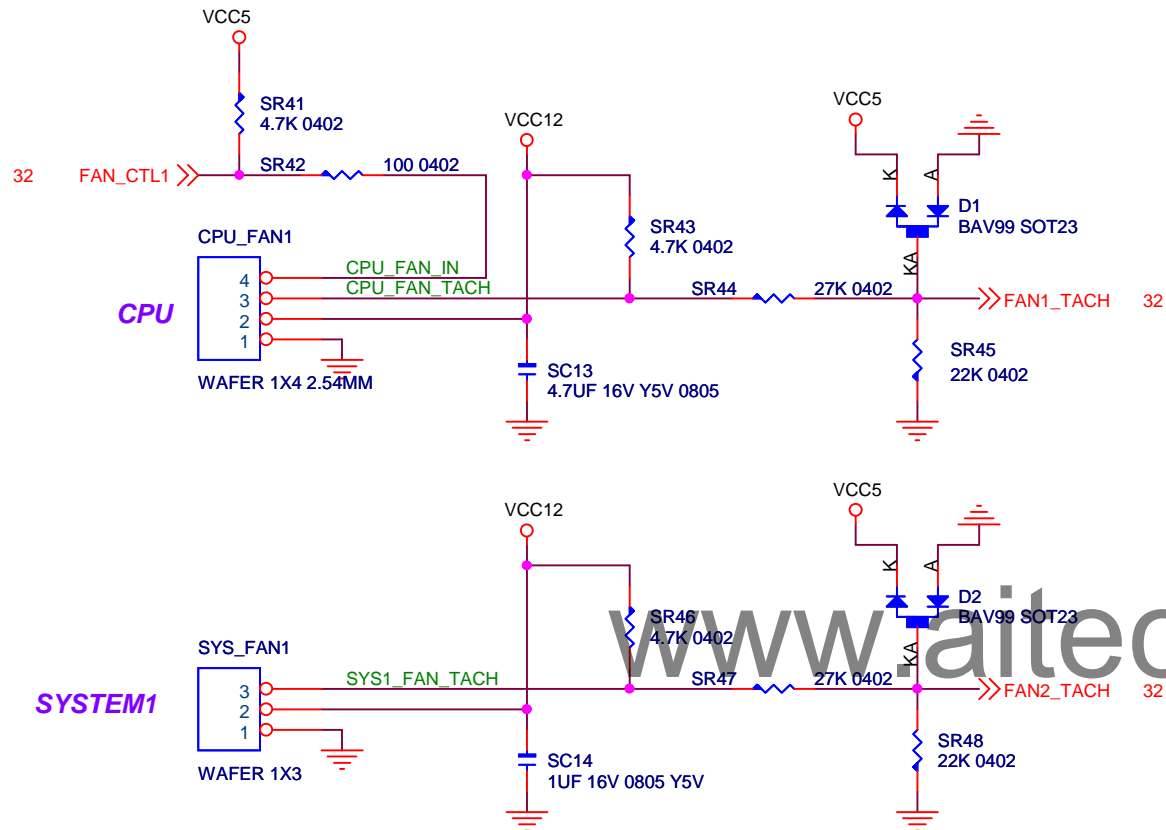
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Date: **Friday, March 11, 2011**

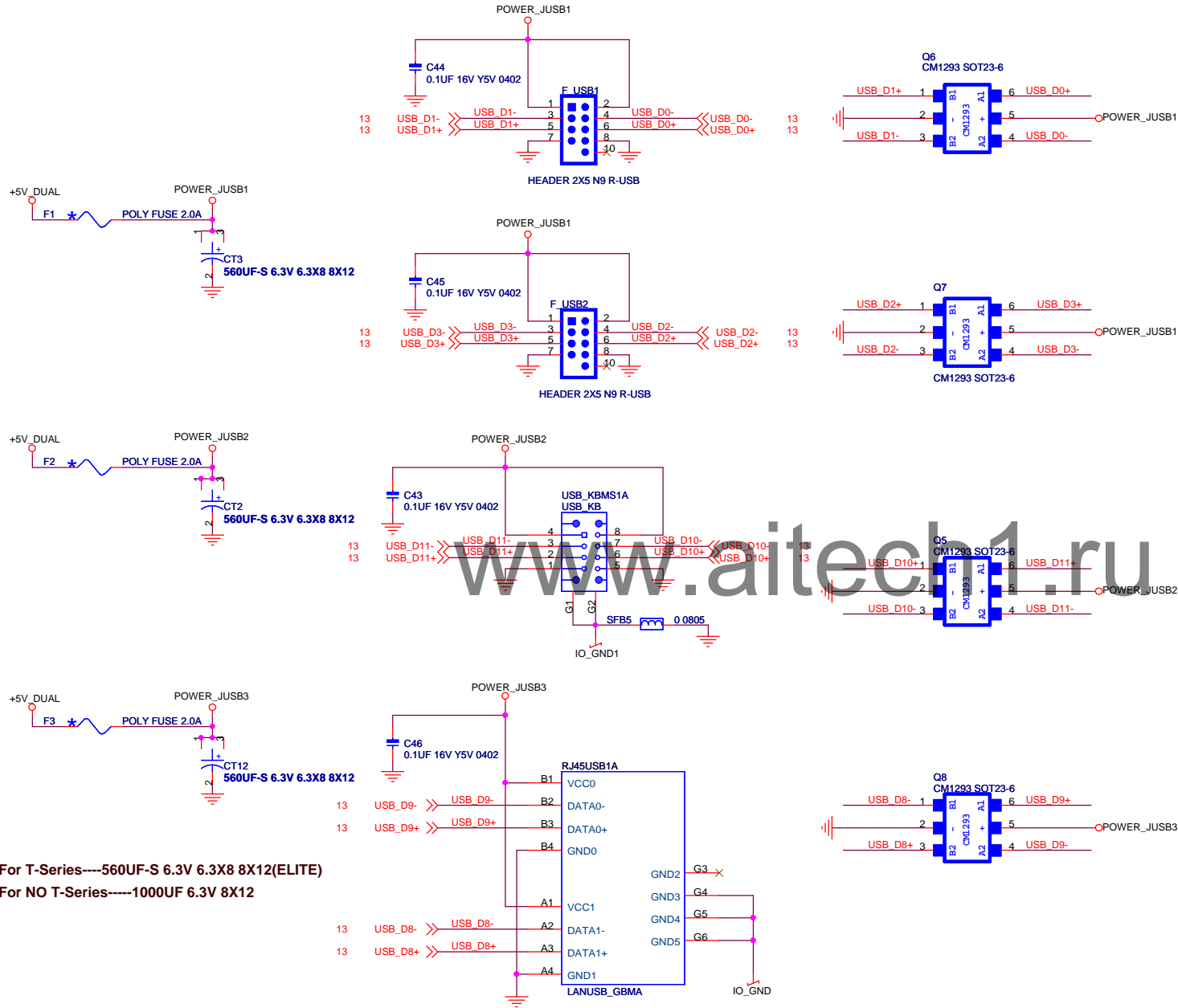
Sheet: **33** of **47**

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CPU FAN/SYSTEM FAN1

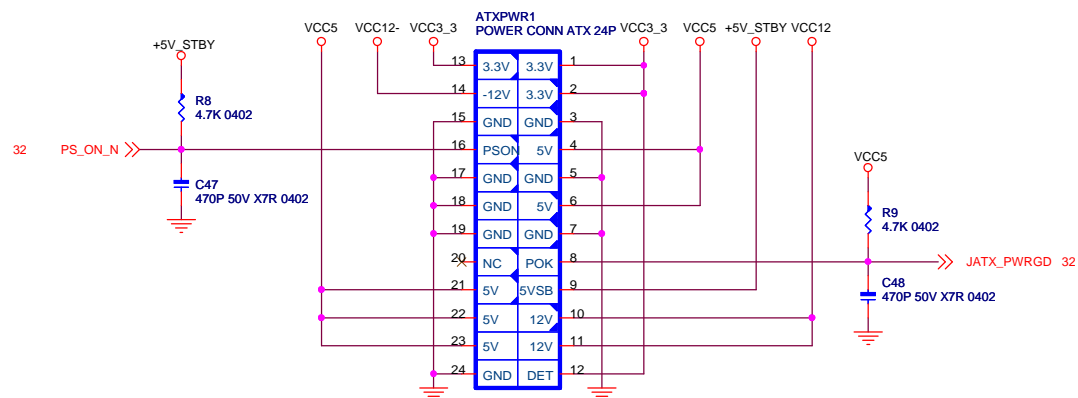


		
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Title HW MONITOR/FAN CONTROL		
Size A	Document Number IH61A-AHS	Rev 6.0
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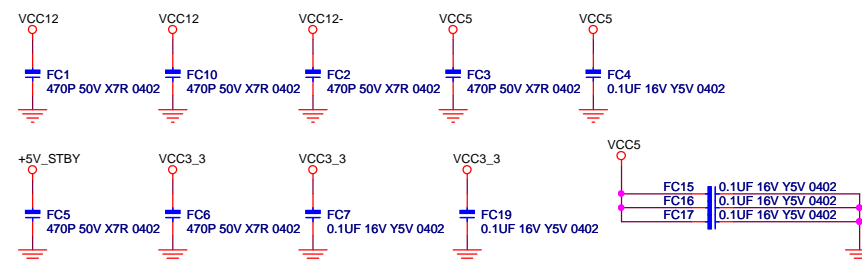


24 PIN POWER CONNECTOR

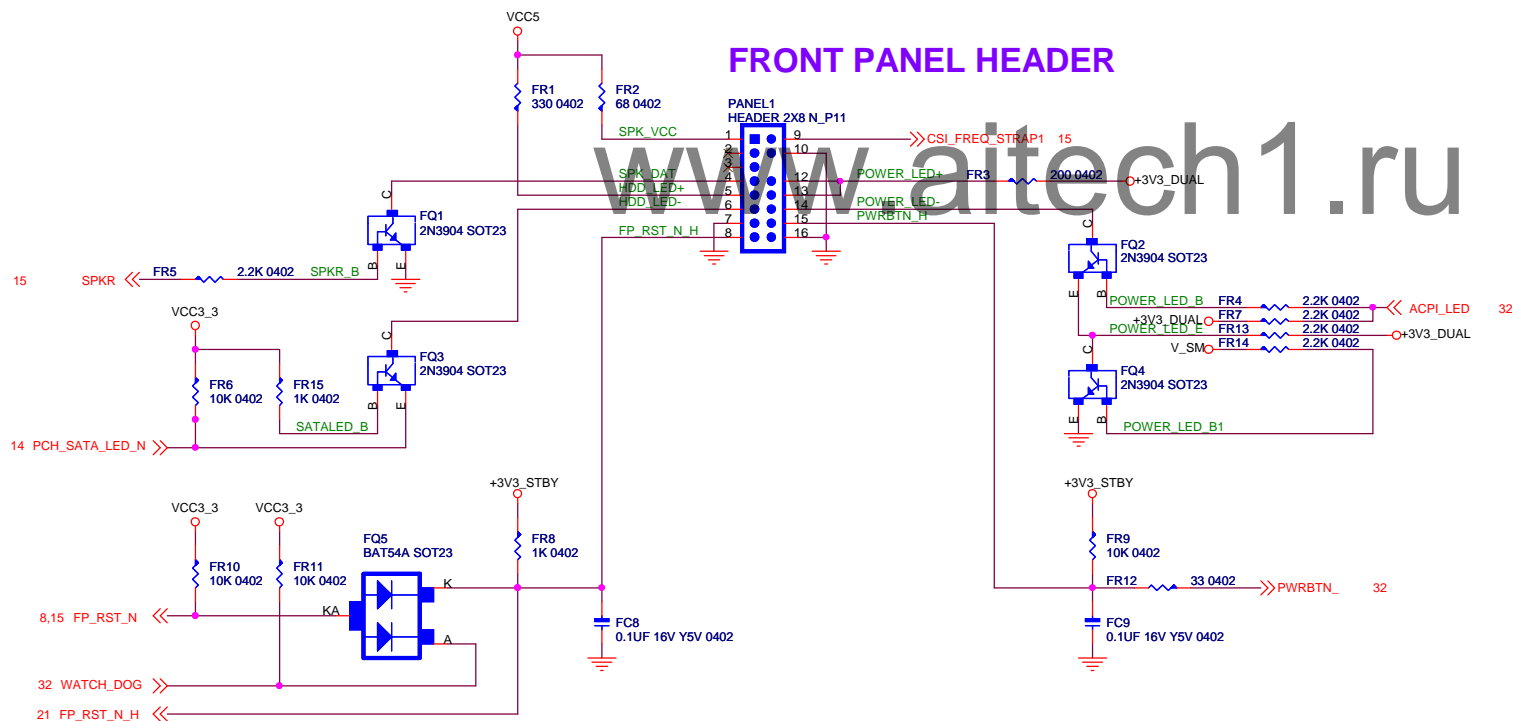
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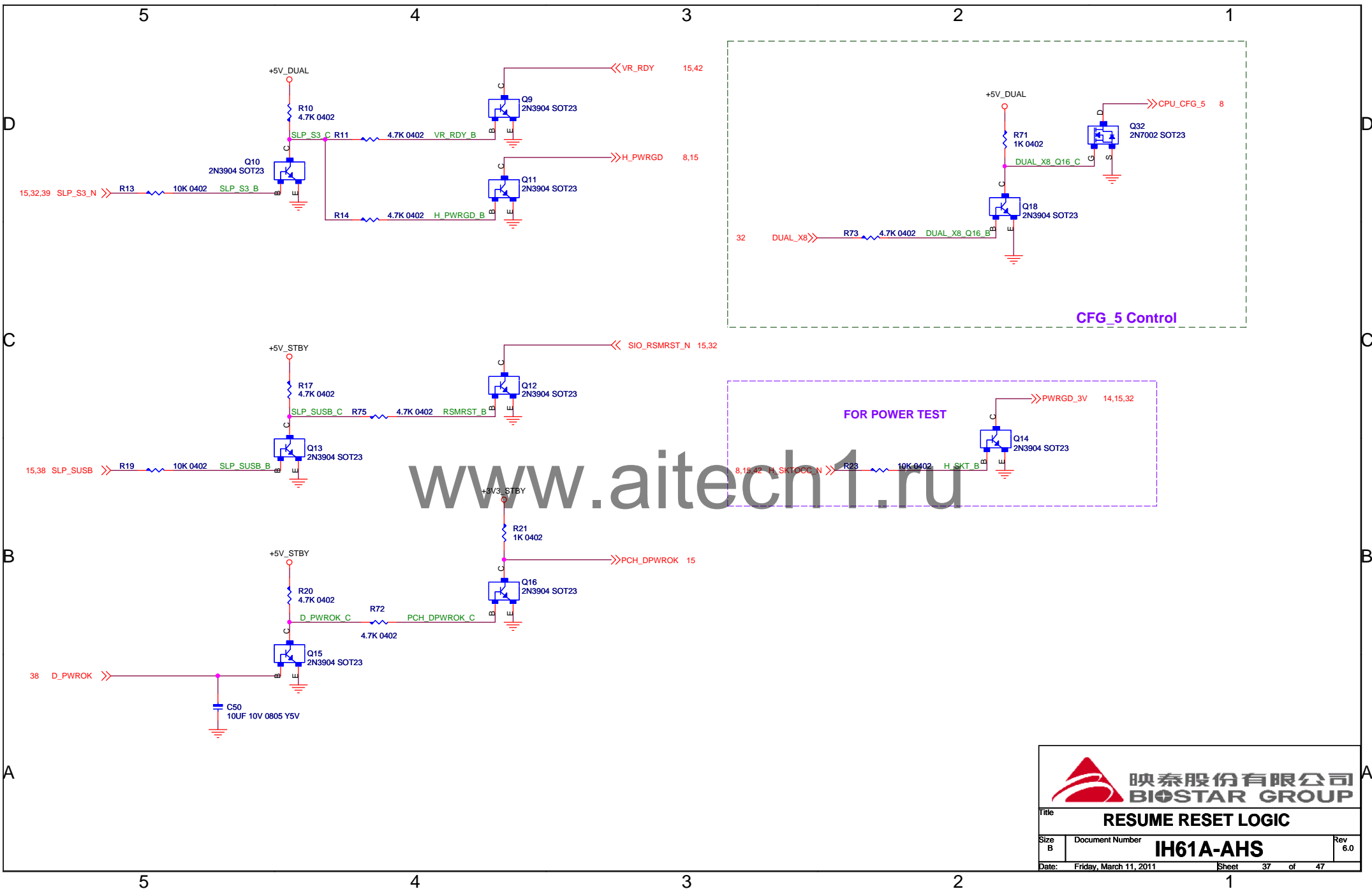
FOR EMI

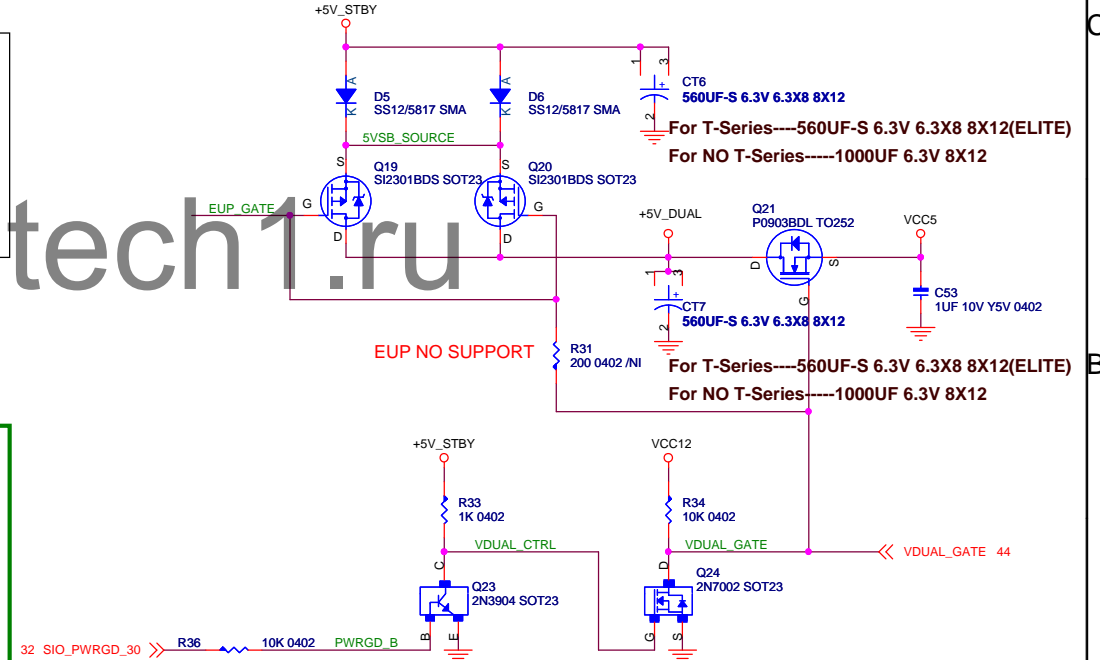
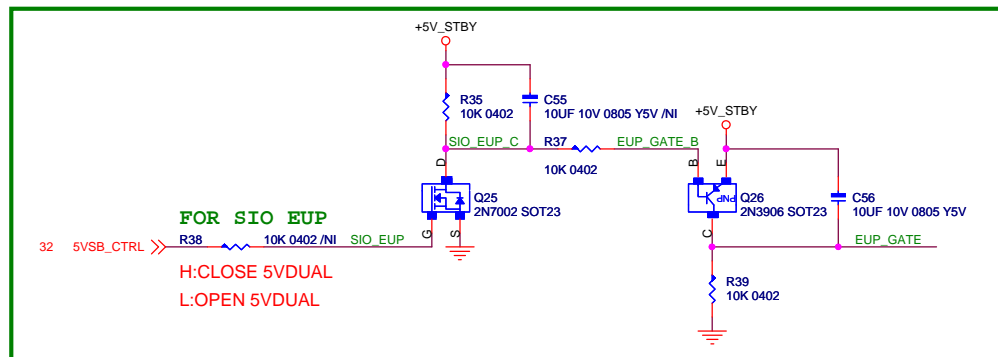
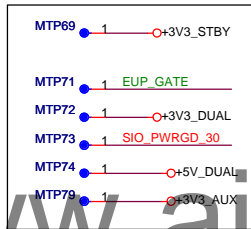
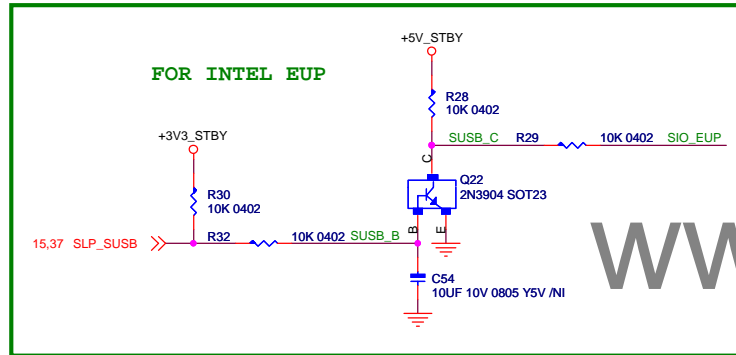
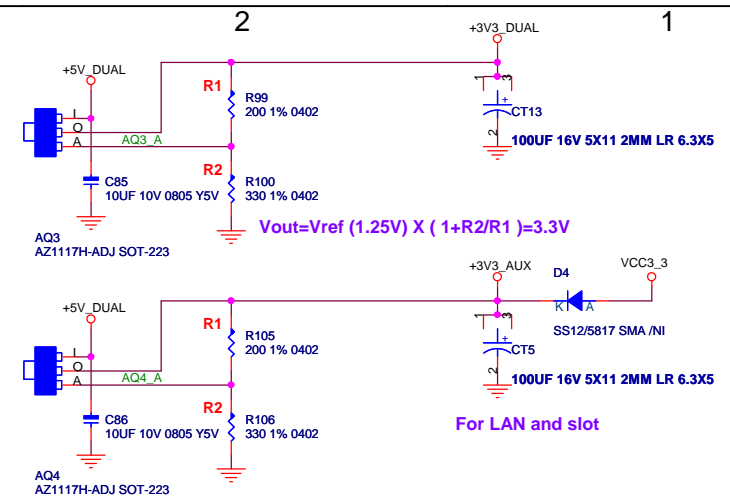
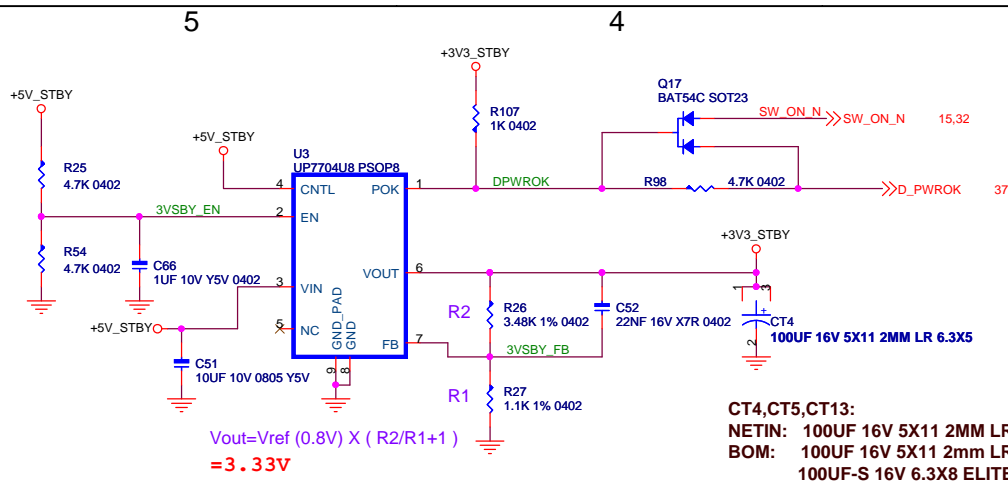


FRONT PANEL HEADER



		
Title 24PIN POWER CONN&FP		
Size B	Document Number IH61A-AHS	Rev 6.0
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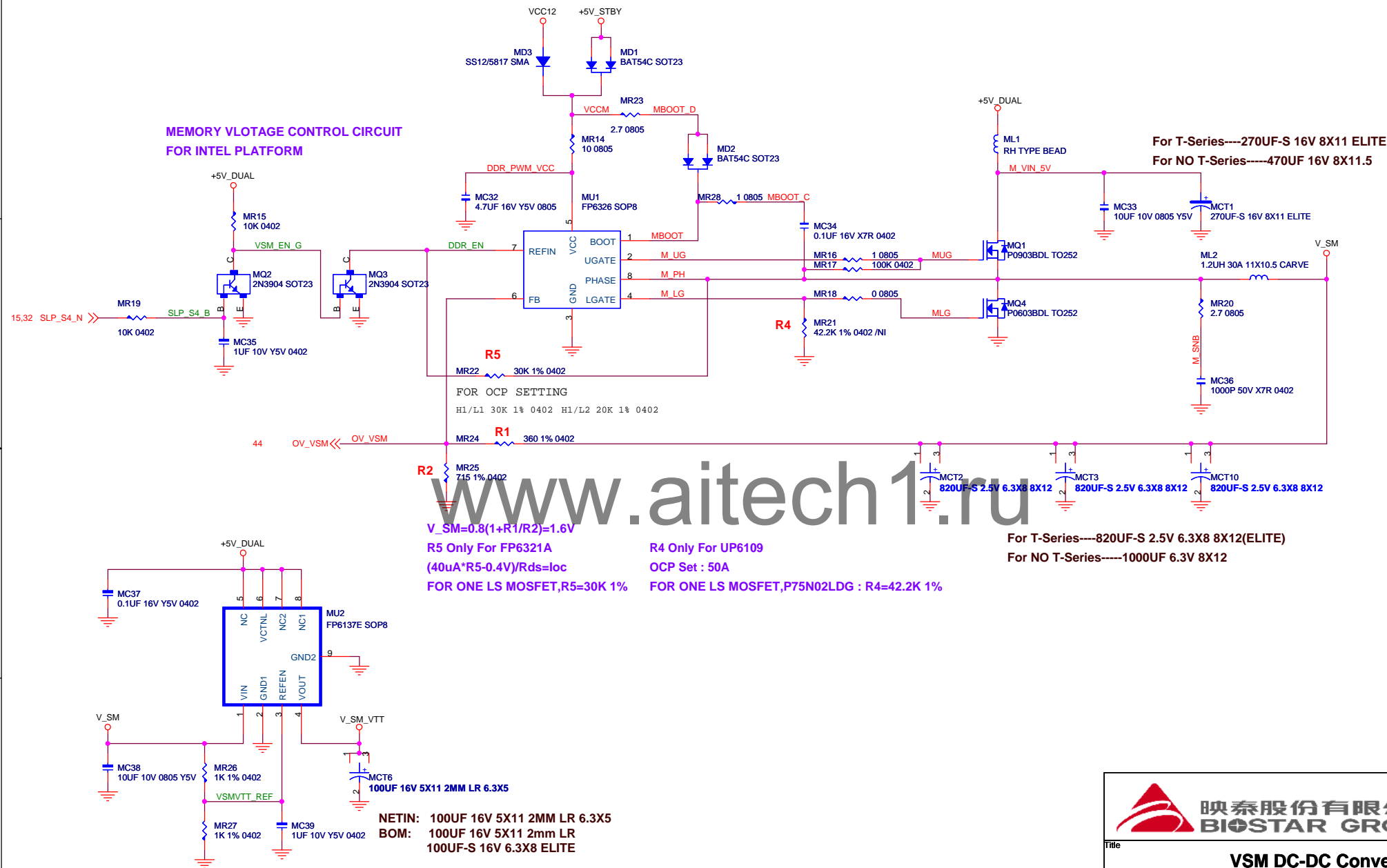
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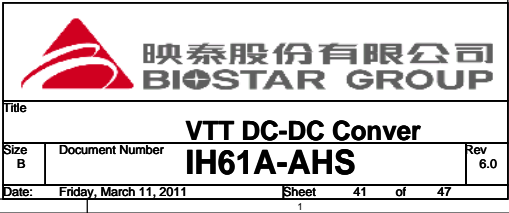
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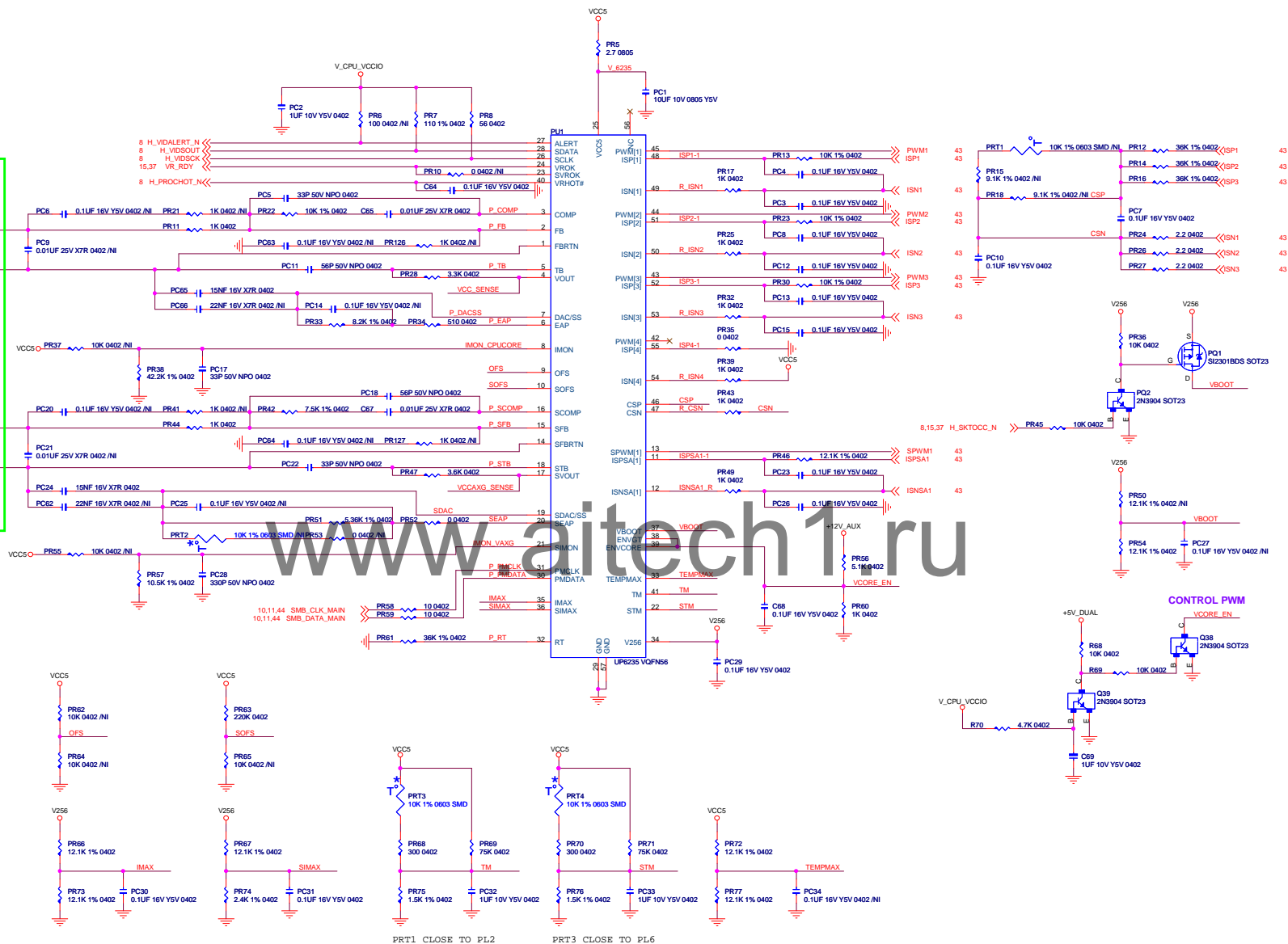
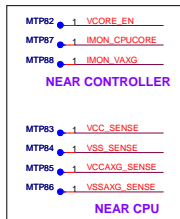
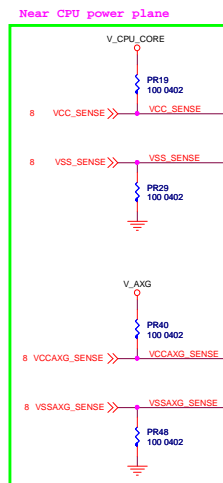
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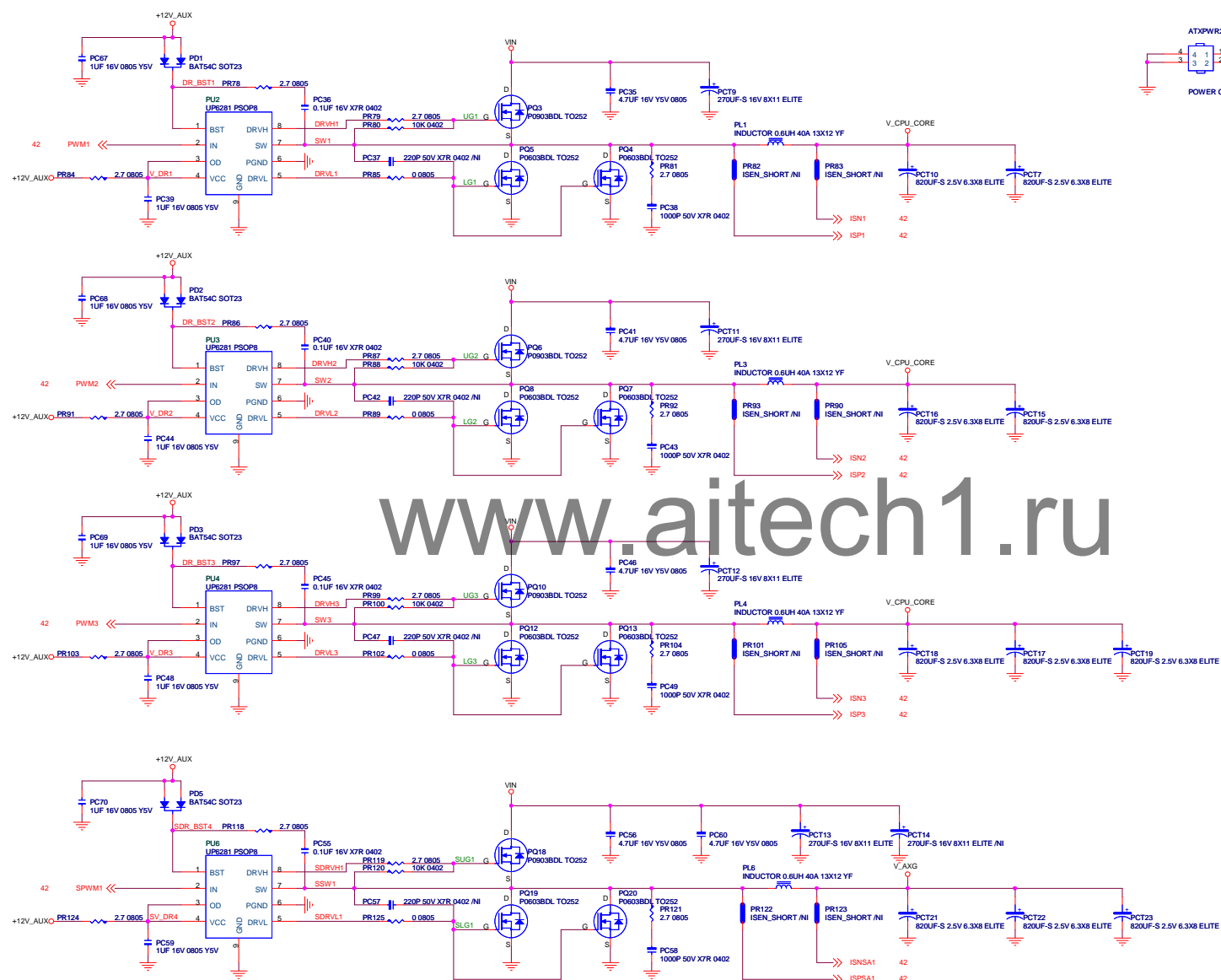
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MEMORY VOLTAGE CONTROL CIRCUIT FOR INTEL PLATFORM



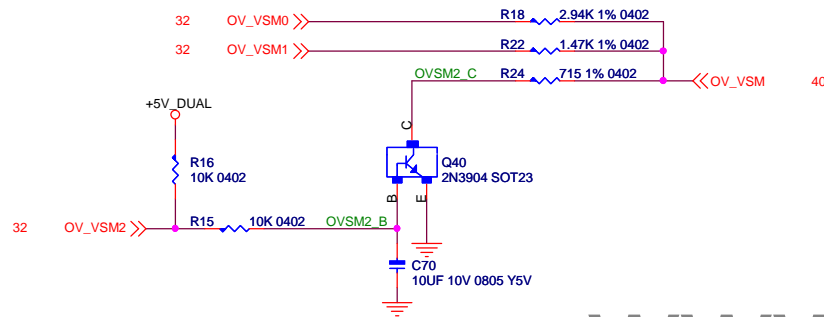




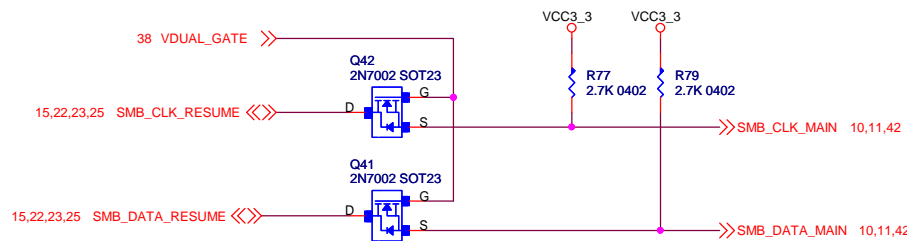




V_CPU_VCCIO	OV_VCCIO0	OV_VCCIO1
1.05V(DEFAULT)	1	1
1.15V	0	1
1.25V	1	0
1.35V	0	0



V_SM	OV_VSM0	OV_VSM1	OV_VSM2
1.2V	1	1	0
1.3V	0	1	0
1.4V	1	0	0
1.5V	0	0	0
1.6V(DEFAULT)	1	1	1
1.7V	0	1	1
1.8V	1	0	1
1.9V	0	0	1





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Title OVER VOLTAGE		
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Title		BOM	
Size	Document Number	IH61A-AHS	Rev
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4

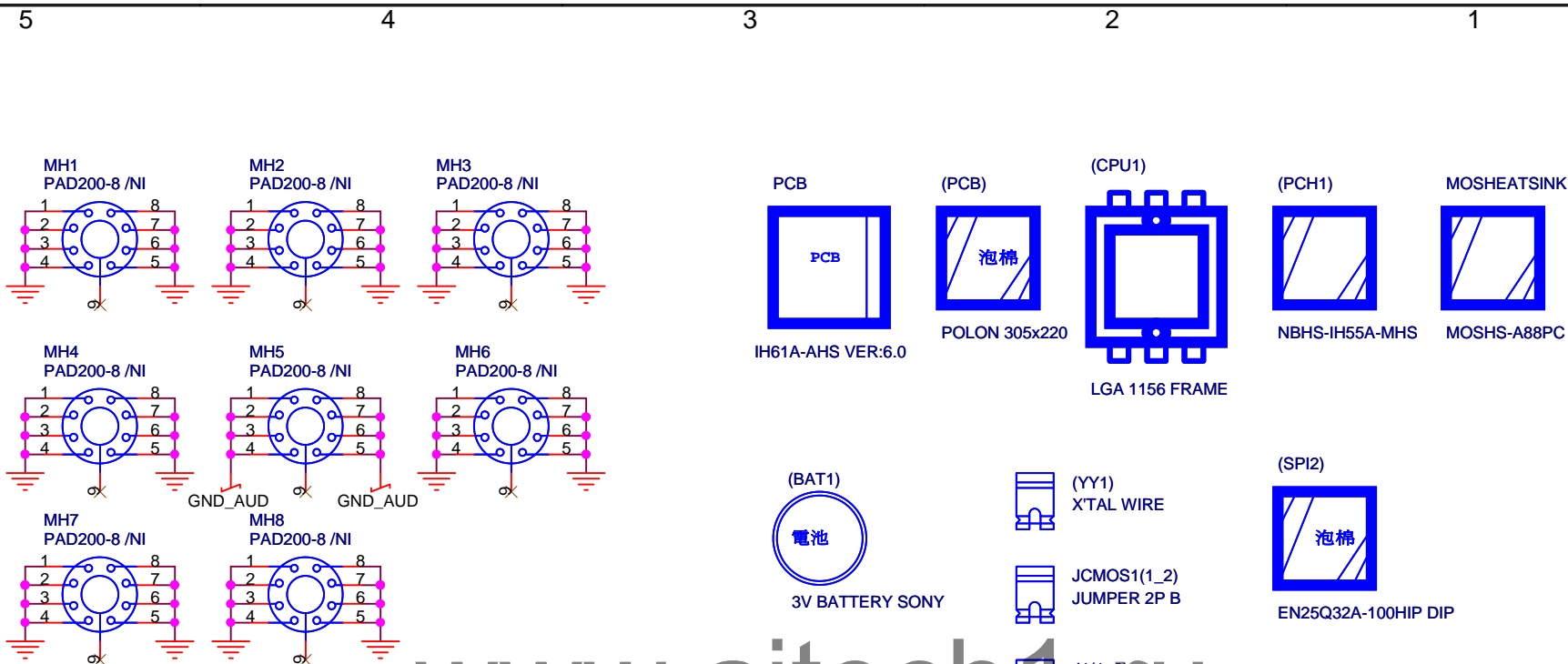
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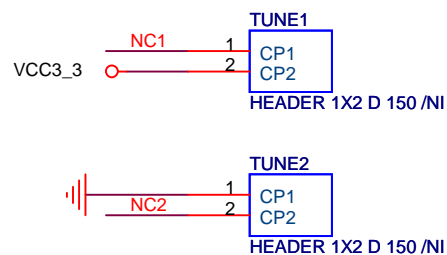
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Title USB3.0 HOST CONTROLLER		
Size Custom	Document Number IH61A-AHS	Rev 6.0
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15-N88-160010R11...IH61A-AHS VER:6.0 /OSP/BLACK/(210.00*305.00*1.5)mm/4L/TREND
86-IH61AAHS-R01P-60
96-IH61AAHS-R01P-60

Impedance Testing Coupon



**New PANEL1
PANEL1 2*8**

YELLOW COLOR



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Title

BOM

Size
A

Document Number

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