

UMA (11.6")

Intel Brasswell-M Platform Block Diagram

+3VS5/+5VS5	PG.29
MOIC	PG.31
CPU Core	PG.32,33
DDR3L	PG.30
Charger	PG.28

DDR3L	1600MT/s Channel A
Memory down*4pcs	PG.14
DDR3L	1600MT/s Channel B
Memory down*4pcs	PG.15

Intel Brasswell

Power : 4.5 (Watt)

Package : BGA1170

Size : 25 X 27 (mm)

eDP (2 lane)

EDP panel

PG.18

DP Port0

HDMI

PG.18

eMMC 4.51

eMMC
32G/64G

USB 3.0

USB3.0 Ports
X1

PG.23

USB 2.0

USB 2.0

USB2.0 Ports
X1

PG.23

USB 2.0

PCI-E x2

Card Reader
RTS5239-GR

PG.17

WLAN
BT COMBO
NGFF M2

PG.24

PG.2~13

WLAN
BT COMBO
NGFF M2

PG.24

Webcam

PG.18

WWAN
NGFF M2

PG.20

KBC
IT8987

PG.25

LPC
Fast SPI

KB

PG. 21

TP

PG. 21

ROM

PG. 5

AUDIO
CODEC
ALC 3227

PG.19

Speaker

PG.19

Without amp for eMMC sku

Headphone
amplifier
HPA022642RTJR
Daughter board

Combo Jack

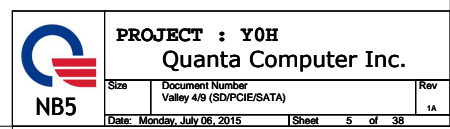
Daughter board



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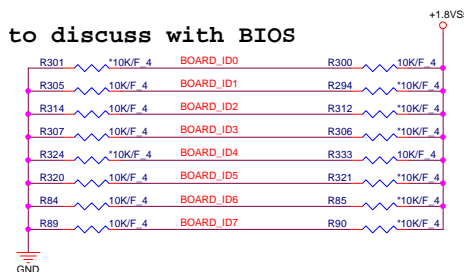
Size	Document Number	Rev
	BLOCK DIAGRAM	1A
Date: Monday, July 06, 2015	Sheet	1 of 38



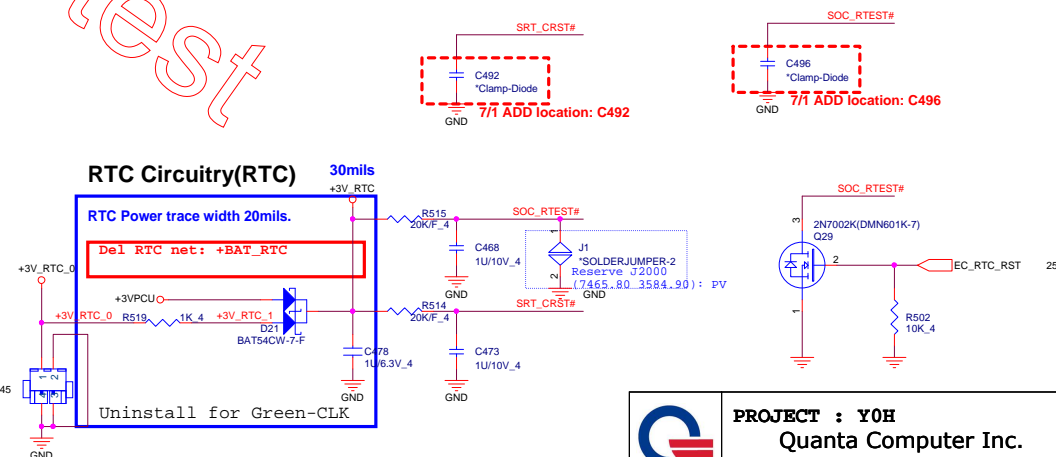
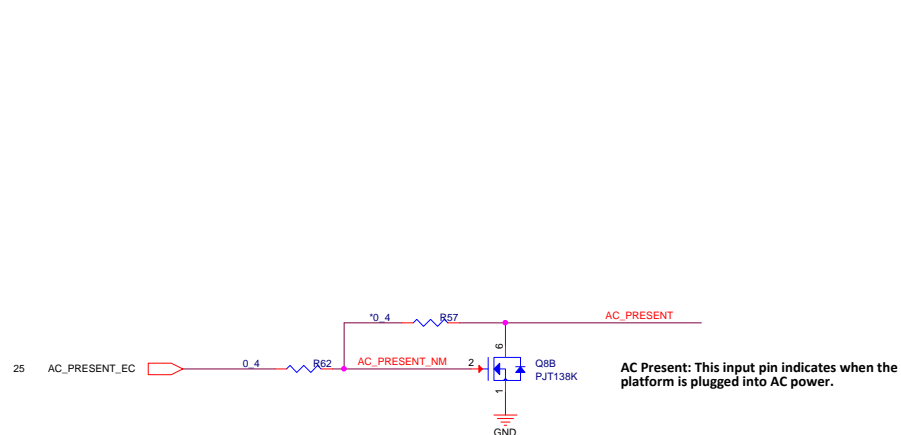
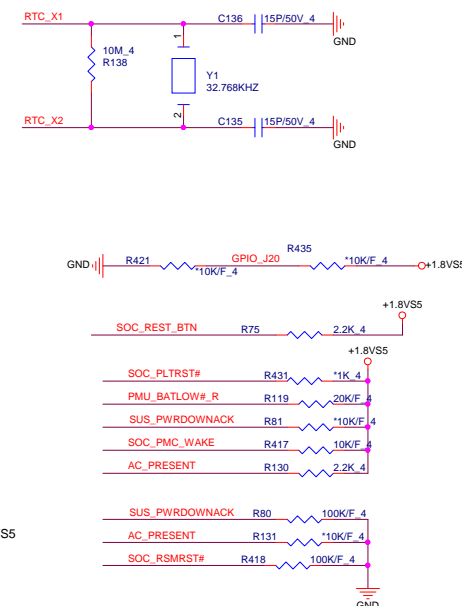
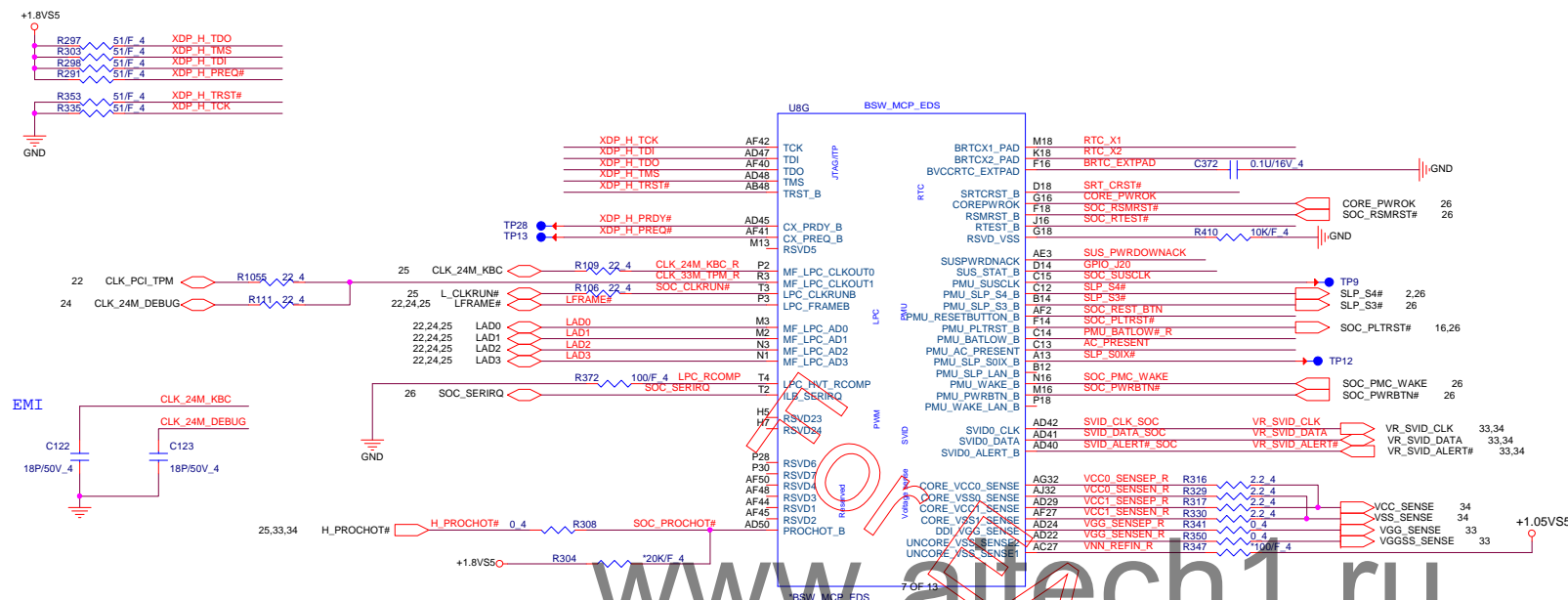


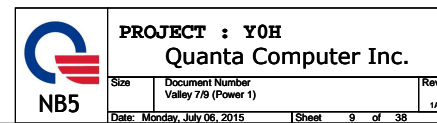


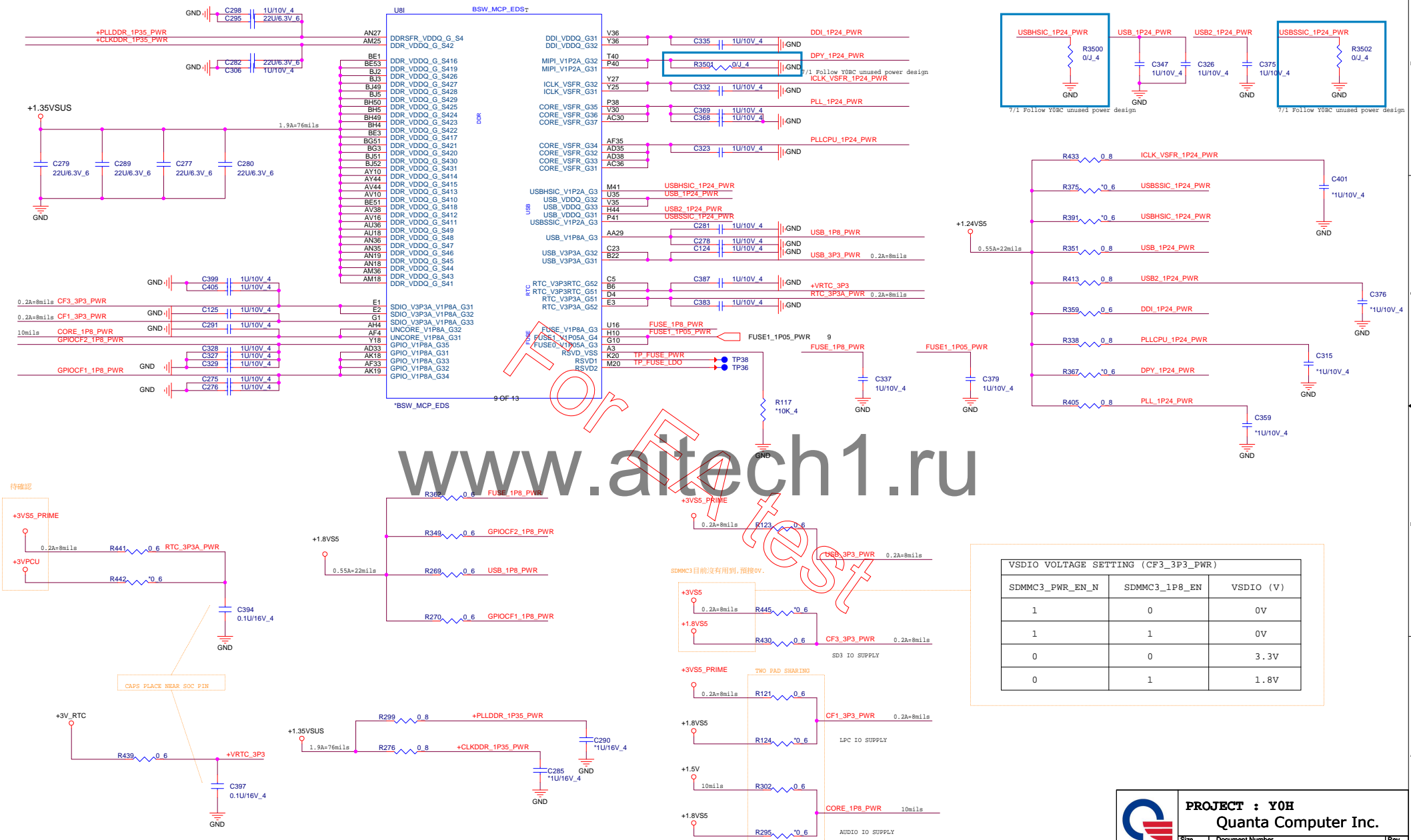
	Reserve (Default = 000)			Size	Reserved				Storage
Model	BOARD_ID7	BOARD_ID6	BOARD_ID5	BOARD_ID4	BOARD_ID3	BOARD_ID2	BOARD_ID1	BOARD_ID0	
Samsung	0	1	0	2G=0	0	0	0	0 : emmc	
Mircon	0	0	1	4G=1	0	0	0	1 : HDD	
Hynix	0	0	0	0	0	0	0		

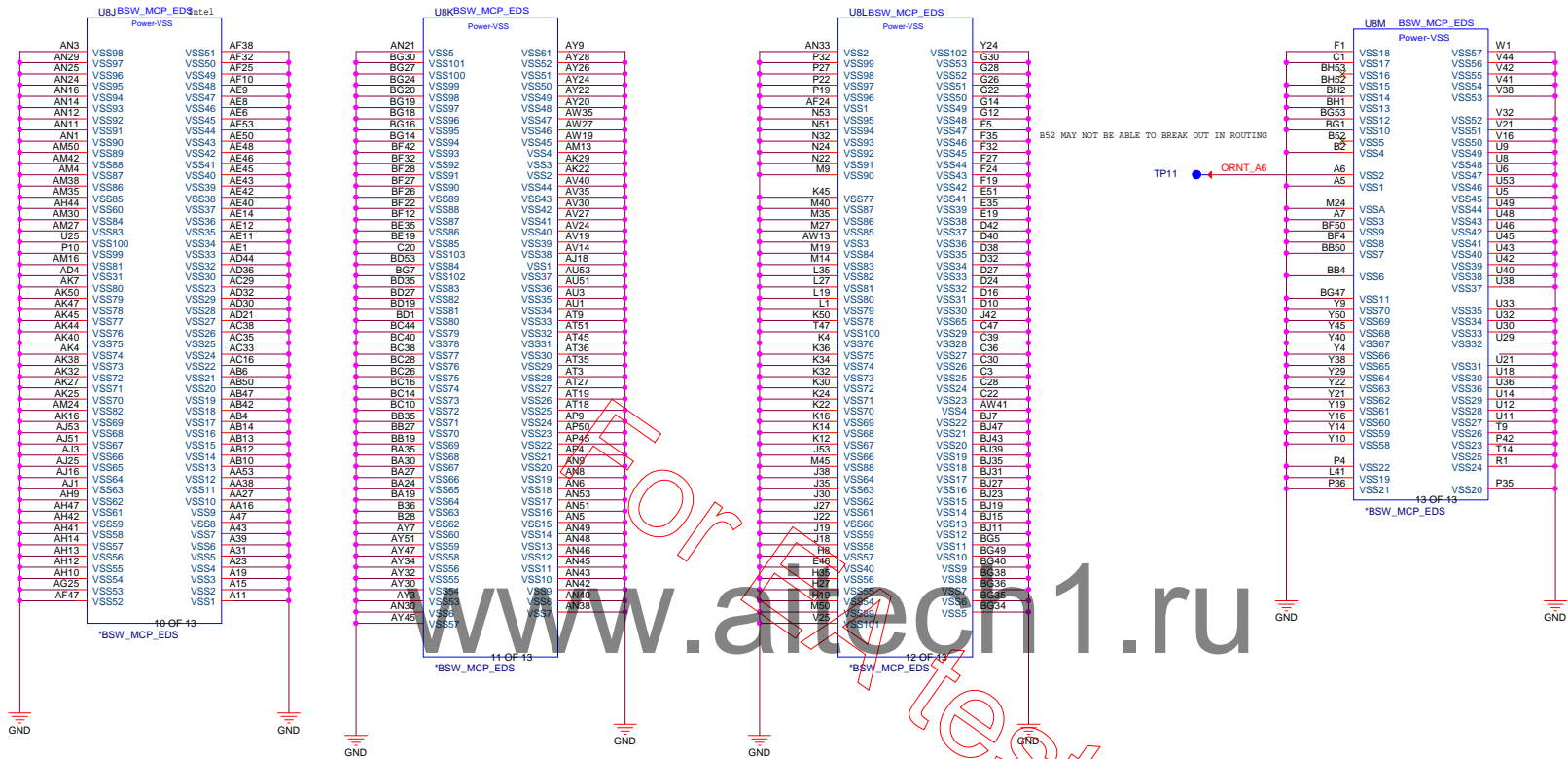


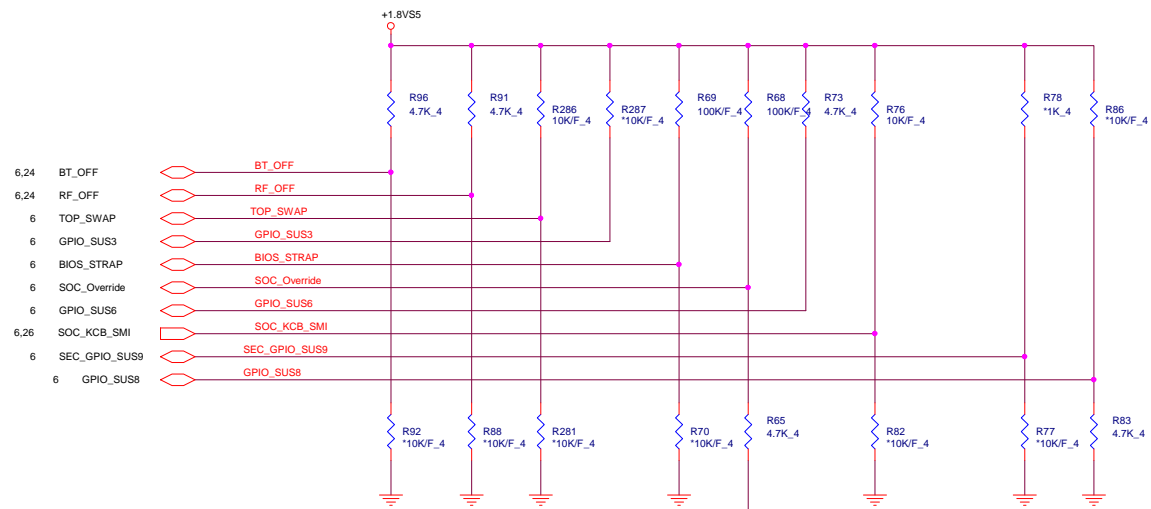
RTC Clock 32.768KHz



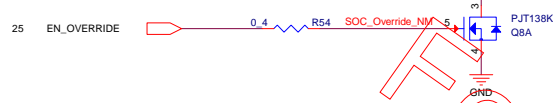
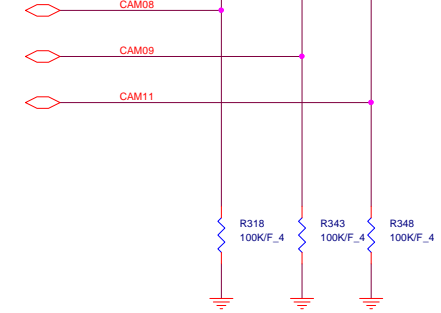








4 CAM08
4 CAM09
4 CAM11



	CAM08	CAM09	CAM11
PULL HIGH	ICLK Xtal OSC Bypass	CCU SUS RO Bypass	RTC OSC Bypass
PULL LOW	ICLK Xtal OSC No Bypass DEFAULT	CCU SUS RO No Bypass DEFAULT	RTC OSC No Bypass DEFAULT

REQUIRED STRAPS

	GPIO_SUS0	GPIO_SUS1	TOP_SWAP	GPIO_SUS3	BIOS_STRAP	SOC_Override	GPIO_SUS6	SOC_KCB_SMI	GPIO_SUS8
PULL HIGH	DDI0 detected DEFAULT	DDI1 detected DEFAULT	Normal Operation DEFAULT	Reserve 10 KΩ PU DEFAULT	SPI DEFAULT	Normal Operation	10 KΩ PU to 1.8V DEFAULT	Reserve 10 KΩ PU DEFAULT	Supply is 1.35V
PULL LOW	DDI0 not detected	DDI1 not detected	Change Boot Loader address		LPC	Override DEFAULT			Supply is 1.25V DEFAULT

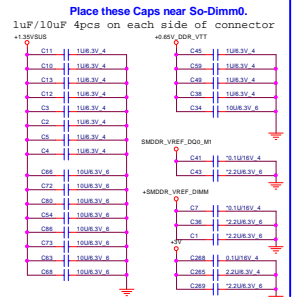
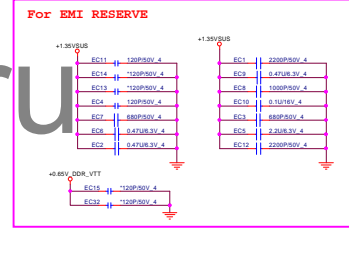
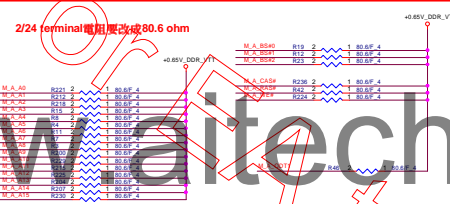
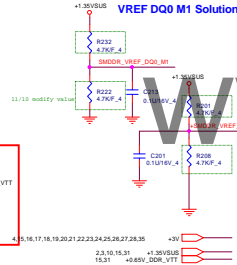
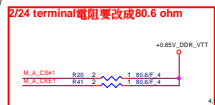
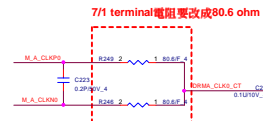
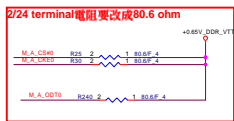
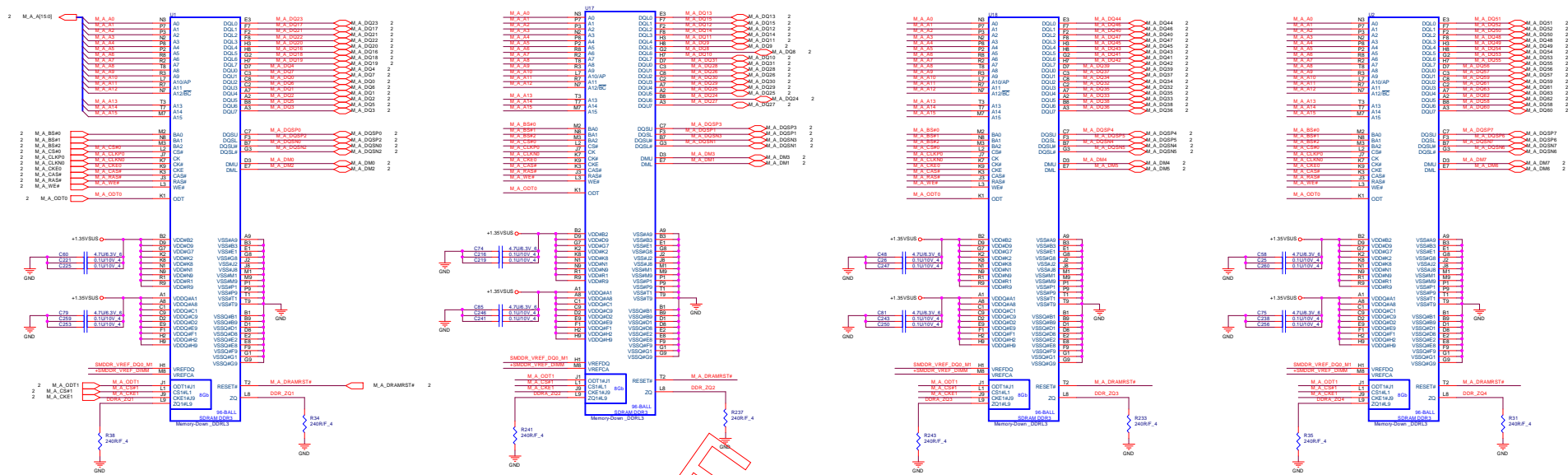


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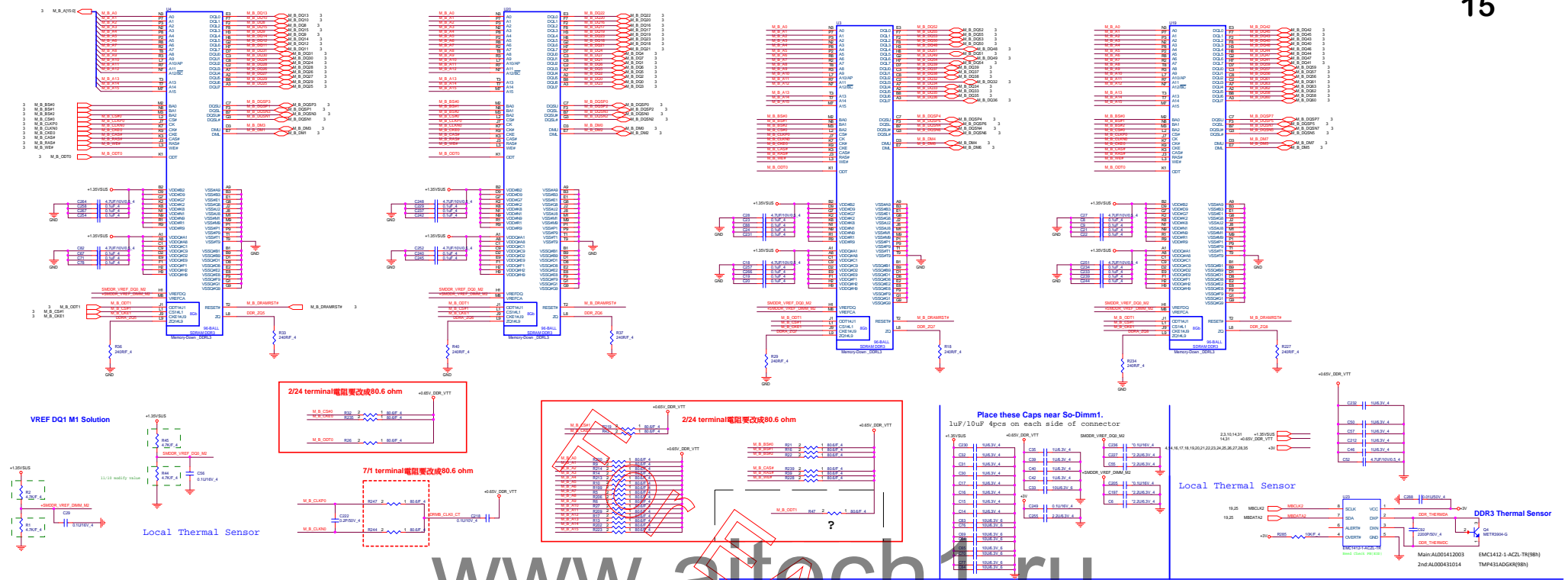
Size Document Number Valley 9/9 (GND) Rev
NB5 Date: Monday, July 06, 2015 Sheet 12 of 38 1A

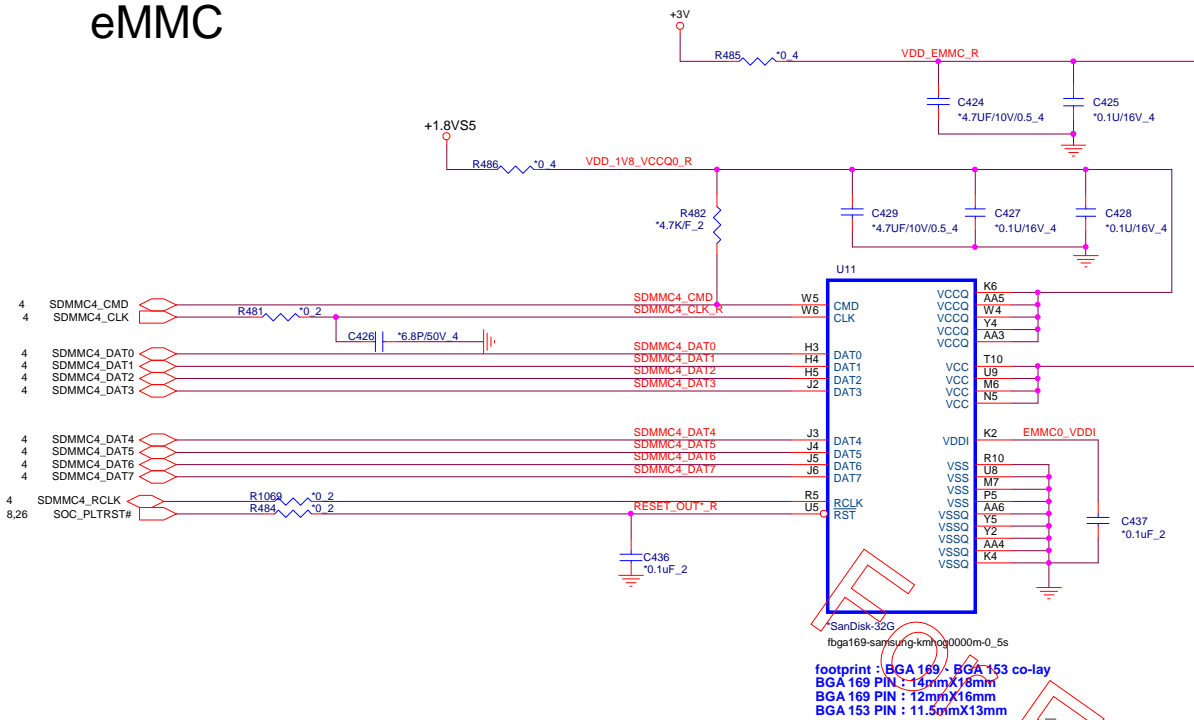
For E4 test

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DDR3L				
TOP3S PN	QB3CN	Vendor PN	Description	
AKD5JGETW07	AKD5JGETW08	H5TC4G63AFR-PBA	IC SDRAM (96P) H5TC4G63AFR-PBA	Hybris (default)
AKD5PGST508	AKD5PGST509	K4T4166Q-H4YK0	IC SDRAM (64P) K4T4166Q-H4YK0	Samsung
	AKD5PGSTL19	MT41K1256ML1Y-107-N	IC SDRAM (96P) MT41K1256ML1Y-107-N	Microc
AKD5PGSTW14	AKD5PGSTW15	H5TC4G63CFR-PBA	IC SDRAM (96P) H5TC4G63CFR-PBA	Hybris (H5Y-Dia)



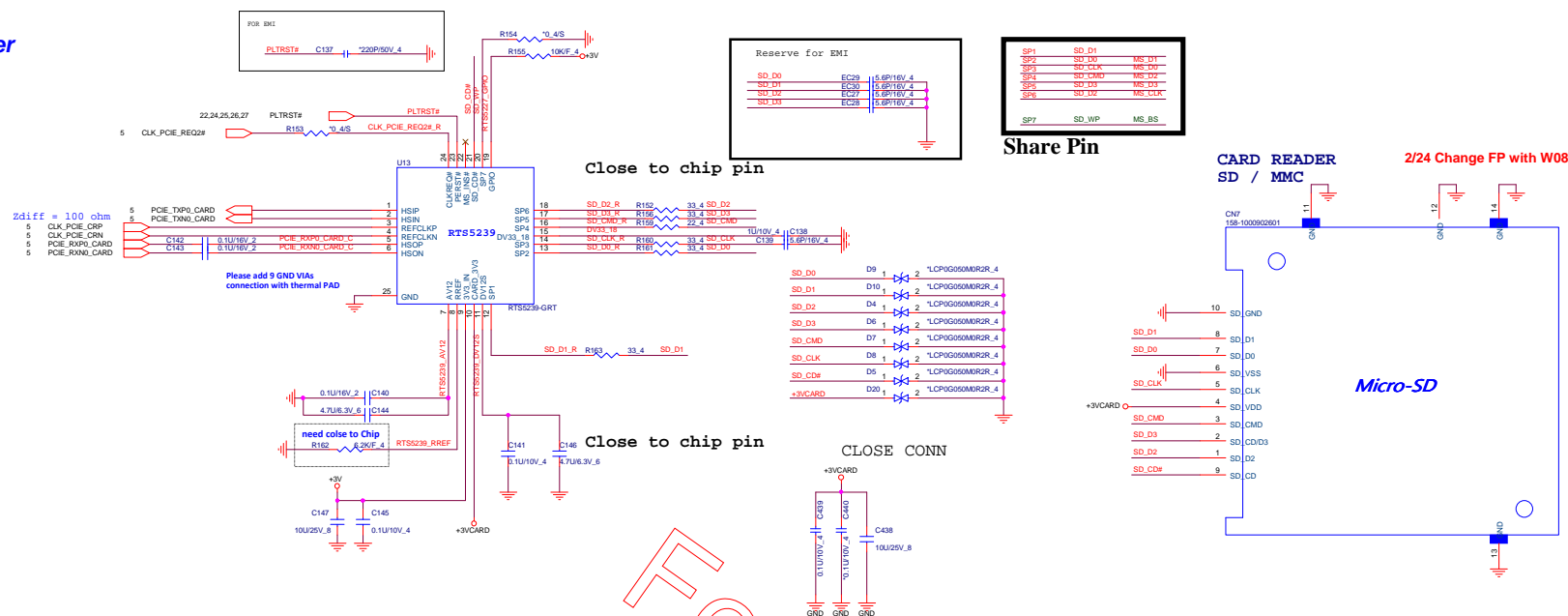


Default

iNAND (eMMC) V4.51				
TOPBSQ	QBCON	Description	SIZE	Vender
AKE3SZ-TW01	AKE3SZ-TW02	IC FLASH(153P)H26M64103EMR(FBGA)	32G	Hynix
	AKE5SZ0T512	IC FLASH(153)KLMBG4GEND-B031(FBGA)	32G	samaung
AKE3SFUT000	AKE3SFUT001	IC FLASH(153P)SDIN9DW4-32G(FBGA)	32G	SanDisk
AKE3TG-TW01	AKE3TG-TW02	IC FLASH(153P)H26M78103CCR(FBGA)	64G	Hynix
	AKE3TZPT520	IC FLASH(153)KLMCG8GEND-B031(FBGA)	64G	samaung
AKE3TFUT101	AKE3TFUT102	IC FLASH(153P)SDIN9DW4-64G(FBGA)	64G	SanDisk

eMMC setting	Location					
Vender	SIZE	R526	R528	R527	R529	R530
Hynix	32G	1	0	0	0	0
samaung	32G	1	0	0	0	0
SanDisk	32G	1	1	1	0	0
Hynix	64G	1	1	1	1	0
samaung	64G	0	1	1	1	1
SanDisk	64G	0	0	1	1	1
Hynix	128G	0	0	0	1	1
samaung	128G	0	0	0	0	1
SanDisk	128G	0	0	0	0	0
		1	1	1	1	1

Memory setting	Location					
Vender	SIZE	R521	R522	R523	R524	R525
Hynix	2G	1	0	0	0	0
samaung	2G	1	1	0	0	0
Micron	2G	1	1	1	0	0
Hynix	4G	1	1	1	1	0
samaung	4G	0	1	1	1	1
Micron	4G	0	0	1	1	1
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		0	0	0	0	1
		0	0	0	0	0
		1	1	1	1	1

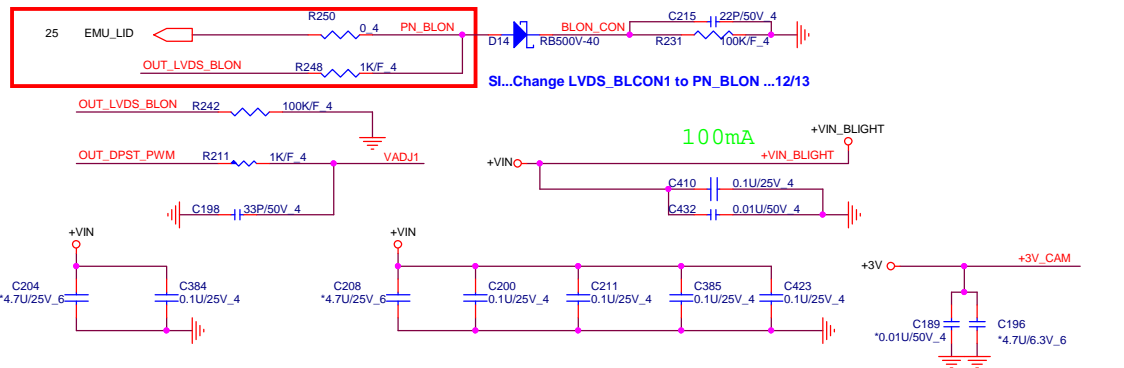


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LID Switch

LVDS Conn.

18



Sl...Change LVDS_BLCON1 to PN_BLON ...12/13

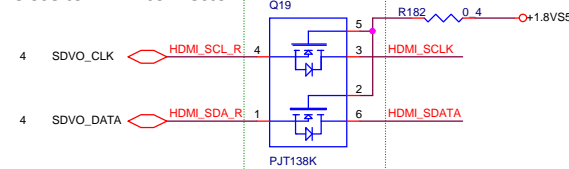
100mA

For eDP

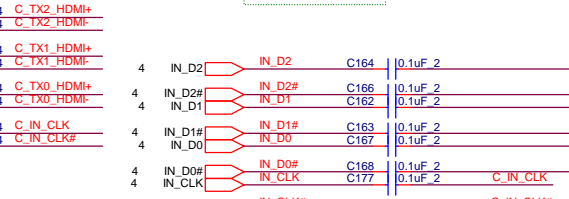
R6110 close to U6100
for eDP,stuff

HDMI SMBus Isolation

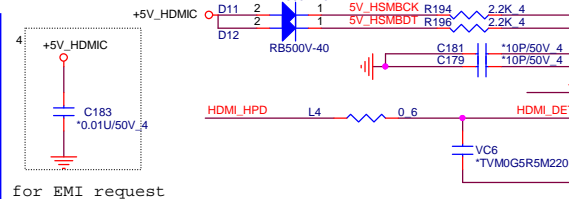
Close to HDMI connector



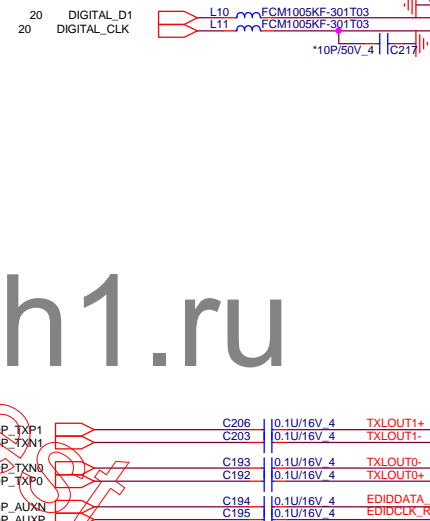
Close to HDMI connector



Close to HDMI connector



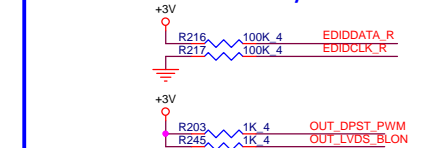
for EMI request

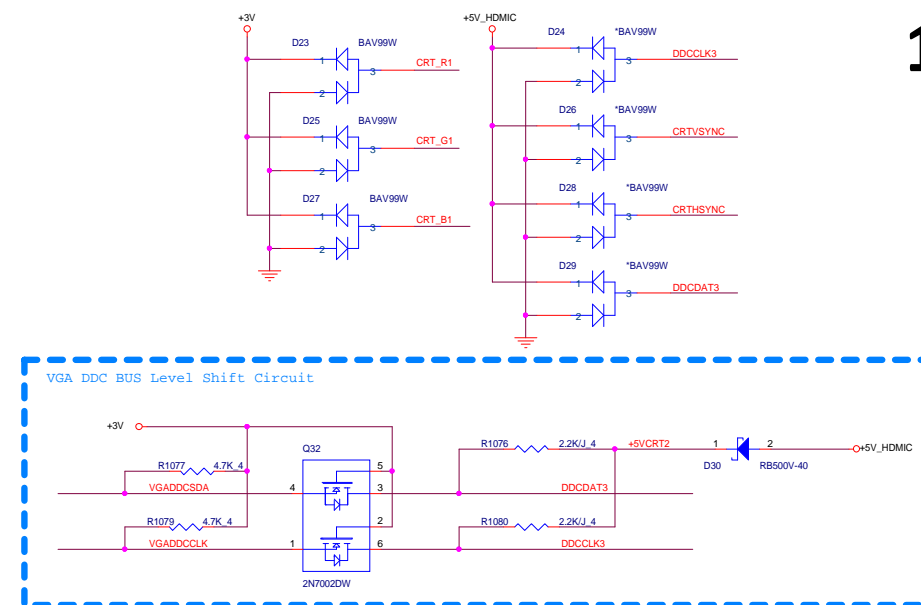



For EDP Only,close CN6100

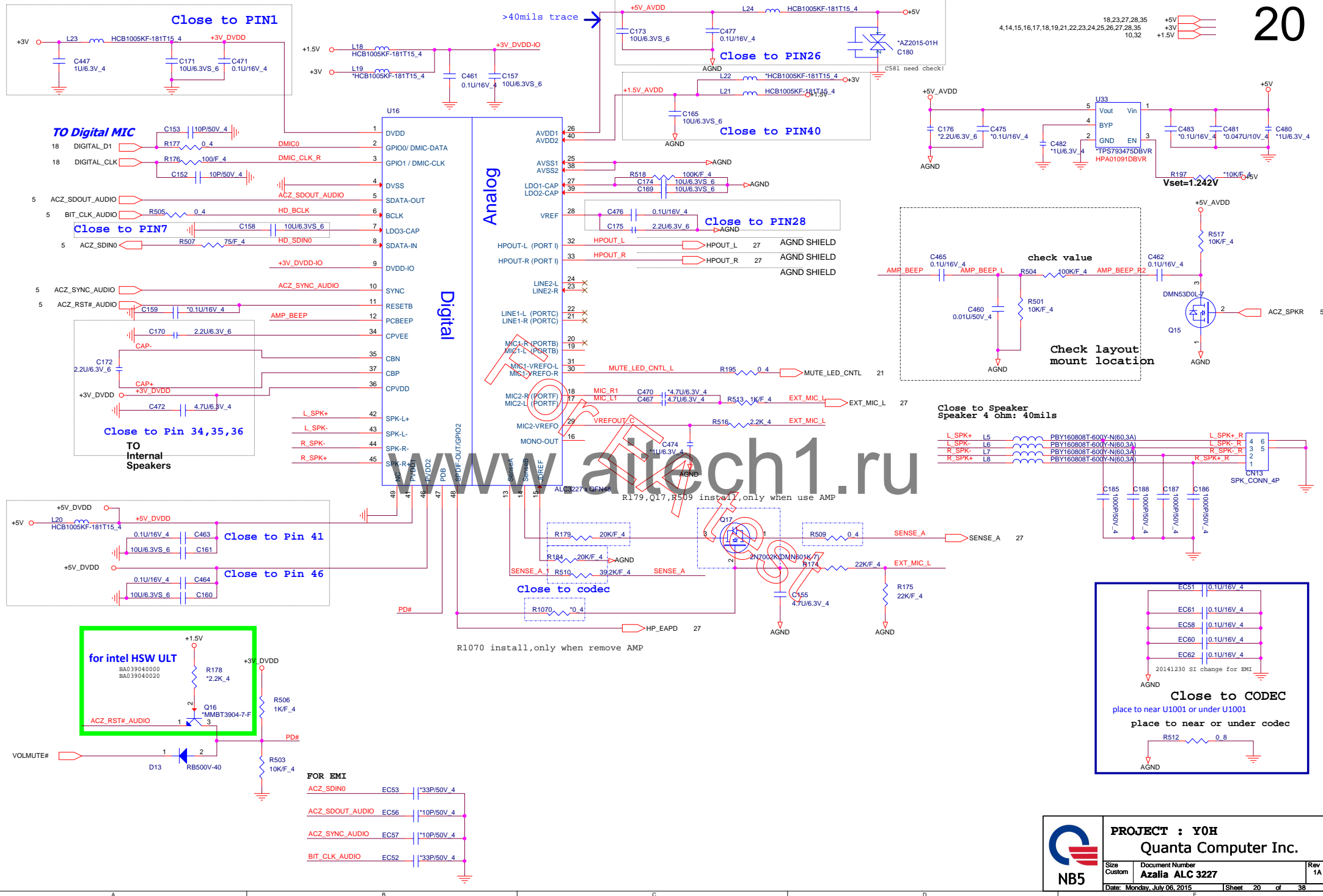


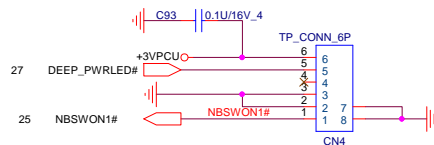
For EDP Only: Reserve



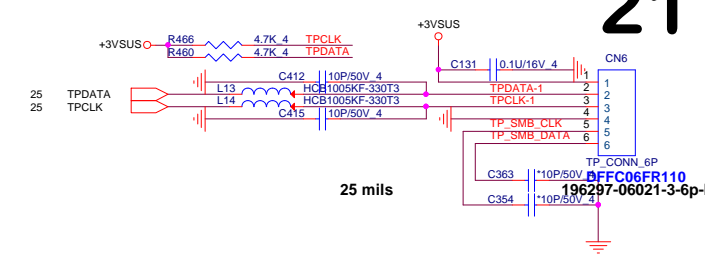
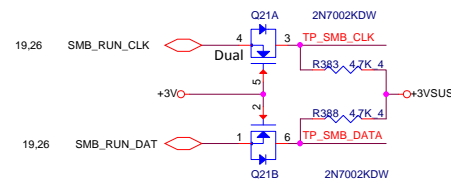


 NB5	PROJECT : S400 Series Quanta Computer Inc.		
	Size Custom	Document Number 27 - DP2VGA_converter	Rev 1
Date: Monday, July 06, 2015		Sheet 19 of 38	

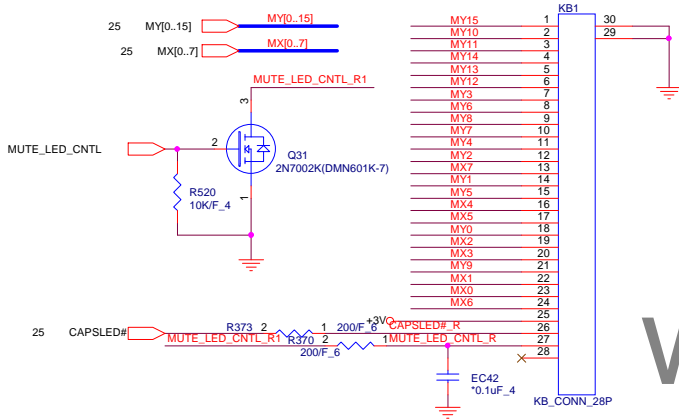




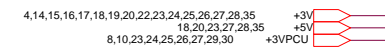
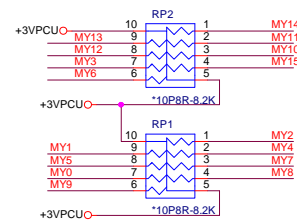
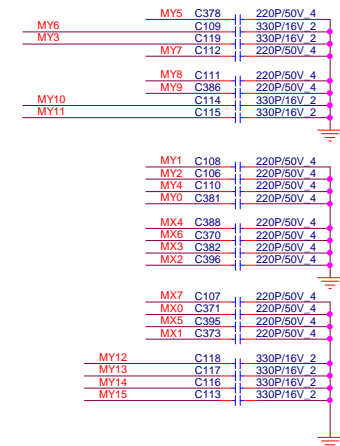
Touch Pad Connector



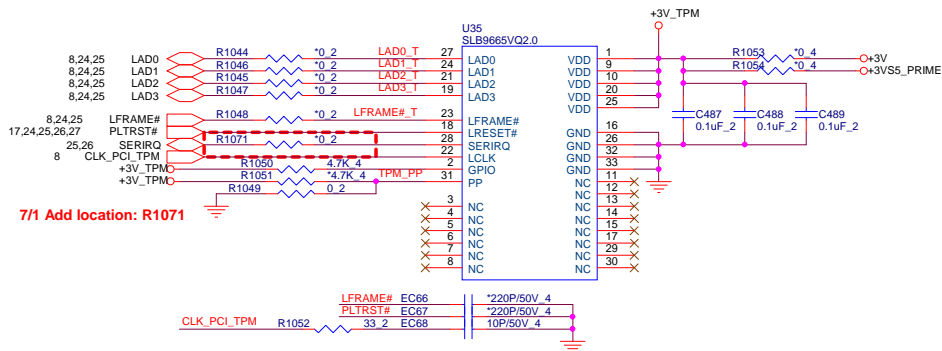
KEYBOARD Con.



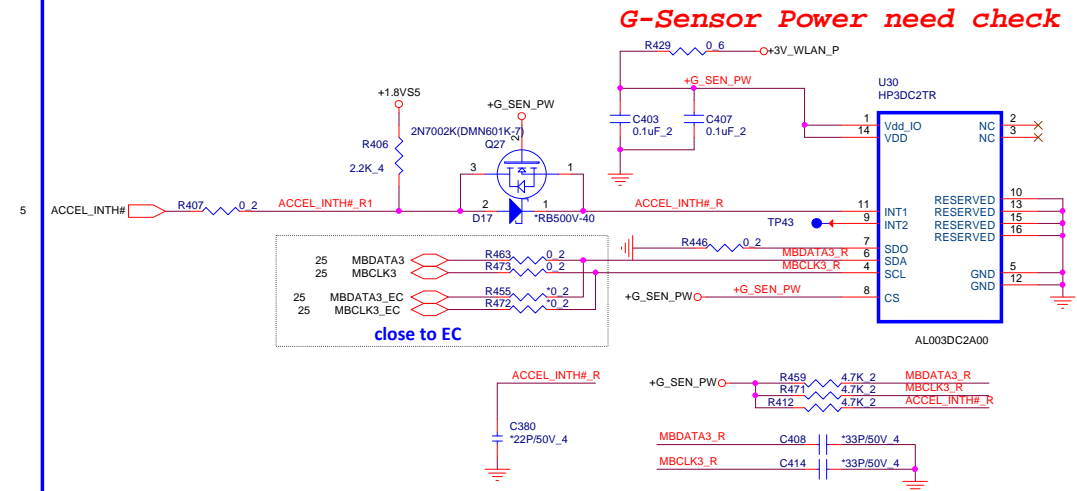
KEYBOARD PULL-UP



TPM (2.0)



Accelerometer Sensor



Touch screen

Green CLK Circuitry

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23,27,28,30,31,32,33,34,35
8,10,21,23,24,25,26,27,29,30

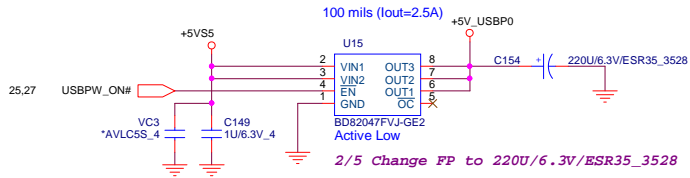
+5VS5
+3VPCU

4,14,15,16,17,18,19,20,21,23,24,25,26,27,28,35
18,20,23,27,28,35

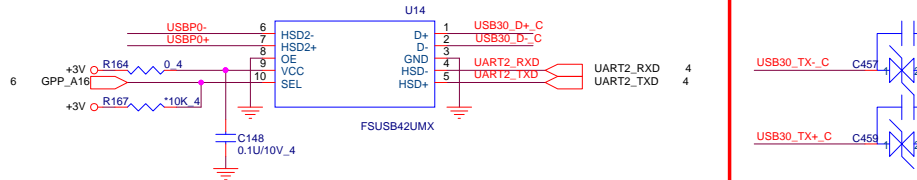
+3V
+5V

		PROJECT : Y0H	
		Quanta Computer Inc.	
Size	Document Number	Rev	
	USB3.0/GCLK/TS/FR	1A	
Date:	Monday, July 06, 2015	Sheet	22 of 38

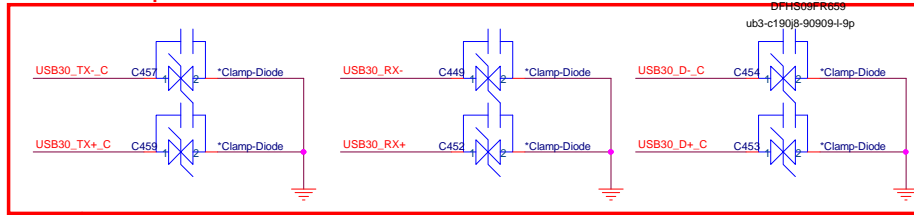
USB 2.0/3.0 Combo



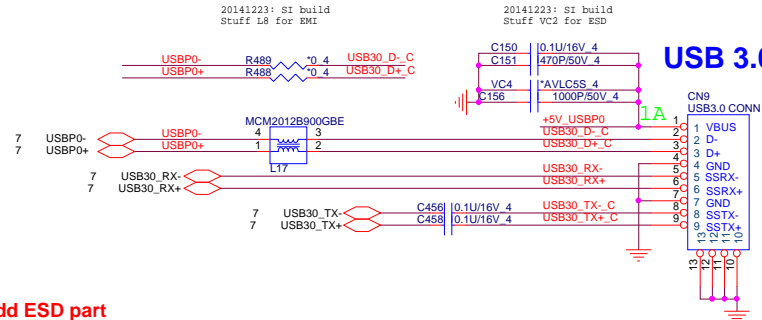
UART for DEBUG



2/25 Add ESD part

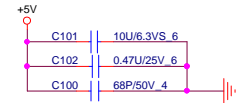
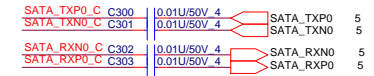
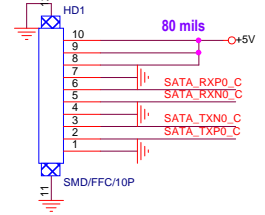


USB 3.0

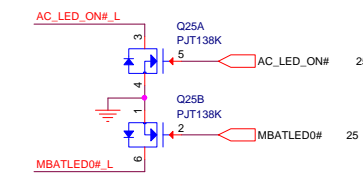


HDD

3/24 Change pin define as Napa

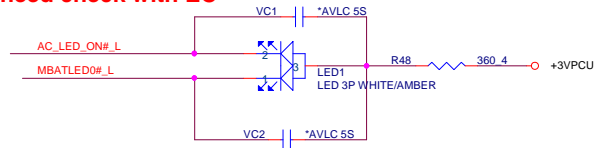


2/26 add LED MOS

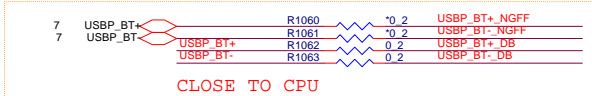


PWR LED

2/10 need check with EC

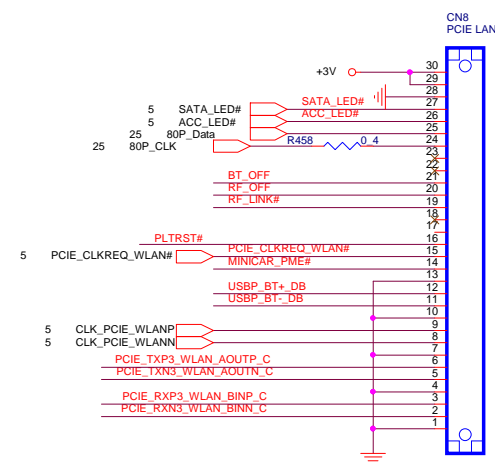
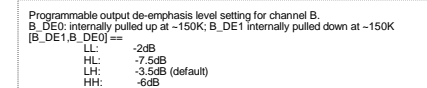
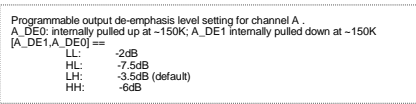
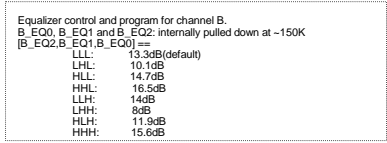
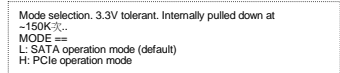


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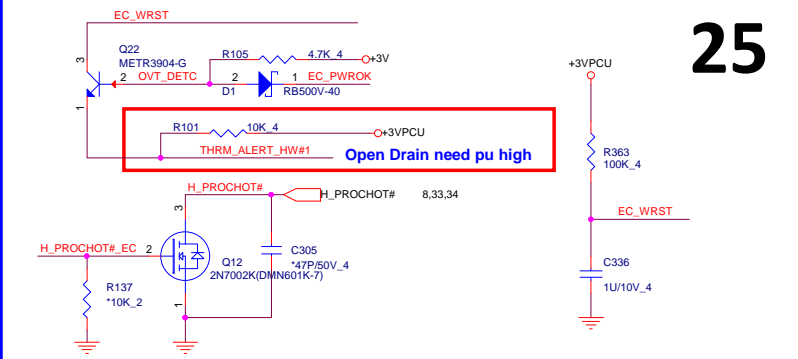
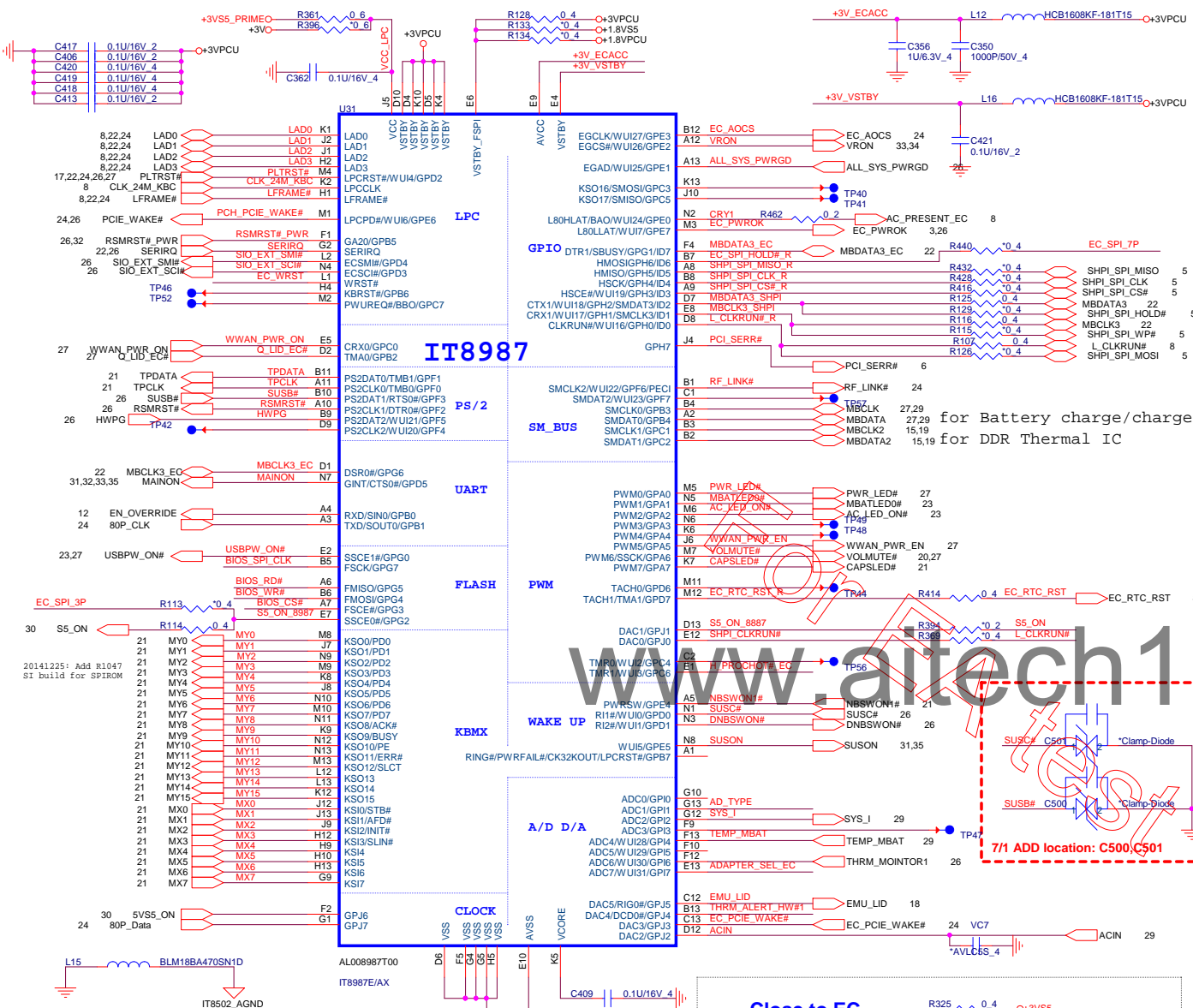


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Size	Document Number WLAN
Date: Wednesday, July 08, 2015	Sheet 24 of 39

Chip power down. 3.3V tolerant. Internally pulled down a
~150K.
PWD ==
L: Normal operation (default)
L: Chip



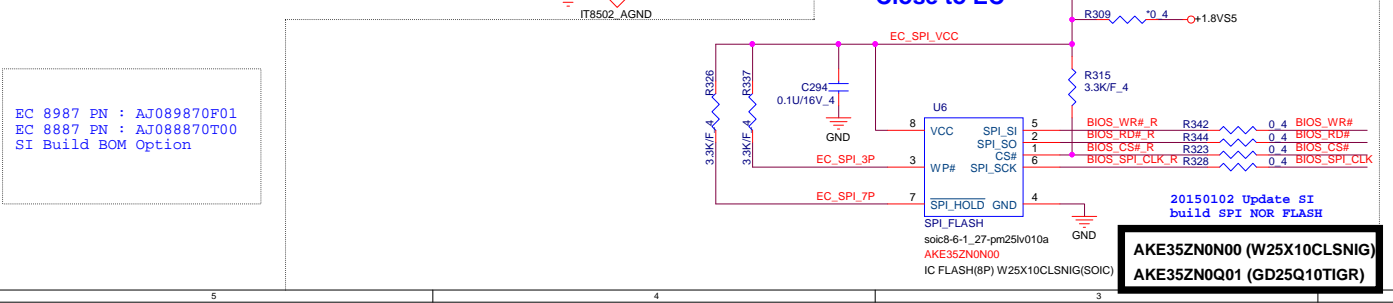
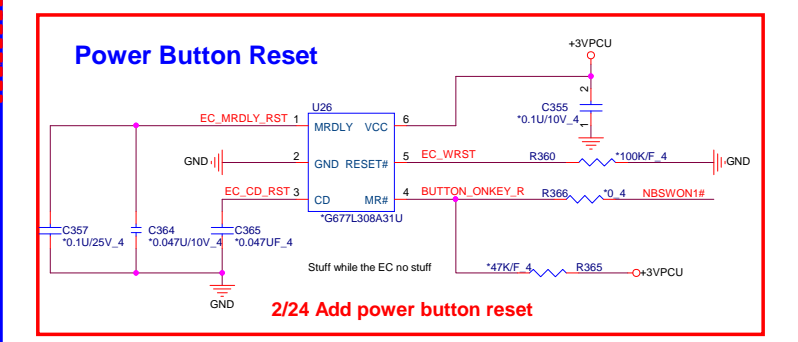
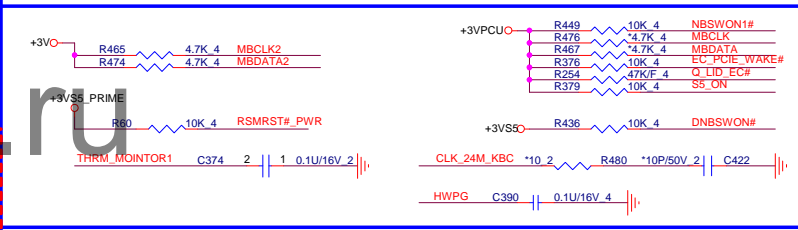
Adapter select for EC

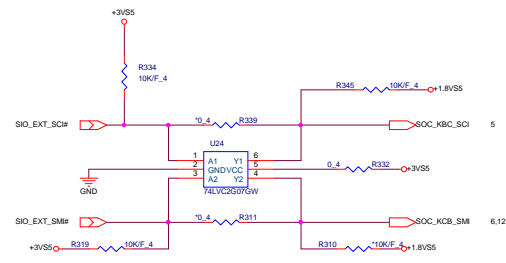
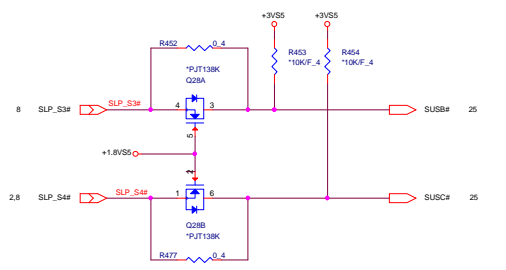
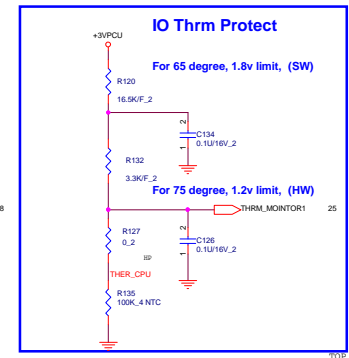
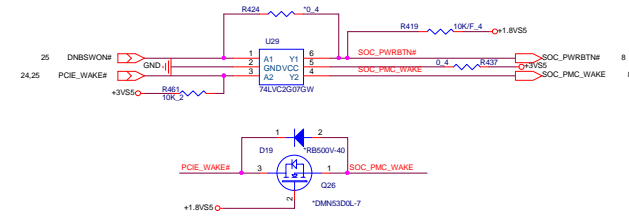
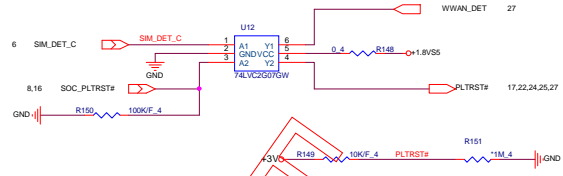
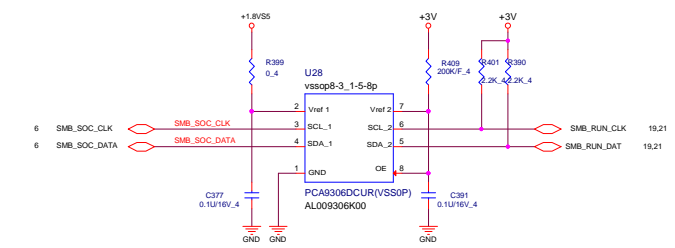
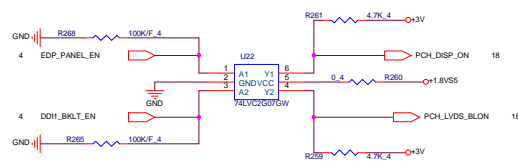
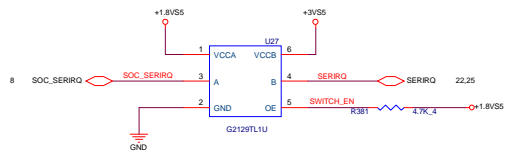
DIS Middle ==> (65W) Stuff R5016 and R5017
UMA Low ==>(45W) Stuff R5017 only

Adapter	65W	45W
UMA	X	Low

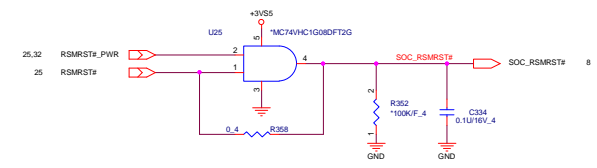
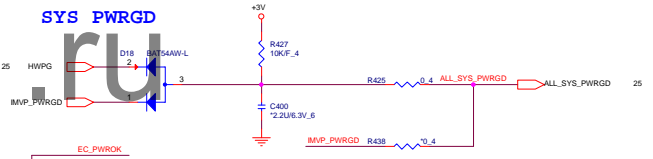
AD_TYPE R103 2K/F 4 R112 100/F 4 AD_ID 29

Change to 1SS355 as Current loss

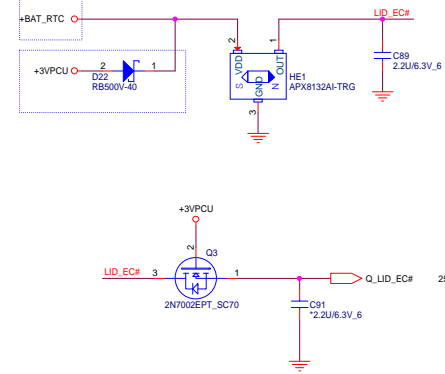




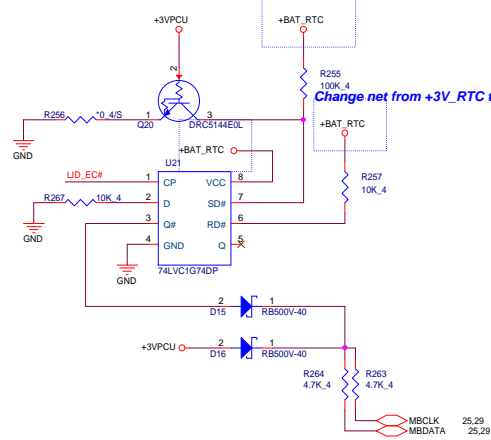
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Change net from +3V_RTC to +BAT_RTC



Change net from +3V_RTC to +BAT_RTC



Input				Output	
SD	RD	CP	D	Q	Q̄
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H

[1] H = HIGH voltage level;
L = LOW voltage level;
X = don't care.

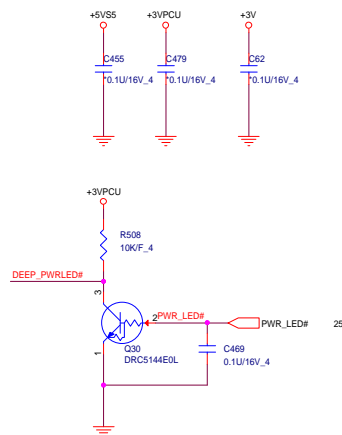
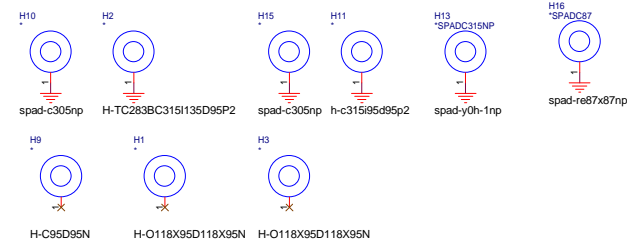
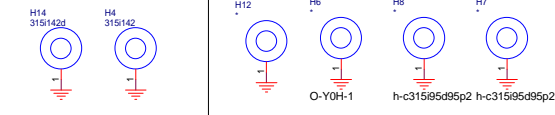
Input				Output	
SD	RD	CP	D	Q _{n+1}	Q̄ _{n+1}
H	H	↑	L	L	H
H	H	↑	H	H	L

[1] H = HIGH voltage level;
L = LOW voltage level;
↑ = LOW-to-HIGH CP transition;
Q_{n+1} = state after the next LOW-to-HIGH CP transition.

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Daughter Board

HOLE

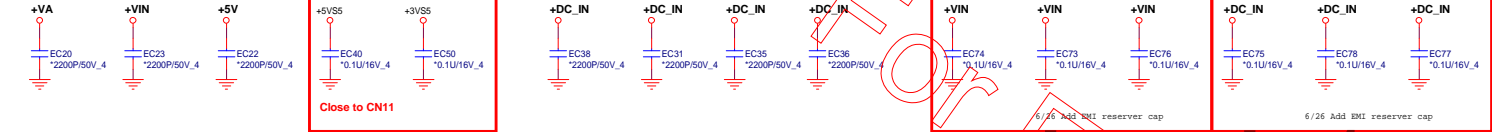
Thermal Nut



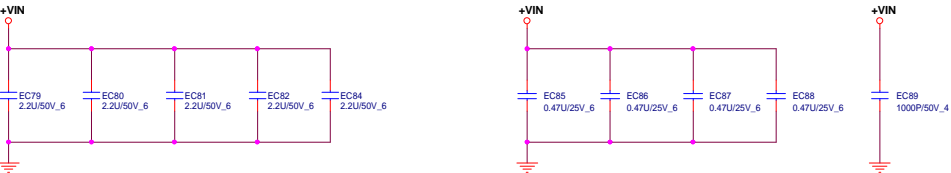
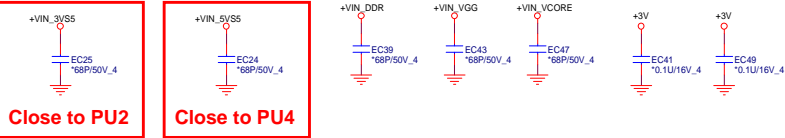
I/O port definition

	Brasswell-M	Note
SATA Port0	HDD	
SATA Port1	ODD	
PCIE Port0	Card reader	
PCIE Port1		
PCIE Port2		
PCIE Port3	WIFI	
USB3.0 Port0	USB 2.0/3.0 Combo	
USB3.0 Port1		
USB3.0 Port2		
USB3.0 Port3		
USB2.0 Port0	USB 2.0/3.0 Combo	
USB2.0 Port1	USB 2.0	
USB2.0 Port2	Webcam	
USB2.0 Port3	BT	
USB2.0 Port4	WWAN	

EMI Reserve

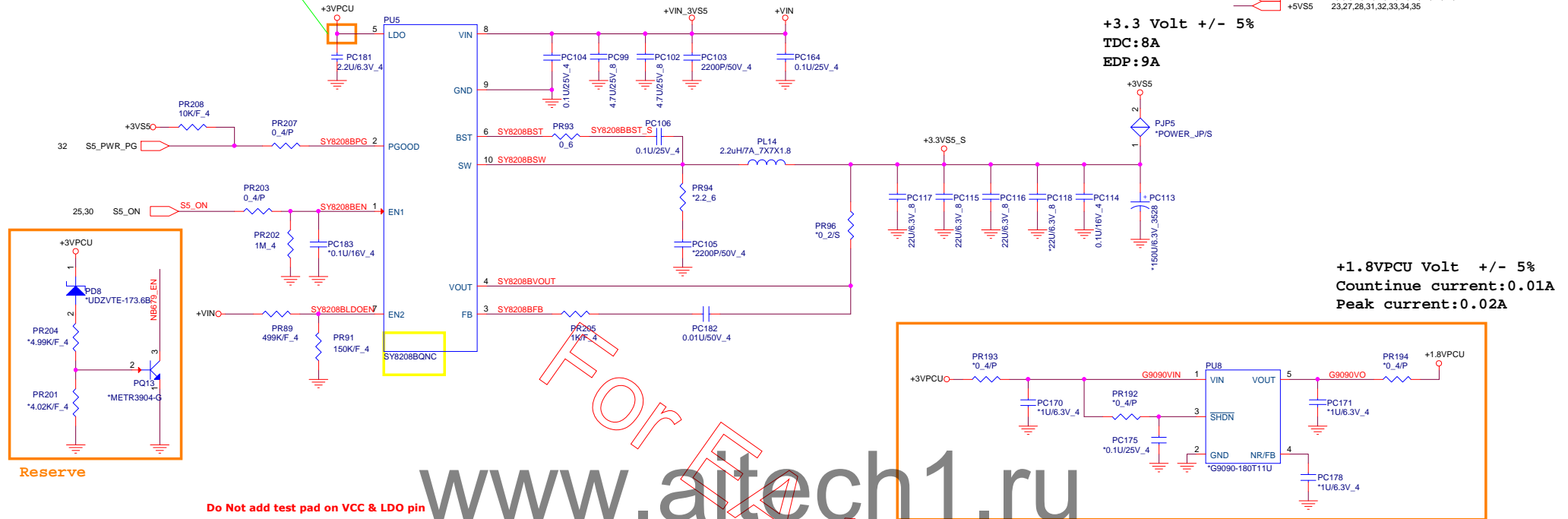


RF Reserve

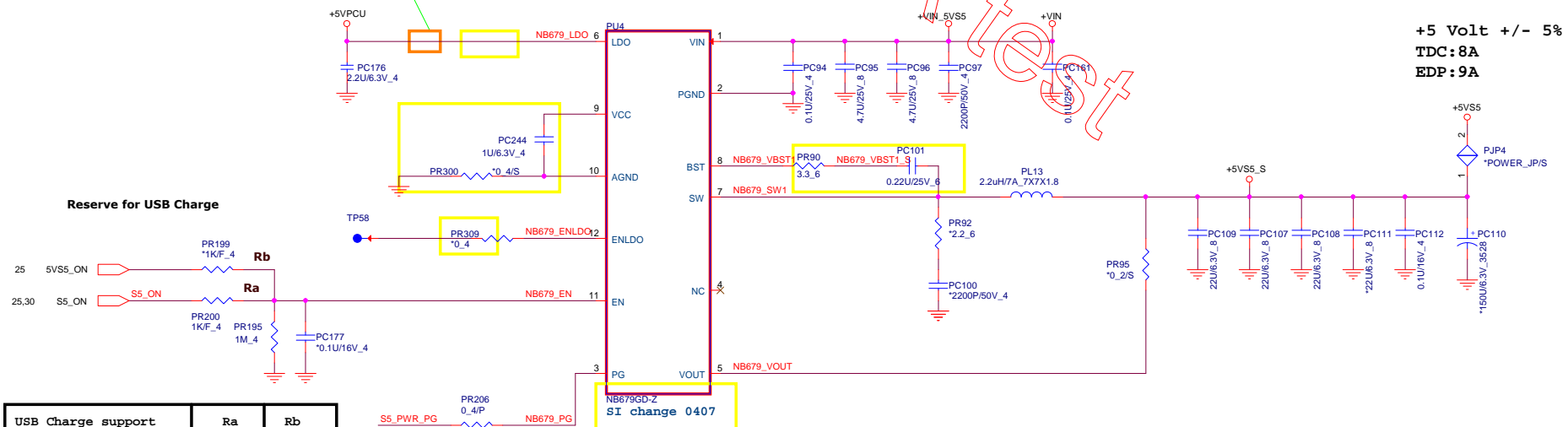


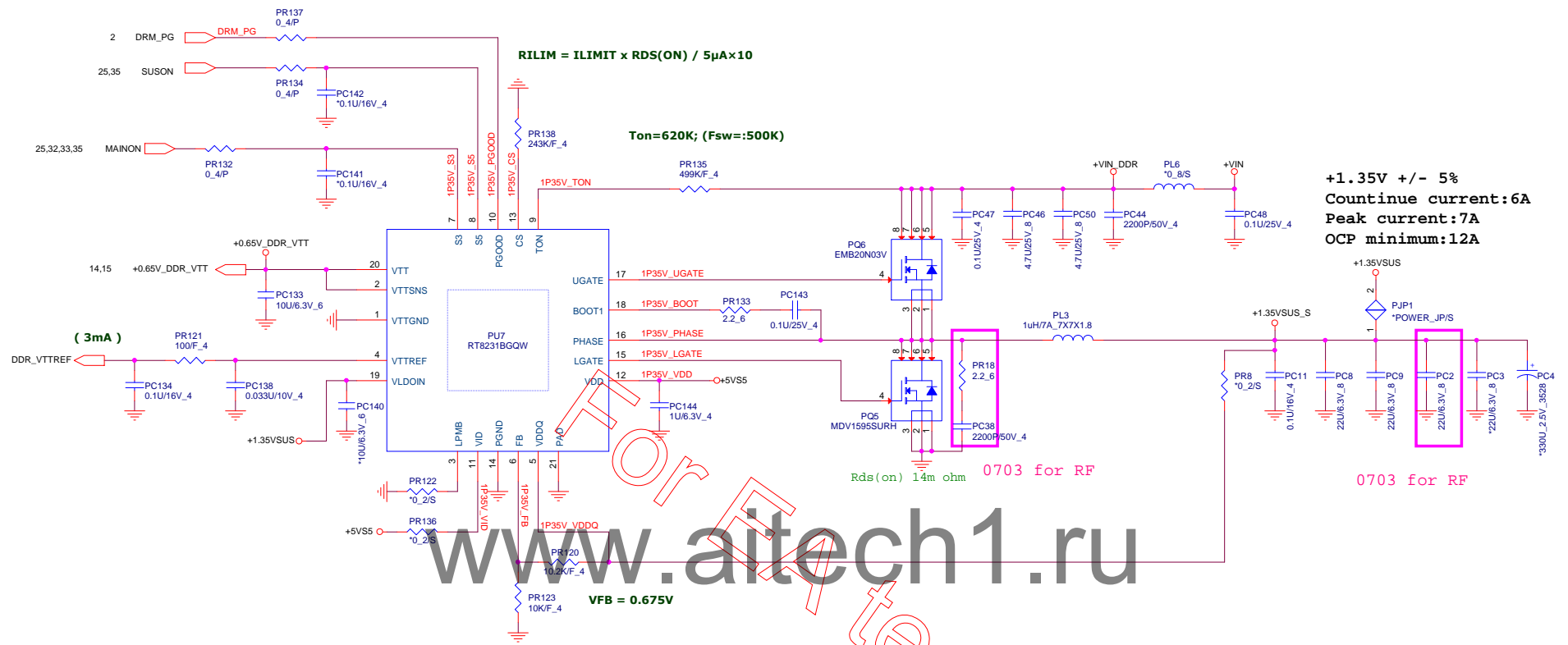
	2-cell	3-cell
PR26	un-stuff	stuff

Do Not add test pad on VCC & LDO pin

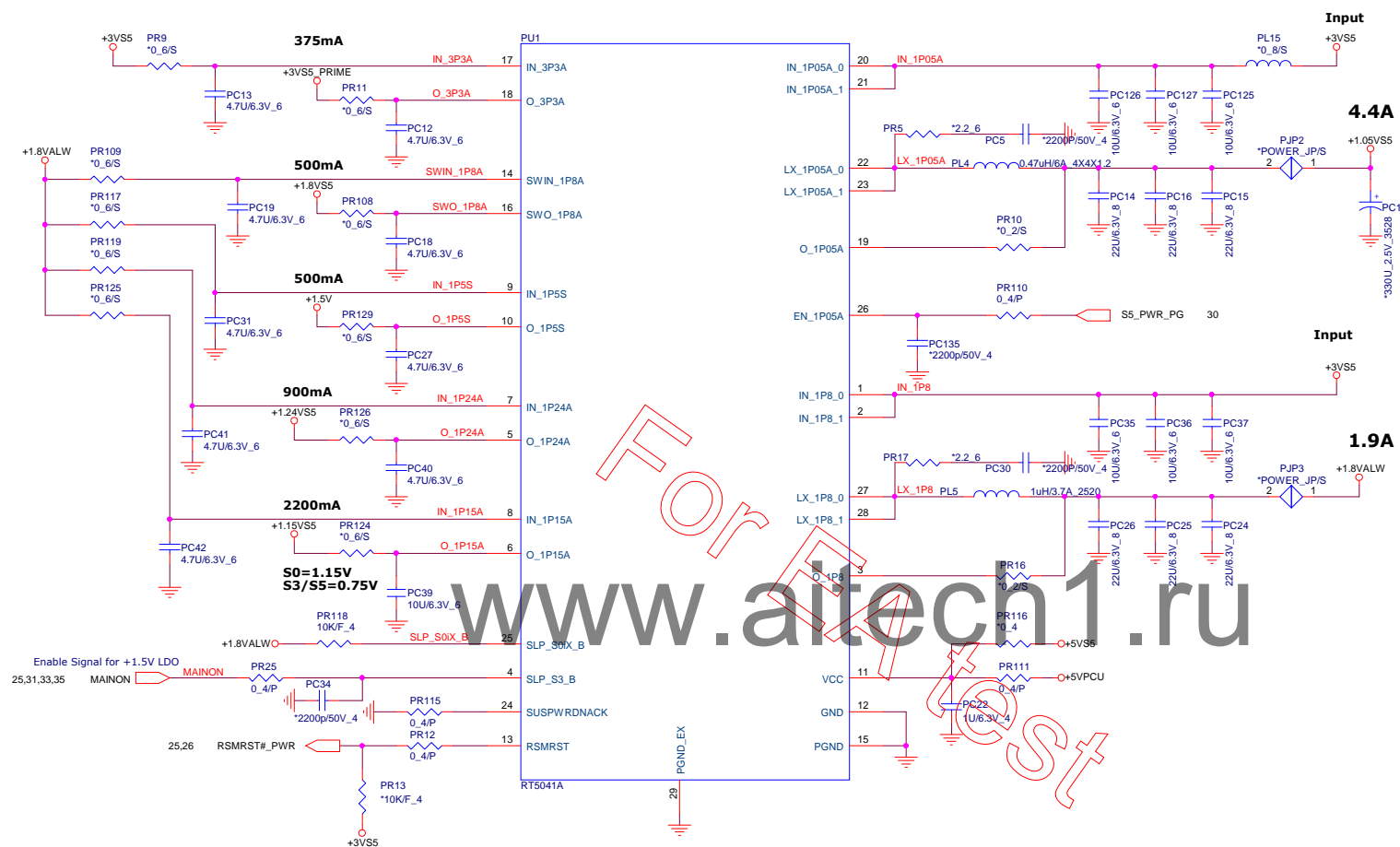


Do Not add test pad on VCC & LDO pin





+1.35VSUS 2,3,10,14,15



+3VS5	2,3,5,10,24,25,26,27,28,30,33,34,35
+1.8VALW	35
+1.8VS5	4,5,6,7,8,10,12,16,18,22,25,26,33
+3VS5_PRIME	10,22,25
+1.5V	10,20
+1.24VS5	10
+1.15VS5	9,32
+5VPCU	30,32
+1.05VS5	8,9,33,34
+1.15VS5	9,32
+5VPCU	30,32
+1.8V	4,5,35

+3VS5 2,3,5,10,24,25,26,27,28,30,32,34,35
 +1.05VS5 8,9,32,34
 +5VS5 23,27,28,30,31,32,34,35
 +VGG 9
 +1.8VS5 4,5,6,7,8,10,12,16,18,22,25,26,32
 +VIN 18,28,29,30,31,34

Close to CPU

0625 For IC performance

+VGG Volt +/- 5%

I_{max}:13A
 OCP:16.64A
 LL=0
 VBOOT=1V

For Acoustic

0625 move back to power side

H/W

47U/6.3VS₈ x 3
 220u/2V₇₃₄₃ x 2

Place close
 with VCORE
 Inductor
 B=4250
 14A for ICCMAX=1V

0625 For IC performance

Vref=0.6V

Vboot=1V

PUT COLSE
 TO V_{CORE}
 HOT SPOT

B=4250

