

Laduree 15.6" Intel Crescent Bay UMA/DIS Co-lay Schematic

Broadwell-U 15W TDP

nVidia N16S-GM 16W

REV:1

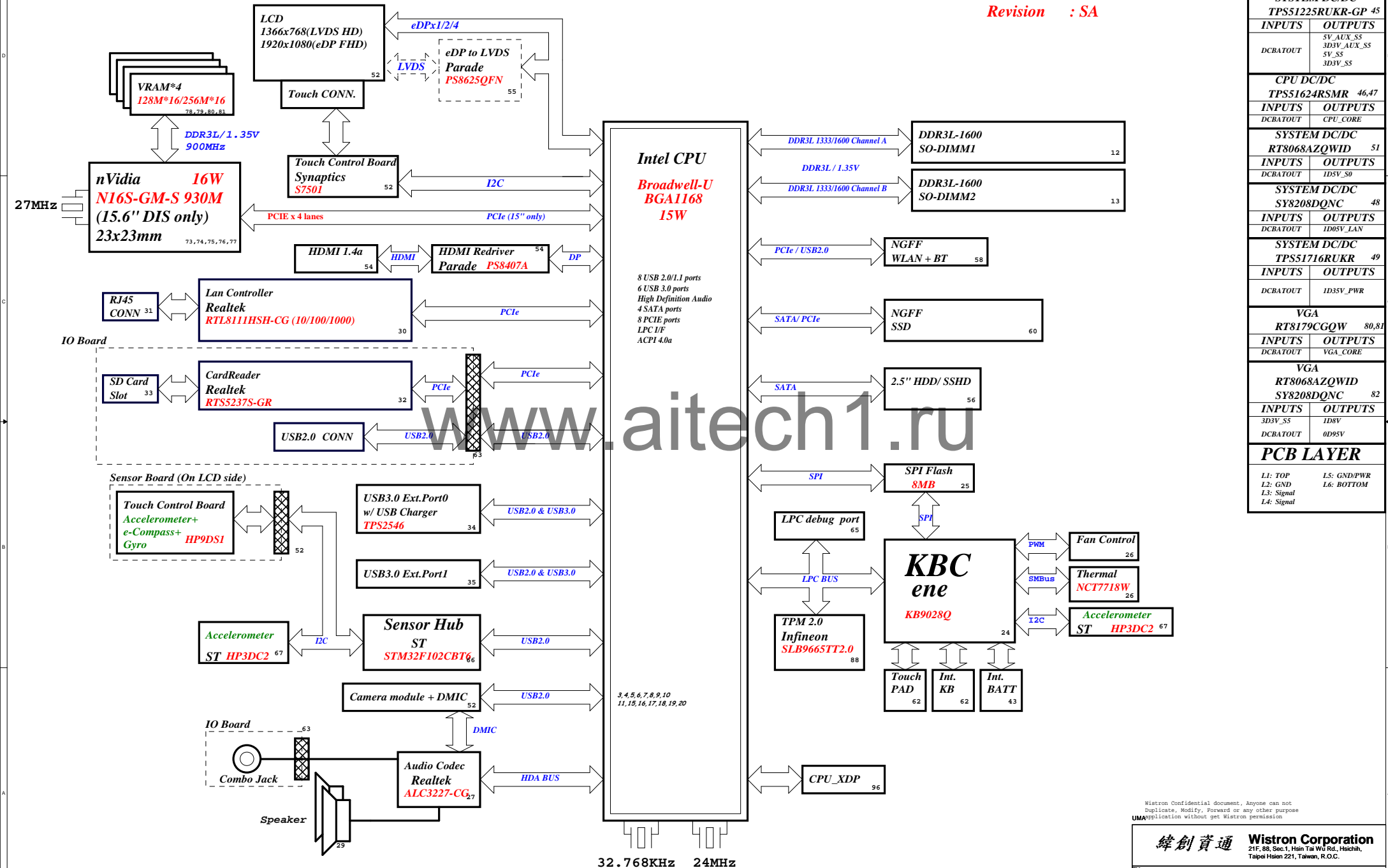
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Title			
Cover Page			
Size A4	Document Number Laduree-BDW 15.6"		Rev 1
Date: Friday, February 13, 2015		Sheet 1	of 102

Laduree 15.6" Block Diagram

Project code : 4PD048010001
PCB P/N : 14257
Revision : SA




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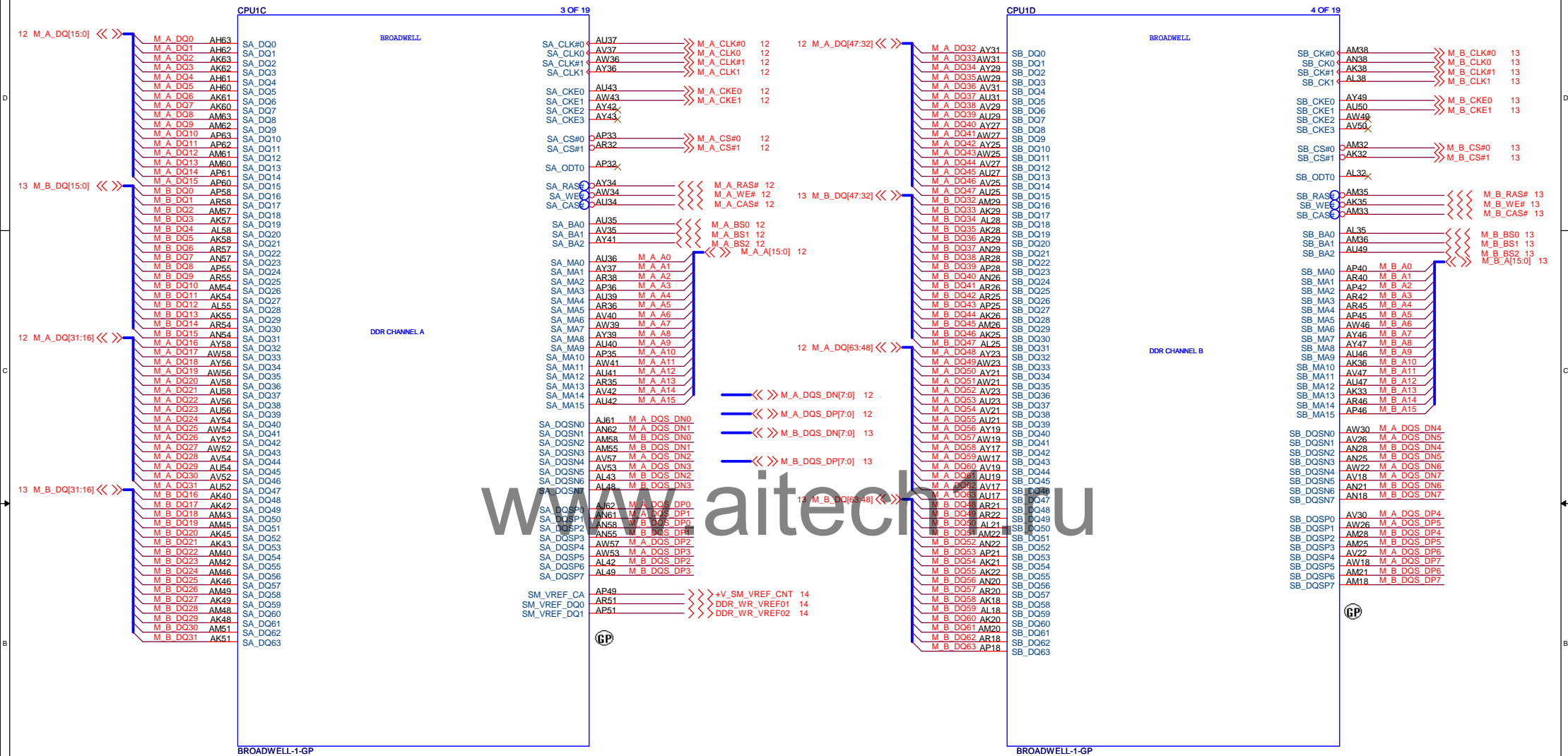
SSID = CPU

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Title			
CPU (Reserved)			
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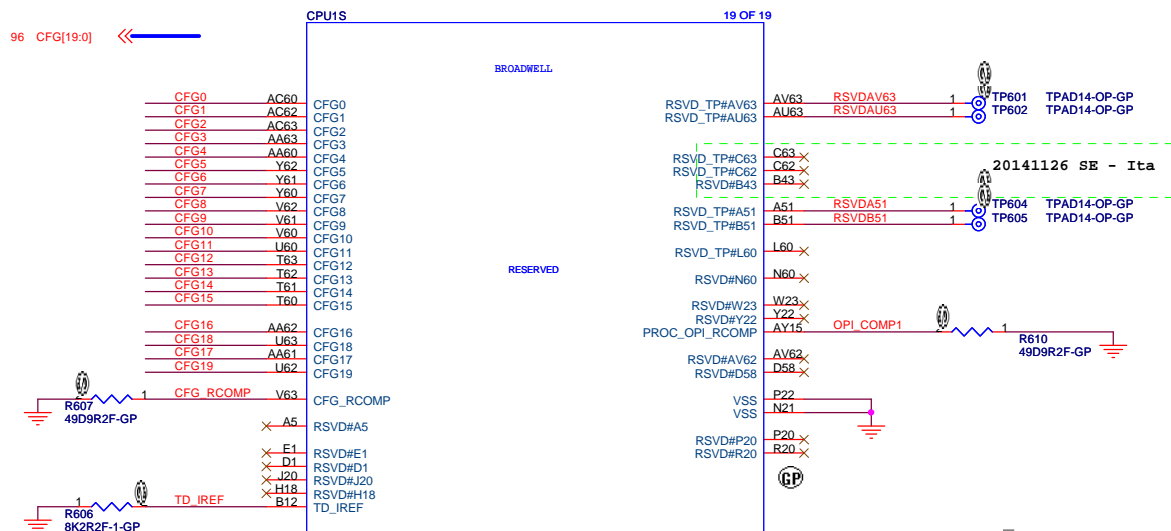


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Title		
CPU (DDR)		
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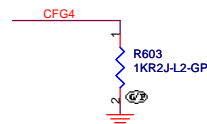
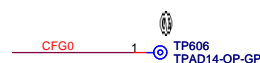
7.4

Reserved or Unused Signals

The following are the general types of reserved (RSVD) signals and connection guidelines:

- RSVD – these signals should not be connected
- RSVD_TP – these signals should be routed to a test point
- RSVD_NCTF – these signals are non-critical to function and may be left unconnected

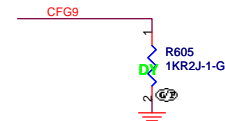
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Pin Name	Strap Description	Configuration (Default value for each bit is 1 unless specified)	Default Value
CFG[0]		Connect a series 1 kΩ resistor on the critical CFG[0] trace in a manner which does not introduce any stubs to CFG[0] trace. Route as needed from the opposite side of this series isolation resistor to the debug port. ITP will drive the net to GND.	

PHYSICAL_DEBUG_ENABLED (DFX PRIVACY)	
CFG[3]	0 : ENABLED SET DFX ENABLED BIT IN DEBUG INTERFACE MSR 1 : DISABLED

DISPLAY PORT PRESENCE STRAP	
CFG[4]	0 : ENABLED AN EXTERNAL DISPLAY PORT DEVICE IS CONNECTED TO THE EMBEDDED DISPLAY PORT 1 : DISABLED NO PHYSICAL DISPLAY PORT ATTACHED TO EMBEDDED DISPLAY PORT

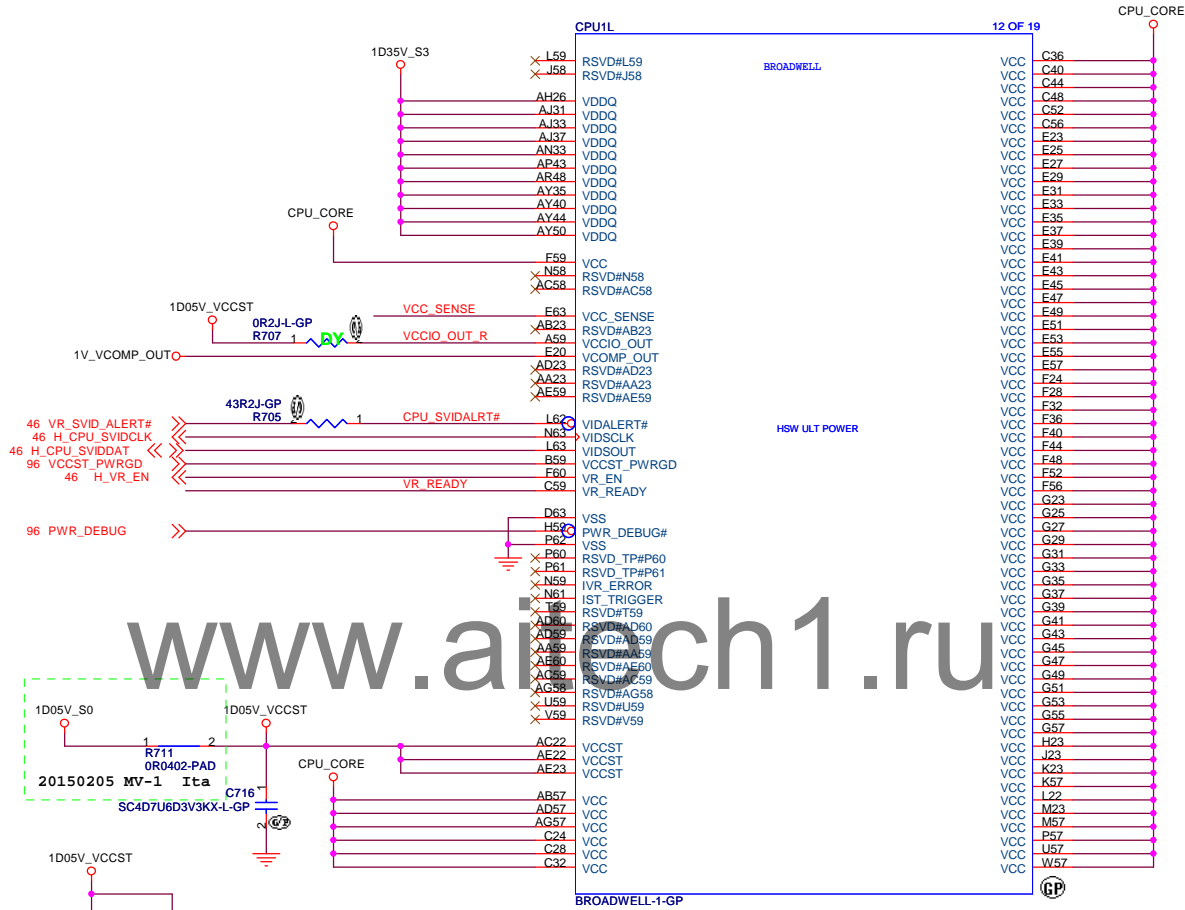
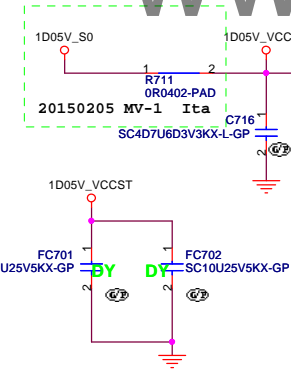
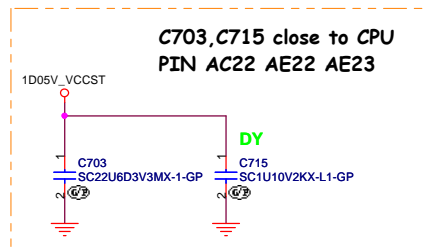
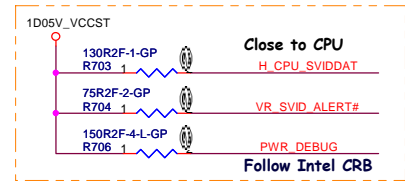


NO SVID PROTOCOL CAPABLE VR CONNECTED	
0: NO VR SUPPORTING SVID IS PRESENT. THE CHIP WILL NOT GENERATE (OR RESPOND TO) SVID ACTIVITY	
1: VRS SUPPORTING SVID PROTOCOL ARE PRESENT	

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CPU (CFG)			
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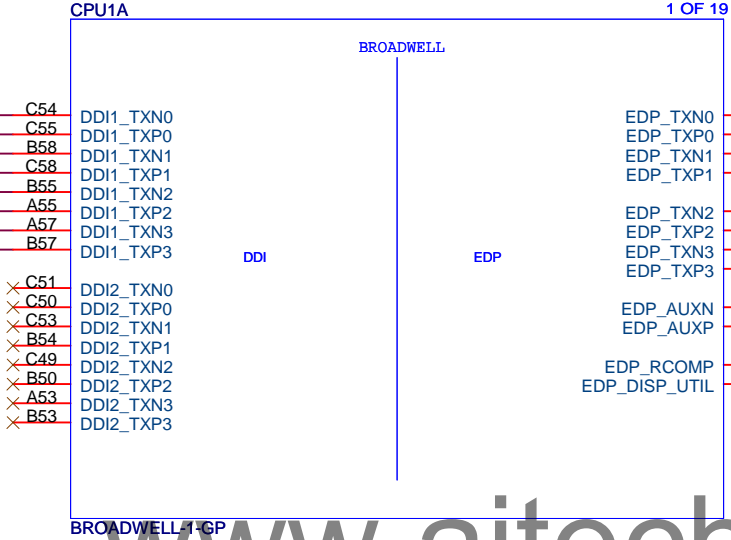


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SSID = CPU

HDMI

54 HDMI_DATA_CPU_N2
54 HDMI_DATA_CPU_P2
54 HDMI_DATA_CPU_N1
54 HDMI_DATA_CPU_P1
54 HDMI_DATA_CPU_N0
54 HDMI_DATA_CPU_P0
54 HDMI_DATA_CPU_N3
54 HDMI_DATA_CPU_P3



Layout Note:
Design Guideline:
EDP_COMP Keep routing length max 100 mils.
Trace Width:20 mils.

Signal	Trace Width	Isolation Spacing	Resistor Value	Length
eDP_RCOMP	20 mils	25 mils	24.9 Ω ±1%	Max = 100 mils

Bit Rate	Supports (in # of lanes)	Peak Bandwidth
1.62 Gb/s	4	4 x 162 MB/s = 648 MB/s
5.4 Gb/s	4	4 x 540 MB/s = 2160 MB/s
2.7 Gb/s	4	4 x 270 MB/s = 1080 MB/s

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Title

CPU (DDI/EDP)

Size

A4

Document Number

Laduree-BDW 15.6"

Rev

1

Date

Thursday, February 12, 2015

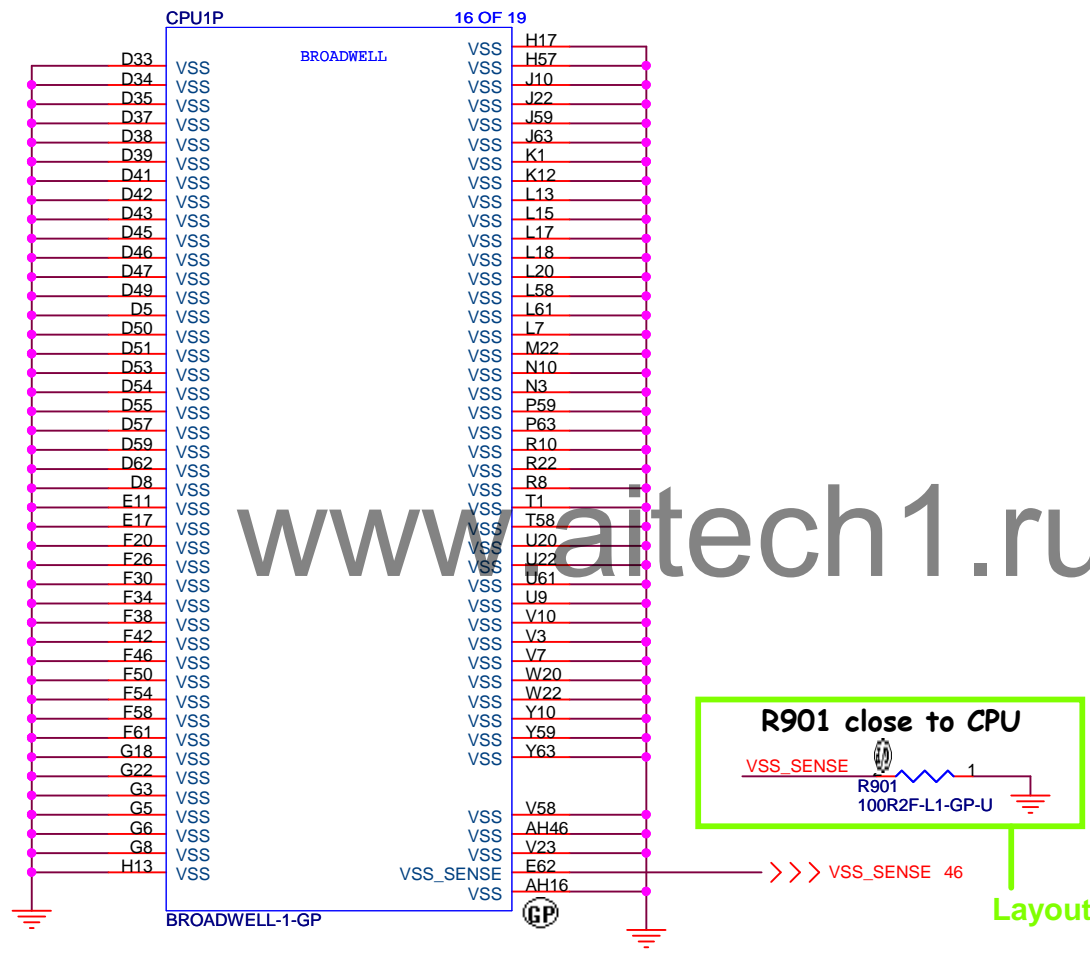
Sheet

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of

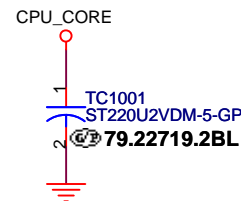
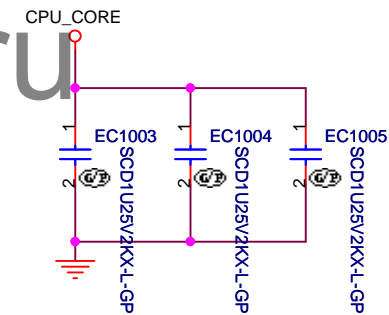
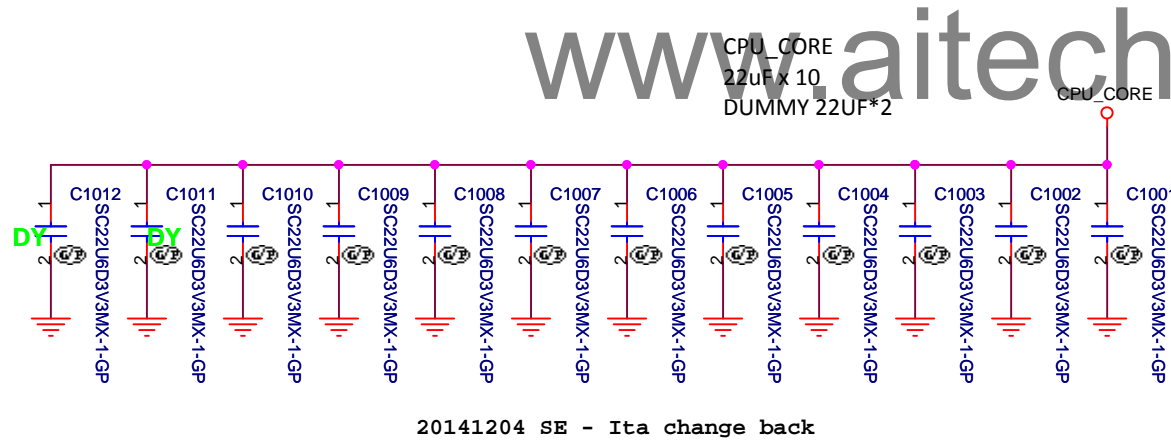
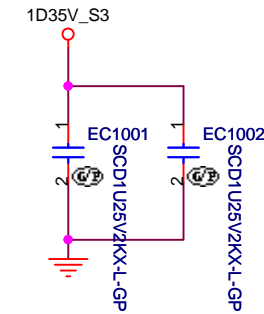
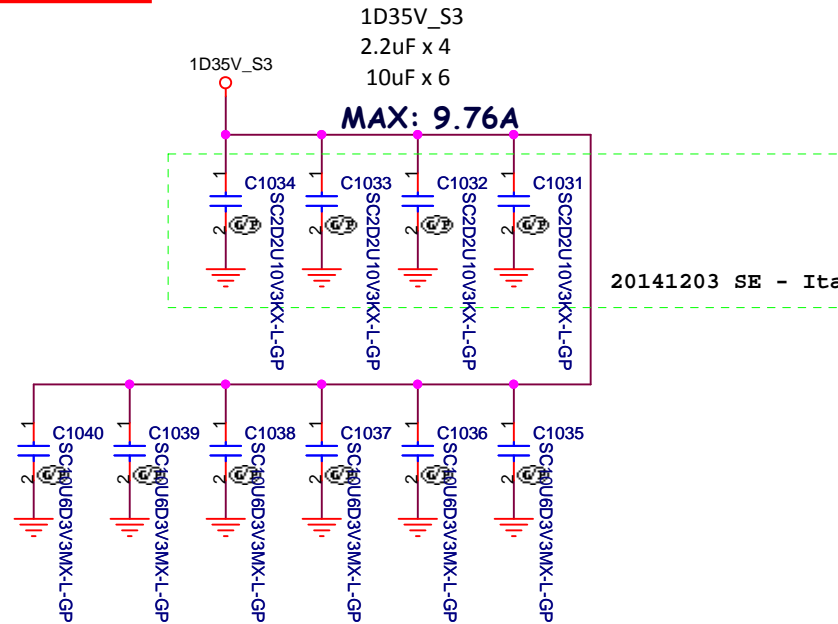
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SSID = CPU



Layout Note:

SSID = MCP



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Title

CPU (Power CAP1)

Size
A4

Document Number

Laduree-BDW 15.6"

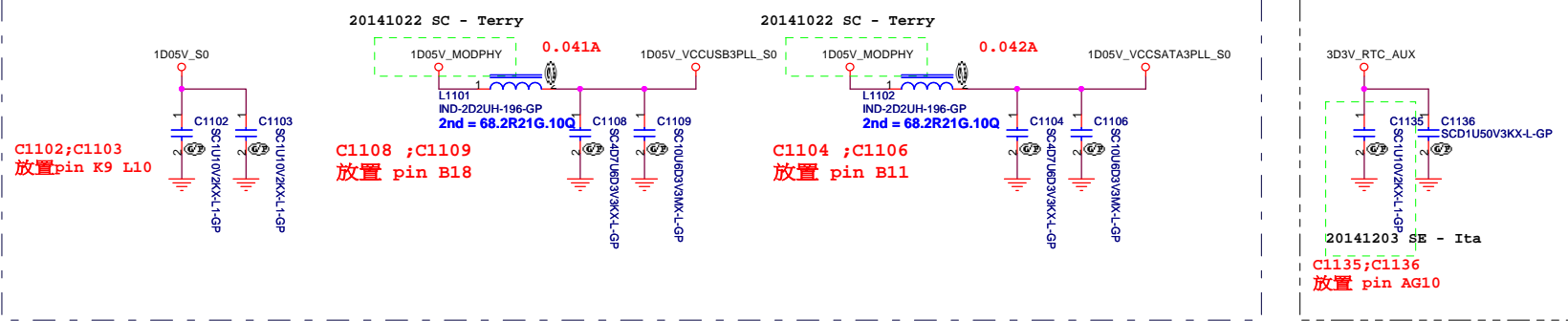
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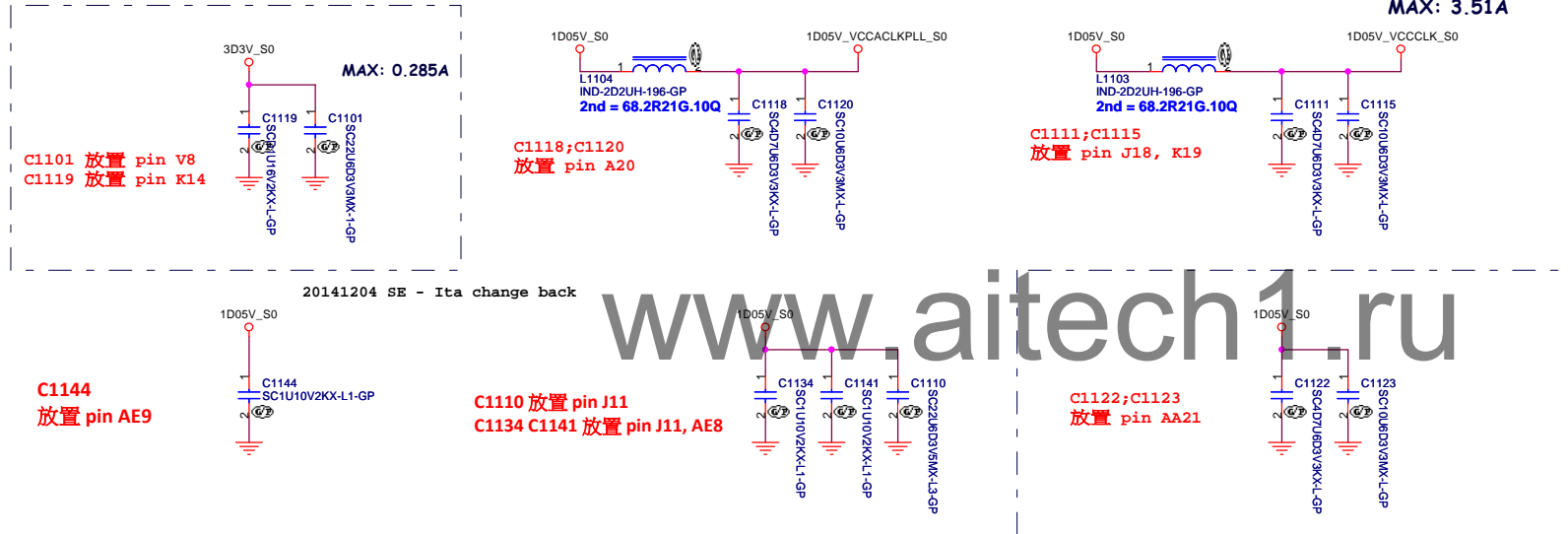
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擺放電容的位置請參考Page 21
每個位置如下

MAX: 1.92A



MAX: 3.51A



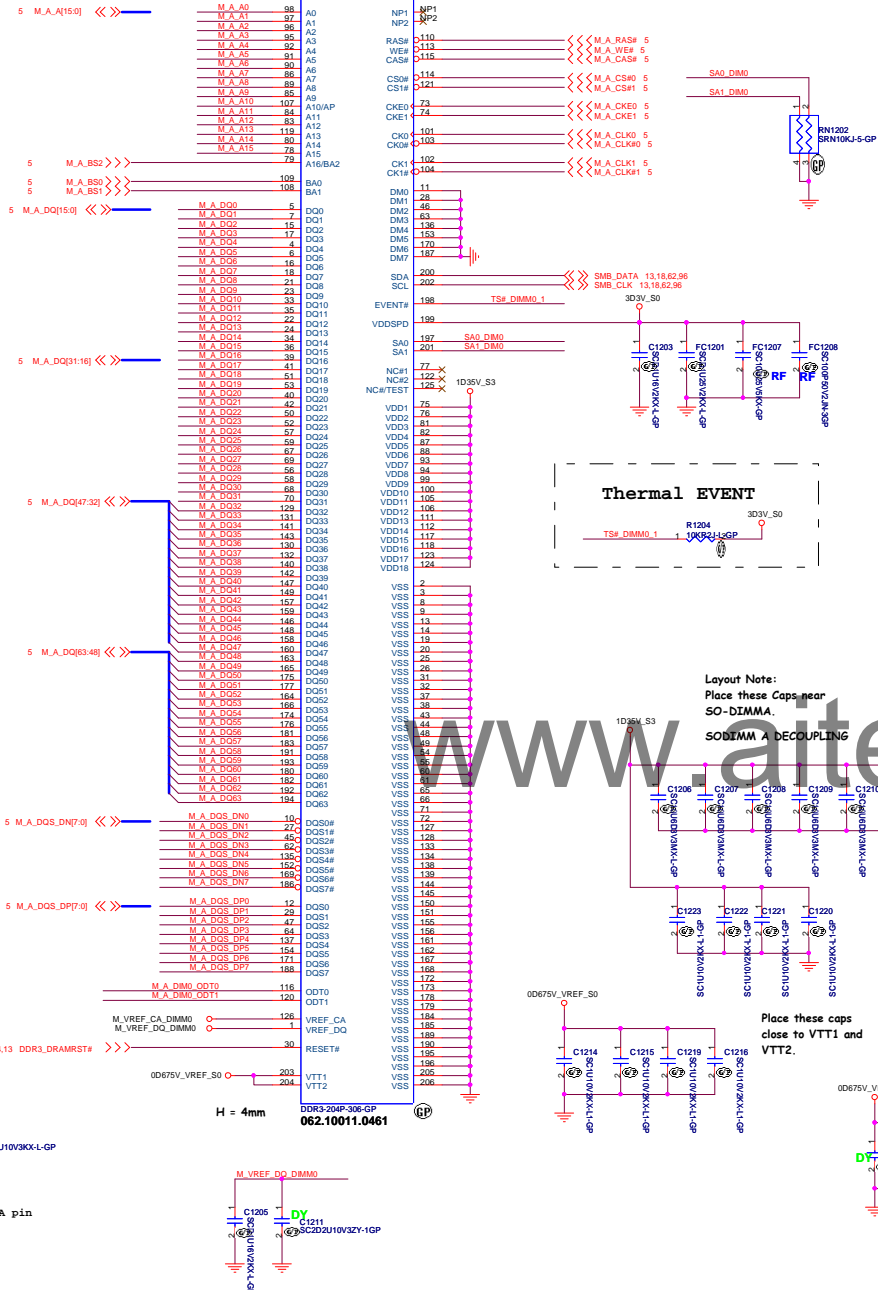
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CPU (Power CAP2)		
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SSID = MEMORY



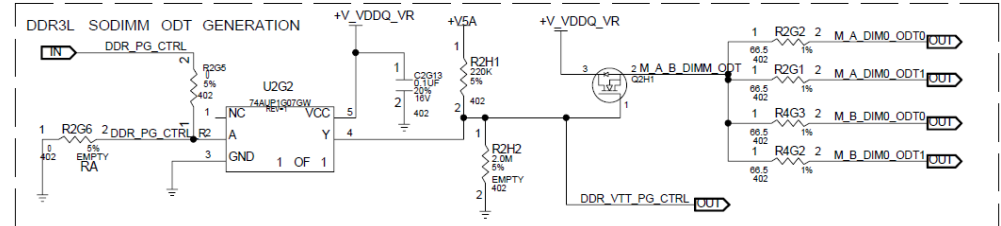
Note:
If SA0_DIM0 = 0, SA1_DIM0 = 0
SO-DIMMA SPD Address is 0xA0
SO-DIMMA TS Address is 0x30

If SA0_DIM0 = 1, SA1_DIM0 = 0
SO-DIMMA SPD Address is 0xA2
SO-DIMMA TS Address is 0x32

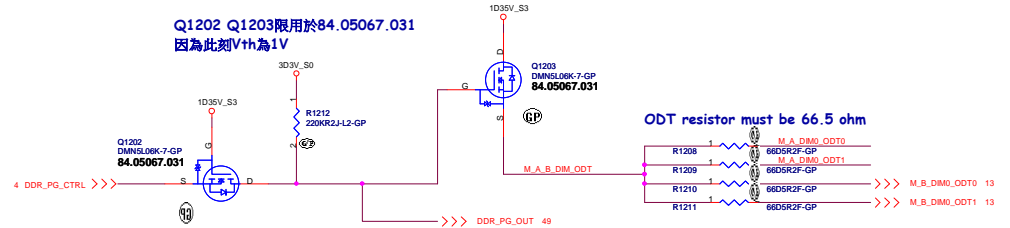
SODIMM Memory Connectivity and Topology
ODT Signal Connectivity and Support

For DDR3L SODIMM designs, Intel recommends ODT signals not to be routed between CPU and DIMM on platform, leave ODT at CPU as no-connect (open), and tie DIMM ODT to VDDQ through FET and resistor. The reason for this additional ODT-control circuitry on the platform is to save power dissipation by turning off VDDQ to VTT path during low power states, as ODT signal is terminated to VTT through RTT on SODIMM. The ODT value for DDR3L SODIMM 1-DPC platform will be encoded in the write command and use RTT_NOM = Off and RTT_WR = (60,120) Ohm.

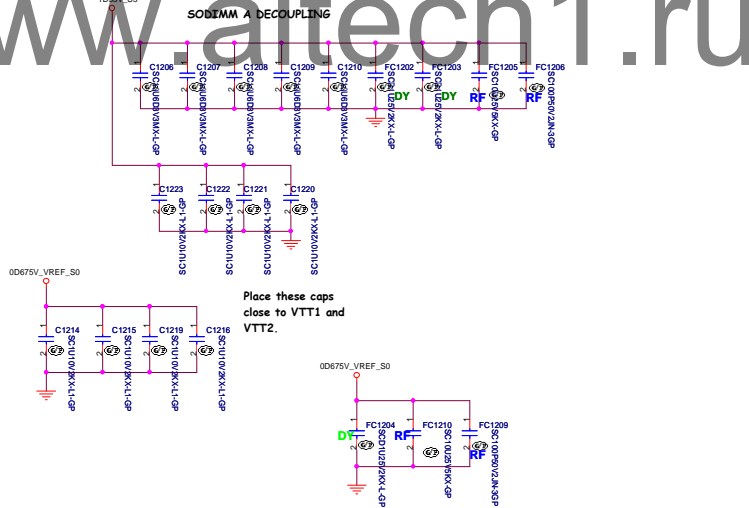
- CPU ODT output would be NOCON
- SODIMM ODT input should be tied to VDDQ through a FET and a resistor to support low power states.



Q1202 Q1203限用於84.05067.03:
因為此刻 V_{th} 為1V

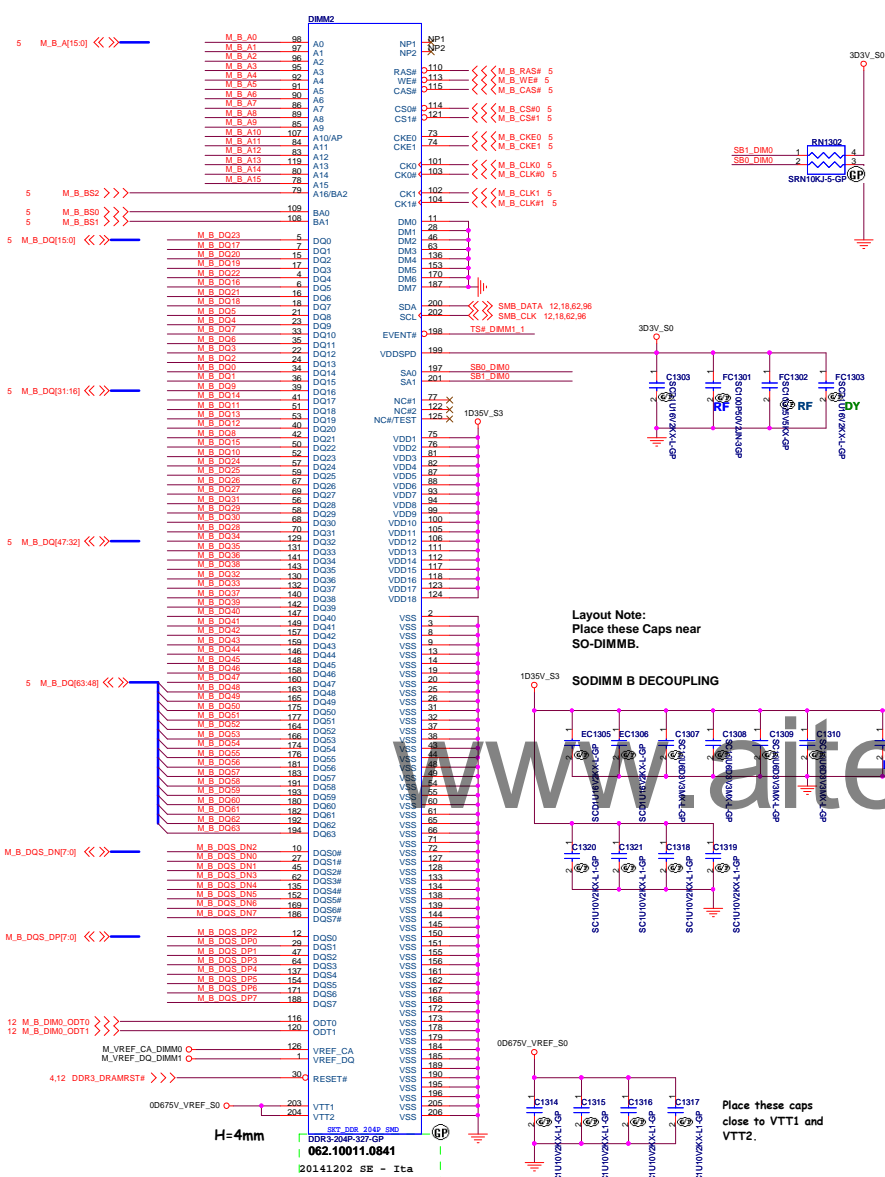


Layout Note:
Place these Caps near
SO-DIMM A.



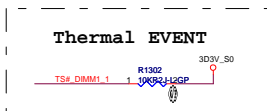
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SSID = MEMORY

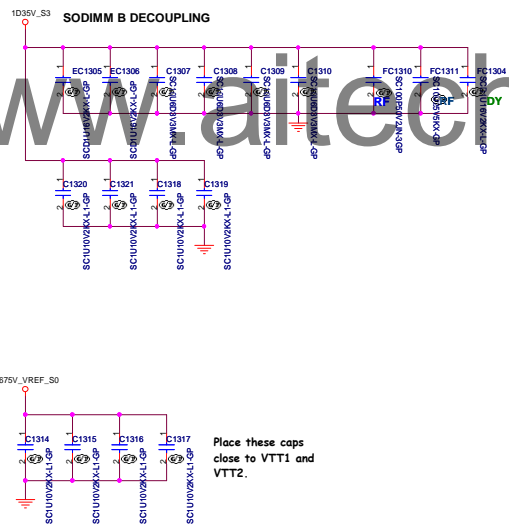


Note:
SO-DIMMB SPD Address is 0xA4
SO-DIMMB TS Address is 0x34

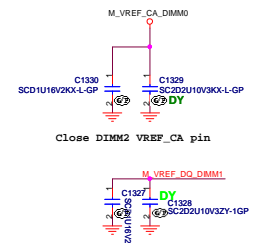
SO-DIMMB is placed farther from the Processor than SO-DIMMA



Layout Note:
Place these Caps near
SO-DIMMB.

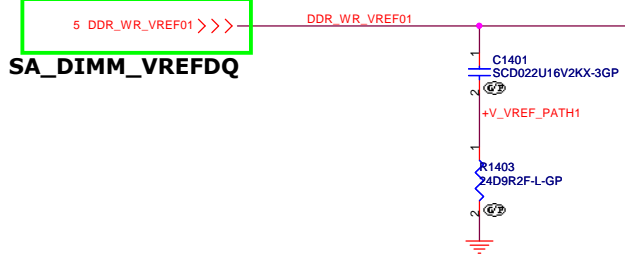


Place these caps
close to VTT1 and
VTT2.

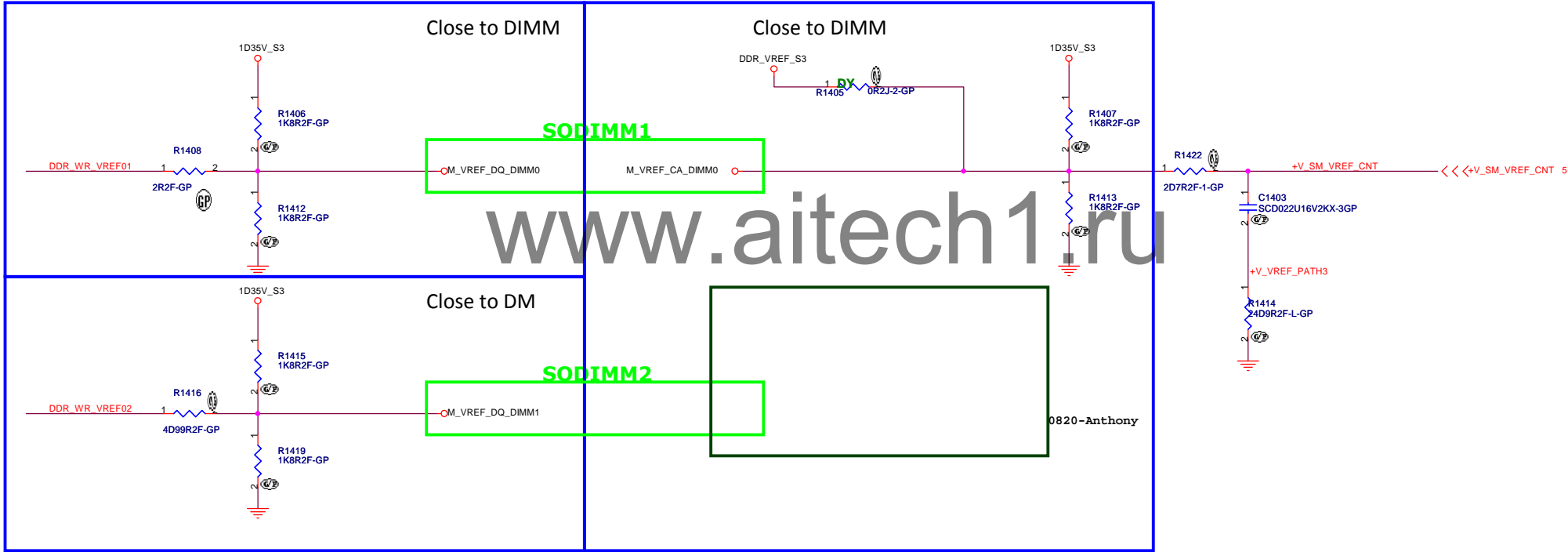


VREF circuit -M1 (Voltage Driver Network) & M3 (Driven by Processor) Implementation

Driven by process (PIN#AR51)



Driven by process (PIN#AP51)

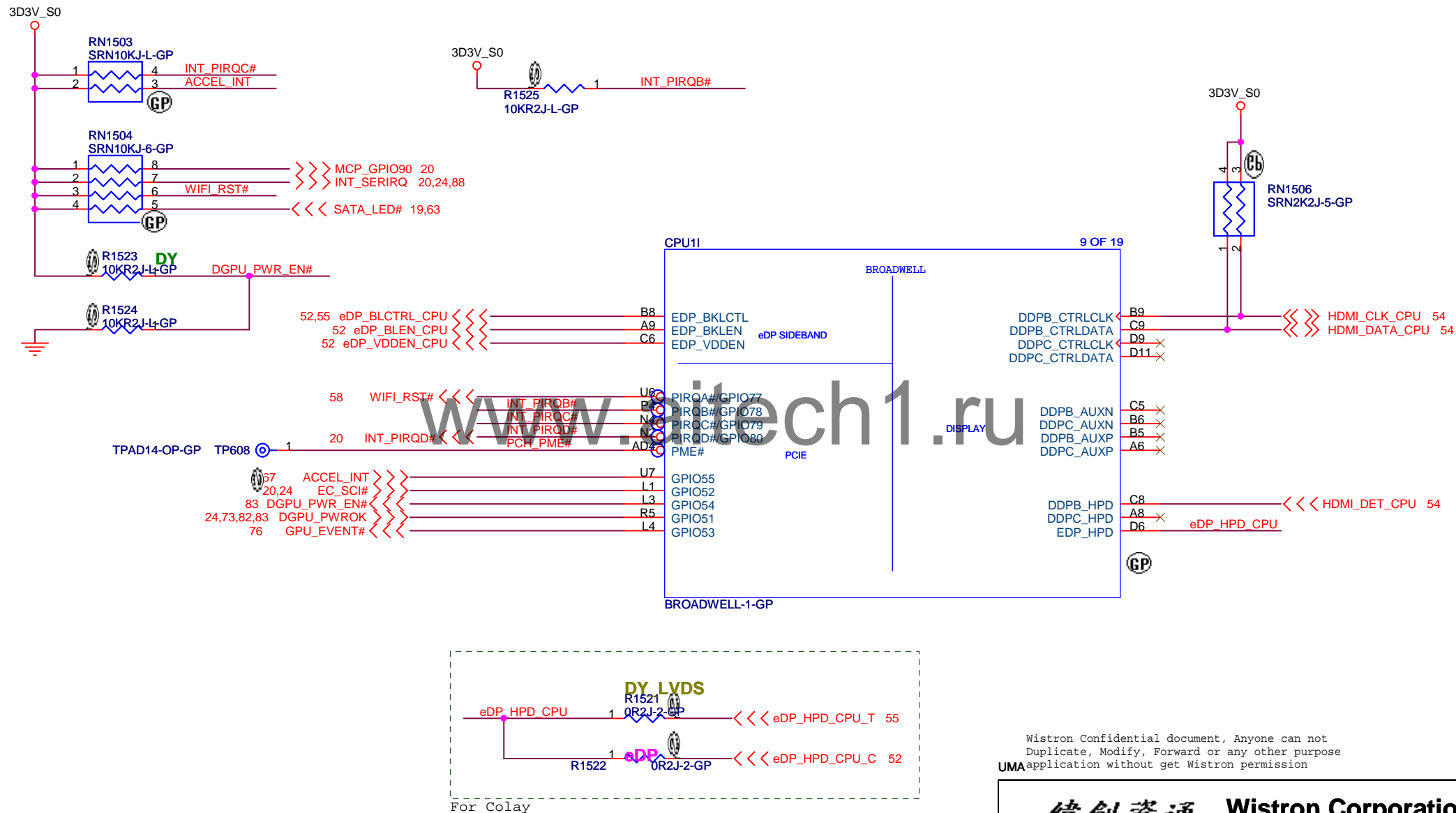


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M1 & M3 Implementation			
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SSID = CPU



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Title

CPU(EDP SIDE BAND/GPIO/DDI)

Size
A4

Document Number

Laduree-BDW 15.6"

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1

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SSID = CPU

Bit	Description
31:3	Reserved
2	<p>WAKE# Pin Deep Sx Enable (WAKE_PIN_DSX_EN) - R/W. When this bit is '1', the PCI Express WAKE# pin is monitored while in Deep Sx, supporting wake from Deep Sx due to assertion of this pin. In this case the platform must externally pull-up the pin to the DSW (instead of pulling-up to the SUS as historically been the case). When this bit is '0':</p> <ul style="list-style-type: none"> Deep Sx configurations: The PCH internal pull-down on the WAKE# pin is enabled in Deep Sx and during G3 exit and the pin is not monitored during this time. Deep Sx disabled configurations: The PCH internal pull-down on the WAKE# pin is never enabled. <p>NOTE: Deep Sx disabled configuration must leave this bit at '0'.</p>

DSWODVREN - On Die DSW VR Enable	
HIGH	Enabled (DEFAULT)
LOW	Disabled

3D3V_RTC_AUX

1

R1717 330K R2J-L-GP

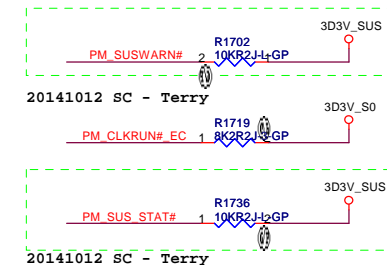
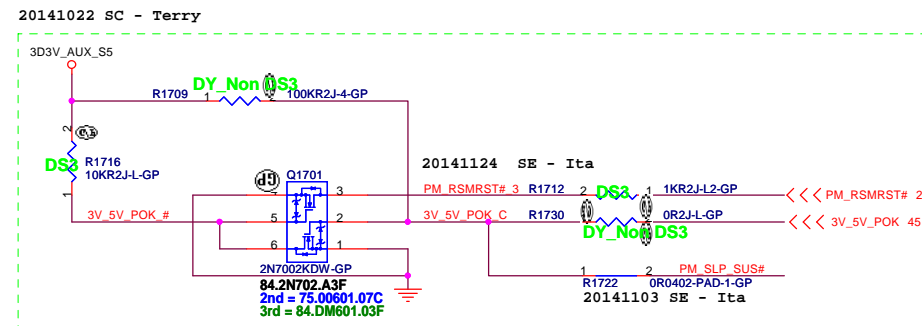
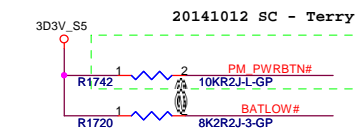
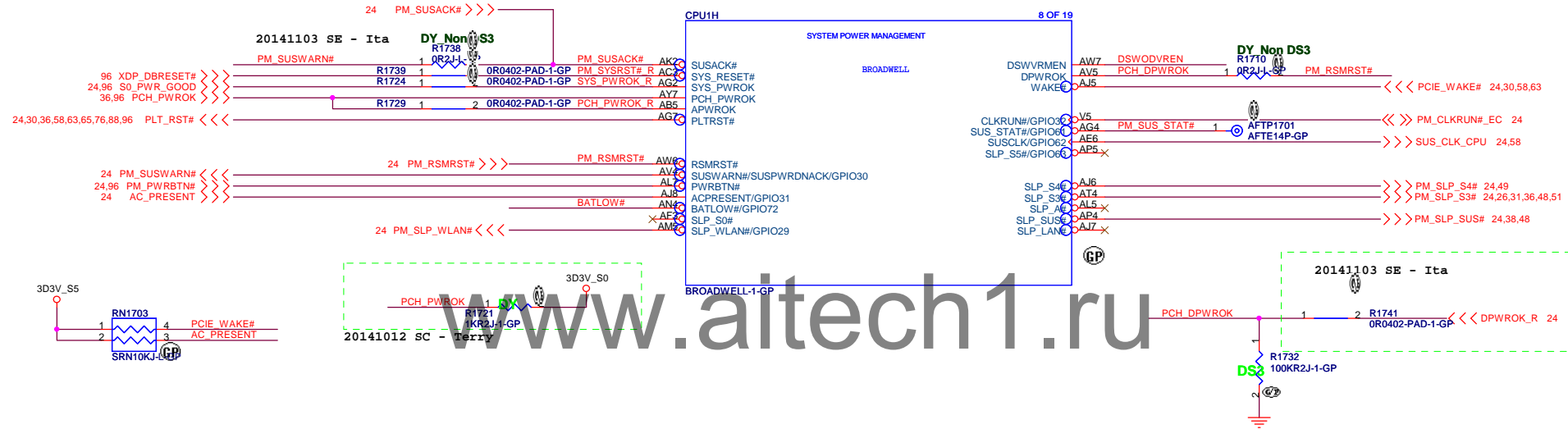
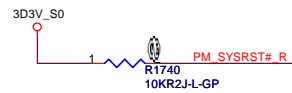
DSWODVREN

1

R1718 330K R2J-L-GP

DY

Ground



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Title	Author	Year	Country	Sample Size	Age Range	Gender	Ethnicity	Religion	Education	Occupation	Income	Health	Mental	Physical	Social	Cultural	Language	Religion	Education	Occupation	Income	Health	Mental	Physical	Social	Cultural	Language
Title	Author	Year	Country	Sample Size	Age Range	Gender	Ethnicity	Religion	Education	Occupation	Income	Health	Mental	Physical	Social	Cultural	Language	Religion	Education	Occupation	Income	Health	Mental	Physical	Social	Cultural	Language

CPU (DMI/FDI/PM)Size
A3

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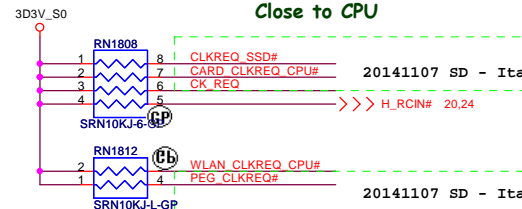
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SSID = CPU

Close to CPU



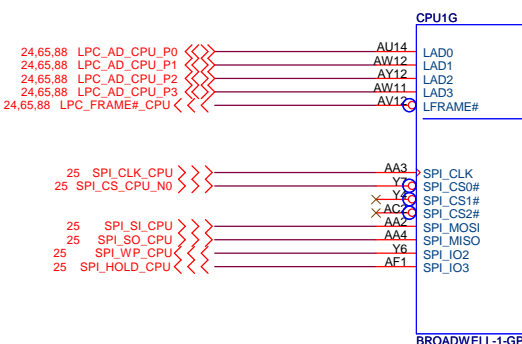
Cardreader

LAN

WLAN

GPU PEG BUS

20141107 SD - Ita



CPU1F

BROADWELL

CLOCK

SIGNALS

BROADWELL-1-GP

BROADWELL

CPU1G

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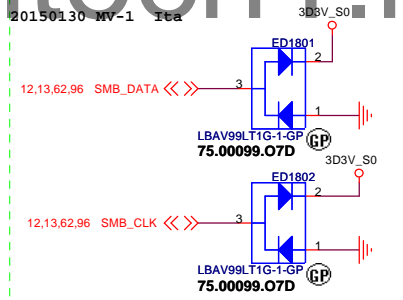
BROADWELL

SMBUS

C-LINK

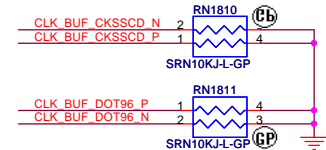
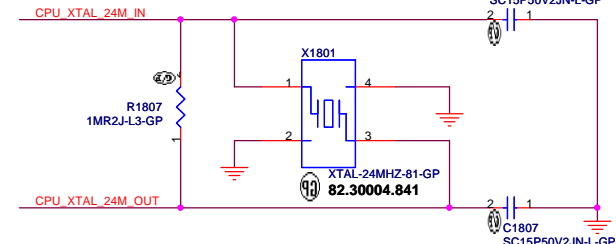
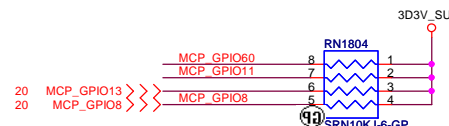
BROADWELL-1-GP

20150130 MV-1 Ita

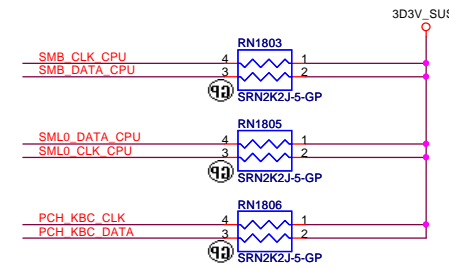
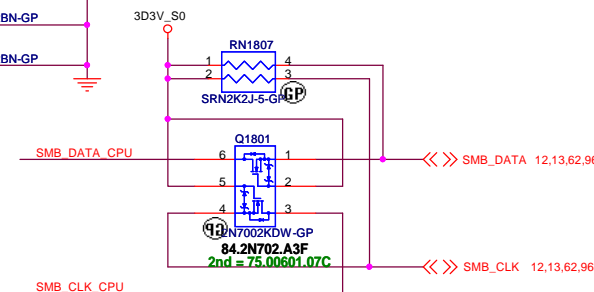


DIMM1 / DIMM2 / Touchpad / XDP

EC / Thermal / GPU
EDP to LVDS / Sensor



Need very close to CPU



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SSID = CPU

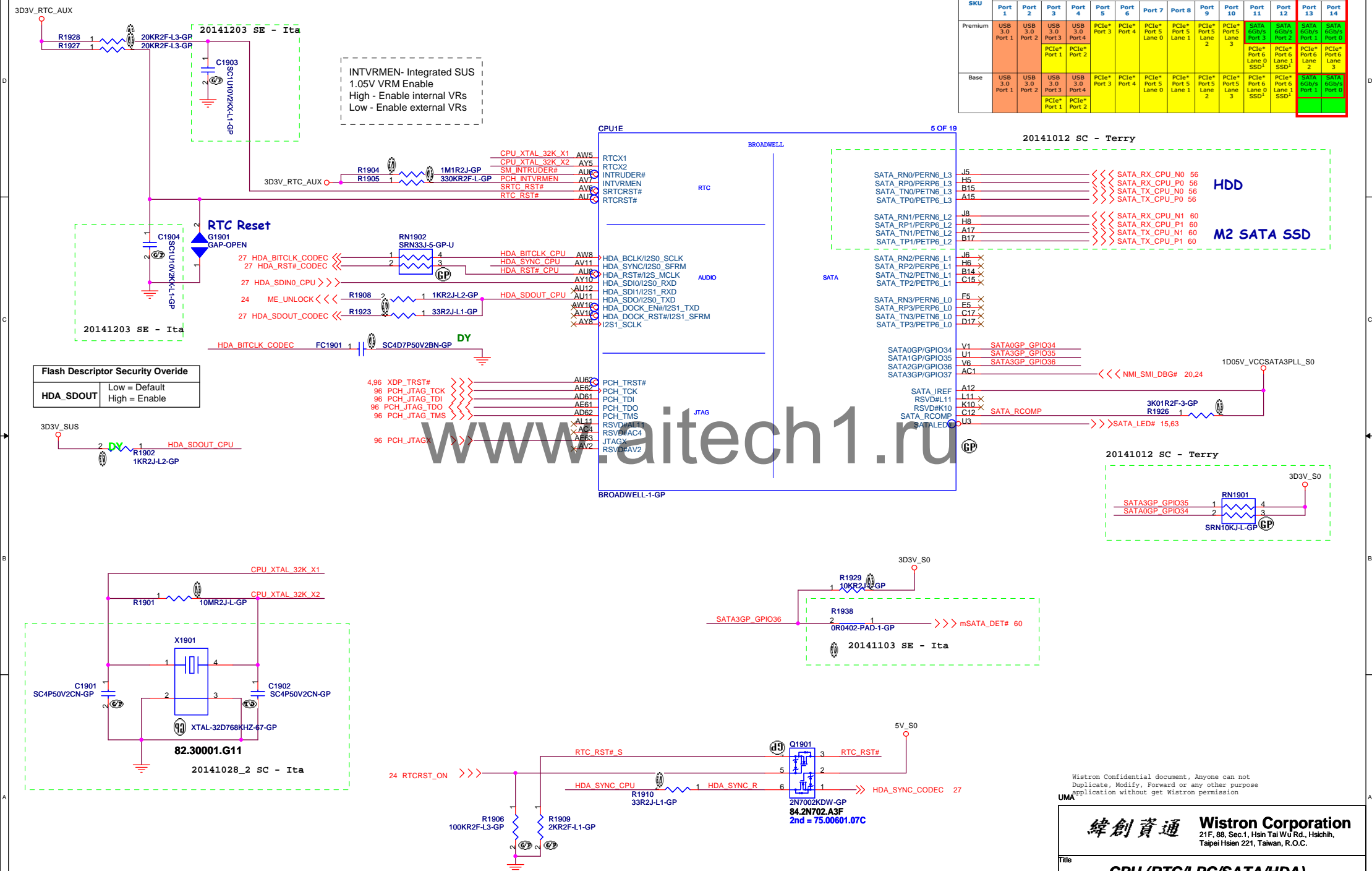


Table 1-3. Broadwell U PCH-LP SKUs—Flexible I/O Map

SKU		High Speed I/O Ports												Port 13	Port 14
		Port 1	Port 2	Port 3	Port 4	Port 5	Port 6	Port 7	Port 8	Port 9	Port 10	Port 11	Port 12		
Premium	USB 3.0 Port 1	USB 3.0 Port 2	USB 3.0 Port 3	USB 3.0 Port 4	PCIe* Port 3	PCIe* Port 4	PCIe* Port 5 Lane 0	PCIe* Port 5 Lane 1	PCIe* Port 5 Lane 2	PCIe* Port 5 Lane 3	SATA 6Gb/s Port 2	SATA 6Gb/s Port 3	SATA 6Gb/s Port 4	SATA 6Gb/s Port 5	
			PCIe* Port 1	PCIe* Port 2							PCIe* Port 6 Lane 0 SSD¹	PCIe* Port 6 Lane 1 SSD¹	PCIe* Port 6 Lane 2 SSD¹	PCIe* Port 6 Lane 3 SSD¹	
Base	USB 3.0 Port 1	USB 3.0 Port 2	USB 3.0 Port 3	USB 3.0 Port 4	PCIe* Port 3	PCIe* Port 4	PCIe* Port 5 Lane 0	PCIe* Port 5 Lane 1	PCIe* Port 5 Lane 2	PCIe* Port 5 Lane 3	PCIe* Port 6 Lane 0 SSD¹	PCIe* Port 6 Lane 1 SSD¹	SATA 6Gb/s Port 1	SATA 6Gb/s Port 0	

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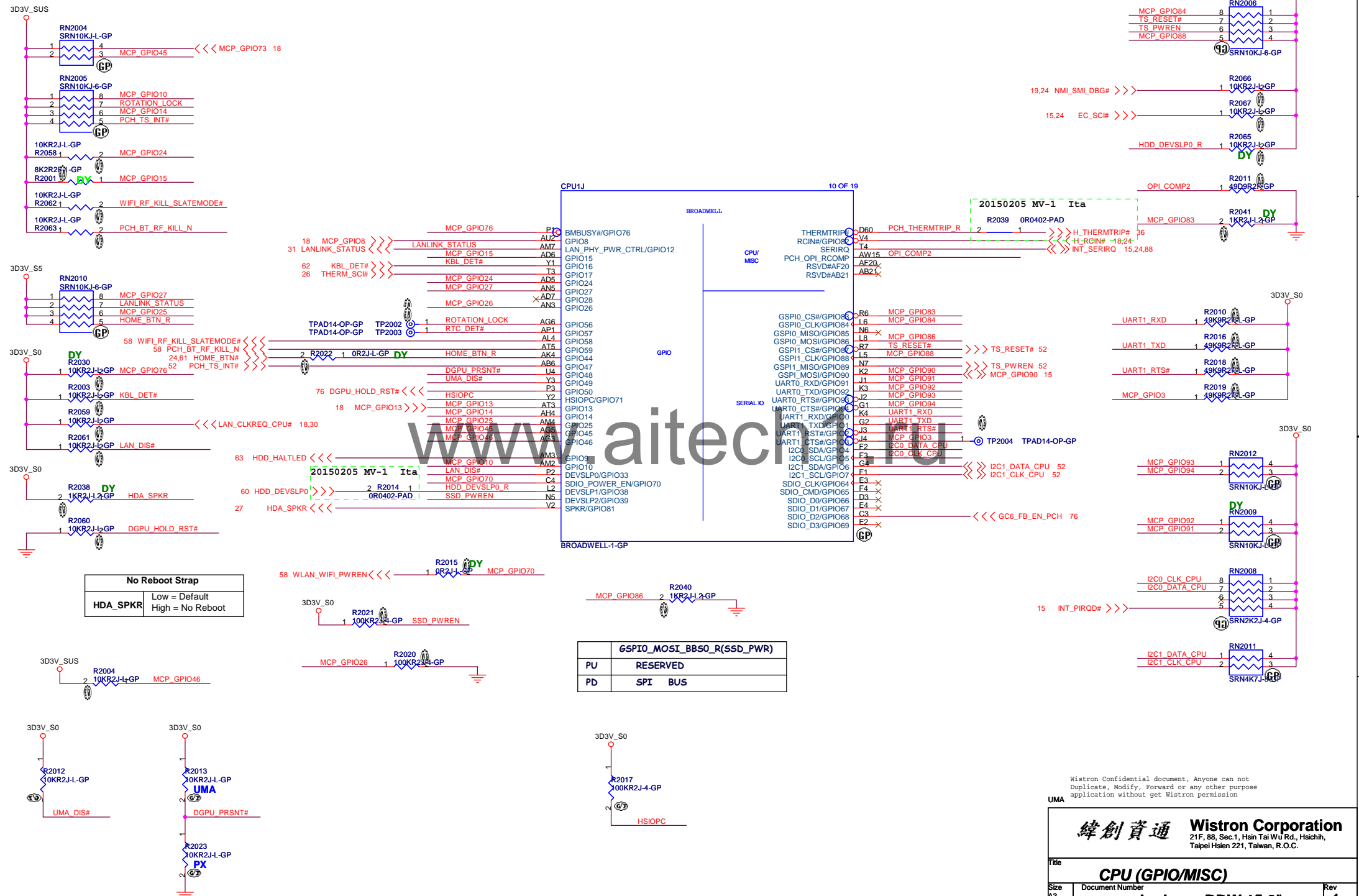
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Title			
CPU (RTC/LPC/SATA/HDA)			
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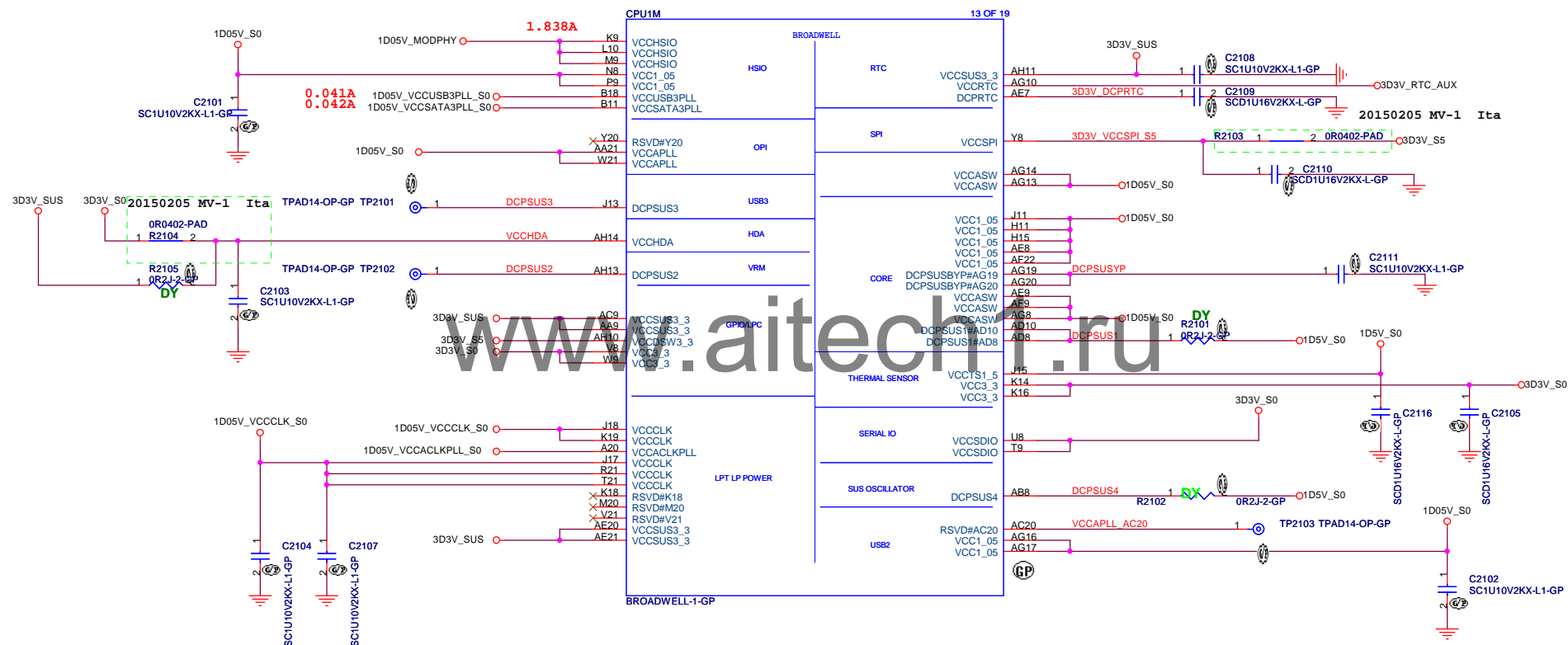
SSID = CPU



SSID = CPU

Notes:

1. Required only on external SUS.
2. Placeholder only. Does not need to be stuffed.
3. The following pins are not to be connected and be left floating. Test point is optional on these pins: AC20, Y20, K18, M20, V21.
4. Note that some decoupling capacitors are shared between more than 1 rail. Follow the "Place capacitors near balls" instructions above to ensure this sharing is optimized.
5. Capacitors should be placed less than 100 mils (2.54 mm) from the edge of package.
6. For description of (R)unway, and (E)dge decoupling capacitor placement, please refer to [Section 41.3, "Loop Inductance Reduction Decoupling" on page 532.](#)



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Title

CPU (POWER1)

Size

Document Number

Laduree-BDW 15.6"

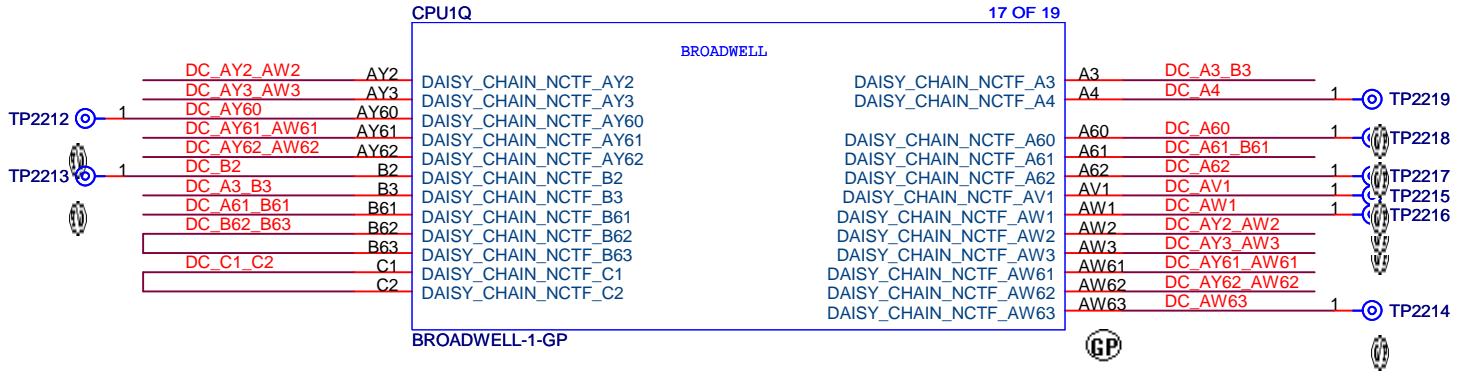
Rev

Date: Friday, February 06, 2015

Sheet 21 of

102

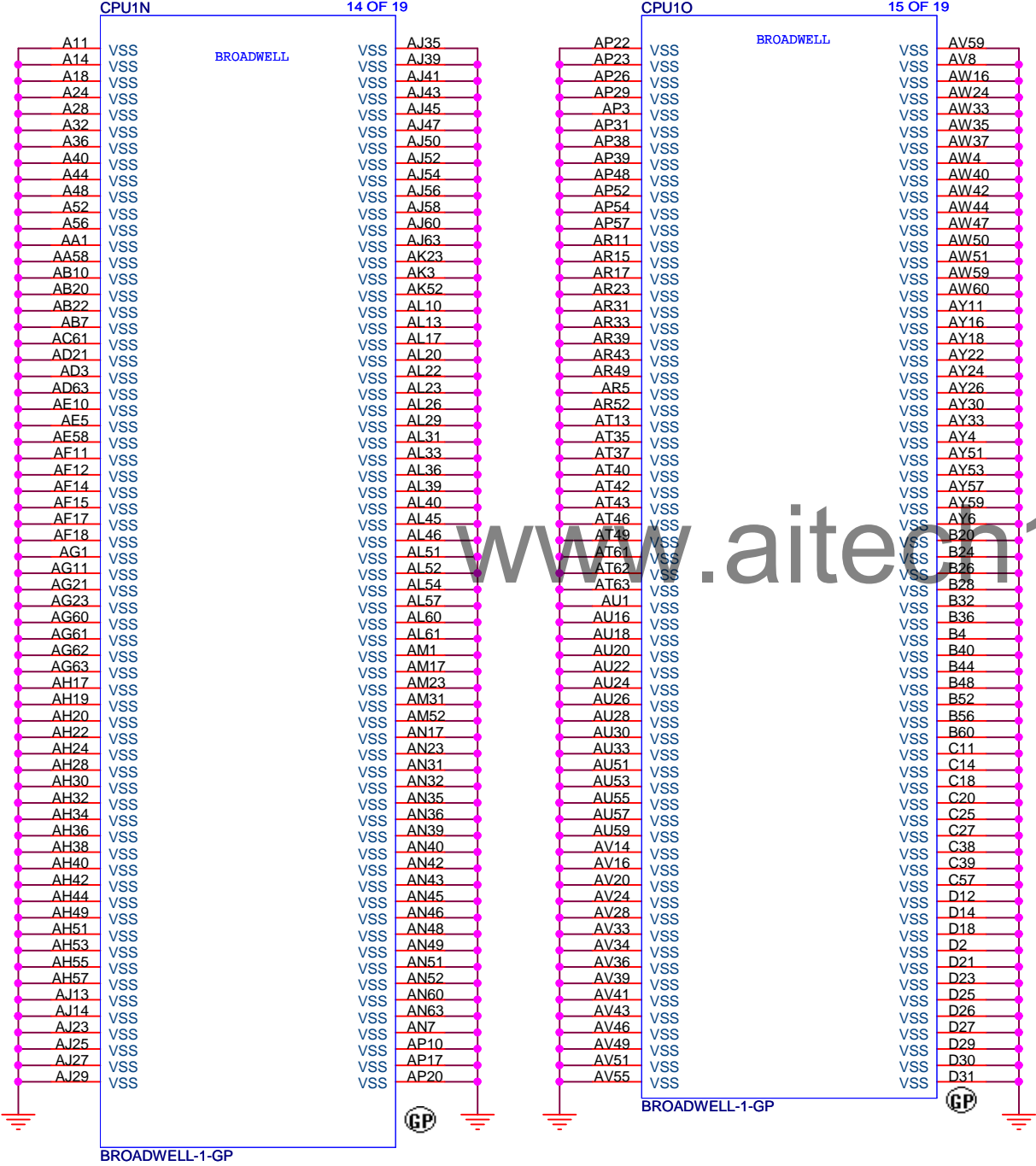
SSID = CPU



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Title			
CPU (RSVD)			
Size	Document Number	Rev	
A4	Laduree-BDW 15.6"	1	
Date	Friday, January 30, 2015	Sheet	22 of 102

SSID = CPU

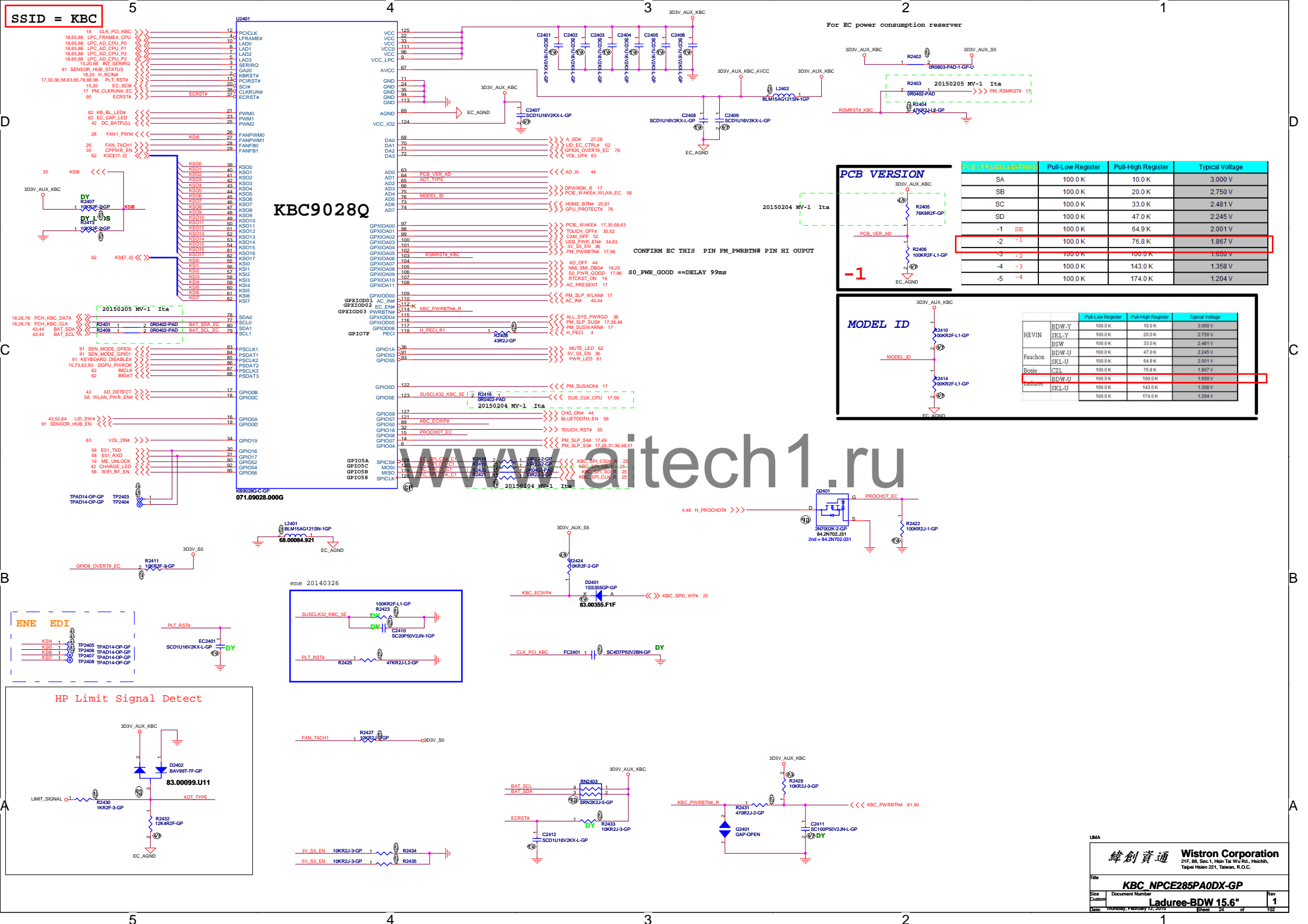


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緯創資通

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Title CPU (VSS)		
Size A4	Document Number Laduree-BDW 15.6"	Rev 1
Date: Friday, January 30, 2015		Sheet 23 of 102

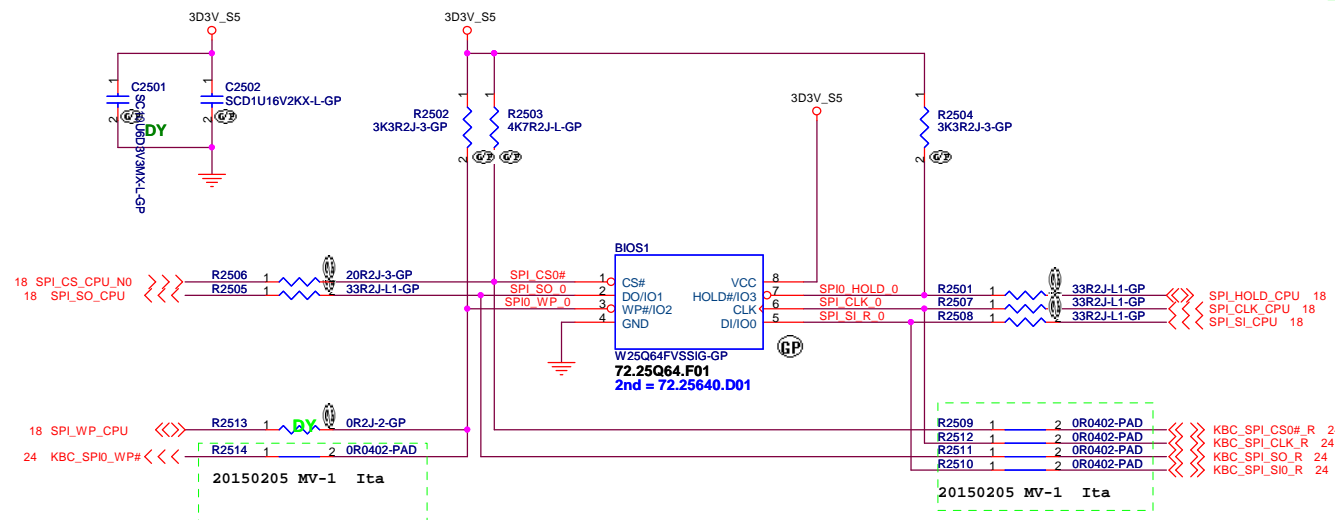


SSID = Flash.ROM

SPI FLASH ROM (8M byte) for PCH

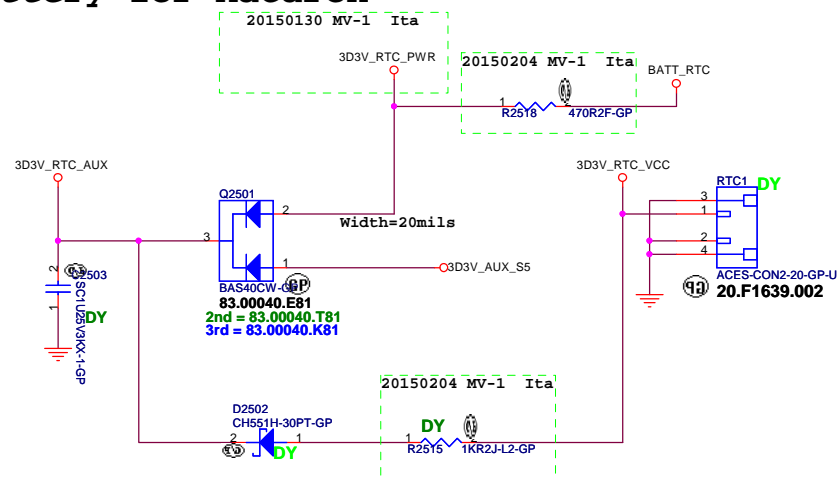
SPI ROM Equal length need to less than 500mil

20150213 MV-1 Ita



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SSID = RBAT No RTC battery for Macaron



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Title _____

Flash(KBC+PCH)/RTC

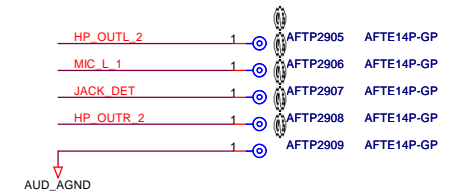
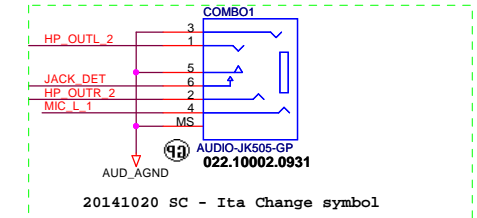
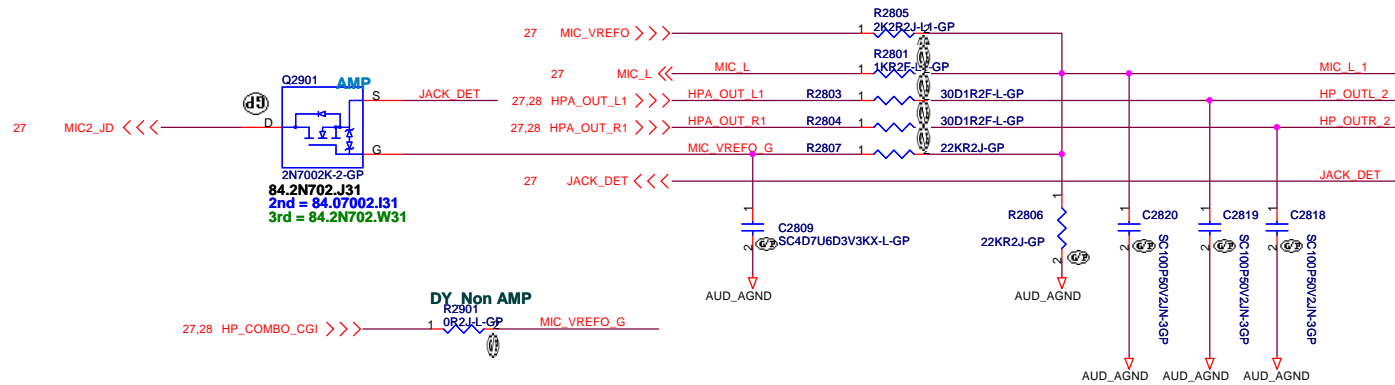
Size	Document Number	Rev
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Size A3	Equipment Name Laduree-BDW 15 6"	Lot 1
------------	--	-----------------

Date: Friday, February 13, 2015 Sheet 25 of 102

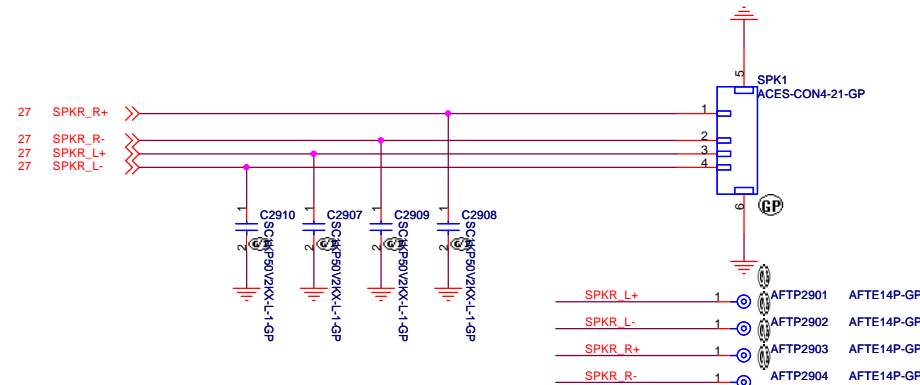
Thermal sensor NCT 7718W

Combo-Jack (Headphone & MIC)



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Speaker

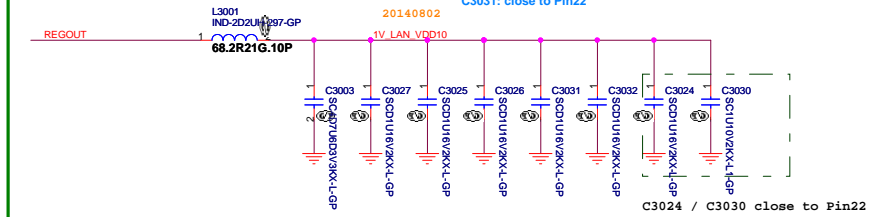


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Title Audio Combo Jack / SPK Conn	
Size A3	Document Number Laduree-BDW 15.6"
Date: Thursday, February 12, 2015	Rev 1
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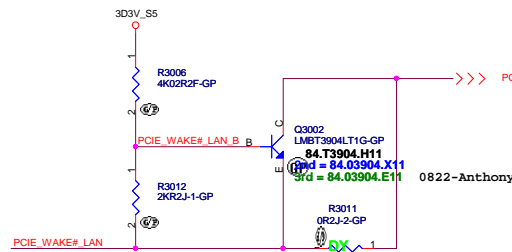
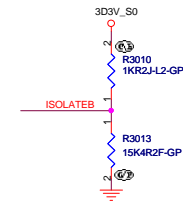
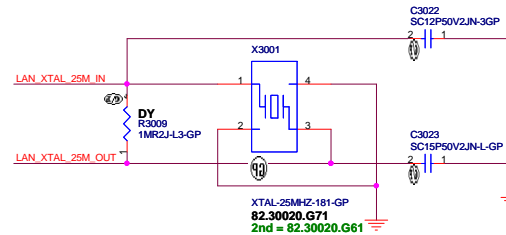
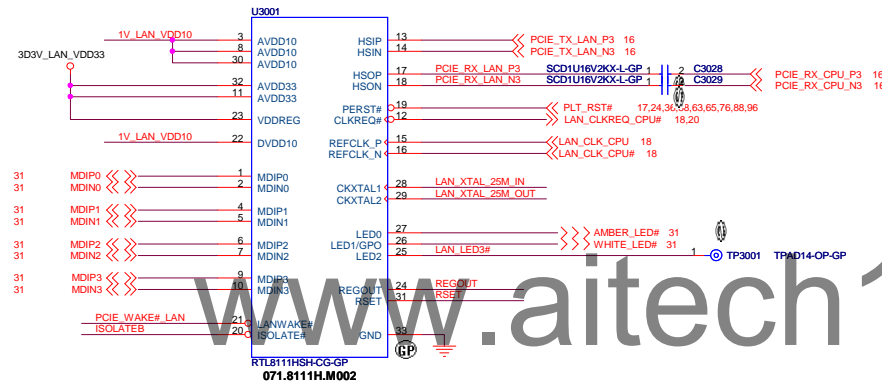
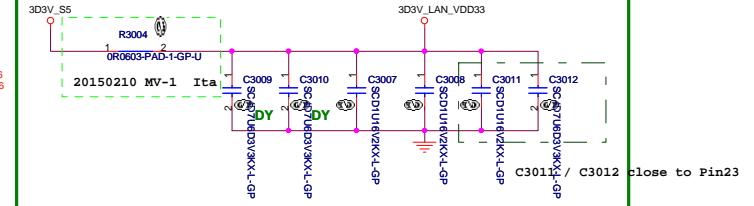
EEPROM LED OPTION USE '00'
 => LED0 : ACT (Amber)
 => LED1 : LINK (White)
 (BOTH 10/100 & GIGA CHIP)
 (Power down => Kept high)

Layout:
 For RTL8111G(S)
 * Place C3021 to C3024 close to each VDD10 pin-3, 8,
 C3032: close to Pin8
 C3025 close to Pin30
 C3026: close to Pin3
 C3031: close to Pin22



40 mils

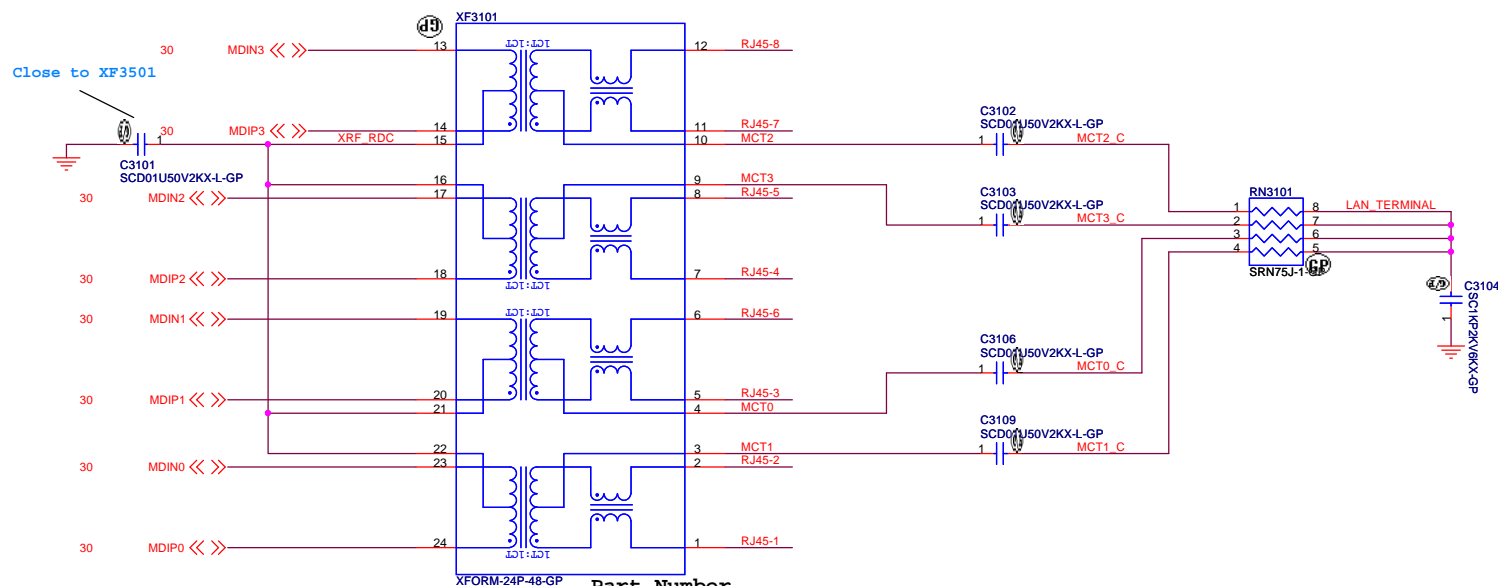
C3008: close to Pin32
 C3007: close to Pin11 (RTL8111 only)
 C3009 and C3011 close pin23



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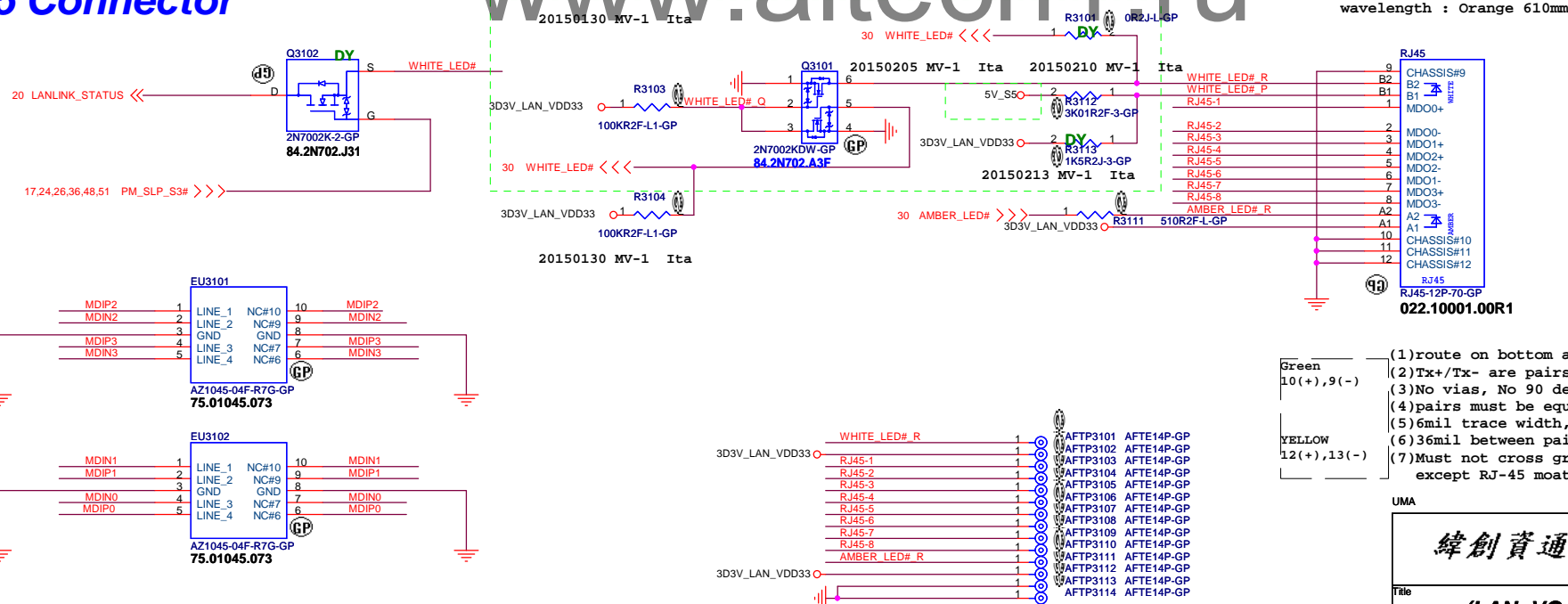
緯創資通 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Heichai, Taipei Hsien 221, Taiwan, R.O.C.	
Title	
LAN(RTL8411)	
Size	Document Number
Custom	Laduree-BDW 15.6"
Date	Rev
1/10/2015	1

White LED for connectivity and Amber LED for activity located on RJ-45 connector ⁴³



Part Number
Main:68.69241.301
2nd:68.IH080.301

RJ45 Connector



- (1) route on bottom as differential pairs.
- (2) Tx+/Tx- are pairs. Rx+/Rx- are pairs.
- (3) No vias, No 90 degree bends.
- (4) pairs must be equal lengths.
- (5) 6mil trace width, 12mil separation.
- (6) 36mil between pairs and any other trace.
- (7) Must not cross ground moat,
except RJ-45 moat.

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Title **(LAN+VGA) CONNECTOR**

Size A3	Document Number Laduree-BDW 15.6"	Rev 1
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Title		
RTS5237(CARD READER)		
Size	Document Number	Rev
A3	Laduree-BDW 15.6"	1
Date:	Friday, January 30, 2015	Sheet 32 of 102

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Title		
CARD Reader CONN		
Size	Document Number	Rev
A3	Laduree-BDW 15.6"	1
Date:	Friday, January 30, 2015	Sheet 33 of 102

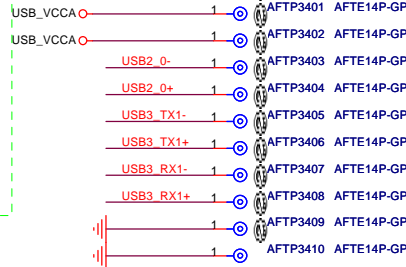
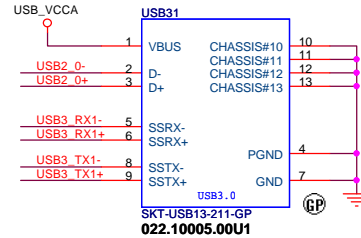
20150205 MV-1 Ita

16 USB30_RX_CPU_N1 <<>> R3401 1 2 0R0402-PAD USB3_RX1-
16 USB30_RX_CPU_P1 <<>> R3402 1 2 0R0402-PAD USB3_RX1+

35 USB_CHAR_PN0 <<>> 1 2 TR3402 2 USB2_0-
35 USB_CHAR_PP0 <<>> 4 3 TR3402 3 USB2_0+
FILTER-4P-6-GP

16 USB30_TX_CPU_N1 <<>> C3401 SCD1U16V2KX-L-GP USB3_TX1- C R3405 1 2 0R0402-PAD USB3_TX1-
16 USB30_TX_CPU_P1 <<>> C3402 SCD1U16V2KX-L-GP USB3_TX1+ C R3406 1 2 0R0402-PAD USB3_TX1+

USB3.0 Charger Port



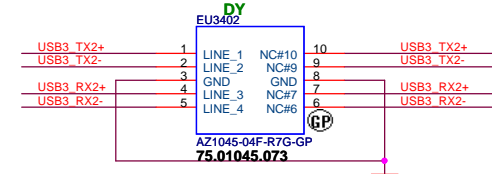
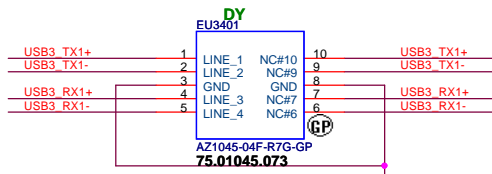
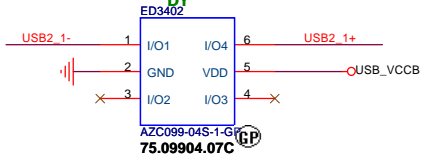
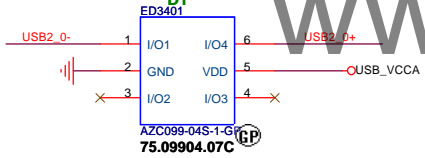
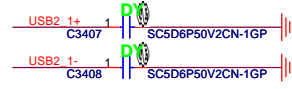
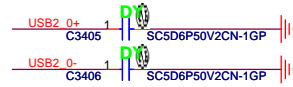
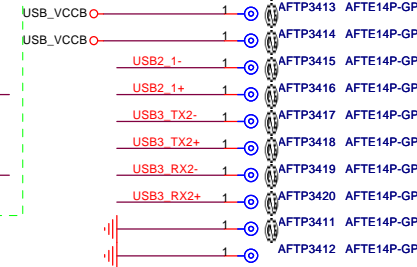
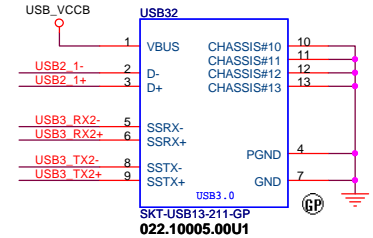
20150205 MV-1 Ita

16 USB30_RX_CPU_N2 <<>> R3407 1 2 0R0402-PAD USB3_RX2-
16 USB30_RX_CPU_P2 <<>> R3412 1 2 0R0402-PAD USB3_RX2+

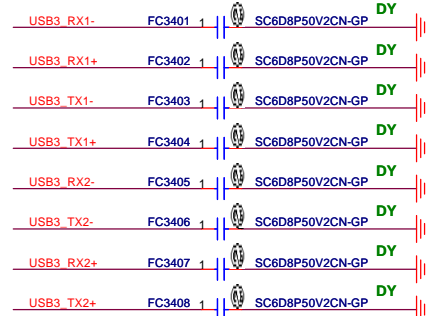
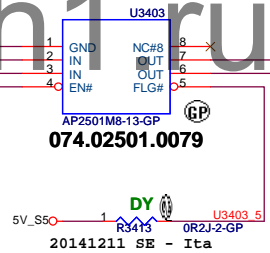
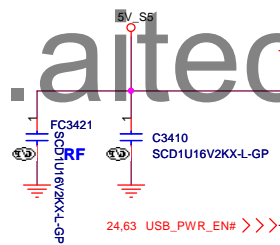
16 USB_CPU_PN1 <<>> 1 2 TR3404 2 USB2_1-
16 USB_CPU_PP1 <<>> 4 3 TR3404 3 USB2_1+
FILTER-4P-6-GP

16 USB30_TX_CPU_N2 <<>> C3404 SCD1U16V2KX-L-GP USB3_TX2- C R3408 1 2 0R0402-PAD USB3_TX2-
16 USB30_TX_CPU_P2 <<>> C3403 SCD1U16V2KX-L-GP USB3_TX2+ C R3409 1 2 0R0402-PAD USB3_TX2+

USB3.0 Port



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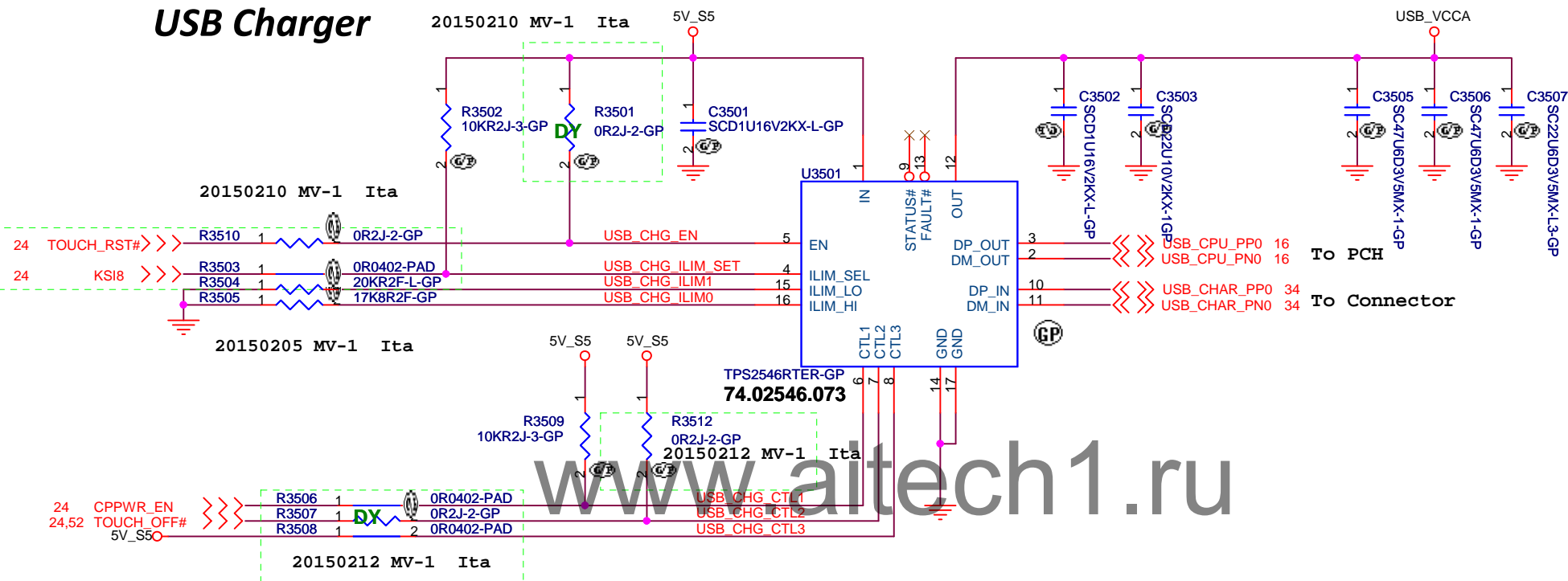
USB 3.0 Connector Pin definition

1	POWER
2	USB 2.0 D-
3	USB 2.0 D+
4	GND
5	StdA_SSRX-
6	StdA_SSRX+
7	GND
8	StdA_SSTX-
9	StdA_SSTX+

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USB Charger



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Title

USB CHARGER

Size

Document Number

Rev

Laduree-BDW 15.6"

1

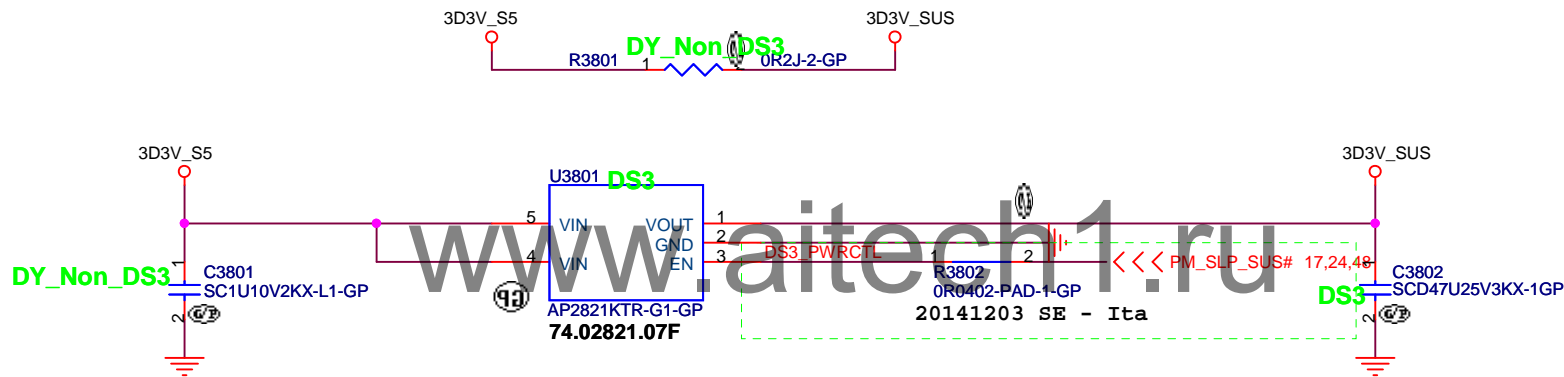
Date: Thursday, February 12, 2015

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Title		
ADAPTER OCP / S3 reduction		
Size	Document Number	Rev
A4	Laduree-BDW 15.6"	1
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Title					
DS3					
Size	Document Number				Rev
A4	Laduree-BDW 15.6"				1
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Power Sequence

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Title			
1D05 M			
Size	Document Number		Rev
A3	Laduree-BDW 15.6"		1
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Title

Connected Standby1

Size
A4

Document Number

Laduree-BDW 15.6"

Rev

1

Date: Friday, January 30, 2015

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Title

Connected Standby2

Size
A4

Document Number

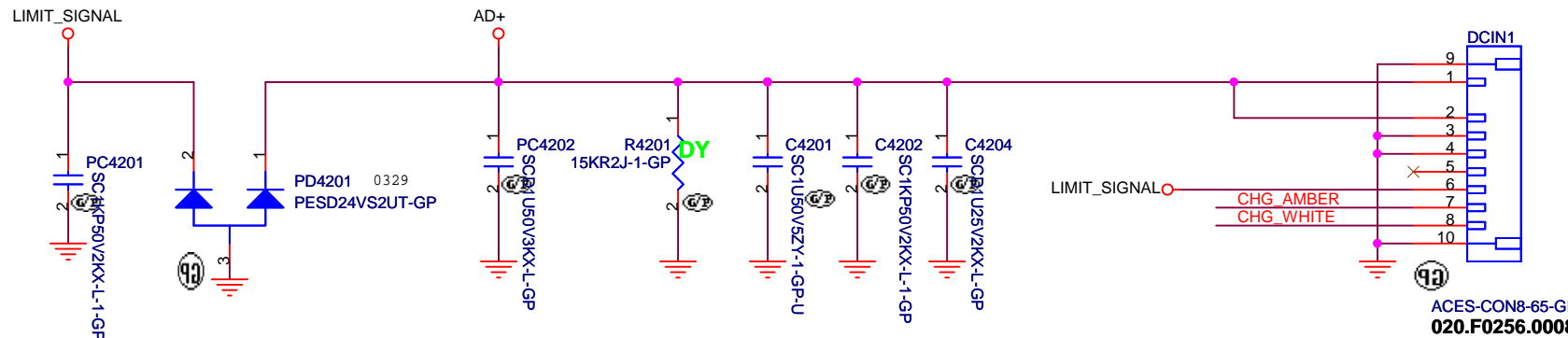
Laduree-BDW 15.6"

Rev

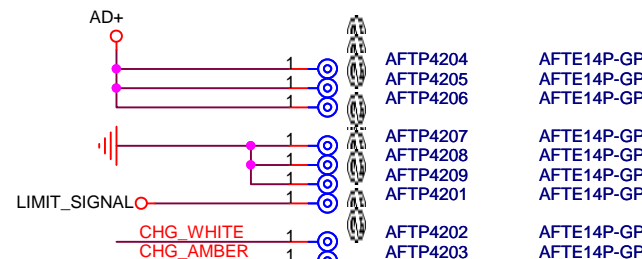
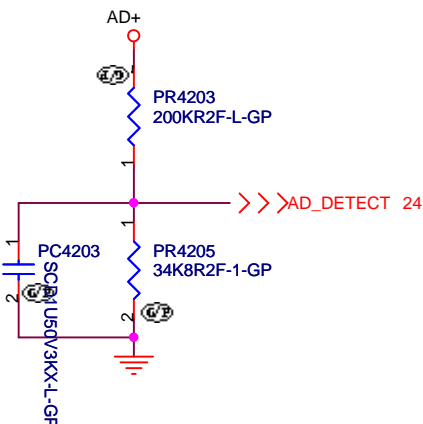
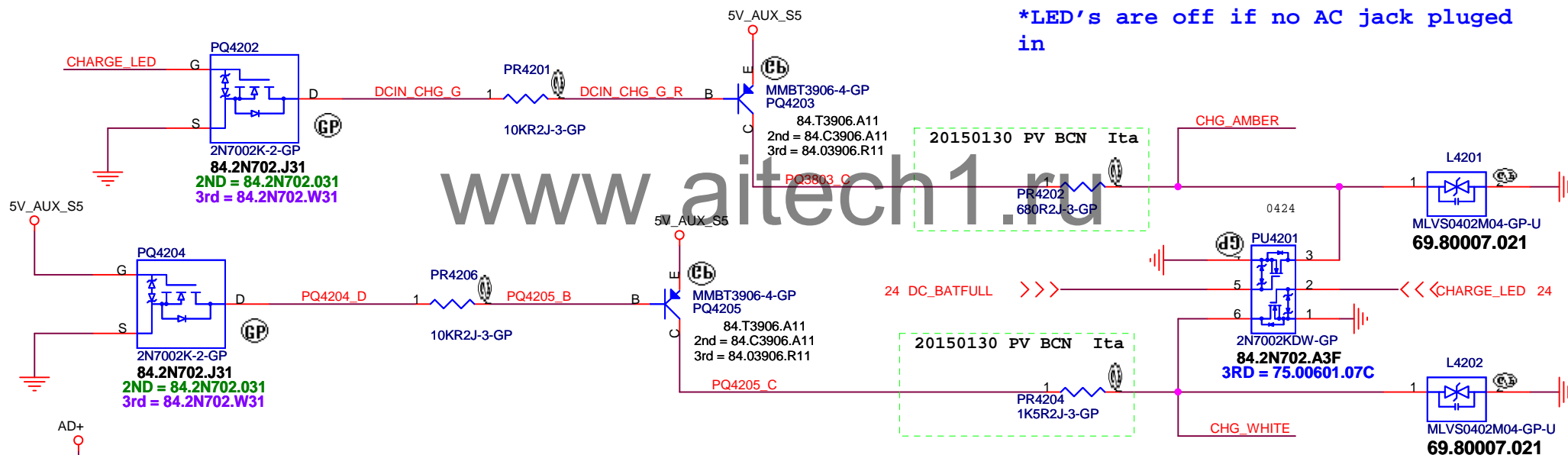
1

Date: Friday, January 30, 2015

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AC Present = White
Standby = White pulsing
Charging = Amber
*LED's are off if no AC jack plugged in

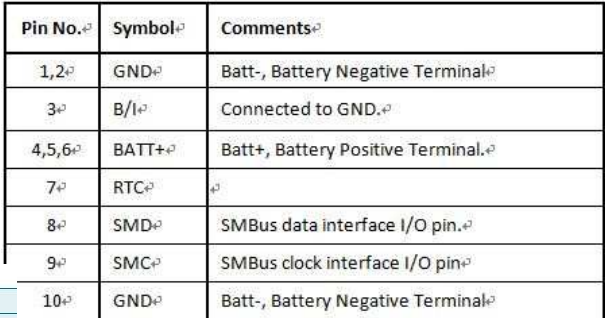


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Title		
DCIN JACK		
Size A4	Document Number	Rev
	Laduree-BDW 15.6"	1
Date: Thursday, February 12, 2015	Sheet 42 of 102	

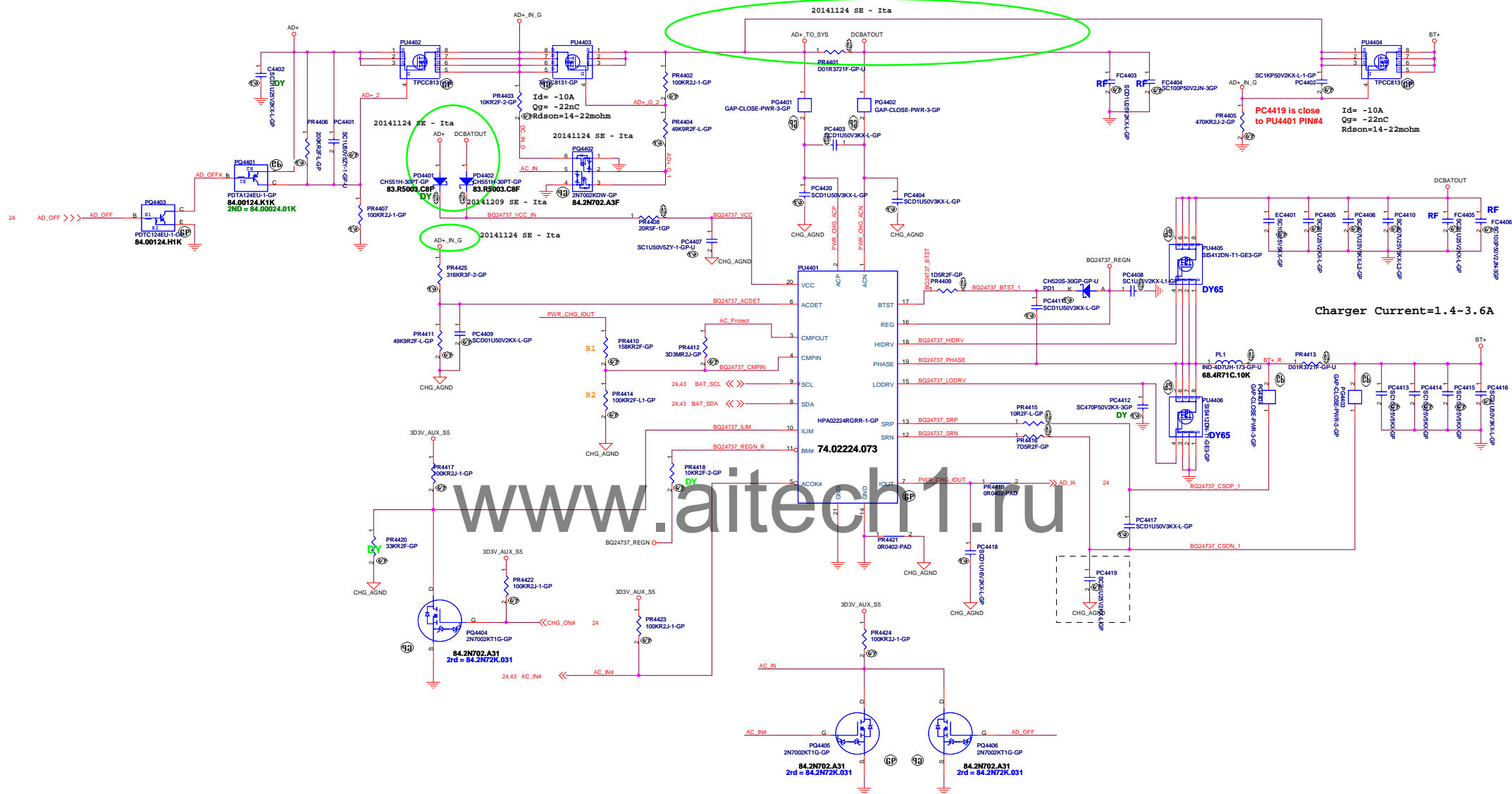
Check Battery Pin Spec



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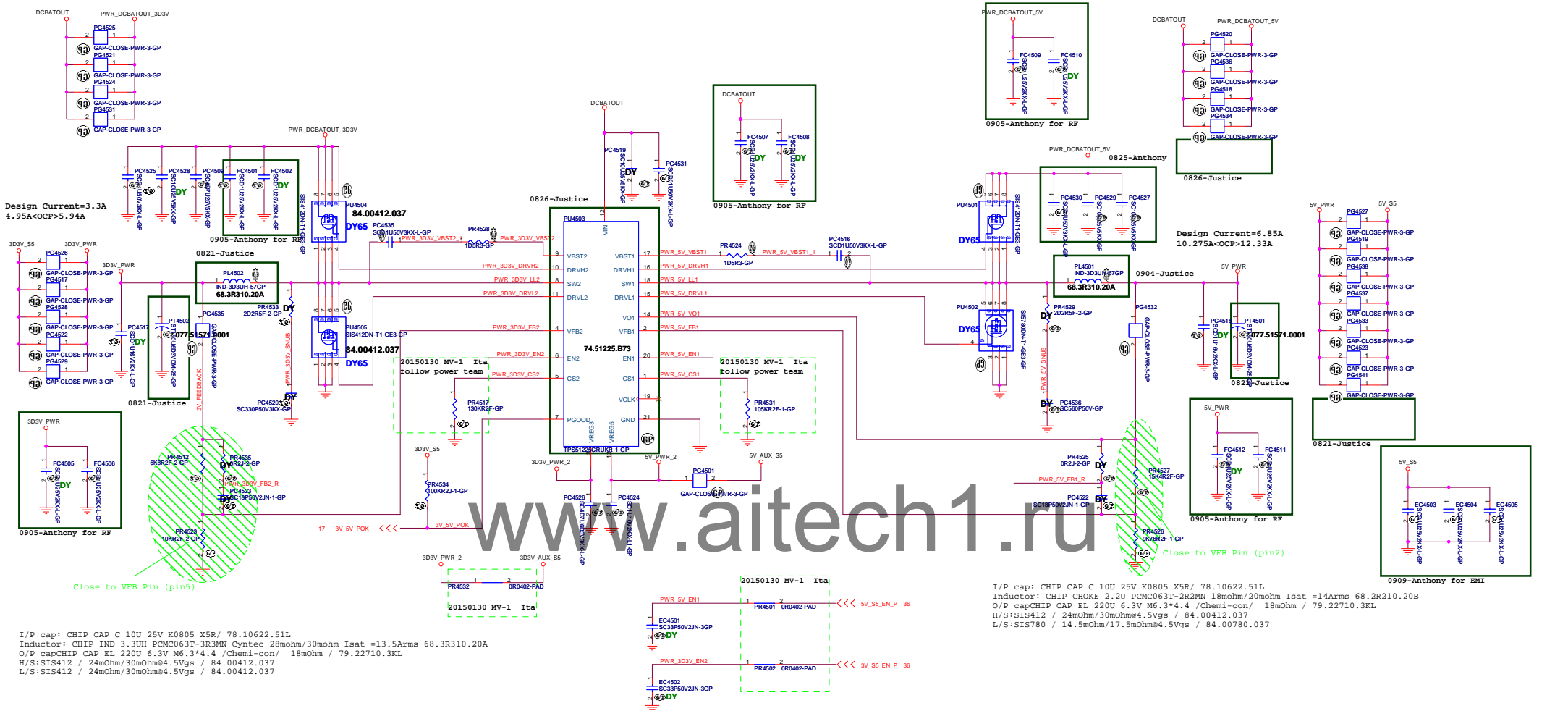
Title			
BATT CONN			
Size #3	Document Number		Rev
	Laduree-BDW 15.6"		1
Date:	Thursday, February 12, 2015	Sheet 43 of	102

SSID = Charger



20140812 Change Charge solution follow Reacher.

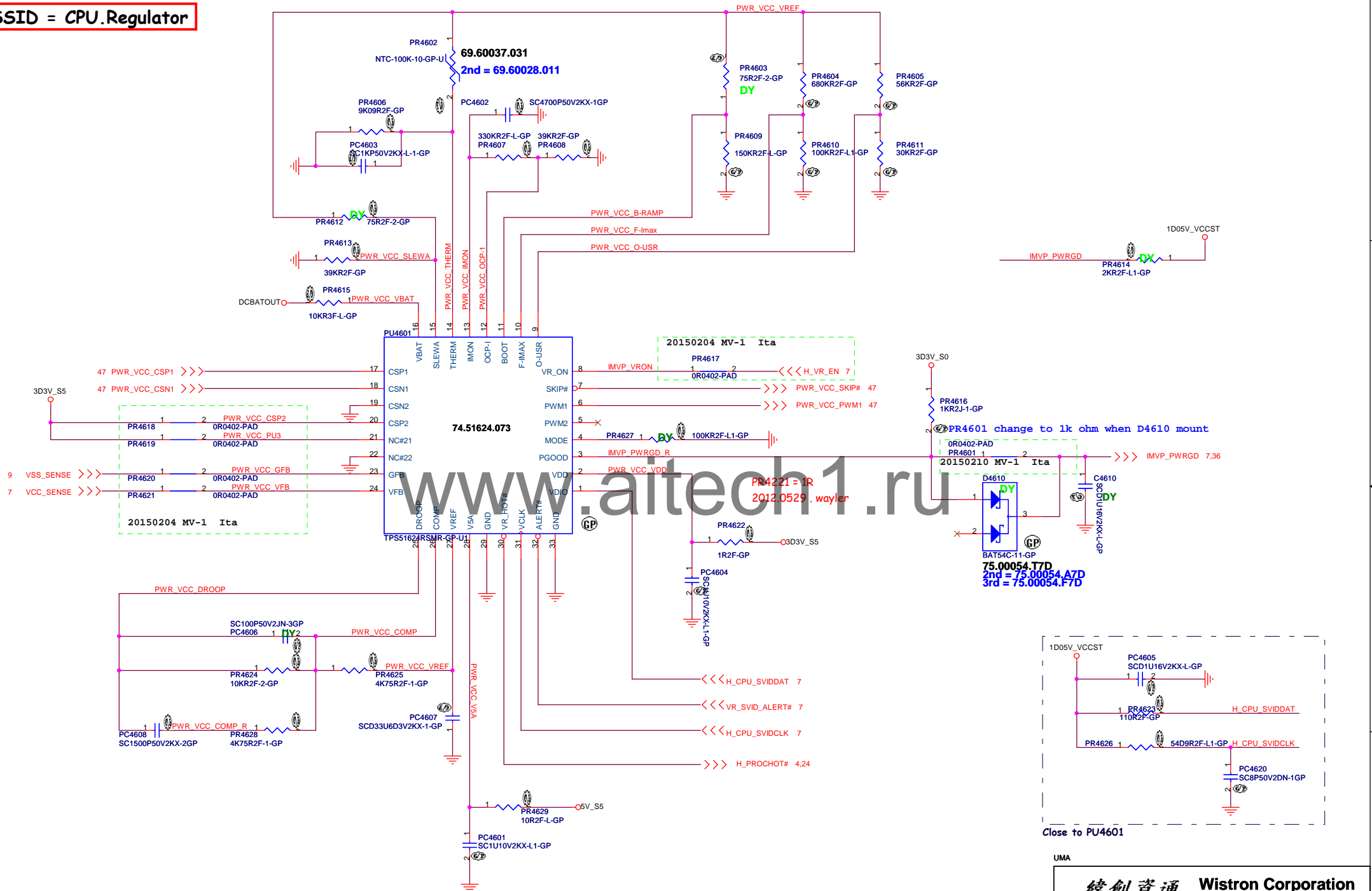
Main Func = 3D3V_5V



I/P cap: CHIP CAP C 10U 25V K0805 X5R/ 78.10622.51L
Inductor: CHIP IND 3.3UH PCMC063T-3R3MN Cynotec 28mohm/30mohm Isat =13.5Arms 68.3R310.20A
O/P cap:CHIP CAP EL 220U 6.3V M6.3*4.4 /Cheml-con/ 18mOhm / 79.22710.3KL
H/S:SIS412 / 24mOhm/30mOhm@4.5Vgs / 84.00412.037
L/S:SIS412 / 24mOhm/30mOhm@4.5Vgs / 84.00412.037

I/P cap: CHIP CAP C 10U 25V K0805 X5R/ 78.10622.51L
Inductor: CHIP CHOK 2.2U PCMC063T-2R2MN 18mohm/20mohm Isat =14Arms 68.2R210.20B
O/P cap:CHIP CAP EL 220U 6.3V M6.3*4.4 /Cheml-con/ 18mOhm / 79.22710.3KL
H/S:SIS412 / 24mOhm/30mOhm@4.5Vgs / 84.00412.037
L/S:SIS780 / 14.5mOhm/17.5mOhm@4.5Vgs / 84.00780.037

SSID = CPU.Regulator



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Title

TPS51622_CPUCORE(1/2)

Size

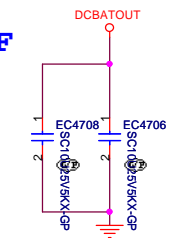
Document Number

Laduree-BDW 15.6" 1

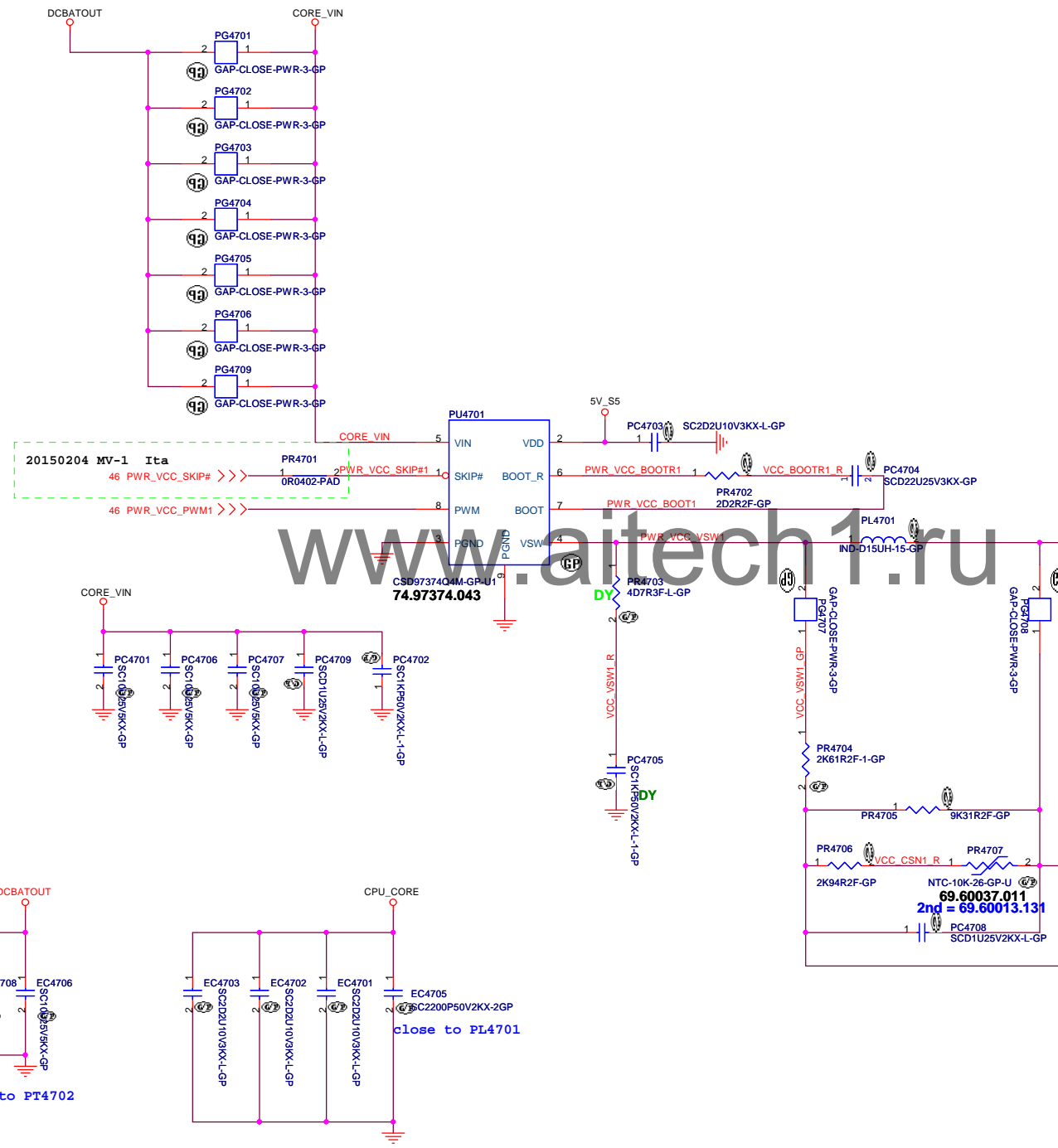
Date: Thursday, February 12, 2015

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RF



Close to PT4702

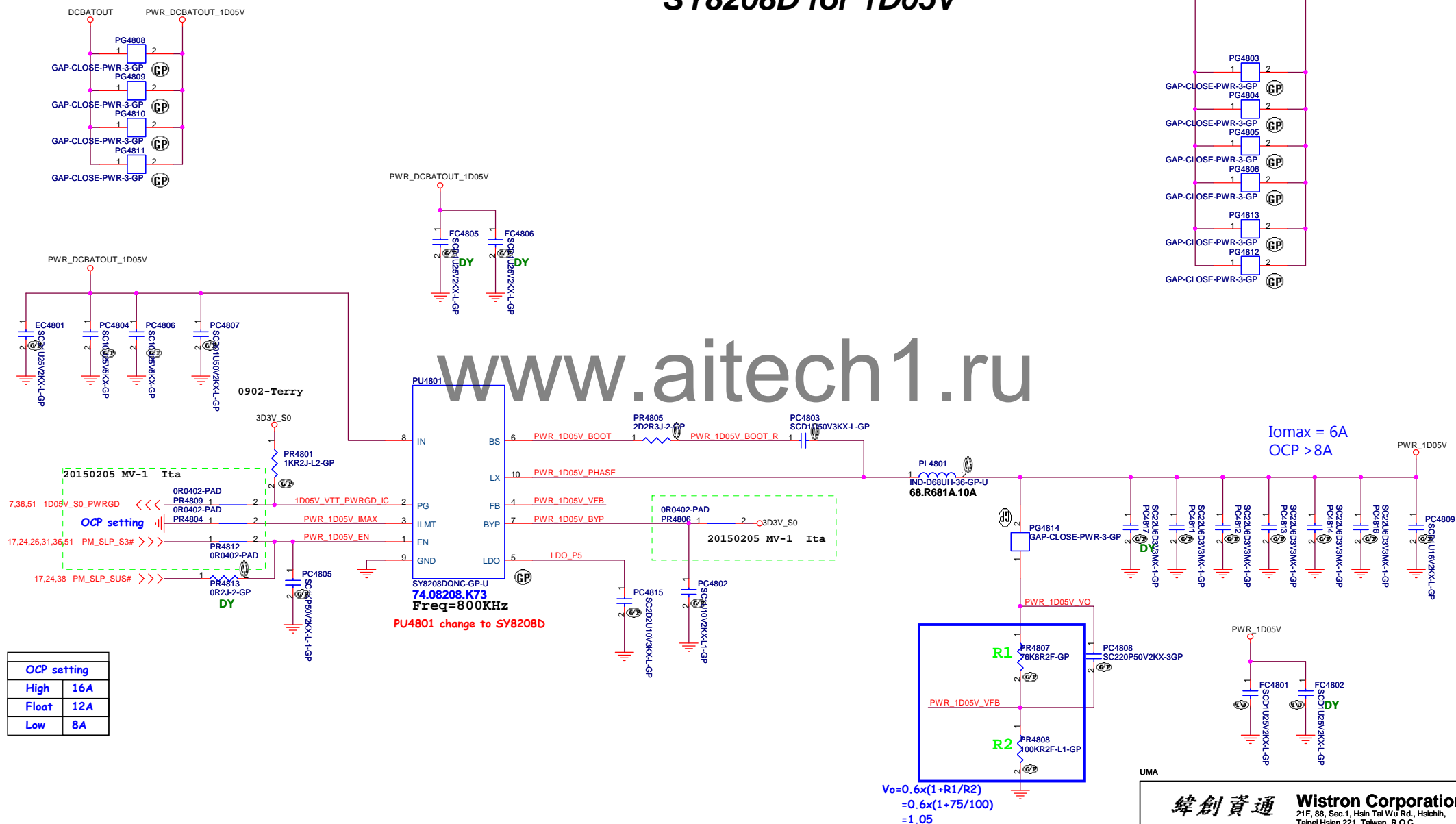


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Title TPS51622 CPUCORE(2/2)	
Size A3	Document Number Laduree-BDW 15.6"
Date: Thursday, February 12, 2015	Sheet 47 of 102

```
SSID = PWR.Plane.Regulator_1p05v
```

SY8208D for 1D05V



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Taipei Hsien 221, Taiwan, R.O.C.

Title	Author	Date	Page
Title	Author	Date	Page

SY8208D for 1D05V

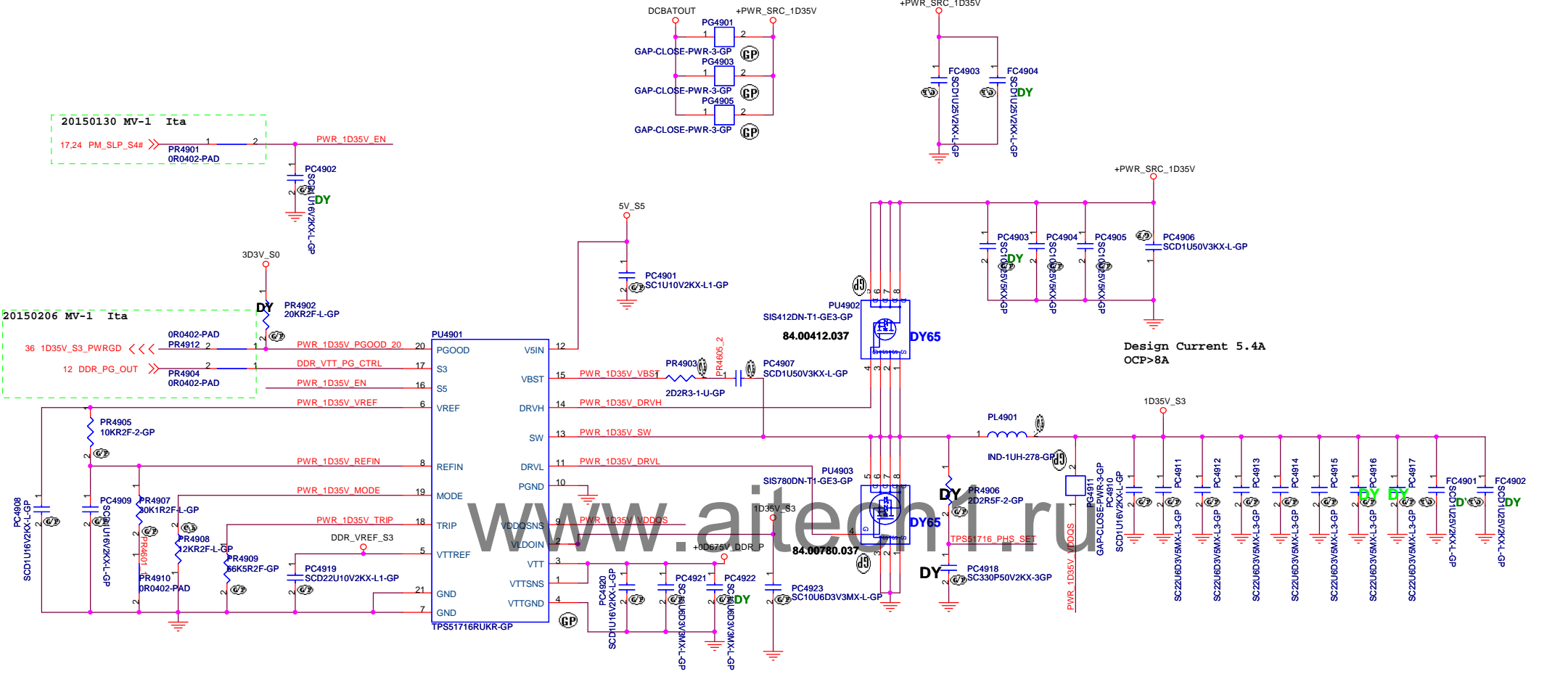
Size A3	Document Number Laduree-BDW 15.6"
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Rev	1
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Date: Thursday, February 12, 2015

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SSID = PWR.Plane.Regulator 1p35v0p675v



Design Current 5.4A
OCP>8A

S3/S5 Power State Control

STATE	S3	S5	VREF	VDDQ	VTTREF	VTT
S0	HI	HI	ON	ON	ON	ON
S3	LO	HI	ON	ON	ON	OFF(High-Z)
S4/S5	LO	LO	OFF	OFF(Discharge)	OFF(Discharge)	OFF(Discharge)

MODE Selection

MODE NO.	RESISTANCE BETWEEN MODE AND GND (kΩ)	CONTROL MODE	SWITCHING FREQUENCY (kHz)	DISCHARGE MODE
3	33	D-CAP2	500	Non-Tracking
2	22		670	
1	12		670	Tracking
0	1		500	

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Taipei Hsien 221, Taiwan, R.O.C.

Title: **TPS51716(VDDQ VTT)**

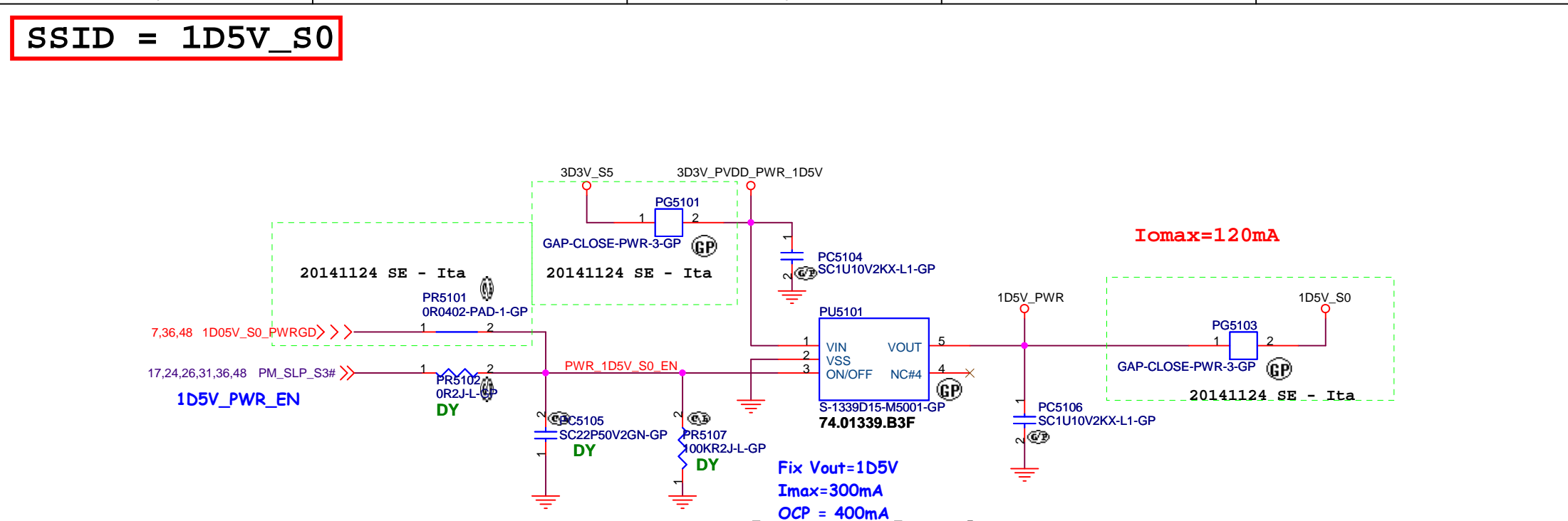
Size A3	Document Number	Rev 1
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Date: Thursday, February 12, 2015 Sheet 49 of 102

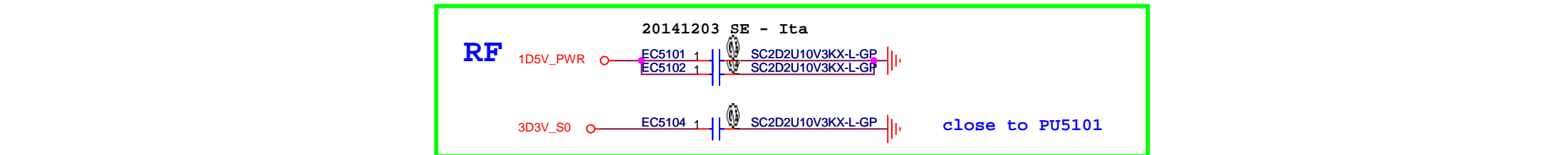
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(Reserved)1D8V S0		
Size	Document Number	Rev
A3	Laduree-BDW 15.6"	1
Date:	Friday, January 30, 2015	Sheet 50 of 102

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SSID = 1D5V_S0
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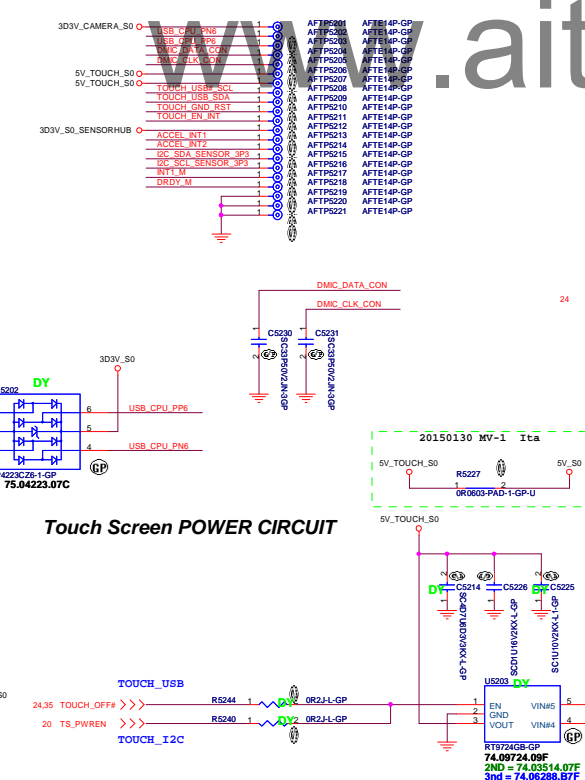
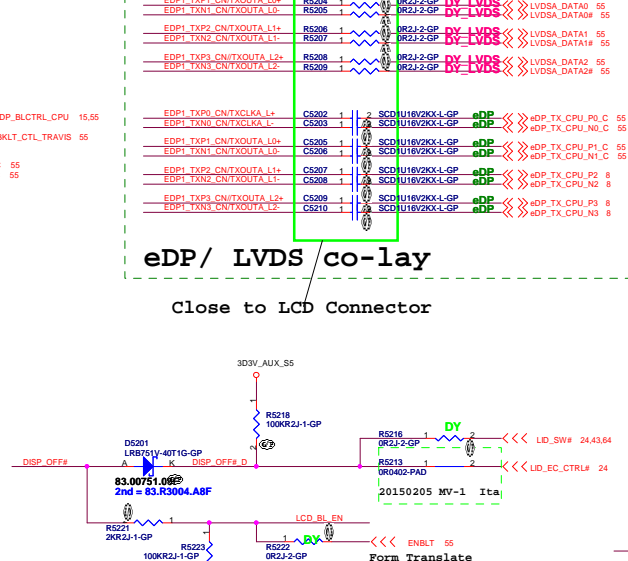
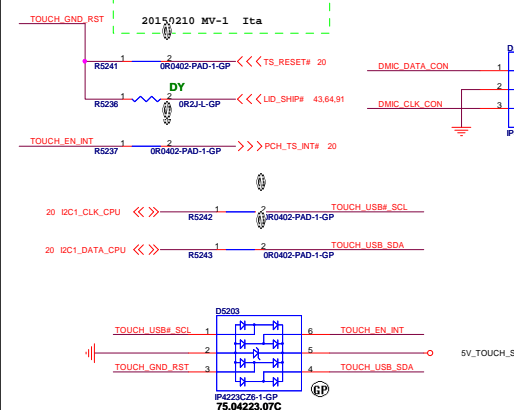
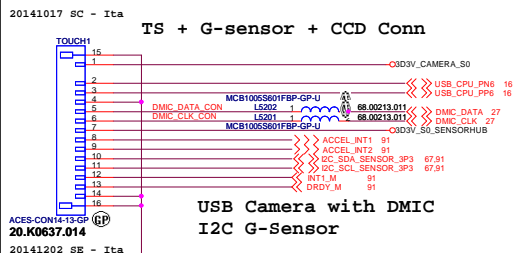
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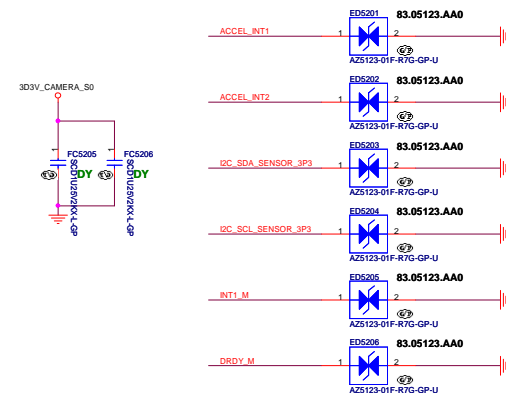
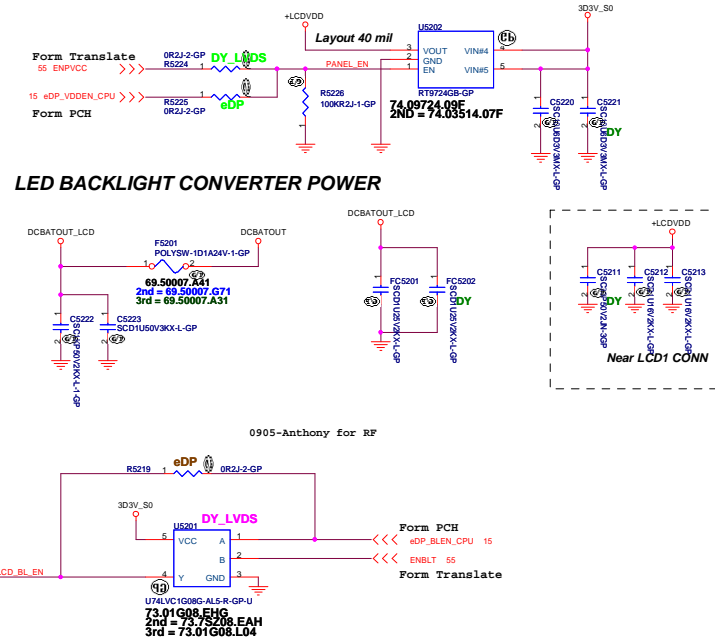
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Touch Connector



LED BACKLIGHT CONVERTER POWER



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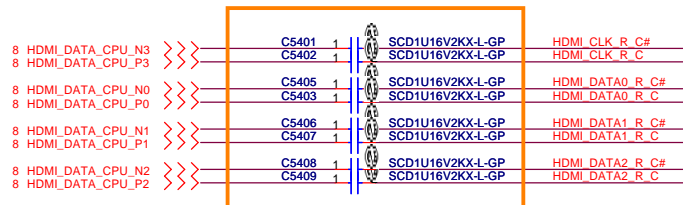
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of

102

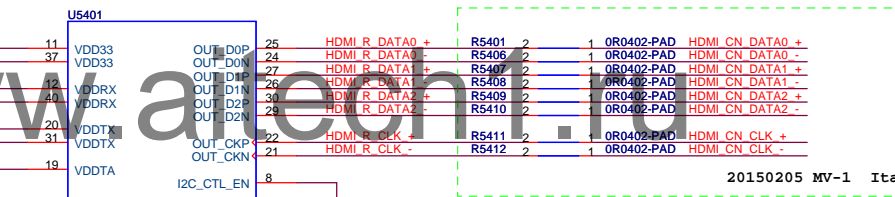
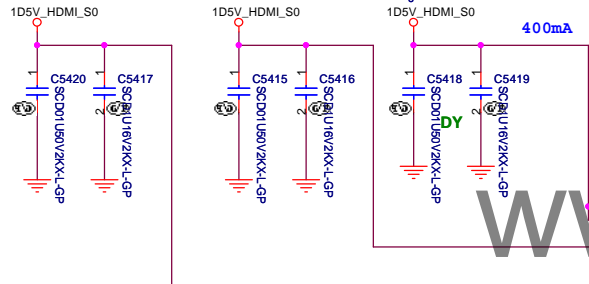
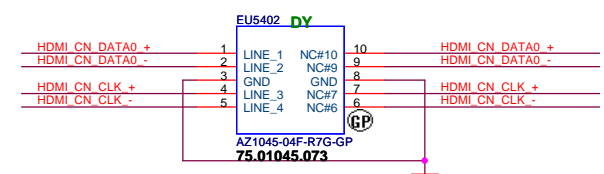
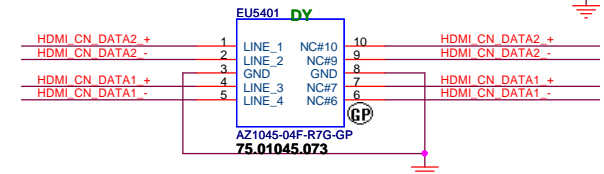
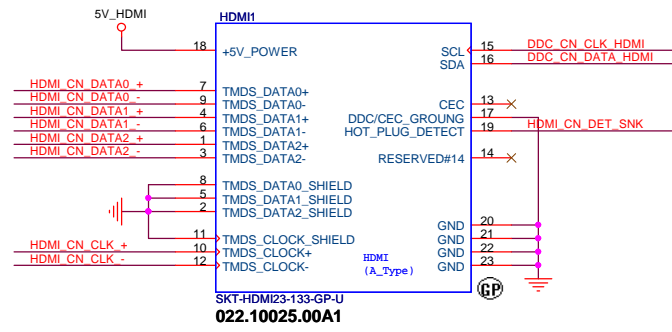
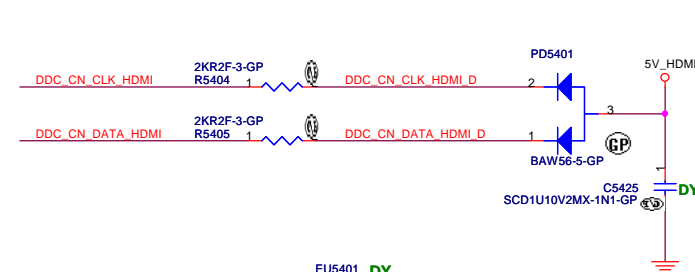
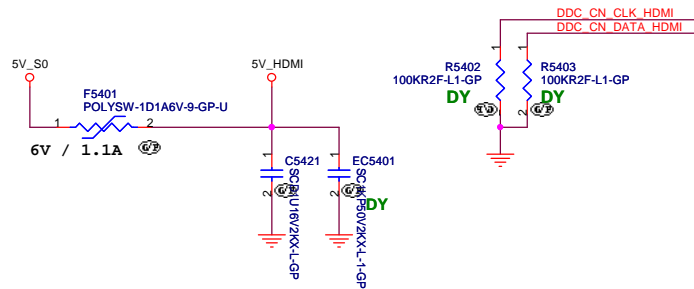
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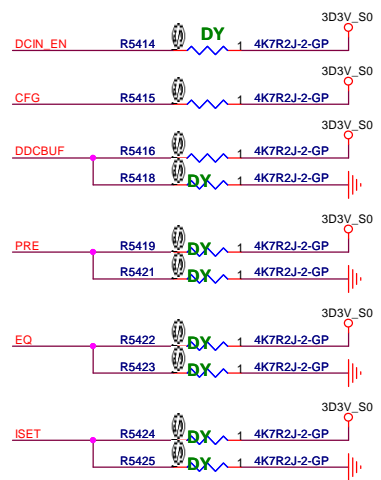
Close to HDMI U5401

Need check 1.5V power regulator
CAP palace near IC

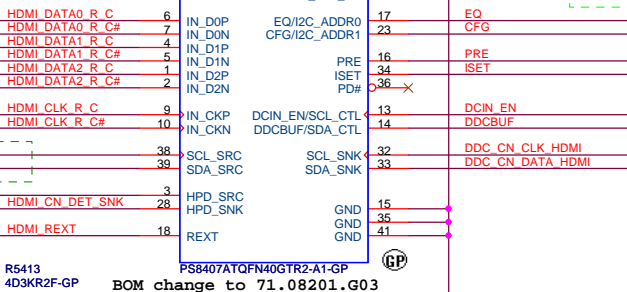
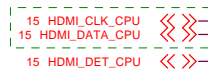
all cap close to IC



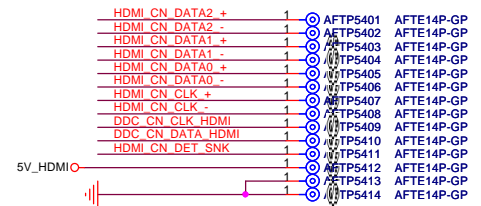
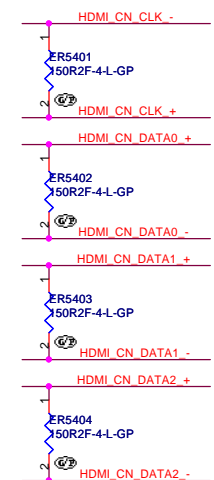
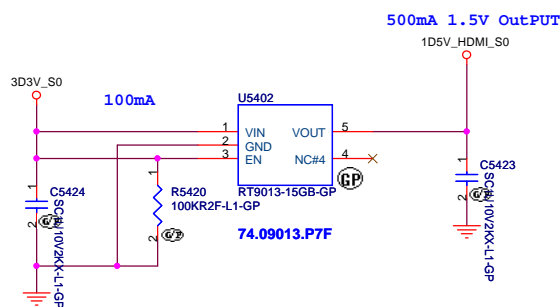
NEED CONFIRM SETTING



From slate

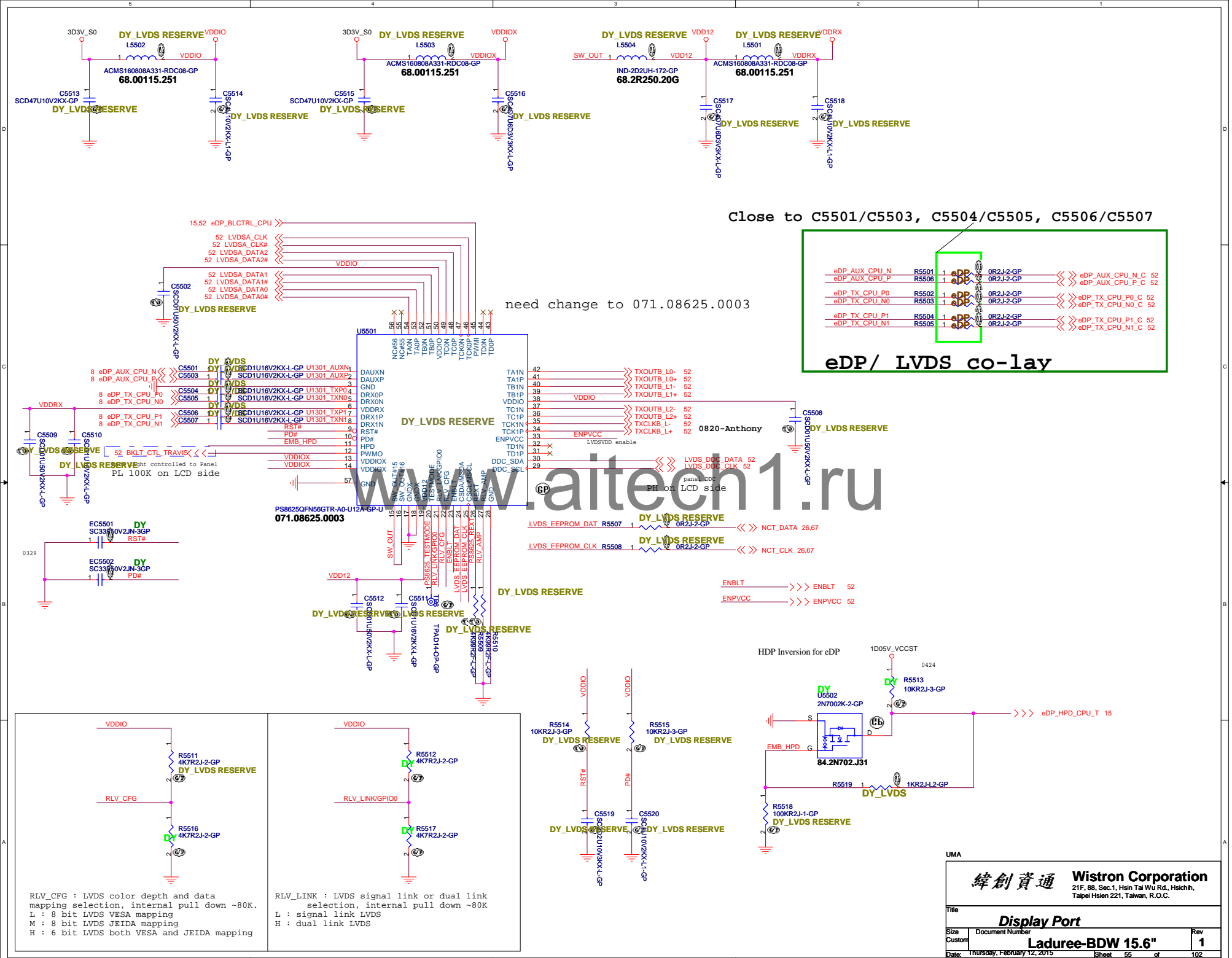


BOM change to 71.08201.G03

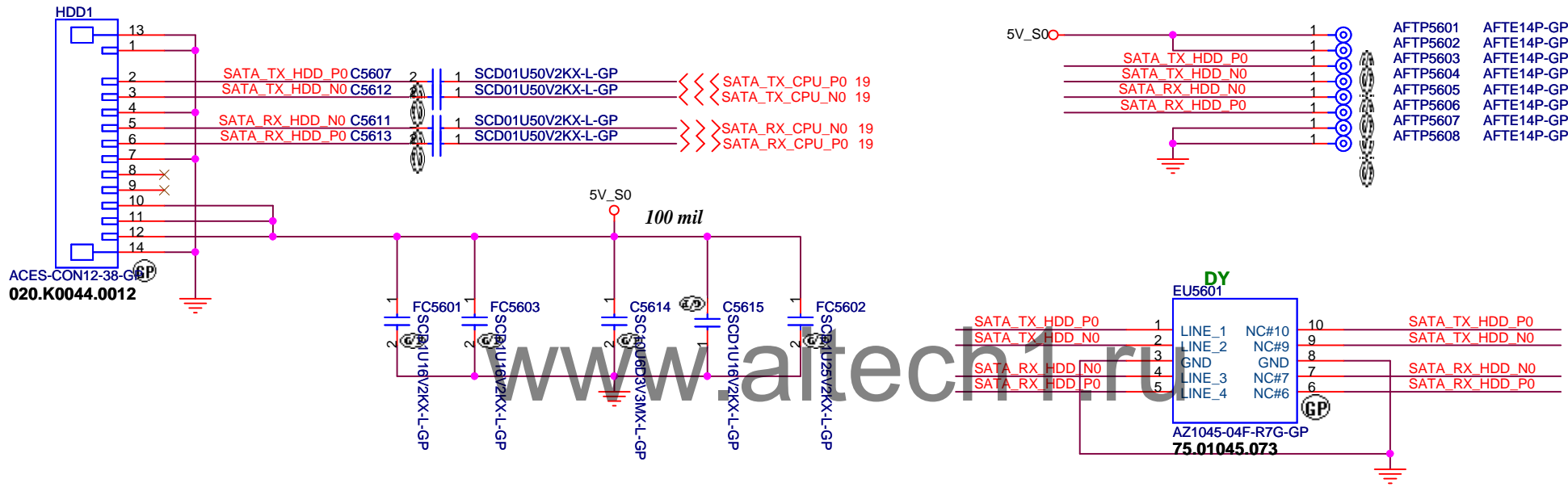


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Date: Thursday, February 12, 2015 Sheet 54 of 102		



SATA HDD Connector

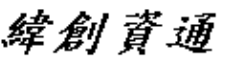


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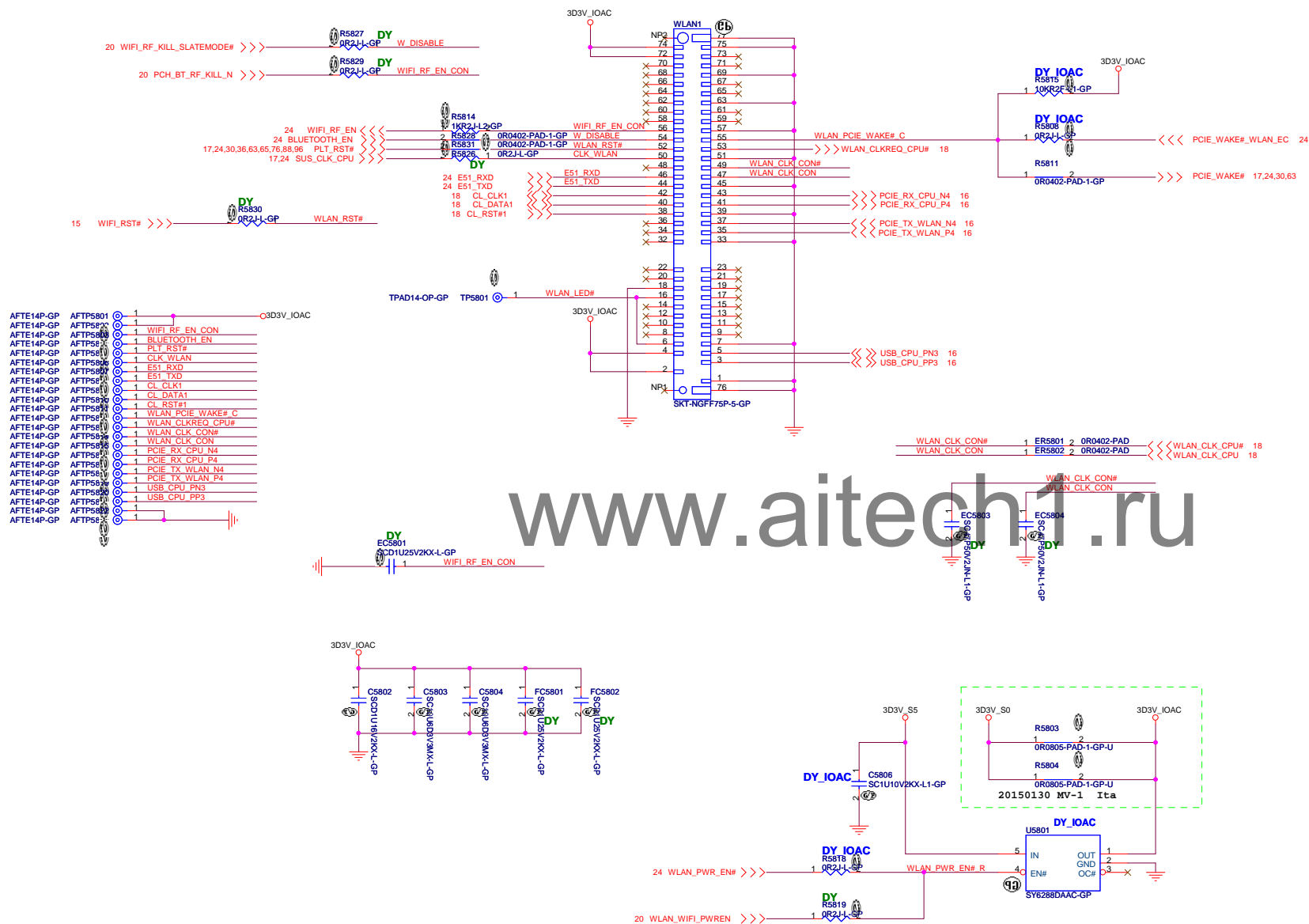
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E-SATA		
Size A4	Document Number Laduree-BDW 15.6"	Rev 1
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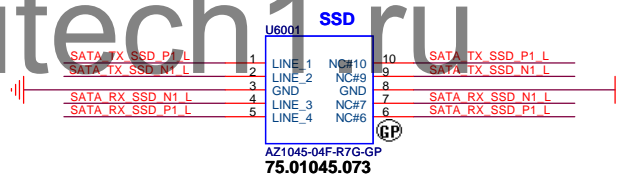
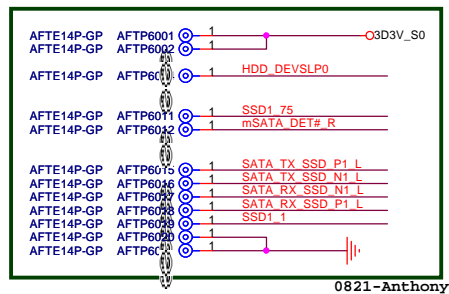
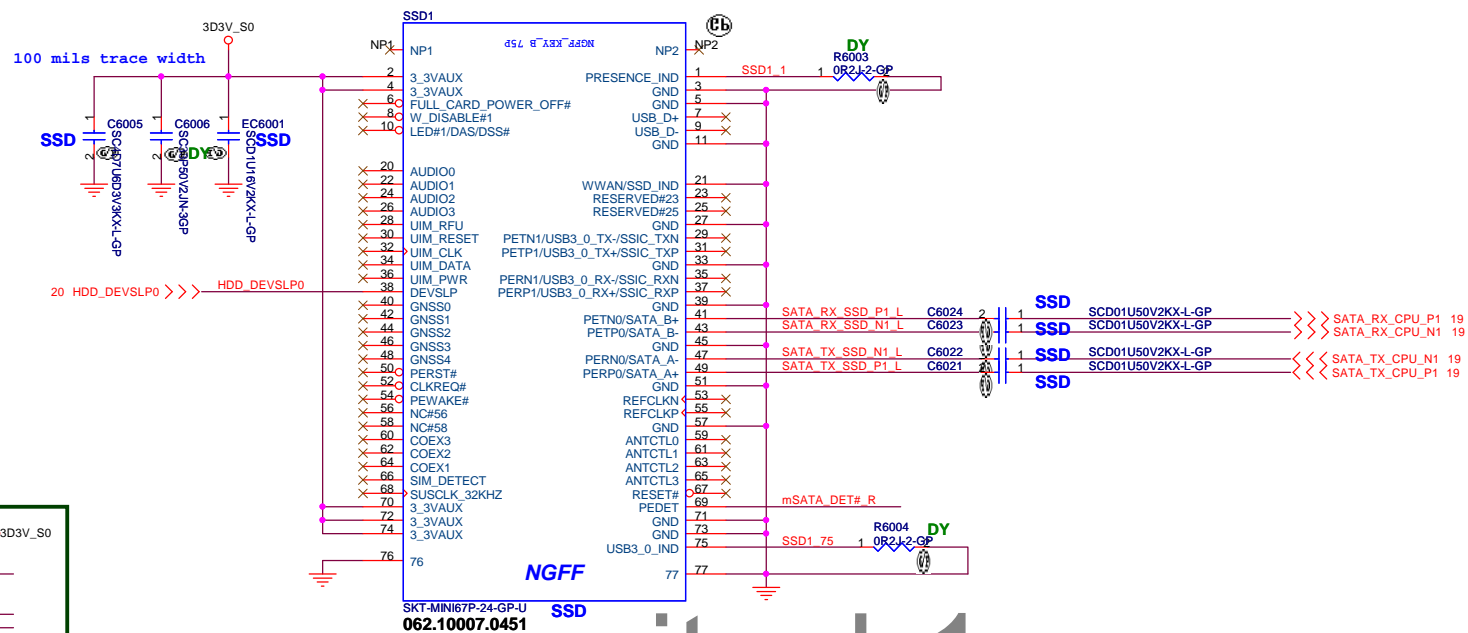
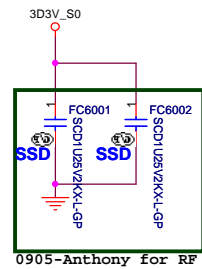
SSID = Wireless *Mini Card Connector(802.11a/b/g/n)*



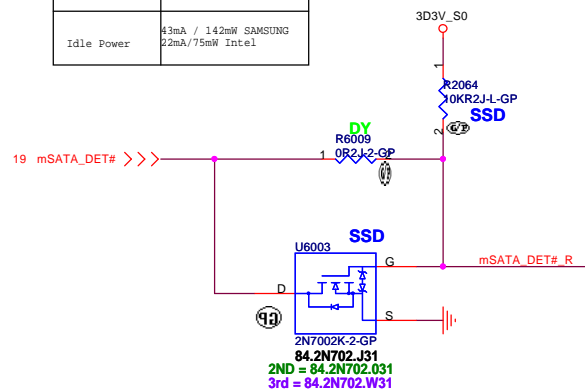
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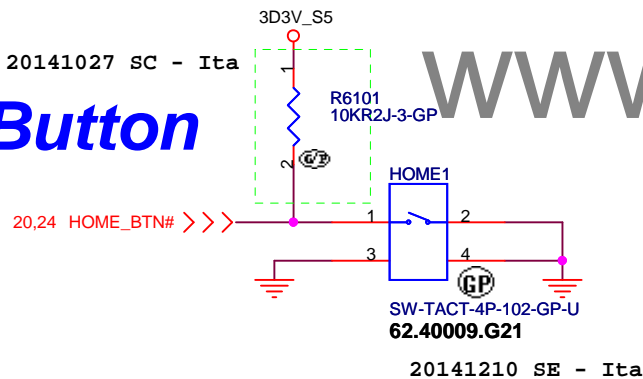
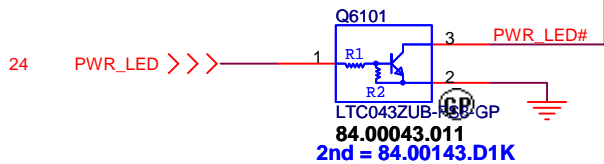
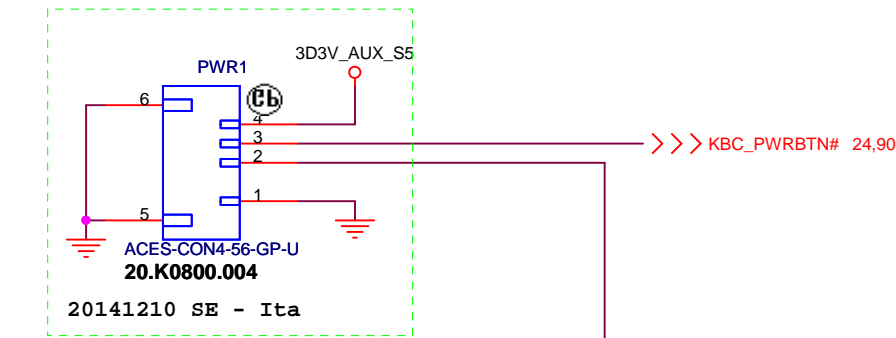
SSID = SATA SSD



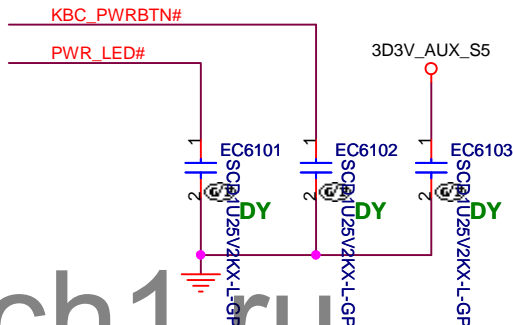
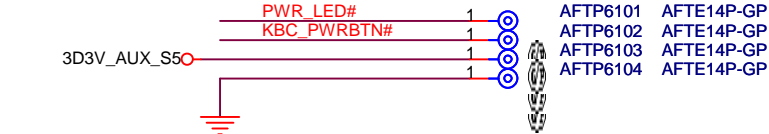
power supply	3.3V
Active Power	50mA / 0.165W SAMSUNG 45mA/0.15mW Intel
Idle Power	43mA / 142mW SAMSUNG 22mA/75mW Intel



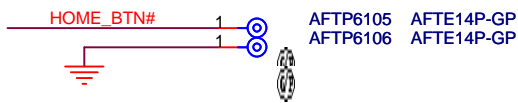
Power Button



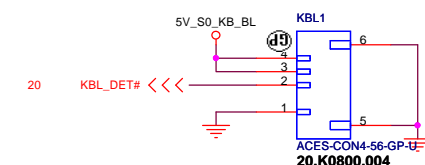
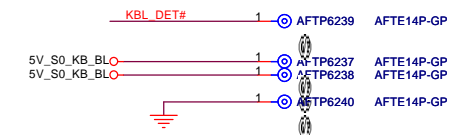
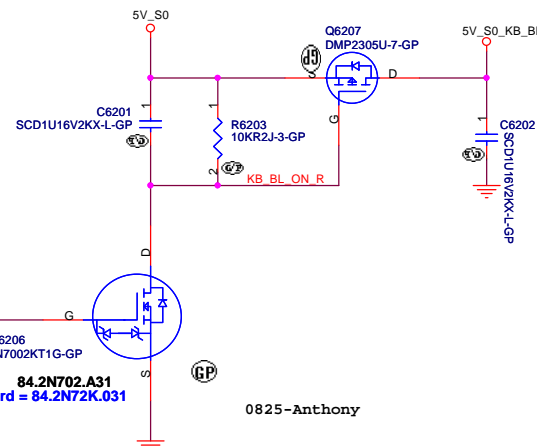
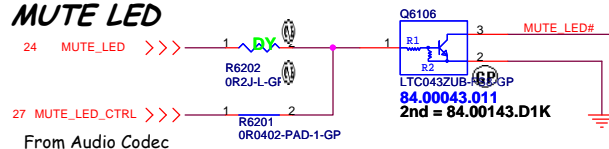
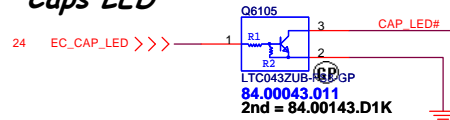
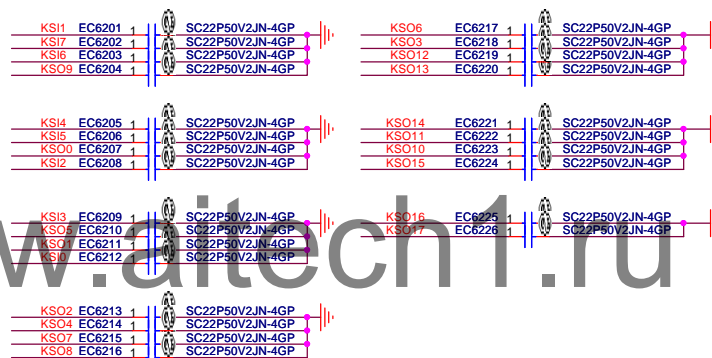
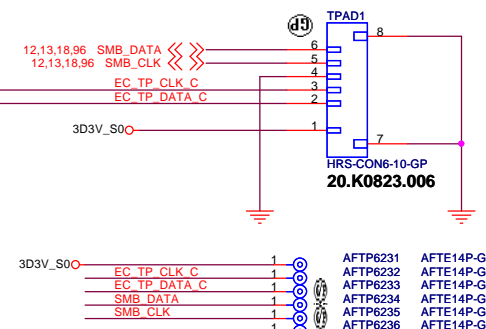
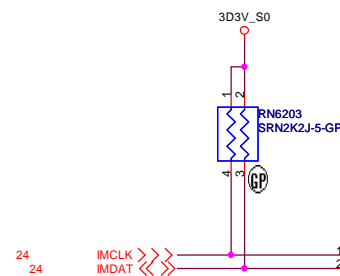
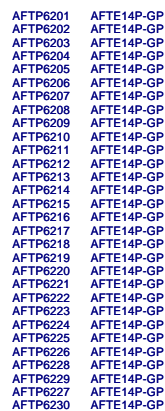
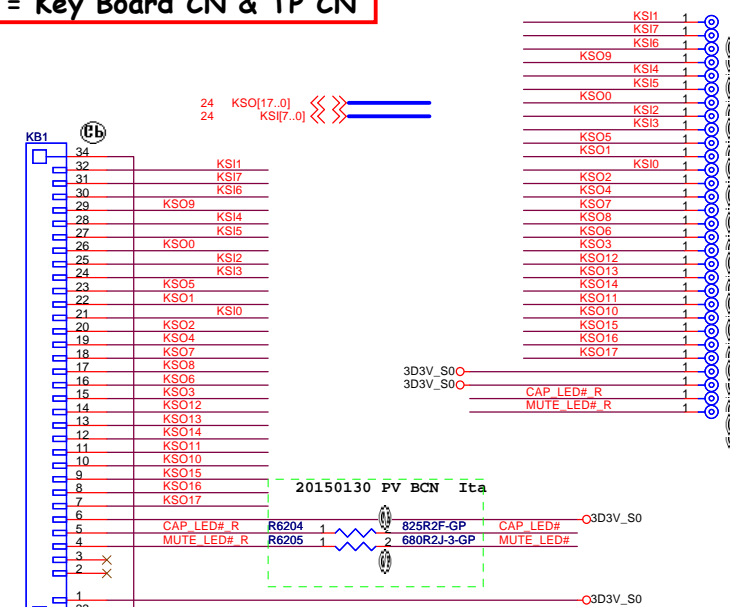
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Home Button



SSID = Key Board CN & TP CN



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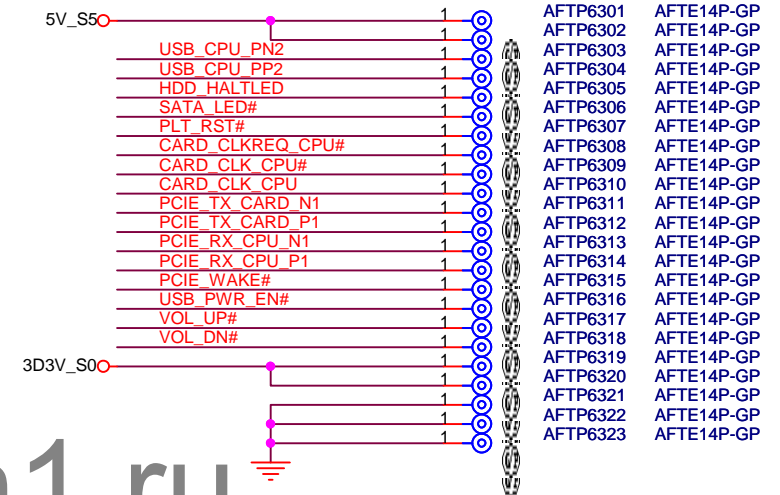
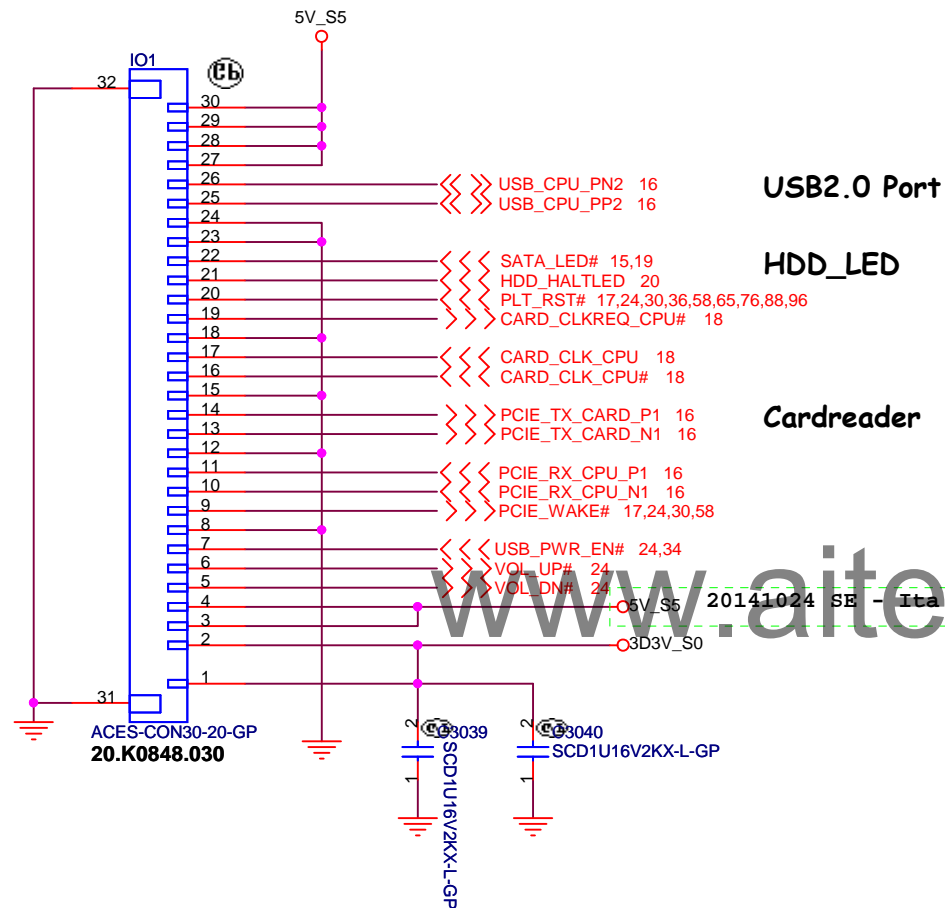
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Title

IO Board Connector

Size
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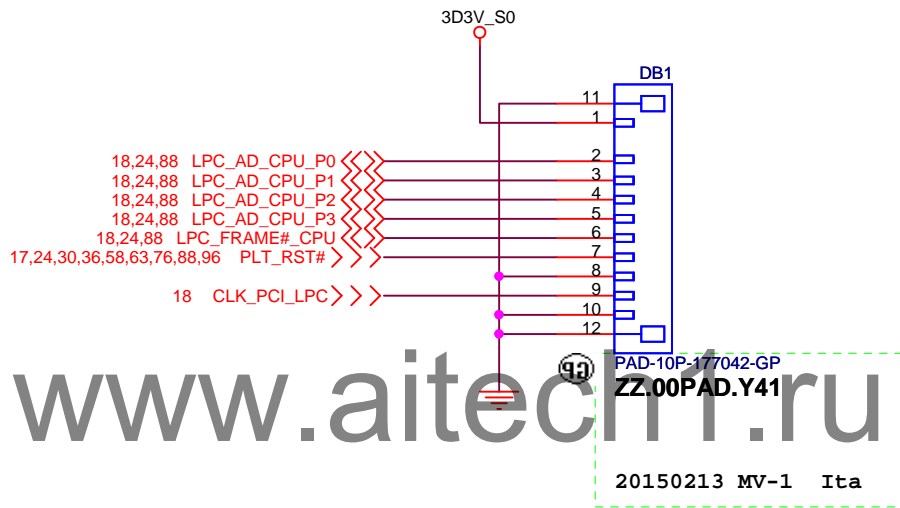
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Thunderbolt (4/5)

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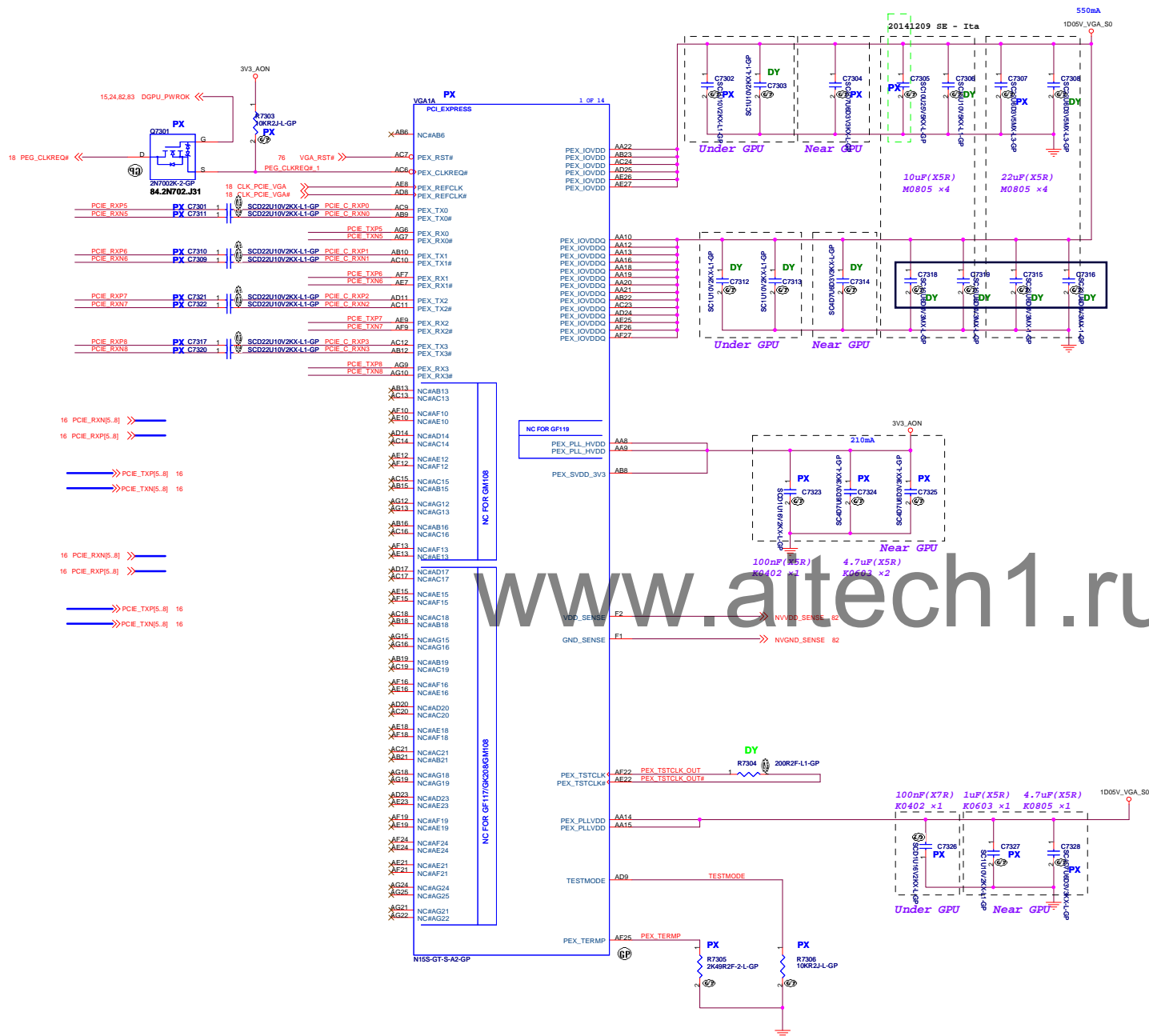
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3.4.2 PCI Express Power Decoupling and Filtering

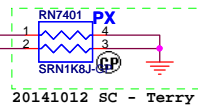
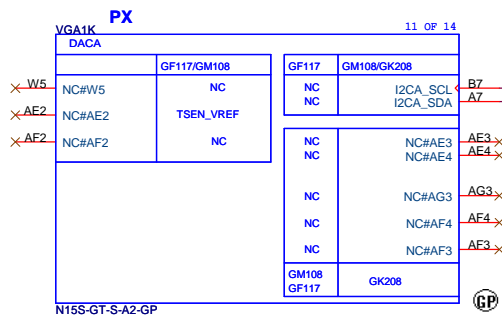
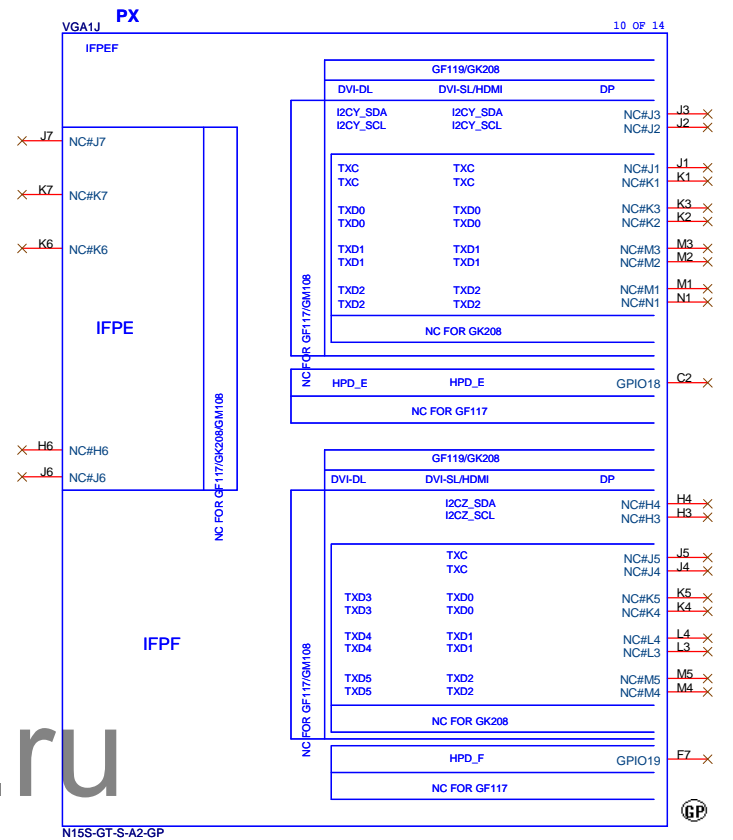
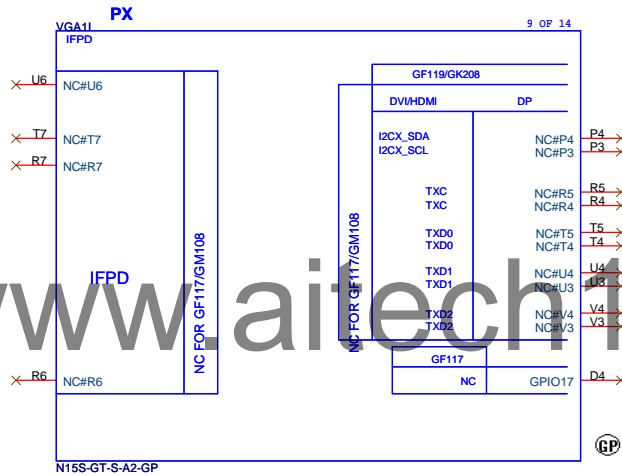
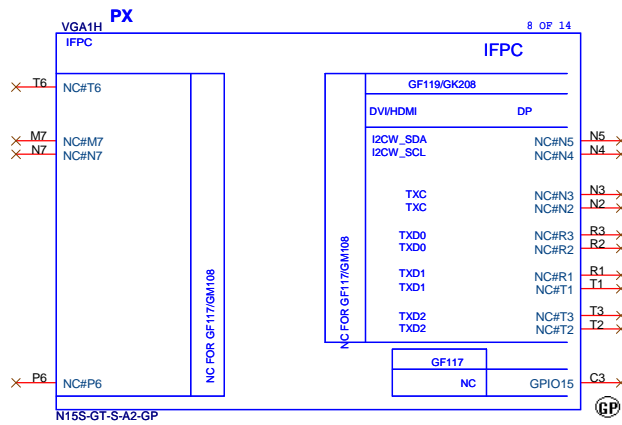
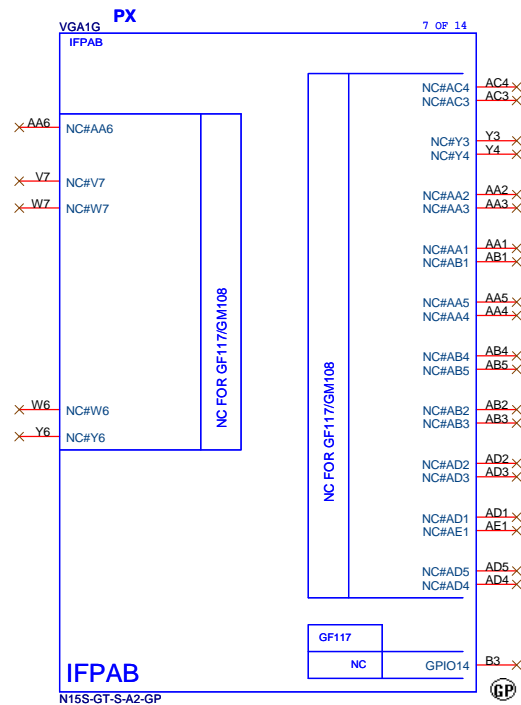
Table 3-16. PEX_IOVDD/Q Power Rail Combined

GPU Package Type	Capacitor Type	Footprint	Population	Location
GB28-64/ GB2-64	1.0 μ F	X6S	0402	Under GPU
	4.7 μ F	X6S	0603	Near GPU
	10 μ F	X5R	0805	Midway between GPU and Power Supply
	22 μ F	X5R	0805	Midway between GPU and Power Supply
GB48-128/ GB38-256	1.0 μ F	X6S	0402	Under GPU
	4.7 μ F	X6S	0603	Near GPU
	10 μ F	X5R	0805	Midway between GPU and Power Supply
	22 μ F	X5R	0805	Midway between GPU and Power Supply

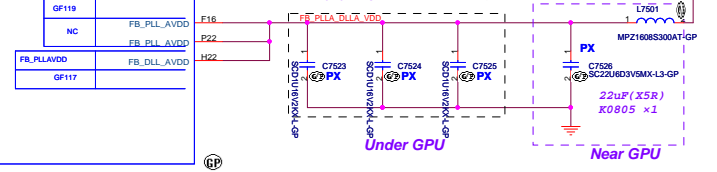
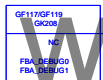
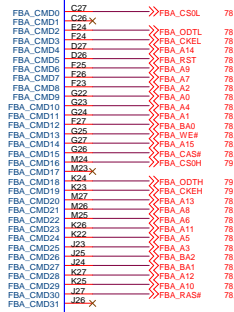
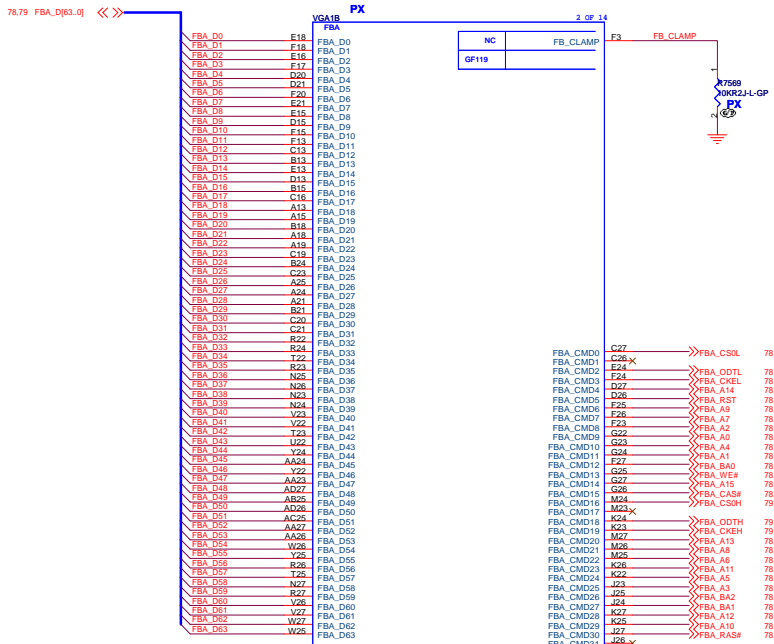
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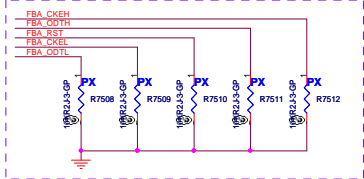
GPU PEG (1/5)
Laduree-BDW 15.6"
Size: 12 Document Number: 1 Rev: 1
Date: Thursday, 1 February 12, 2013 Sheet: 73 of 102



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Memory ODTx, CKEx and RST Termination



FBCLK Termination placed near each VRAM at board edge side

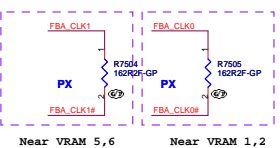


Table 3-6. NVVDD Decoupling Footprint and Population

GPU Package Type	Capacitor Type	Footprint	Population	Location	Comments
GB2B-64 / GB2-64	4.7 μ F X6S	0603	10	Under GPU	
	1 μ F X6S	0402	4	Under GPU	
	47 μ F X5R	0805	1	Near GPU	
	22 μ F X5R	0805	1	Near GPU	
	4.7 μ F X5R	0805	5	Near GPU	
	330 μ F POS	7343	1	Near GPU	ESR < 6 m Ω

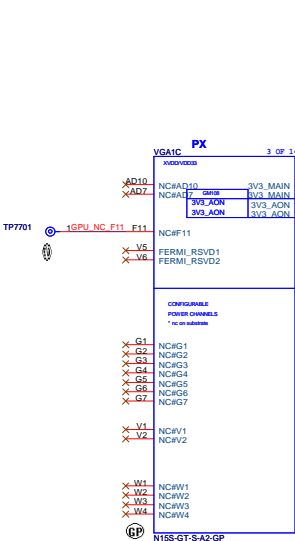
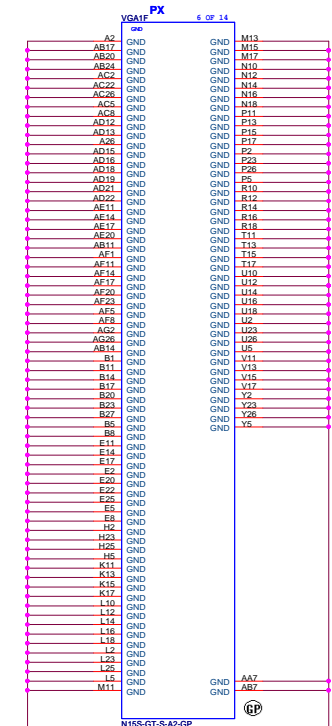
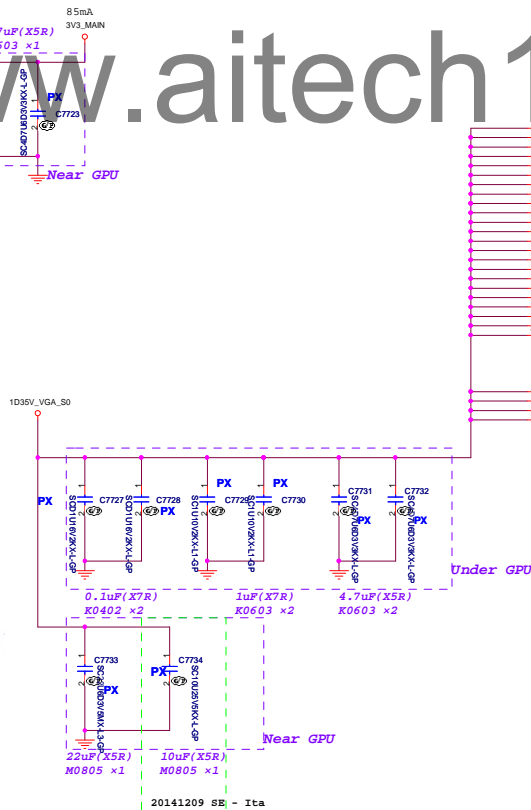
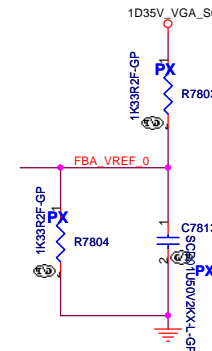
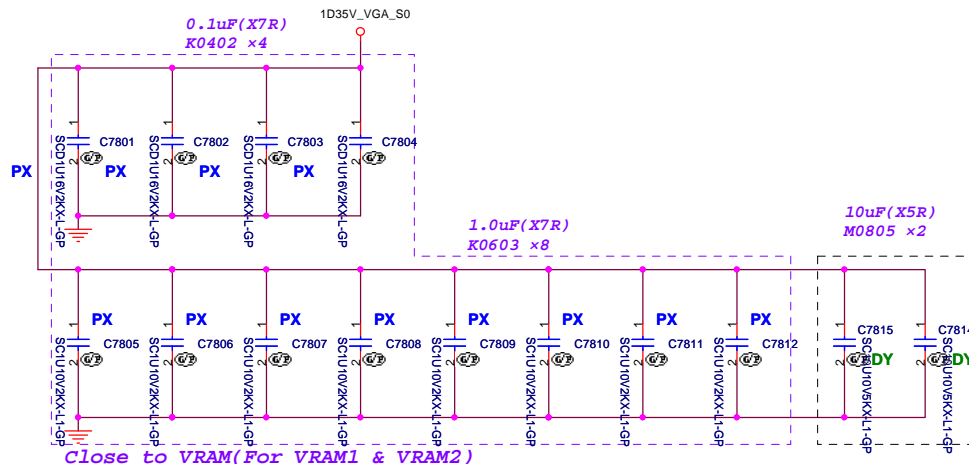
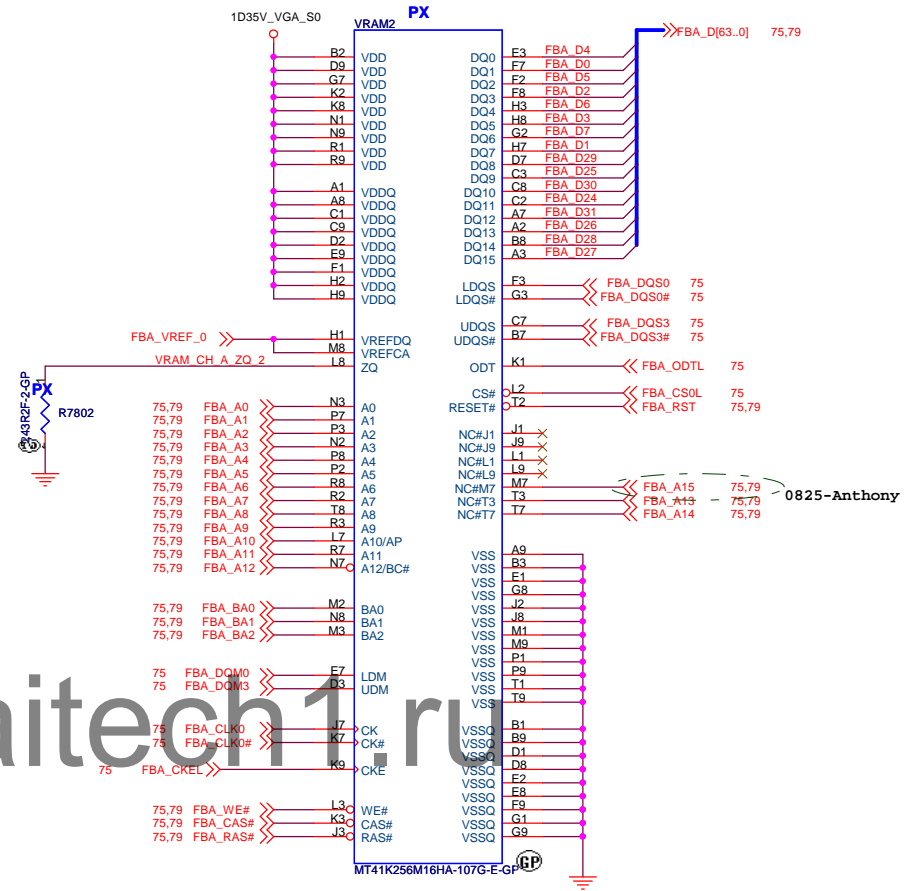
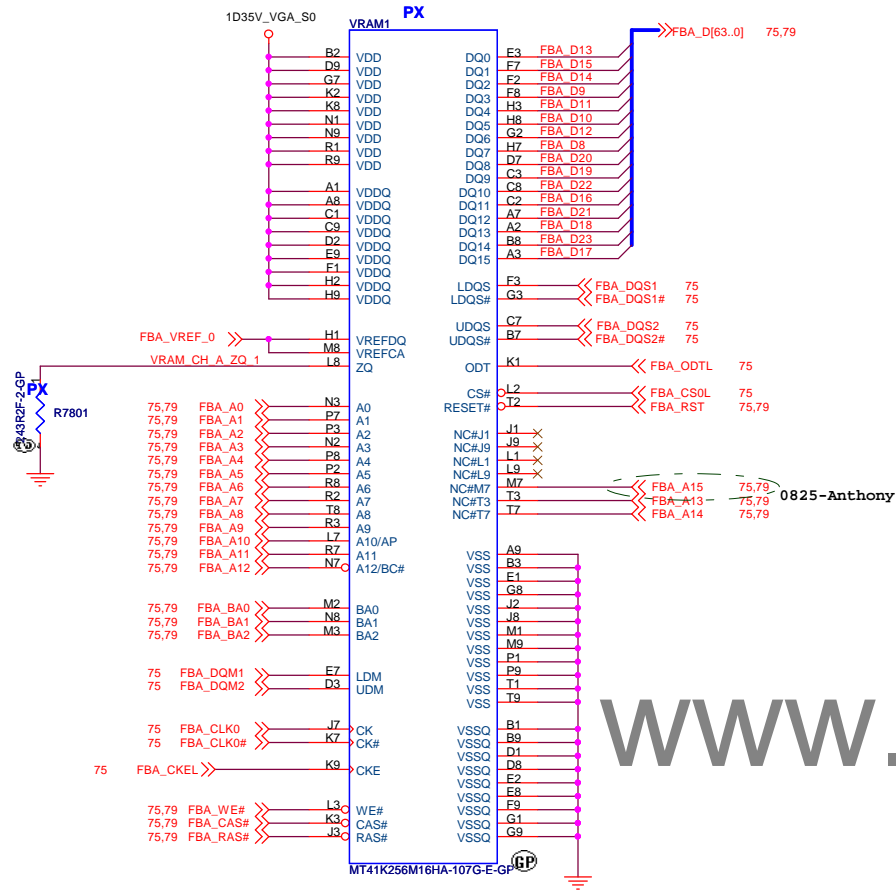


Table 3-9. DDR3 GPU-Side FBVDD and FBVDDQ Combined Decoupling

GPU Package Type	Capacitor Type	Footprint	Population	Location
GB2B-64/GB2-64	0.1 μ F X7R	0402	2	Under GPU
DDR3	1 μ F X7R	0603	2	Under GPU
	4.7 μ F X6S	0603	2	Under GPU
	10 μ F X5R	0805	1	Near GPU
	22 μ F X5R	0805	1	Near GPU

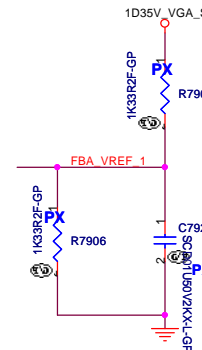
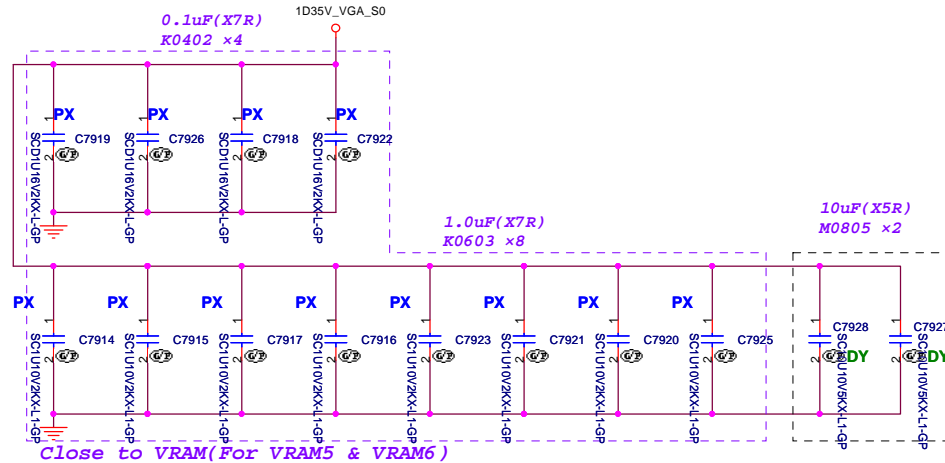
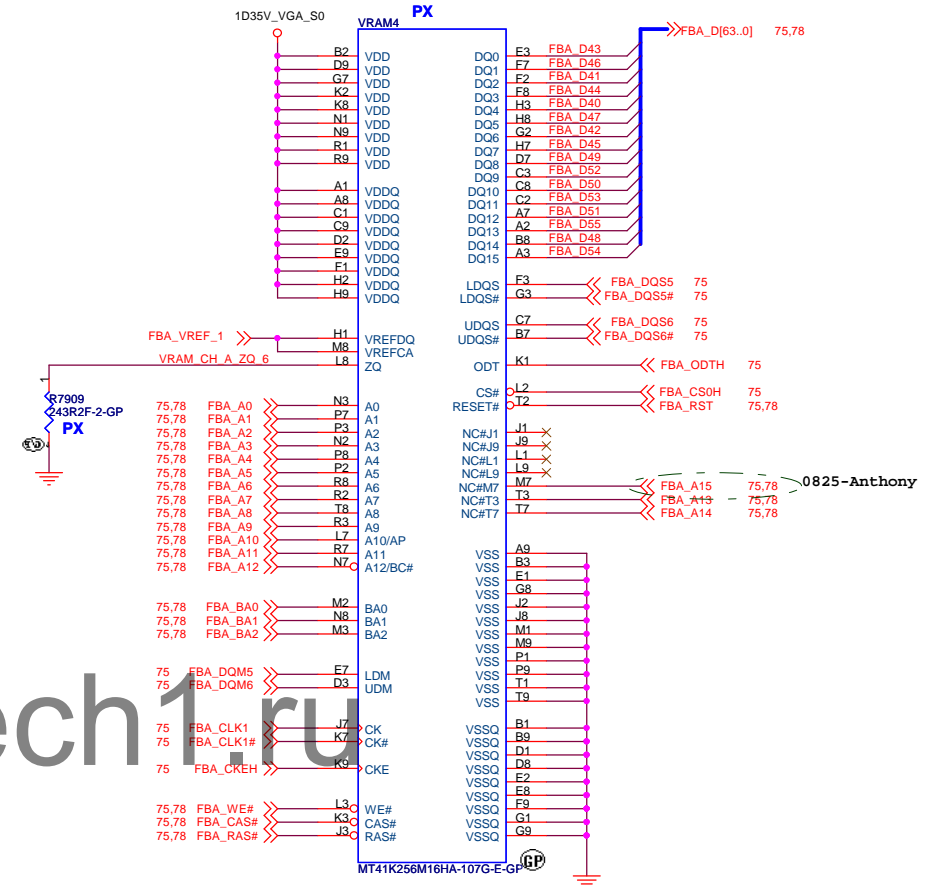
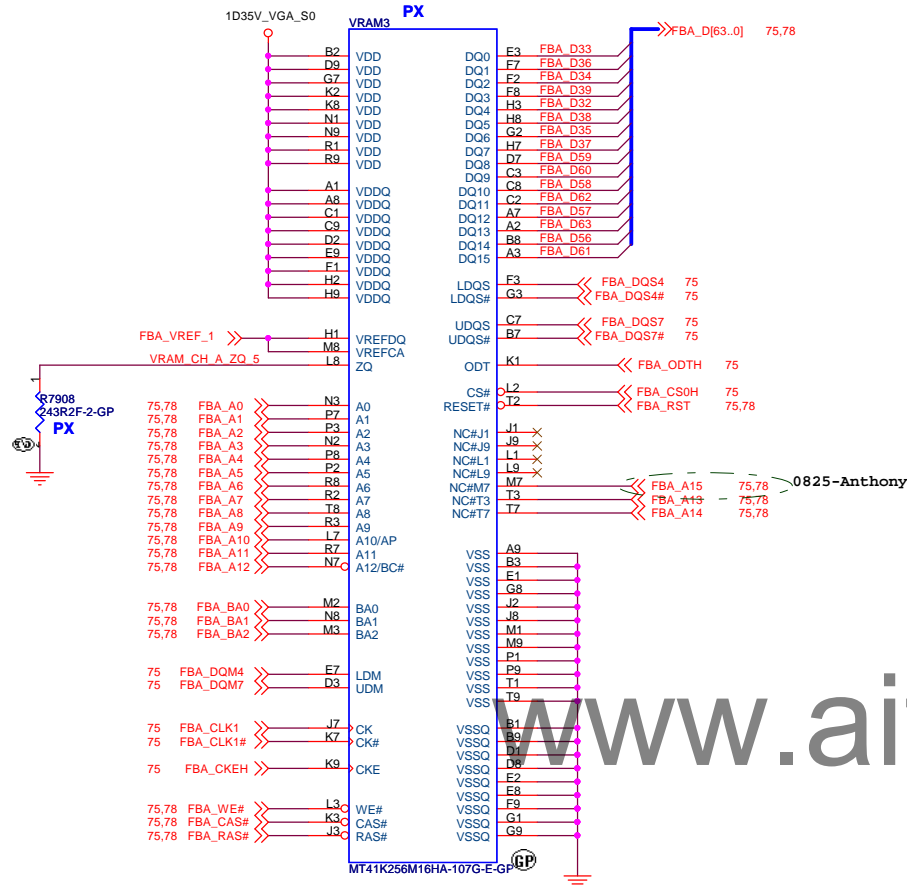


Data Bits 31:0 RANK 0



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Data Bits 63:32 RANK 0



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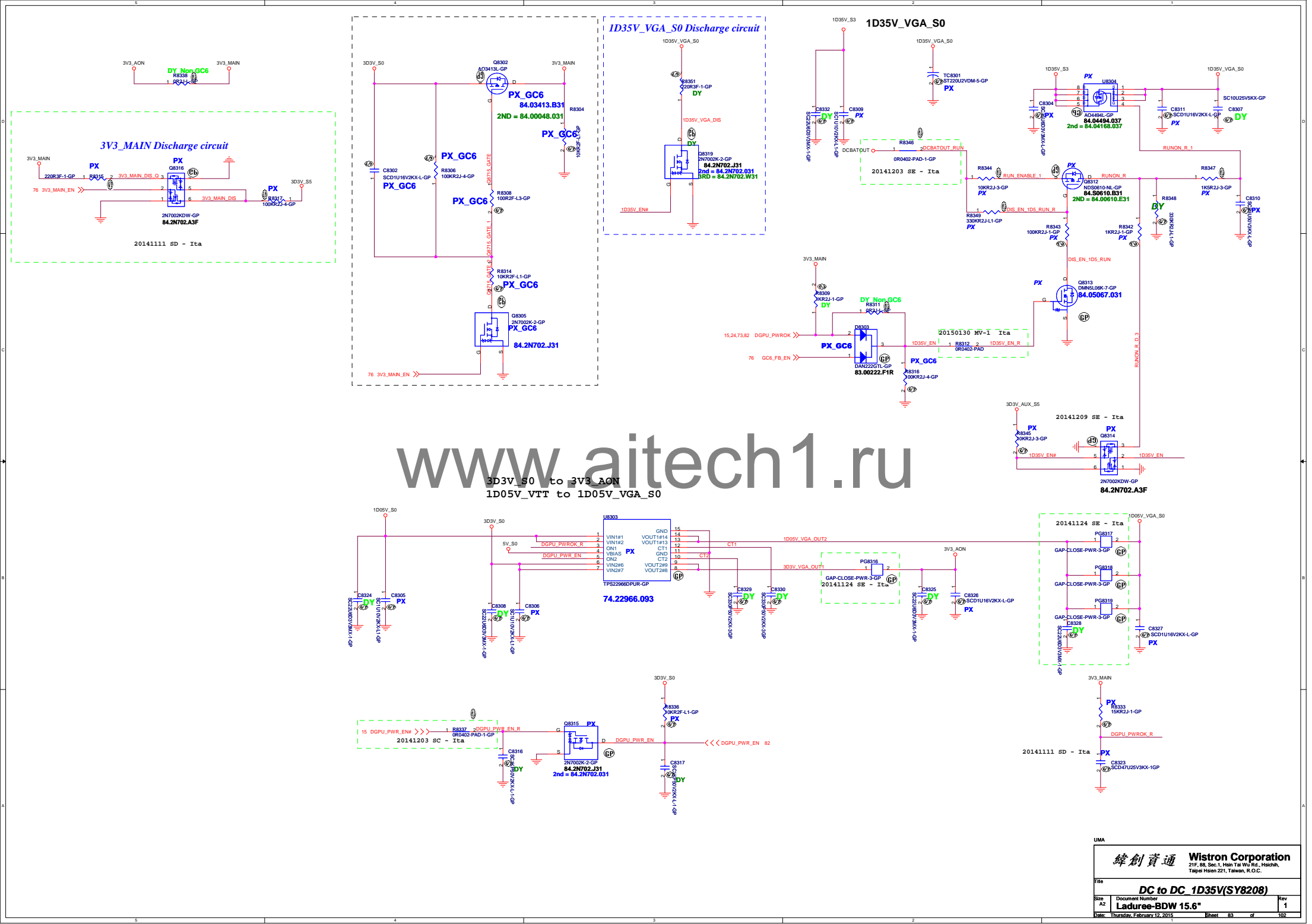
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3D3V_S0 to 3V3_AON
1D05V_VTT to 1D05V_VGA_S0

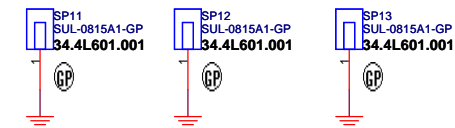
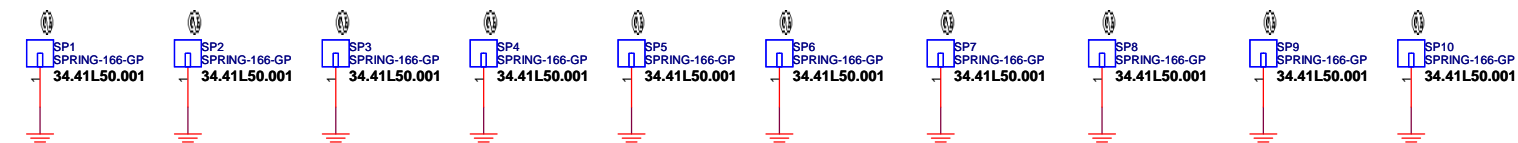
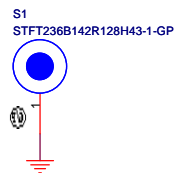
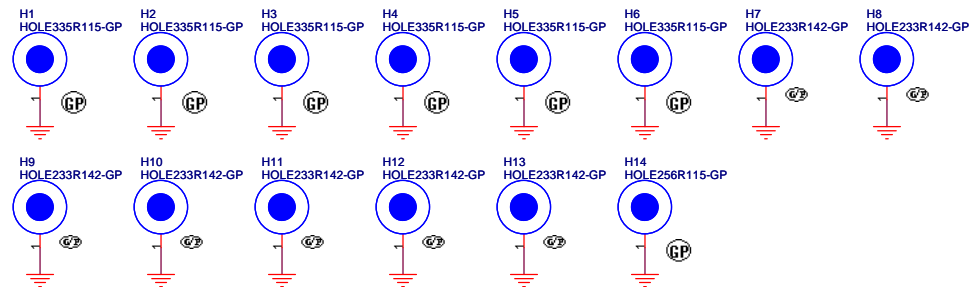
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<div>Date:</div>	<div>Friday, January 30, 2015</div>		<div>Sheet 84 of 102</div>

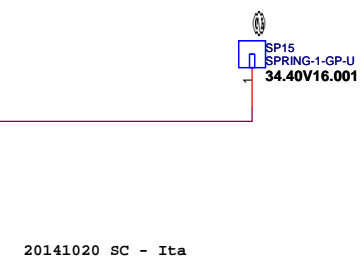
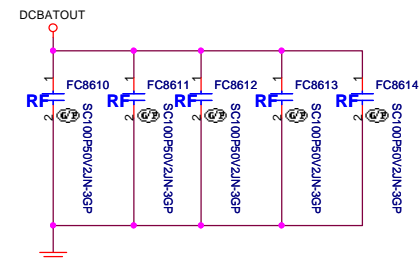
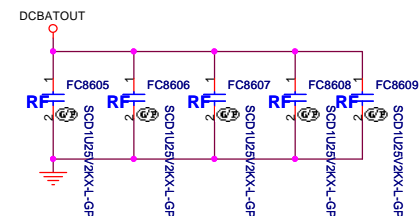
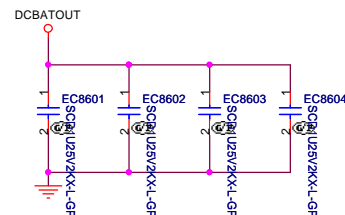
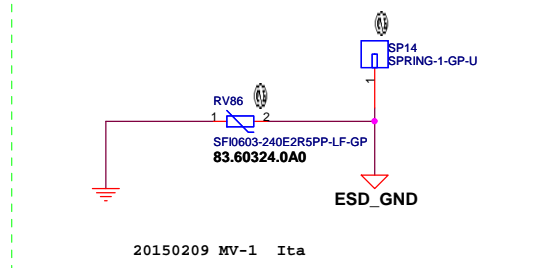
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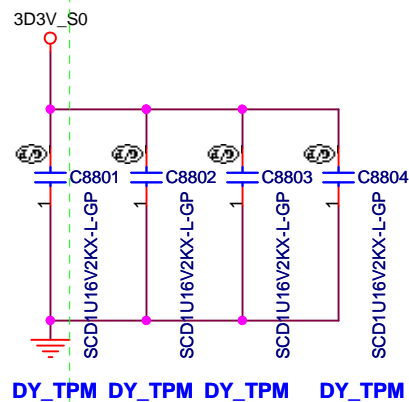
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Laduree-BDW 15.6"

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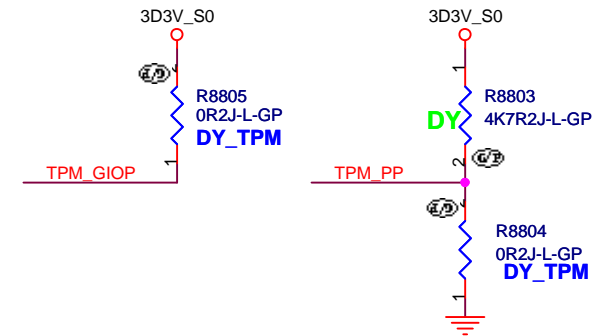
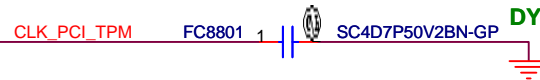
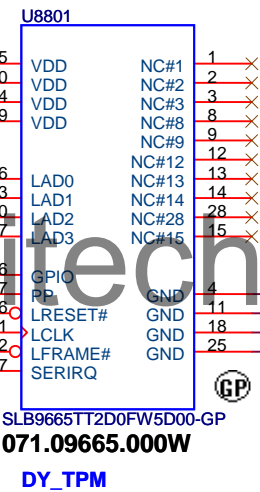
20141022 SC - Ita

3D3V_S0

18,24,65 LPC_AD_CPU_P0
18,24,65 LPC_AD_CPU_P1
18,24,65 LPC_AD_CPU_P2
18,24,65 LPC_AD_CPU_P3

17,24,30,36,58,63,65,76,96 PLT_RST#
18 CLK_PCI_TPM
18,24,65 LPC_FRAME#_CPU
15,20,24 INT_SERIRQ

TPM_GIOP
TPM_PP



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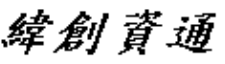
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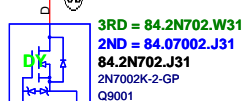
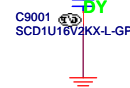
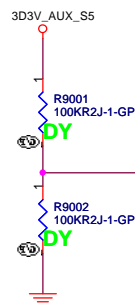
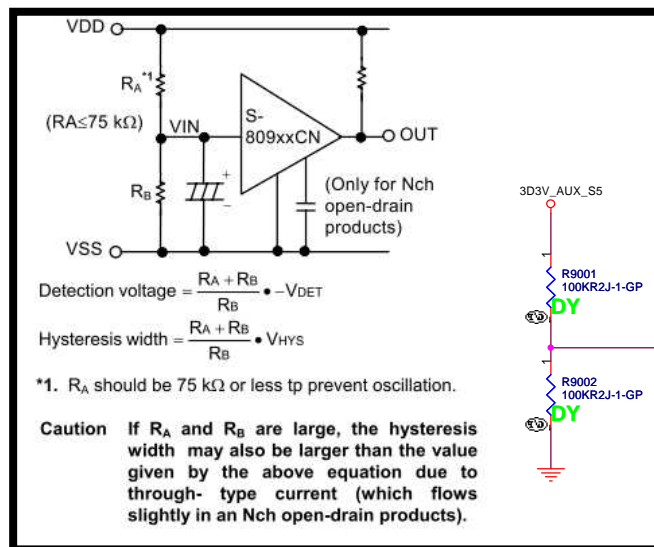
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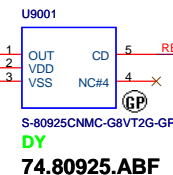
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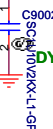


RES_DELAY_VDD



>>> ECRST# 24

RES_DELAY_CD



1uF 7sec

2.2uF 13sec

24.61 KBC_PWRBTN# >>>

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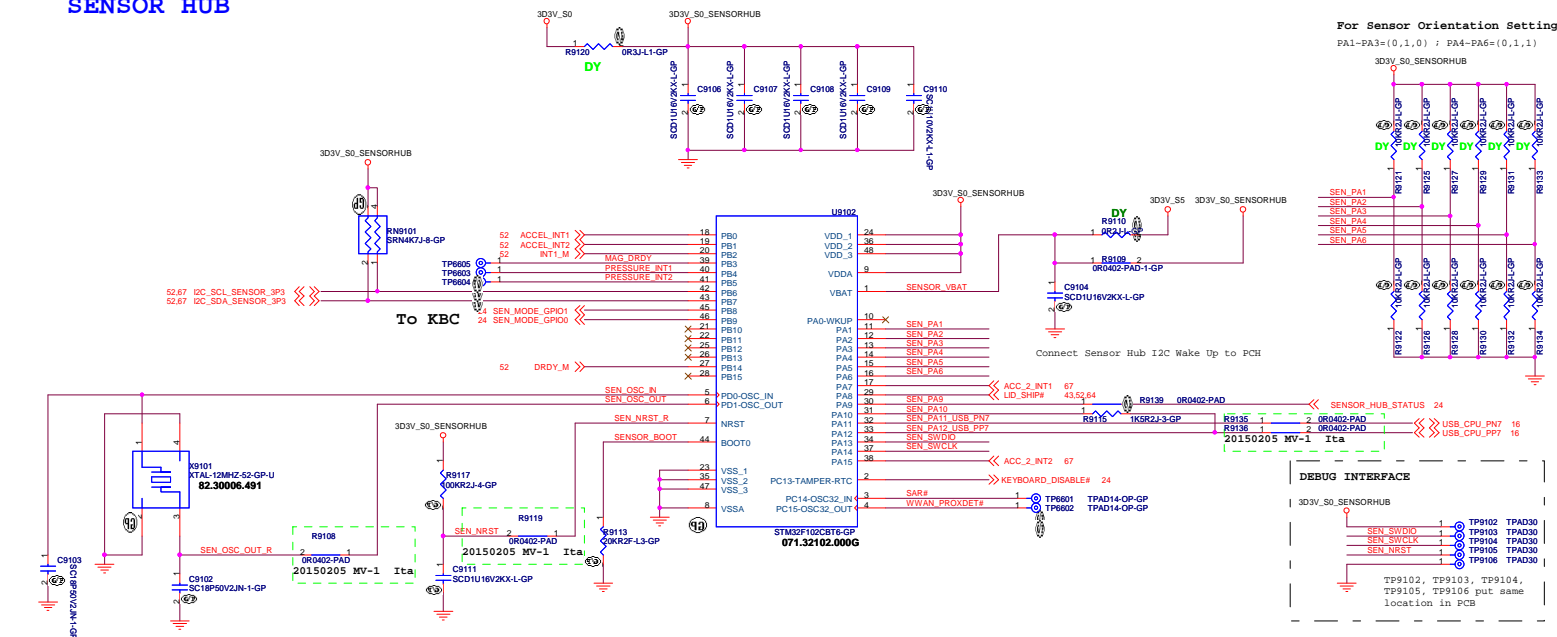
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Title		
Battery Reset		
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SENSOR HUB



According to HP request for lid angle detect during S3 mode. We are need to add new GPIO from EC to MCU PA9 to inform sensor hub current status of OS. We may need to refer this signal for periodically wake up to detect lid angle during S3 state.

OS mode (Sensor hub Powered)	PA9 (Normal Low) from EC
S0	Low
S3	High

DEBUG INTERFACE

3D3V_S0_SENSORHUB

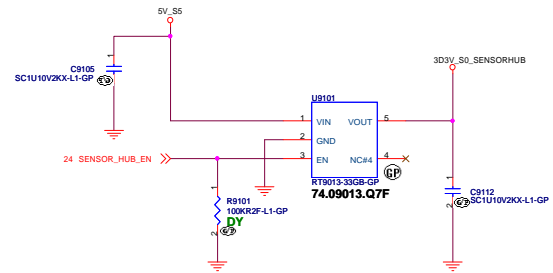
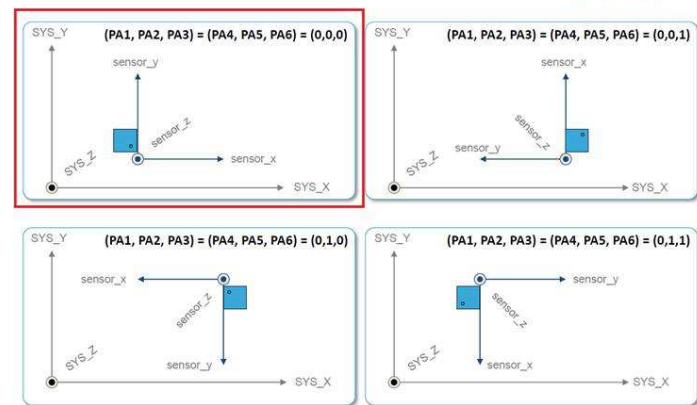
Sensor Hub Pin	PCB Pin	PCB Label
SEN SWDIO	1	TP9102
SEN SWCLK	2	TP9103
SEN NRST	3	TP9104
SEN NRST	4	TP9105
SEN NRST	5	TP9106
SEN NRST	6	TPAD30

TP9102, TP9103, TP9104, TP9105, TP9106 put same location in PCB

PB8	PB9	Mode
Low	Low	Laptop Mode (1)
Low	High	Stand Mode (2)
High	Low	Test Mode (3)
High	High	Tablet Mode (4)

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LSM9DS1 Orientation Setting (Top) ■



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Bottom Docking			
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Size <div>A3</div>	Document Number <div>Laduree-BDW 15.6"</div>	Rev <div>1</div>
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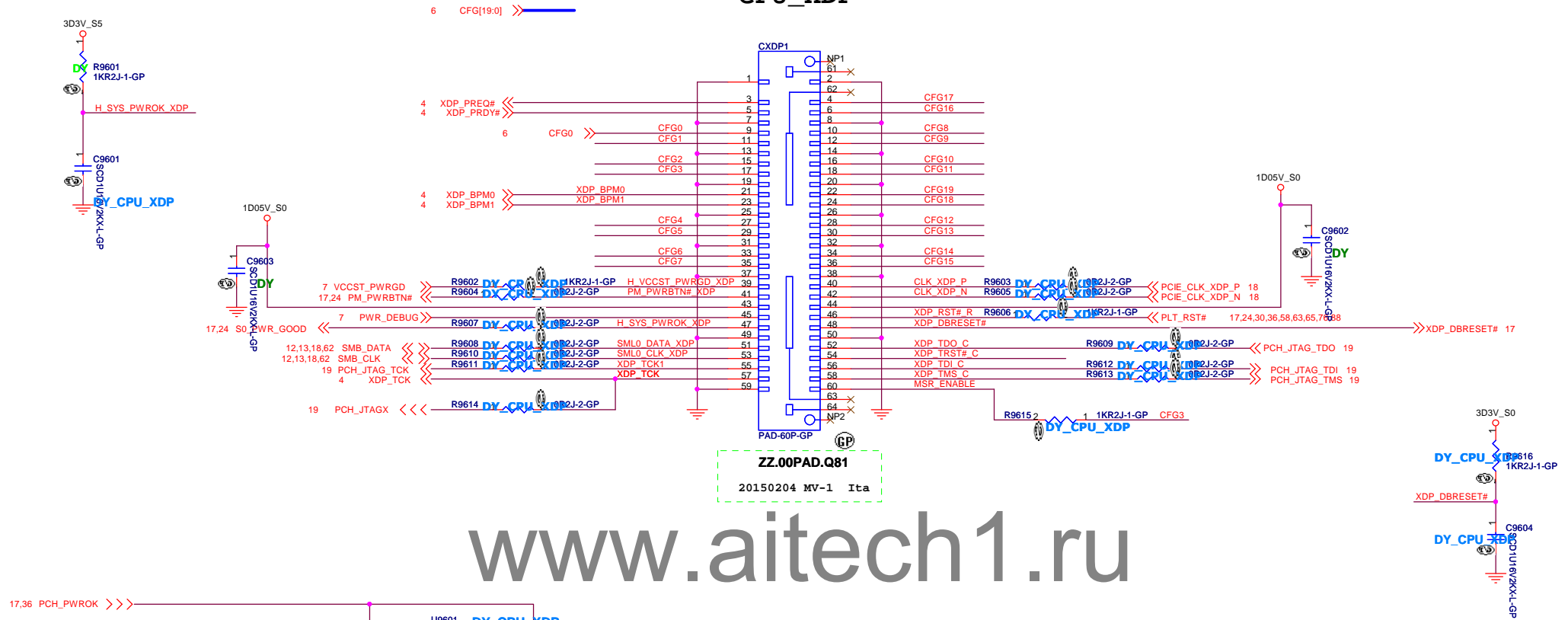
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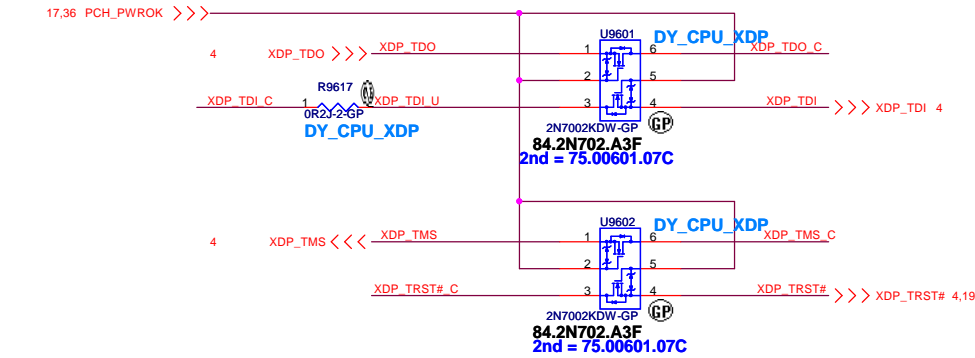
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LAN Switch		
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CPU_XDP



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Pin	XDP Signal Name	Target Signal	I/O	Device	Pin	XDP Signal Name	Target Signal	I/O	Device
1	OBSFN_A0	Open	I/O		2	OBSFN_A1	Open	I/O	
3	GND	GND	NA		4	OBSFN_A[0]	Open	I/O	
5	OBSFN_A[1]	Open	I/O		6	GND	GND	NA	
7	OBSFN_A[2]	Open	I/O		8	OBSFN_A[3]	Open	I/O	
9	GND	GND	NA		10	HOOK1	RSMRST#	I	System
11	HOOK1	BP_PWRGD_RST# ¹	O	System	12	HOOK2	Open	NA	
13	HOOK3	Open	NA		14	HOOK4	1.05V core	NA	
15	HOOK5	Open	NA		16	VCCOBS_AB	3.3V SUS	I	System
17	HOOK6	RSMRST# ¹	O	System	18	HOOK7	DBR# ¹	O	System
19	GND	GND	NA		20	TDO	JTAG_TDO	I	PCH
21	TRSTn	Open	NA		22	TDI	JTAG_TDI	O	PCH
23	TMS	JTAG_TMS	O	PCH	24	TCK1	Open	NA	
25	GND	GND	NA		26	TCK0	JTAG_TCK	O	PCH

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PCH XDP			
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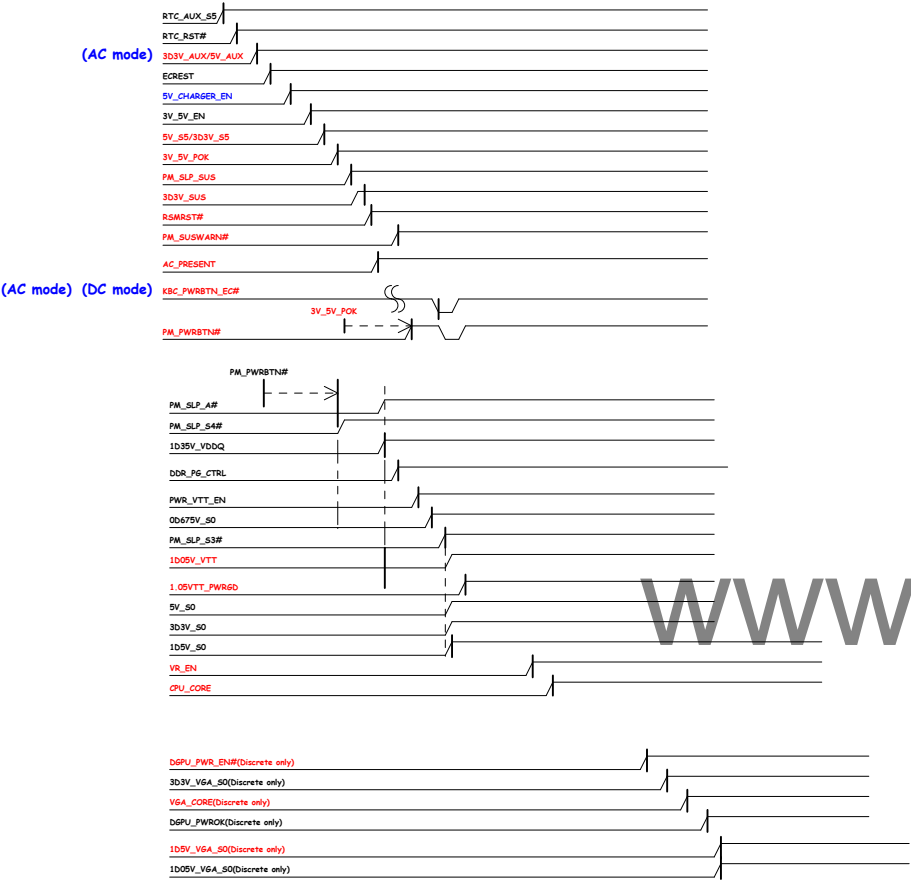
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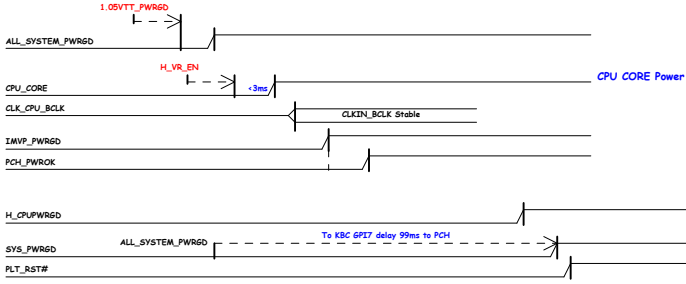
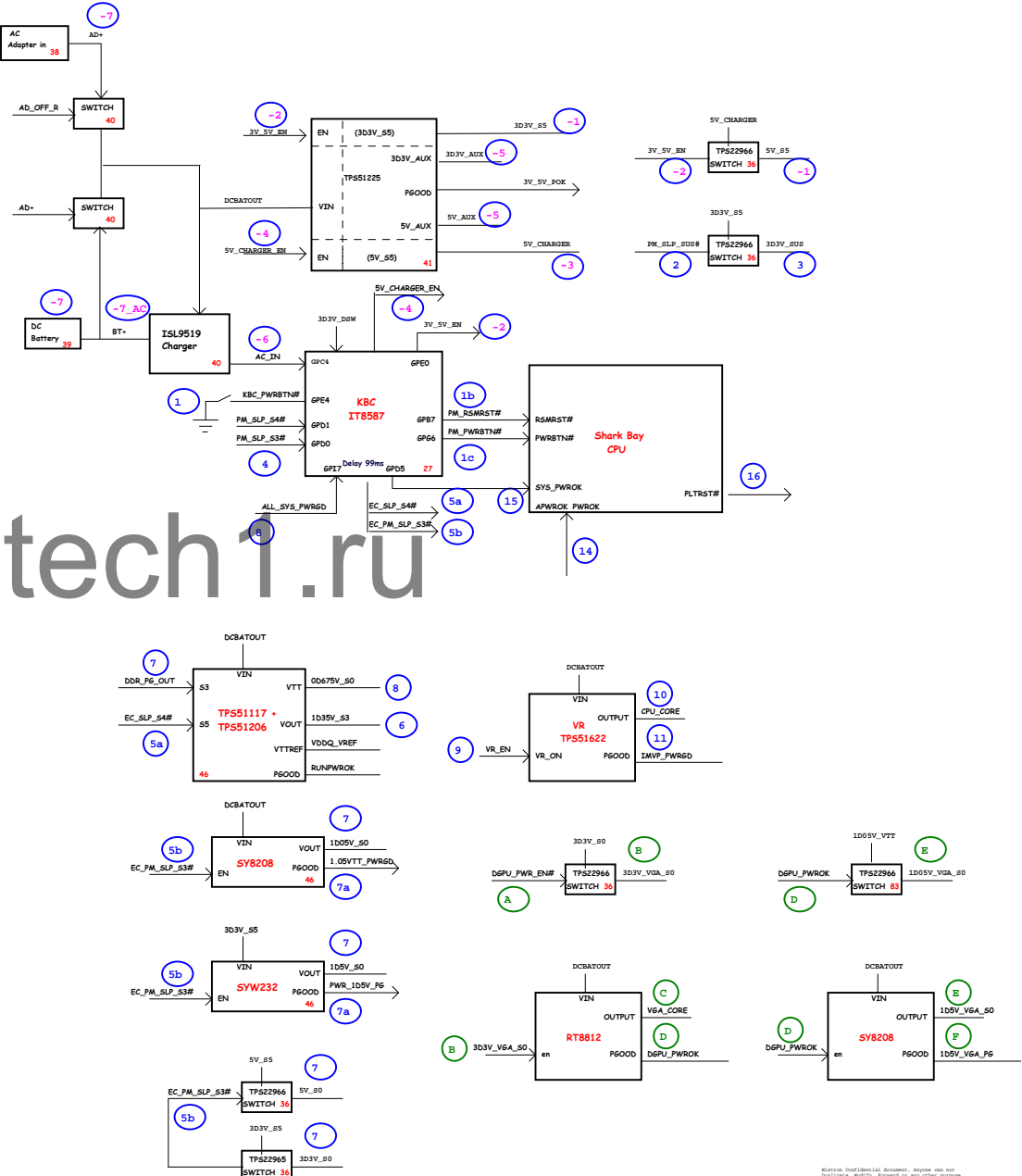
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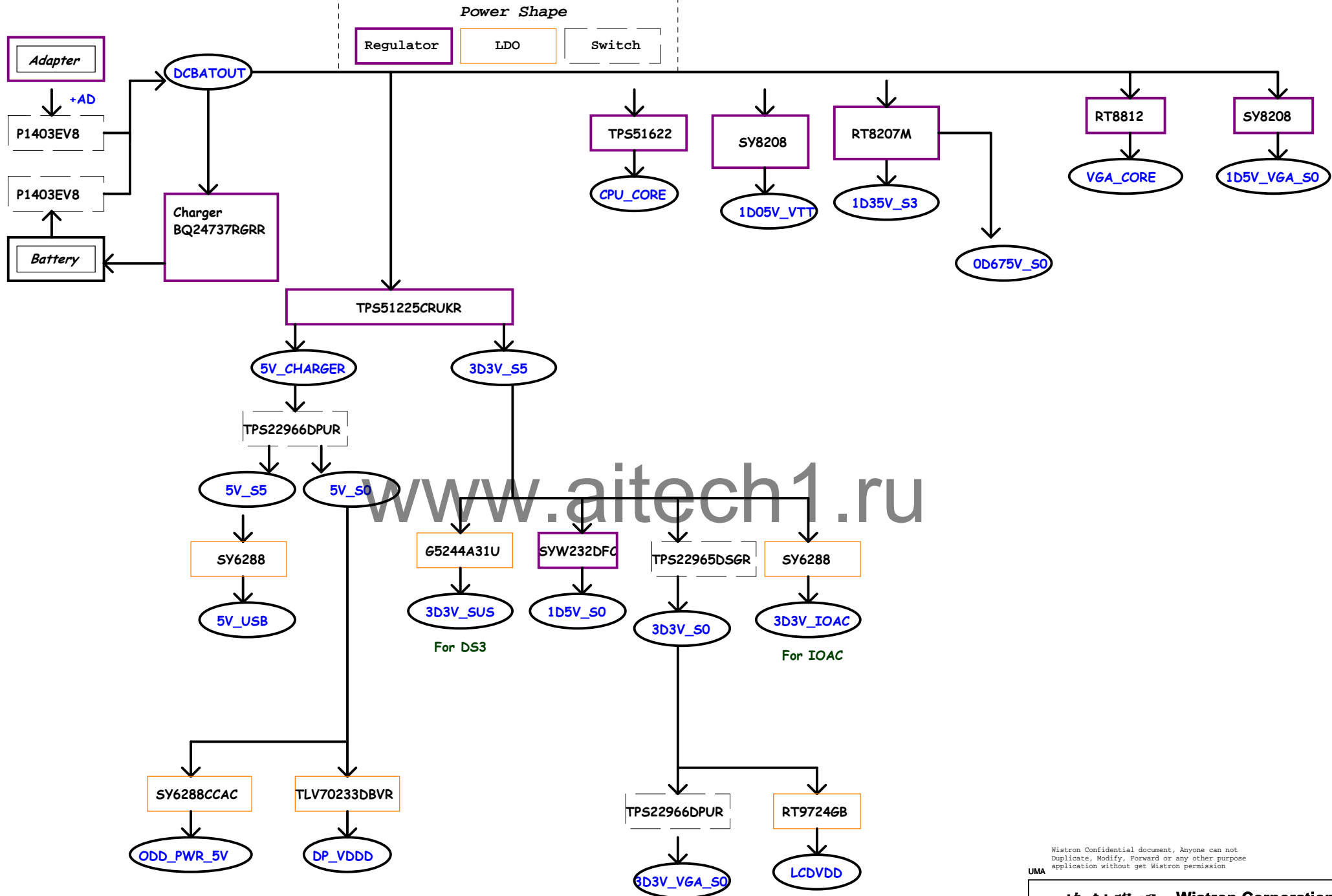
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D	Part Number	2nd	3rd	Manual PN		
		71.BROAD.00U 071.0N15S.0A0U 72.4IK26.00U 022.10025.00A1 20.F0818.004 20.K0678.044 20.K0637.014 20.K0848.030 062.10011.0461 062.10011.0841 022.10005.00U1 020.K0044.0012 62.10043.P21 20.K0800.004 020.K0116.0032 20.K0823.006 062.10007.0451 022.10001.00D1 75.00054.R7D 75.04223.07C 83.00016.F11 83.00040.E81 83.00099.U11 83.0024V.0A1 83.00355.F1F 83.00751.08F 83.R2003.P8F 83.R5003.C8F 83.00222.F1R 84.00043.011 84.00124.H1K 84.00124.K1K 84.02222.V11 84.03904.L06 84.T3904.H11 84.T3906.A11 82.30004.841 82.30006.491 82.30020.G71 82.30034.A61 84.02305.G31 84.03413.B31 84.04494.037 84.05067.031 84.2N702.A31 84.2N702.A3F 84.2N702.J31 84.S0610.B31 83.00222.F1R 69.50007.A41 73.01G08.DHG 74.02821.07F 74.09724.09F 74.22966.093 68.00084.921 68.00143.051 68.00212.051 68.00335.161 68.2R21G.10R 68.2R21G.10P 68.R681A.10A 69.10103.041 22.00215.037 84.08131.037 68.4R71C.10K 84.00780.037 68.3R310.20A 74.01339.B3F 69.60037.031 69.60037.011 79.33719.L01 68.00069.30A 72.25Q64.F01 82.30001.G11 74.09013.P7F 68.R3610.10S 69.48001.081 077.51571.0001 068.1R010.1081 83.00056.Q11 84.06414.037 68.00213.011 75.01045.073 071.08407.0003 78.10421.L0L 83.05121.AA0 75.00099.07D	22.10296.211 020.F0281.0004 62.10024.N21 020.K0125.0012 735274-AB2 20.K0841.004 020.K0137.0032 020.K0048.0006 734729-AB2 75.BAT54.07D 075.01256.007C 83.00016.P11 83.R2004.C81 83.BAV99.111 75.04024.07D 83.00355.D1F 83.R2004.G8F 83.R2003.A8M 83.R5003.T8F 084.05233.001H 84.00024.A1K 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.I31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	020.F0281.0004 62.10024.N21 020.K0049.0012 735274-LE2 734729-FB2 022.10001.00R1 75.00005.C7C 83.00016.I11 83.R5003.H8H 83.00222.B1R 84.05143.011 84.05212.B11 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.I31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	790141-001 796748-001 690995-662 7" Reel 13" Reel 78.10134.1FL 78.10324.2FL 78.10610.SBL 78.22523.SBL 78.22610.51L 78.47520.SBL 63.00000.00L 63.10234.1DL 63.10234.L0L 63.10334.L0L 63.10434.L1L 63.33034.L0L 63.47234.L0L 63.47334.L0L 63.47434.L0L 63.56034.L0L 63.R0034.LDL 64.10015.6DL 64.10025.6DL 66.10336.04L 66.22236.04L 78.47522.51L 78.10424.ZBL 78.10523.5FL 78.10224.2FL 78.10422.5FL 78.22423.SFL 64.10005.6DL 63.22234.1DL 63.22034.LDL 64.20025.6DL 64.15005.6DL 64.10035.6DL 64.2R205.55L 63.10534.LDL 63.33434.LDL 63.82234.LDL 64.10R05.6DL 64.1R005.6DL 64.49R95.6DL 78.10034.1FL 78.22224.2FL 64.20005.6DL 64.20035.6DL 64.13005.6DL 64.20015.6DL 63.51034.L0L 78.10622.51L 78.22034.1FL 78.47034.1FL 63.22334.L0L 63.22334.L0L	
C	Part Number	2nd	3rd	Manual PN		
		71.BROAD.00U 071.0N15S.0A0U 72.4IK26.00U 022.10025.00A1 20.F0818.004 20.K0678.044 20.K0637.014 20.K0848.030 062.10011.0461 062.10011.0841 022.10005.00U1 020.K0044.0012 62.10043.P21 20.K0800.004 020.K0116.0032 20.K0823.006 062.10007.0451 022.10001.00D1 75.00054.R7D 75.04223.07C 83.00016.F11 83.00040.E81 83.00099.U11 83.0024V.0A1 83.00355.F1F 83.00751.08F 83.R2003.P8F 83.R5003.C8F 83.00222.F1R 84.00043.011 84.00124.H1K 84.00124.K1K 84.02222.V11 84.03904.L06 84.T3904.H11 84.T3906.A11 82.30004.841 82.30006.491 82.30020.G71 82.30034.A61 84.02305.G31 84.03413.B31 84.04494.037 84.05067.031 84.2N702.A31 84.2N702.A3F 84.2N702.J31 84.S0610.B31 83.00222.F1R 69.50007.A41 73.01G08.DHG 74.02821.07F 74.09724.09F 74.22966.093 68.00084.921 68.00143.051 68.00212.051 68.00335.161 68.2R21G.10R 68.2R21G.10P 68.R681A.10A 69.10103.041 22.00215.037 84.08131.037 68.4R71C.10K 84.00780.037 68.3R310.20A 74.01339.B3F 69.60037.031 69.60037.011 79.33719.L01 68.00069.30A 72.25Q64.F01 82.30001.G11 74.09013.P7F 68.R3610.10S 69.48001.081 077.51571.0001 068.1R010.1081 83.00056.Q11 84.06414.037 68.00213.011 75.01045.073 071.08407.0003 78.10421.L0L 83.05121.AA0 75.00099.07D	22.10296.211 020.F0281.0004 62.10024.N21 020.K0125.0012 735274-AB2 20.K0841.004 020.K0137.0032 020.K0048.0006 734729-AB2 75.BAT54.07D 075.01256.007C 83.00016.P11 83.R2004.C81 83.BAV99.111 75.04024.07D 83.00355.D1F 83.R2004.G8F 83.R2003.A8M 83.R5003.T8F 084.05233.001H 84.00024.A1K 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.I31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	020.F0281.0004 62.10024.N21 020.K0049.0012 735274-LE2 734729-FB2 022.10001.00R1 75.00005.C7C 83.00016.I11 83.R5003.H8H 83.00222.B1R 84.05143.011 84.05212.B11 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.I31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	790141-001 796748-001 690995-662 7" Reel 13" Reel 78.10134.1FL 78.10324.2FL 78.10610.SBL 78.22523.SBL 78.22610.51L 78.47520.SBL 63.00000.00L 63.10234.1DL 63.10234.L0L 63.10334.L0L 63.10434.L1L 63.33034.L0L 63.47234.L0L 63.47334.L0L 63.47434.L0L 63.56034.L0L 63.R0034.LDL 64.10015.6DL 64.10025.6DL 66.10336.04L 66.22236.04L 78.47522.51L 78.10424.ZBL 78.10523.5FL 78.10224.2FL 78.10422.5FL 78.22423.SFL 64.10005.6DL 63.22234.1DL 63.22034.LDL 64.20025.6DL 64.15005.6DL 64.10035.6DL 64.2R205.55L 63.10534.LDL 63.33434.LDL 63.82234.LDL 64.10R05.6DL 64.1R005.6DL 64.49R95.6DL 78.10034.1FL 78.22224.2FL 64.20005.6DL 64.20035.6DL 64.13005.6DL 64.20015.6DL 63.51034.L0L 78.10622.51L 78.22034.1FL 78.47034.1FL 63.22334.L0L 63.22334.L0L	
B	Part Number	2nd	3rd	Manual PN		
		71.BROAD.00U 071.0N15S.0A0U 72.4IK26.00U 022.10025.00A1 20.F0818.004 20.K0678.044 20.K0637.014 20.K0848.030 062.10011.0461 062.10011.0841 022.10005.00U1 020.K0044.0012 62.10043.P21 20.K0800.004 020.K0116.0032 20.K0823.006 062.10007.0451 022.10001.00D1 75.00054.R7D 75.04223.07C 83.00016.F11 83.00040.E81 83.00099.U11 83.0024V.0A1 83.00355.F1F 83.00751.08F 83.R2003.P8F 83.R5003.C8F 83.00222.F1R 84.00043.011 84.00124.H1K 84.00124.K1K 84.02222.V11 84.03904.L06 84.T3904.H11 84.T3906.A11 82.30004.841 82.30006.491 82.30020.G71 82.30034.A61 84.02305.G31 84.03413.B31 84.04494.037 84.05067.031 84.2N702.A31 84.2N702.A3F 84.2N702.J31 84.S0610.B31 83.00222.F1R 69.50007.A41 73.01G08.DHG 74.02821.07F 74.09724.09F 74.22966.093 68.00084.921 68.00143.051 68.00212.051 68.00335.161 68.2R21G.10R 68.2R21G.10P 68.R681A.10A 69.10103.041 22.00215.037 84.08131.037 68.4R71C.10K 84.00780.037 68.3R310.20A 74.01339.B3F 69.60037.031 69.60037.011 79.33719.L01 68.00069.30A 72.25Q64.F01 82.30001.G11 74.09013.P7F 68.R3610.10S 69.48001.081 077.51571.0001 068.1R010.1081 83.00056.Q11 84.06414.037 68.00213.011 75.01045.073 071.08407.0003 78.10421.L0L 83.05121.AA0 75.00099.07D	22.10296.211 020.F0281.0004 62.10024.N21 020.K0125.0012 735274-AB2 20.K0841.004 020.K0137.0032 020.K0048.0006 734729-AB2 75.BAT54.07D 075.01256.007C 83.00016.P11 83.R2004.C81 83.BAV99.111 75.04024.07D 83.00355.D1F 83.R2004.G8F 83.R2003.A8M 83.R5003.T8F 084.05233.001H 84.00024.A1K 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.G31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	020.F0281.0004 62.10024.N21 020.K0049.0012 735274-LE2 734729-FB2 022.10001.00R1 75.00005.C7C 83.00016.I11 83.R5003.H8H 83.00222.B1R 84.05143.011 84.05212.B11 84.00024.01K 084.02222.0011 84.03904.E11 084.03904.0B11 84.T3906.A11 82.30004.891 82.30006.641 82.30020.D41 82.30034.351 84.02305.G31 84.02130.031 84.04168.037 84.00301.A31 084.27002.0B31 075.27002.0A7C 084.07002.0C31 84.00610.E31 69.50007.A31 73.01G08.EHG 074.05243.007F 74.06288.B7F 74.22966.0093 68.00217.401 68.00230.091 68.00335.101 68.00335.051 68.00206.171 68.2R21A.20X 68.R6810.20J 69.10084.071 68.00201.141 84.07403.037 068.4R710.1081 84.07506.037 68.3R31C.10R 074.09198.0A3F 69.60028.011 69.60013.131 77.53371.21L 68.1R080.301 72.25640.D01 82.30001.G01 074.03705.003F 68.R3610.20D 69.50011.081 077.51571.0021 68.1R01B.10K 83.00056.Y11 84.00172.A37 68.00084.43A 075.07504.0073 83.3V3XU.AA0 75.00099.K7D	790141-001 796748-001 690995-662 7" Reel 13" Reel 78.10134.1FL 78.10324.2FL 78.10610.SBL 78.22523.SBL 78.22610.51L 78.47520.SBL 63.00000.00L 63.10234.1DL 63.10234.L0L 63.10334.L0L 63.10434.L1L 63.33034.L0L 63.47234.L0L 63.47334.L0L 63.47434.L0L 63.56034.L0L 63.R0034.LDL 64.10015.6DL 64.10025.6DL 66.10336.04L 66.22236.04L 78.47522.51L 78.10424.ZBL 78.10523.5FL 78.10224.2FL 78.10422.5FL 78.22423.SFL 64.10005.6DL 63.22234.1DL 63.22034.LDL 64.20025.6DL 64.15005.6DL 64.10035.6DL 64.2R205.55L 63.10534.LDL 63.33434.LDL 63.82234.LDL 64.10R05.6DL 64.1R005.6DL 64.49R95.6DL 78.10034.1FL 78.22224.2FL 64.20005.6DL 64.20035.6DL 64.13005.6DL 64.20015.6DL 63.51034.L0L 78.10622.51L 78.22034.1FL 78.47034.1FL 63.22334.L0L 63.22334.L0L	
A	Part Number	2nd	3rd	Manual PN		
		71.BROAD.00U 071.0N15S.0A0U 72.4IK26.00U 022.10025.00A1 20.F0818.004 20.K0678.044 20.K0637.014 20.K0848.030 062.10011.0461 062.10011.0841 022.10005.00U1 020.K0044.0012 62.10043.P21 20.K0800.004 020.K0116.0032 20.K0823.006 062.10007.0451 022.10001.00D1 75.00054.R7D 75.04223.07C 83.00016.F11 83.00040.E81 83.00099.U11 83.0024V.0A1 83.00355.F1F 83.00751.08F 83.R2003				

Intel-Power Up Sequence

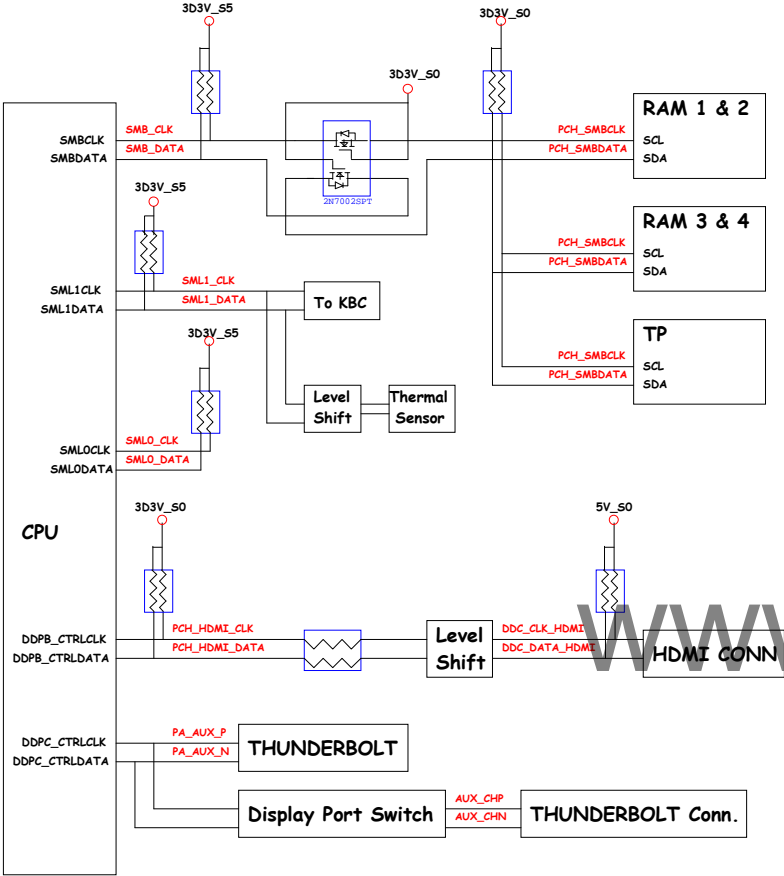


SHARK BAY POWER UP SEQUENCE DIAGRAM

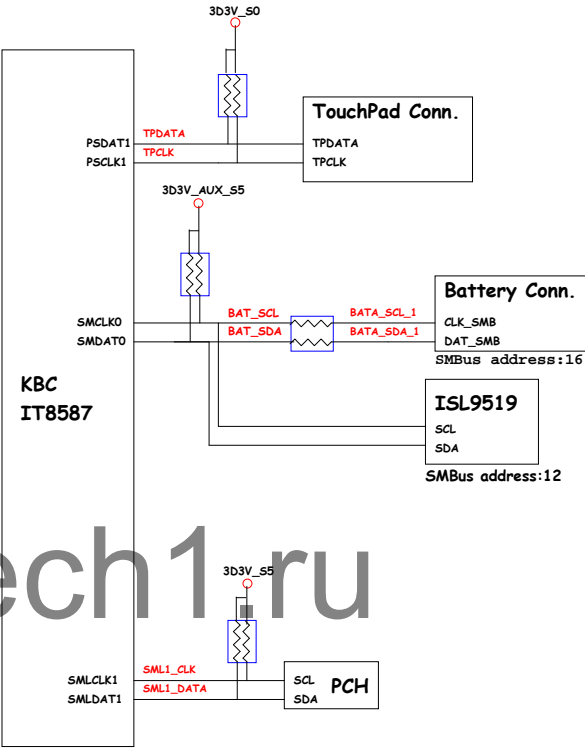




PCH SMBus Block Diagram

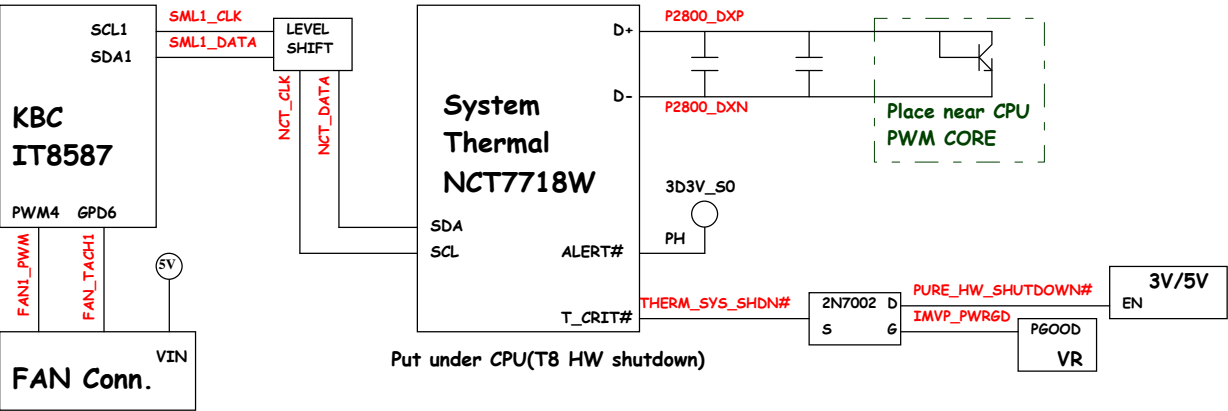


KBC SMBus Block Diagram

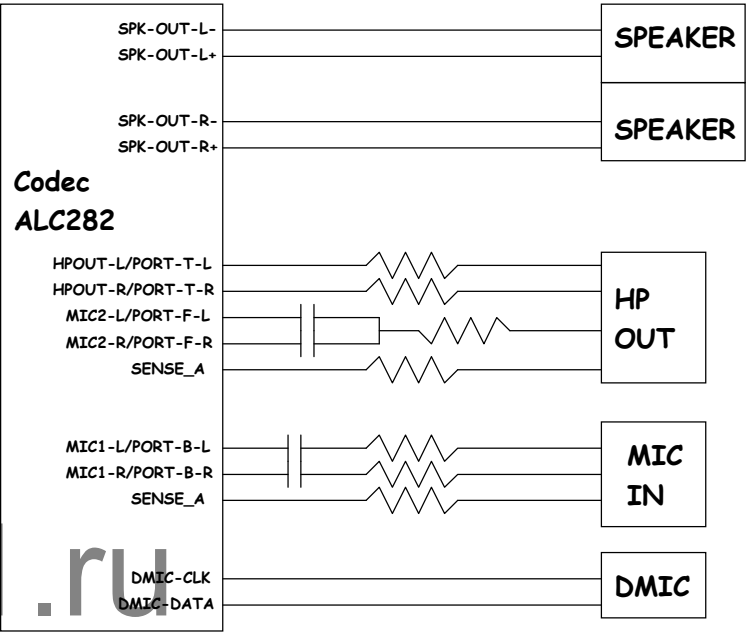


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Thermal Block Diagram



Audio Block Diagram



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