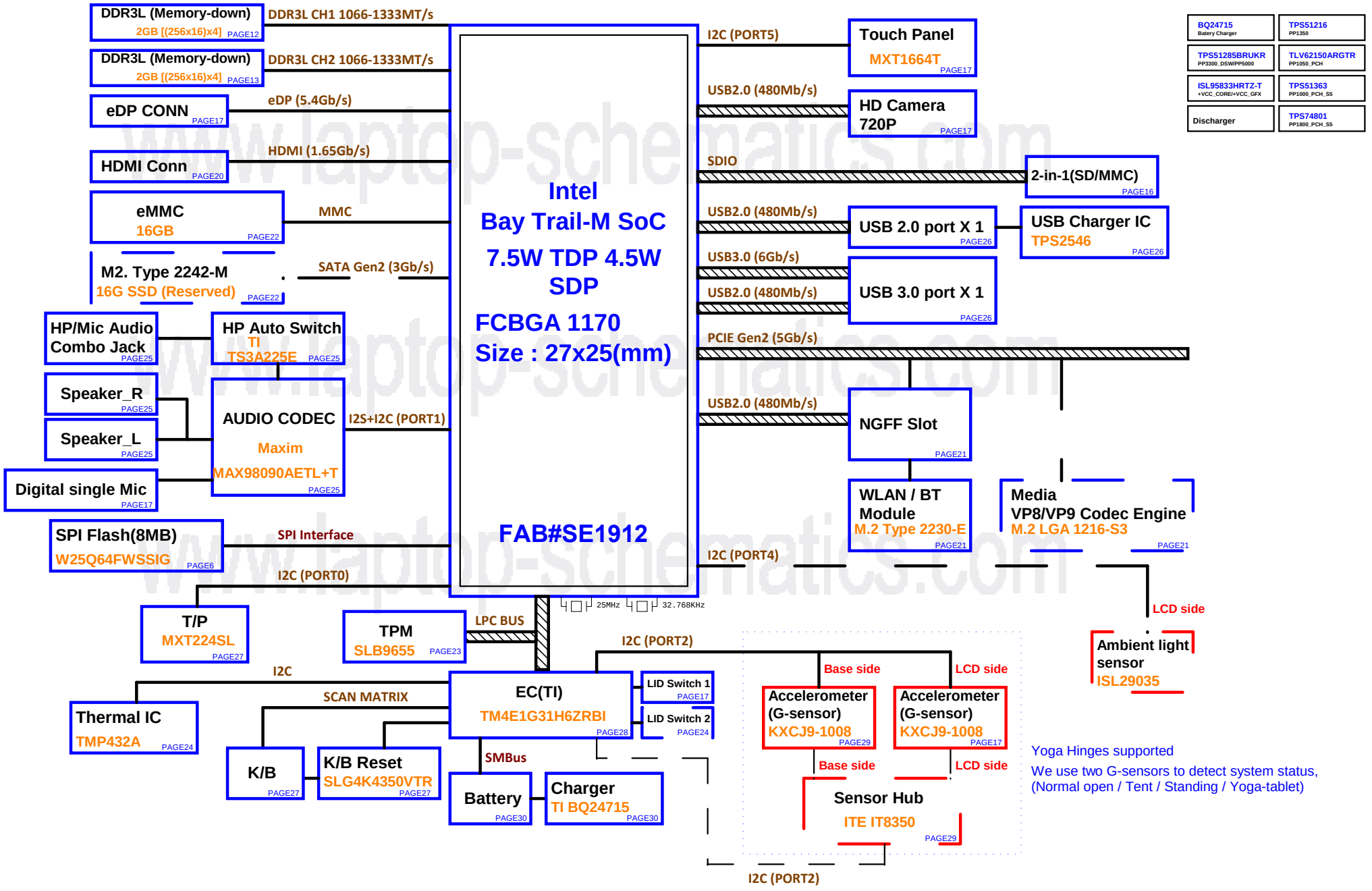
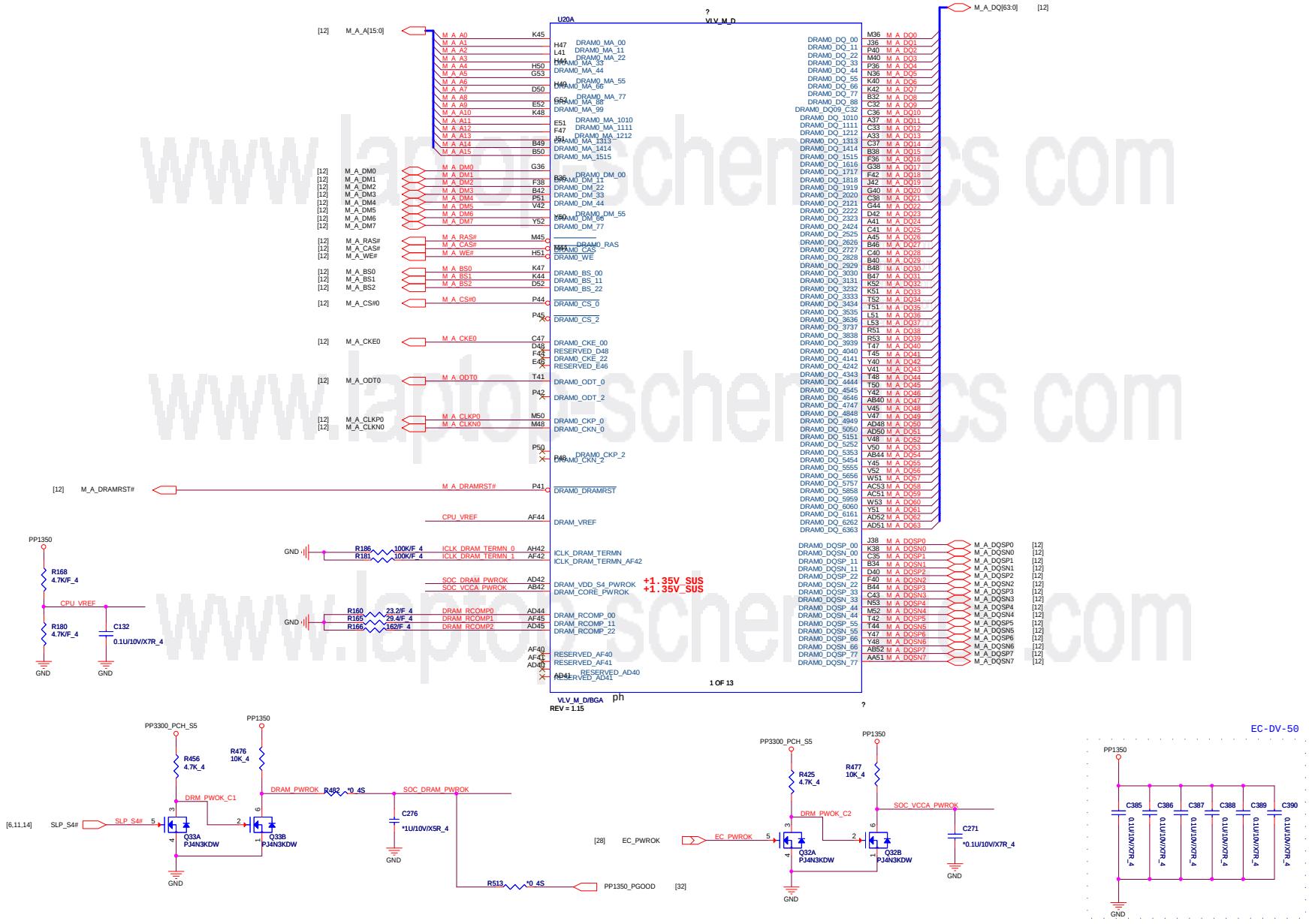
Lima5B UMA Block Diagram (Chrome)



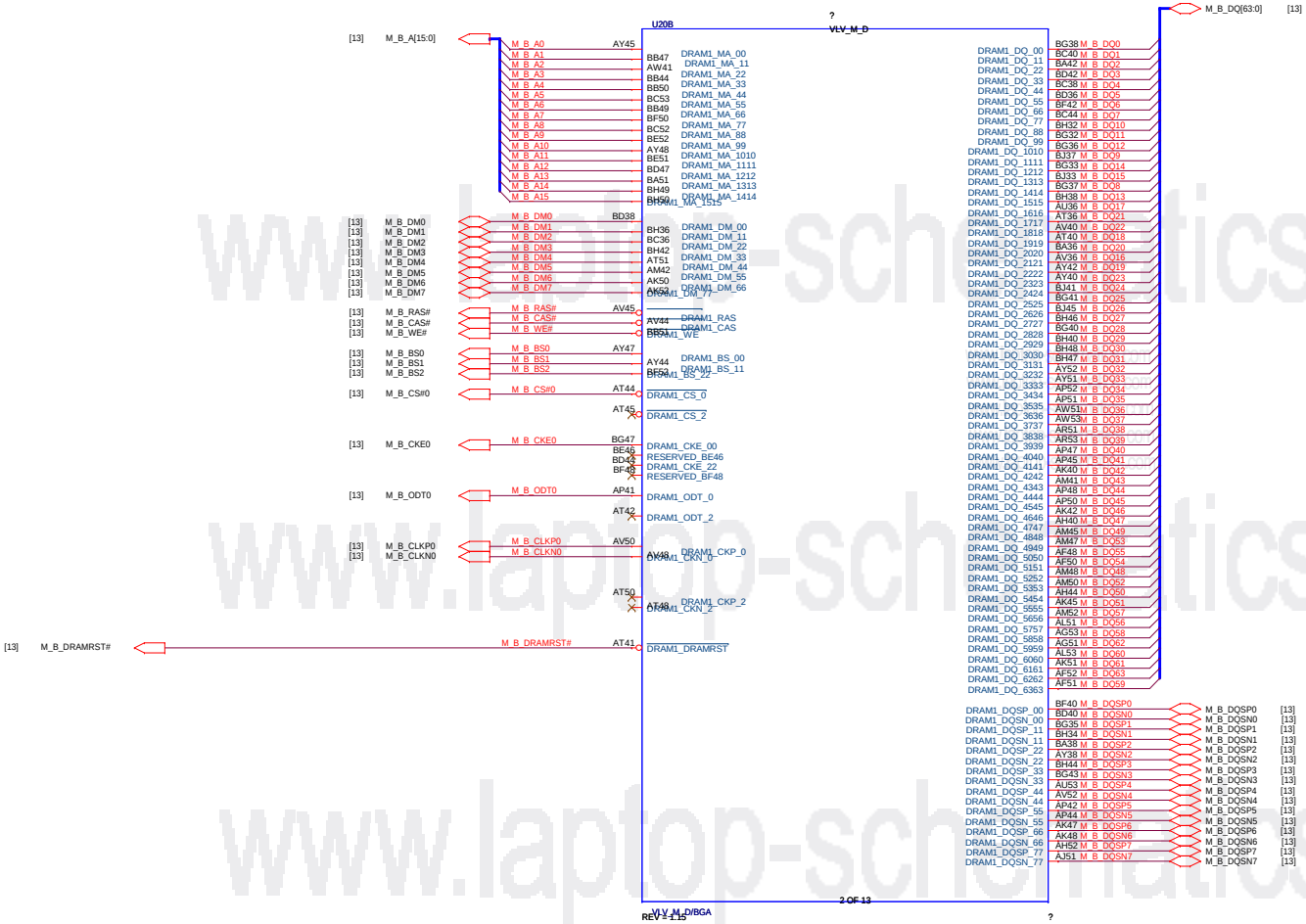
Yoga Hinges supported

We use two G-sensors to detect system status,
(Normal open / Tent / Standing / Yoga-tablet)

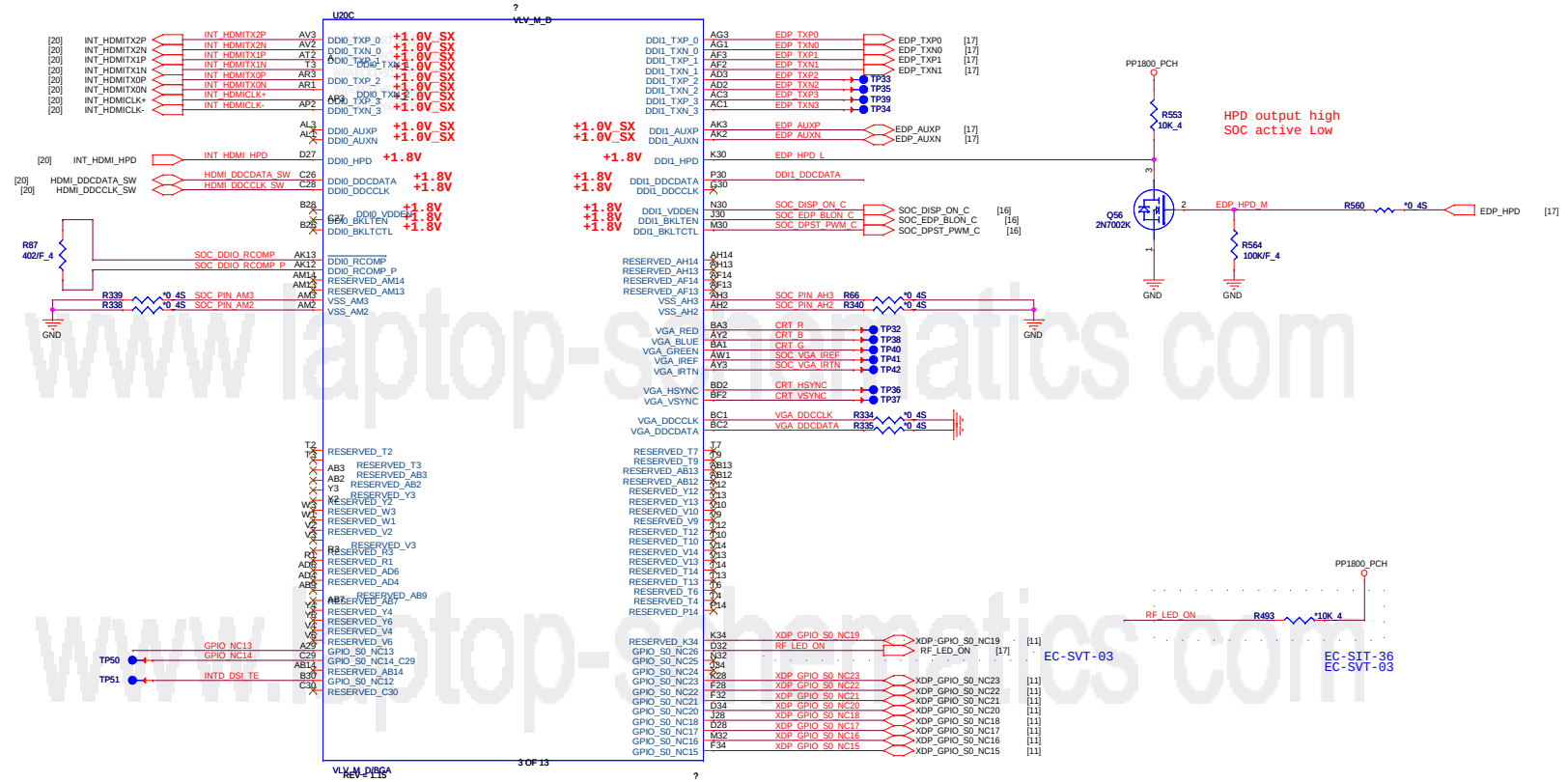
Quanta Computer Inc.
PROJECT : LIMA5B
Size | Document Number | Rev 1A
MR-1 Block Diagram
Date: Wednesday, April 16, 2014 | Sheet 1 of 50



Quanta Computer Inc.			
PROJECT : LIMA5B			
Size	Document Number		Rev
	Valley 1/9 (DDRA)		1A
Date:	Wednesday, April 16, 2014	Sheet 2 of 50	



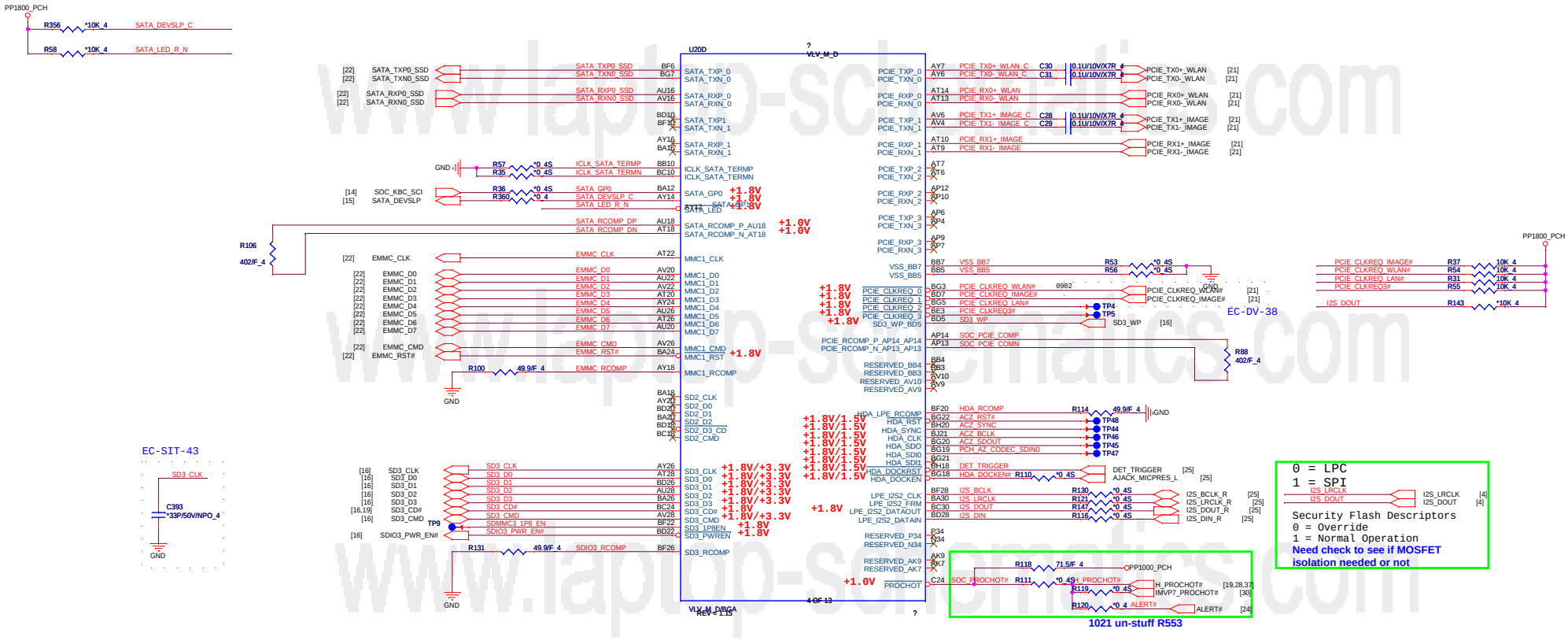
Quanta Computer Inc.			
PROJECT : LIMA5B			
Size	Document Number: Valley 2/9 (DDRB)		Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 3 of 50		



BTM Strapping Table

Pin Name	Strap description	Sampled	Configuration	Note
GPIO_SO_SC_56	Top Swap (A16 Override)	PWROK	0 = Top address bit is unchanged **1 = Top address bit is inverted**	1029 unstuff R128, using SoC internal PU
LPE_I2S2_FRM	BIOS Boot Selection	PWROK	0 = LPC **1 = SPI**	1029 unstuff R372, using SoC internal PU
GPIO_SO_SC_65	Security Flash Descriptors	PWROK	0 = Override **1 = Normal operation**	
DDI0_DDCDATA	DDI0 Detect	PWROK	0 = DDI0 not detected **1 = DDI0 detected**	Pull up +1.8V at HDMI side
DDI1_DDCDATA	DDI1 Detect	PWROK	0 = DDI0 not detected **1 = DDI0 detected**	1029 unstuff R386, using SoC internal PU
GPIO_SO_NC_13				

Quanta Computer Inc.	PROJECT : LIMA5B		
Size	Document Number: Valley 3/9 (Display)		Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 4 of 50		



Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Valley 4/9 (SD/PCIE/SATA)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 5 of 50	

1031 remove R417, PRDY should be direct connection between SoC and XDP by intel request

EC-DV-02

EC-DV-01

EC-SIT-54

EC-SIT-50

EC-DV-16

9/6 Add EC_RCIN_L for warm boot, EC side is OD type

LAYOUT CLOSE TO SPI ROM

SPI NOR FLASH

SPI ROM needs power in S3/S5 for the TXE (Trusted execution engine).

near SPI ROM as possible

To debug header

To PCH

PCH_SPI_WP_D connect to GPIO58 at GRB

From Screw/EC

RTC Clock 32.768KHz

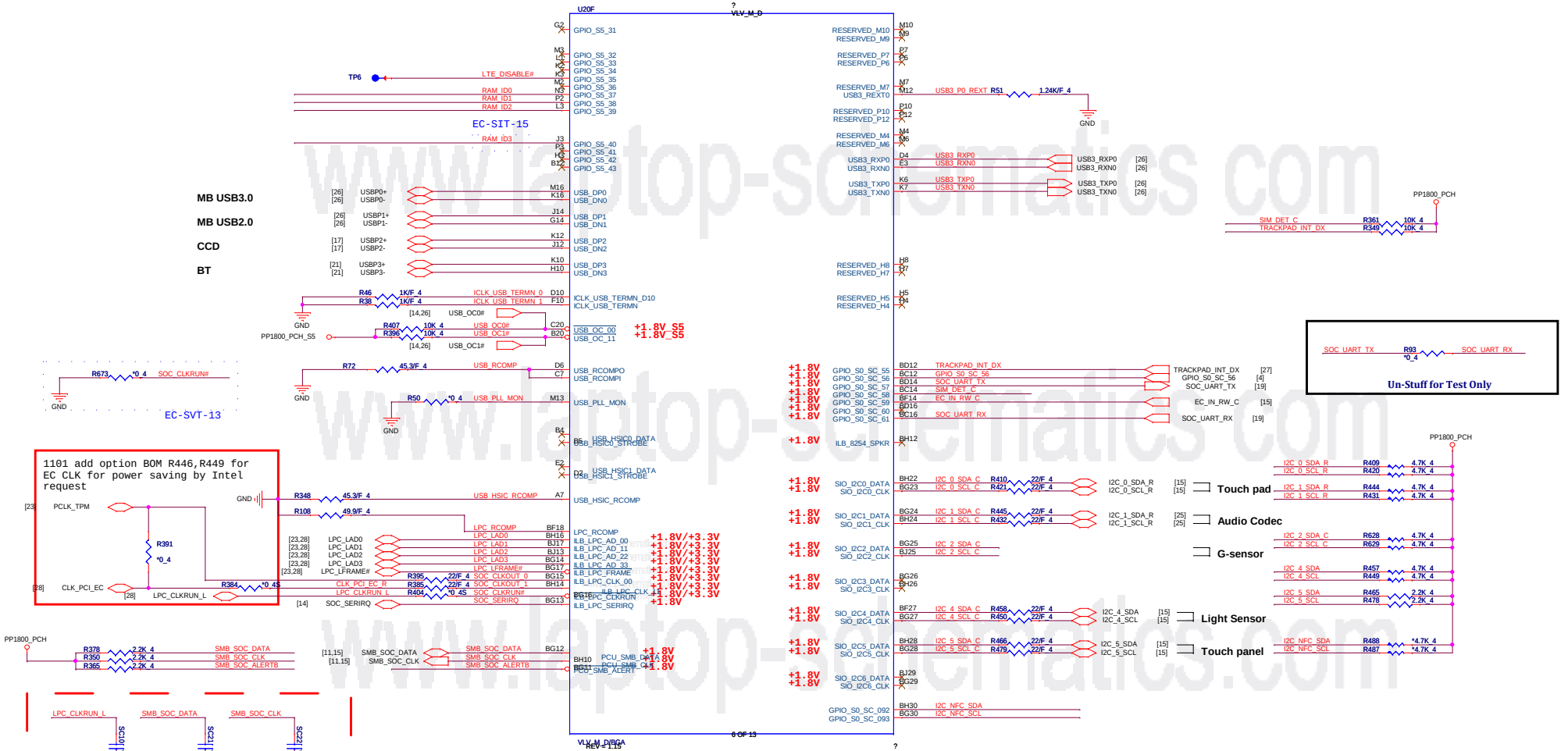
RTC Circuitry(RTC)

30mils

Quanta Computer Inc.

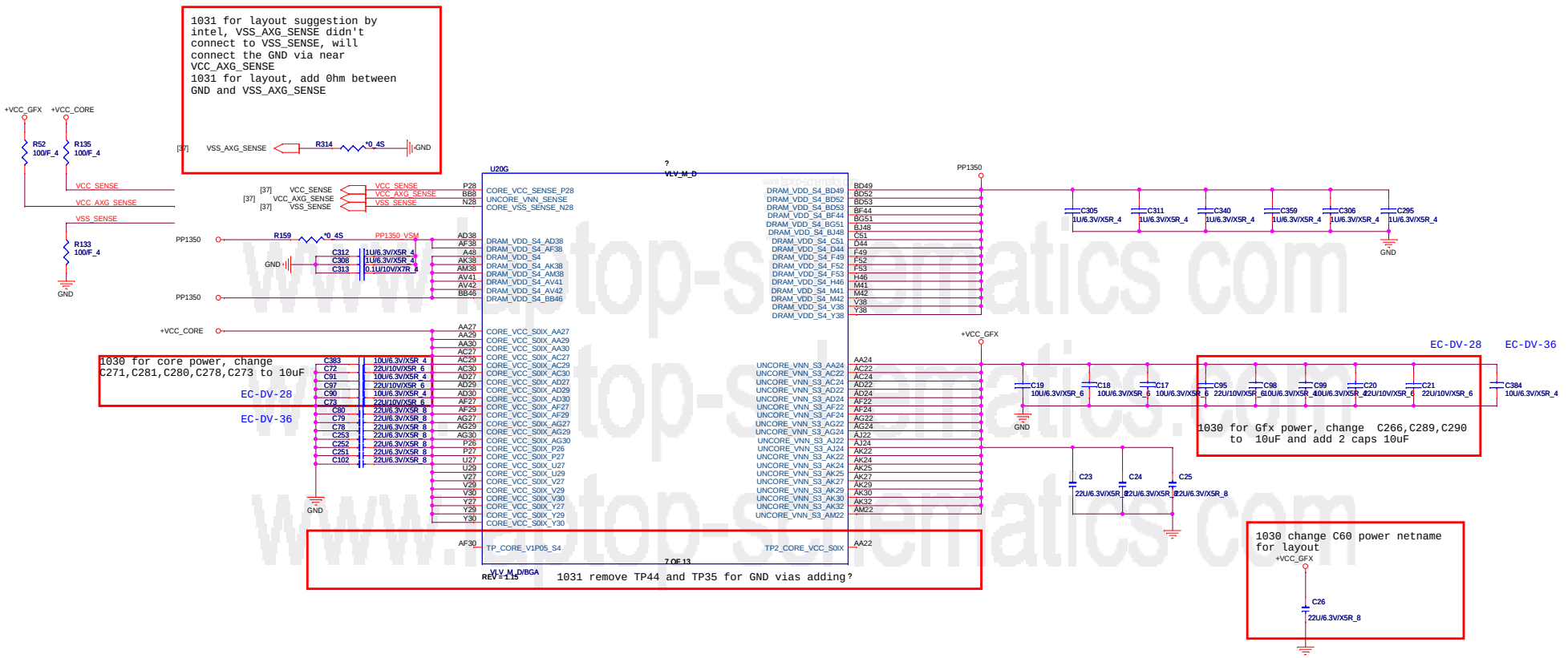
PROJECT : LIMA5B

Size	Document Number	Rev
	Valley 5/9 (SPI/GPIO/CLK)	1A
Date: Wednesday, April 16, 2014	Sheet 6 of 50	

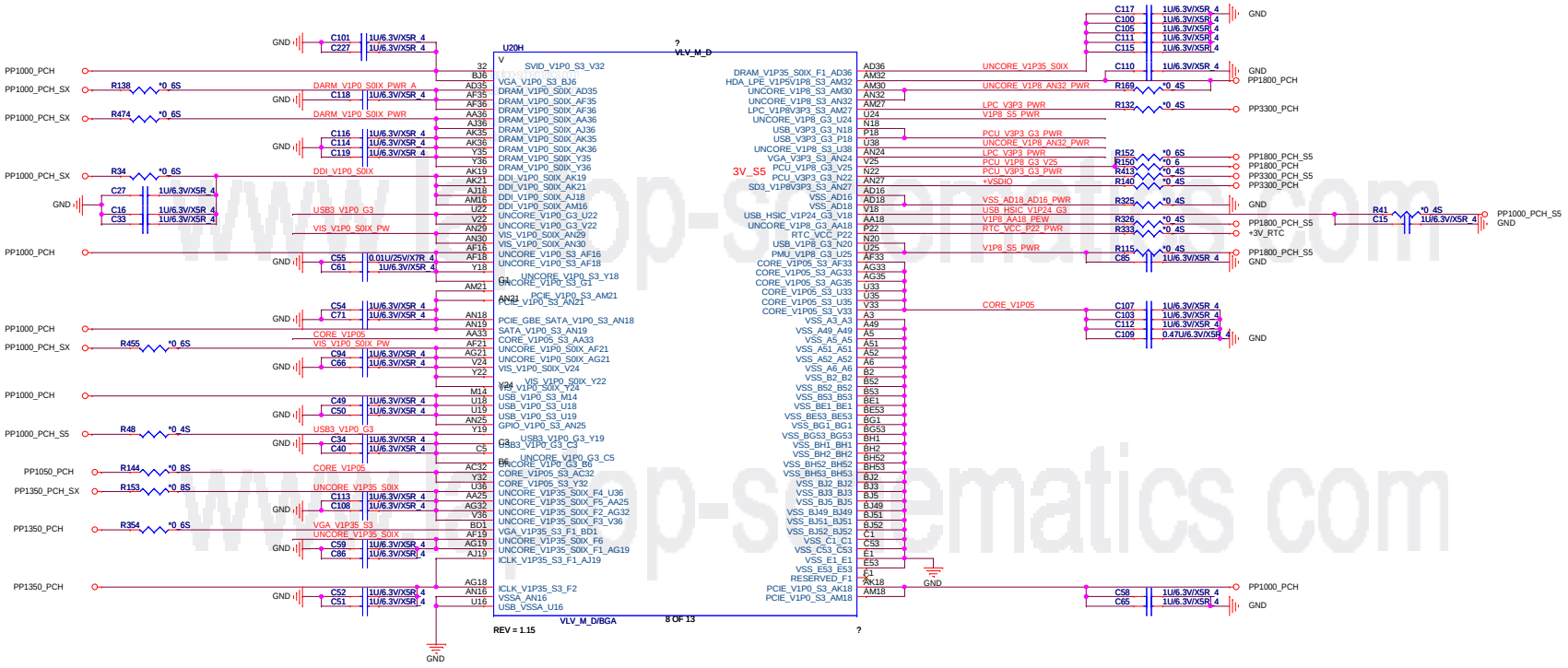


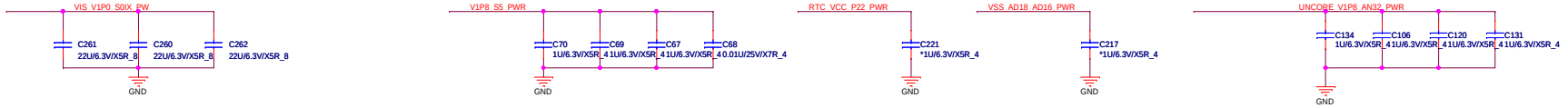
Vender	RAM_ID	Q_PN	Mfr. PN	Freq.	Size	# ch	Total size
Micron	0000	AKD5JGSTL02	MT41K256M16HA-125:E (V80A/4Gb/30nm)	1600MHz	4Gb	2 ch	4GB
Hynix	0001	AKD5JGETW00	H5TC4G63AFR-PBA (A/4Gb/29nm)	1600MHz	4Gb	2 ch	4GB
Micron	0010	AKD5DGSTL02	MT41K128M16JT-125:K (V89C/2Gb/30nm)	1600MHz	2Gb	2 ch	2GB
Hynix	0011	AKD5MG0TW02	H5TC2G63FFR-PBA (F/2Gb /29nm)	1600MHz	2Gb	2 ch	2GB
Samsung	0100	AKD5MG4T510	K4B2G1646Q-BYK0 (Q/2Gb/35nm)	1600MHz	2Gb	2 ch	2GB
Hynix	0101	AKD5JGETW00	H5TC4G63AFR-PBA (A/4Gb/29nm)	1600MHz	4Gb	1 ch	2GB
Samsung	0110	AKD5PGST500	K4B4G1646Q-HYK0 (D35Q/4Gb/35nm)	1600MHz	4Gb	2 ch	4GB
Elpida	0111	AKD5JGST403	EDJ4216EFBG-GN-F (F/4Gb/30nm)	1600MHz	4Gb	2 ch	4GB
Micron	1000	AKD5JGSTL02	MT41K256M16HA-125:E (V80A/4Gb/30nm)	1600MHz	4Gb	1 ch	2GB
Elpida	1001	AKD5JGST403	EDJ4216EFBG-GN-F (F/4Gb/30nm)	1600MHz	4Gb	1 ch	2GB
Samsung	1010	AKD5PGST500	K4B4G1646Q-HYK0 (D35Q/4Gb/35nm)	1600MHz	4Gb	1 ch	2GB

Quanta Computer Inc.
PROJECT : LIMA5B
Size | Document Number: Valley 6/9 (USB/LPC/I2C) | Rev: 1A
Date: Wednesday, April 16, 2014 | Sheet 7 of 50

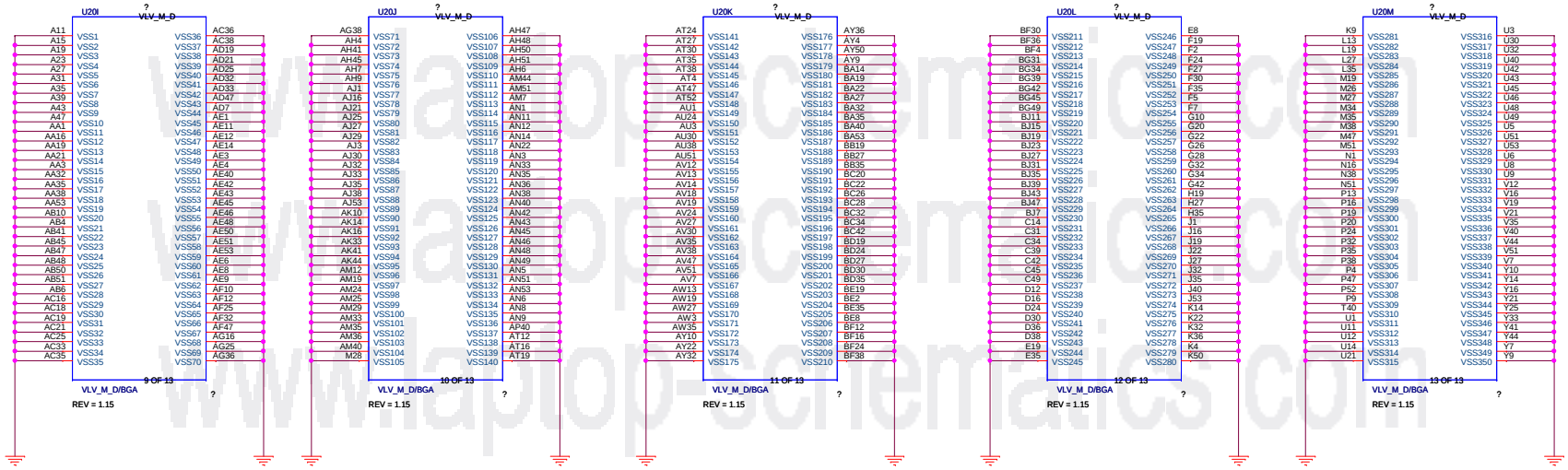


Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Valley 7/9 (Power 1)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 8 of 50	



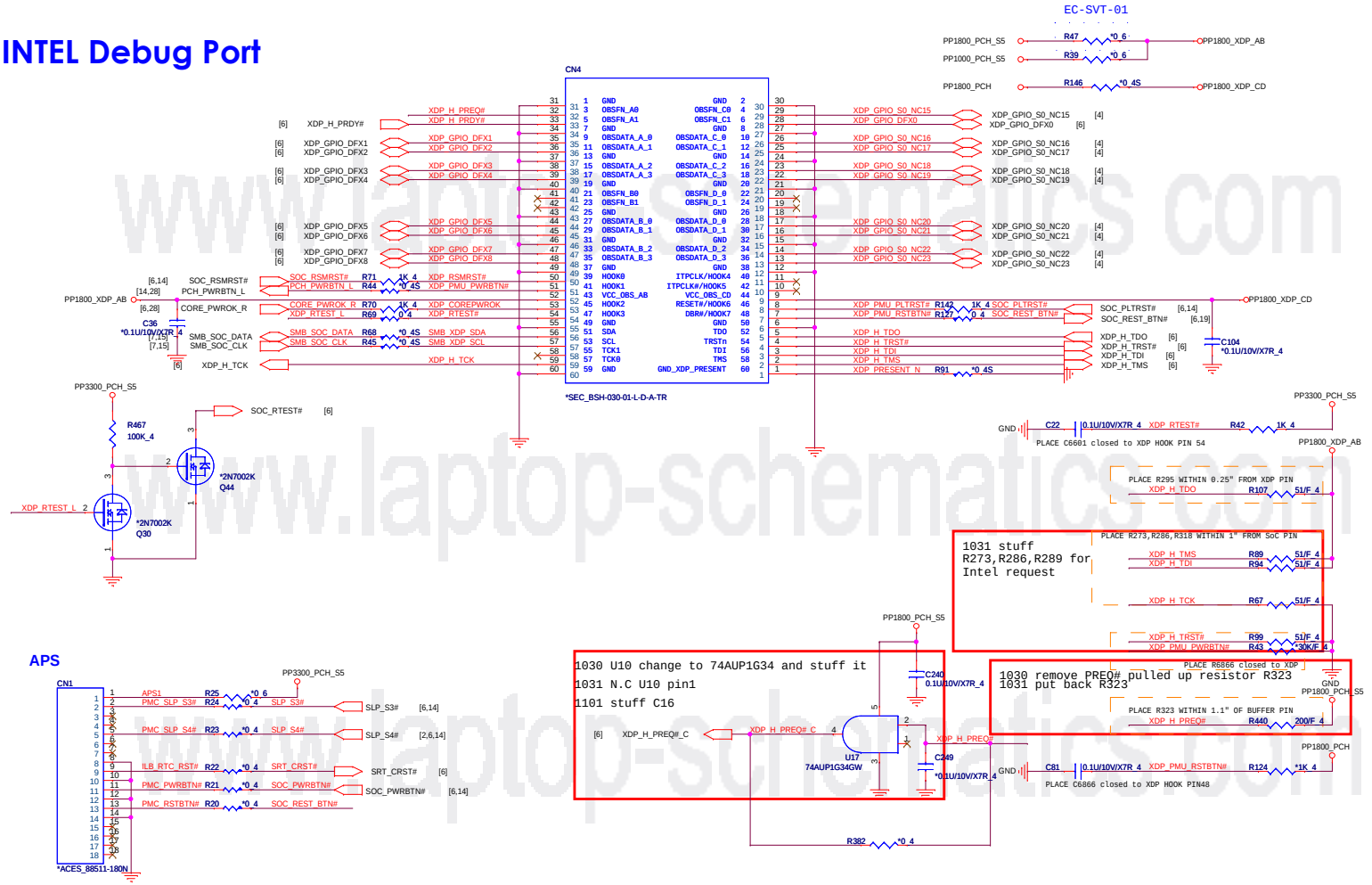


Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Valley 8/9 (Power 2)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 9 of 50	



Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Valley 9/9 (GND)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 10 of 50	

INTEL Debug Port



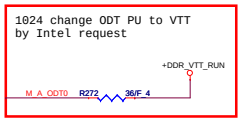
Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: CPU/PCH XDP	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 11 of 50	

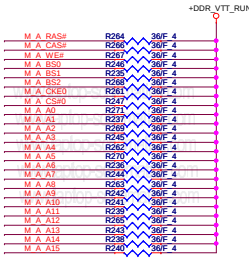
BYTE0_0-7
BYTE1_8-15
BYTE2_16-23
BYTE3_24-31
BYTE4_32-39
BYTE6_48-55
BYTE5_40-47
BYTE7_56-63

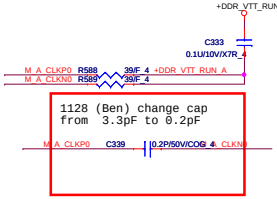
Hynix AKD5JGETW00--H5TC4G63AFR-PBA

Vendor	P/N	
Hynix		
Elpida	AKD5JGST400	DDR3L 1333Mhz 4Gb
	AKD5JGST404	DDR3L 1600Mhz 4Gb

1024 change ODT PU to VTT by Intel request

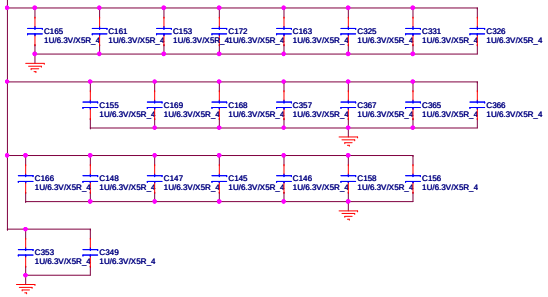


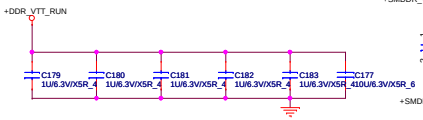


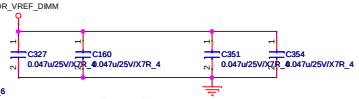


Distributed around all DRAM devices (CHA and CHB)

Place these Caps near each X16 Memory Down

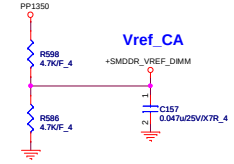




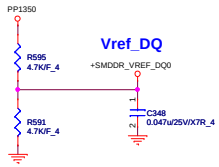


Place these Caps near Memory Down CA & DQ pin

M1 solution



M1 solution



Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	DDR3L MEMORY DOWNx16 A	1A

Date: Wednesday, April 16, 2014 Sheet 12 of 50

BYTE2_16-23
BYTE3_24-31
BYTE0_0-7
BYTE1_8-15
BYTE5_40-47
BYTE6_48-55
BYTE4_32-39
BYTE7_56-63

Hynix AKD5JGETW00--H5TC4G63AFR-PBA

Vendor	P/N	
Micron	AKD5JGSTL02	MT41K256M16HA-125:E
Elpida	AKD5JGST400	
	AKD5JGST404	

1024 change ODT PU to VTT by Intel request

1128 (Ben) change cap from 3.3pF to 0.2pF

Place these Caps near each X16 Memory Down

Place these Caps near Memory Down CA & DQ pin

M1 solution

Vref_DQ

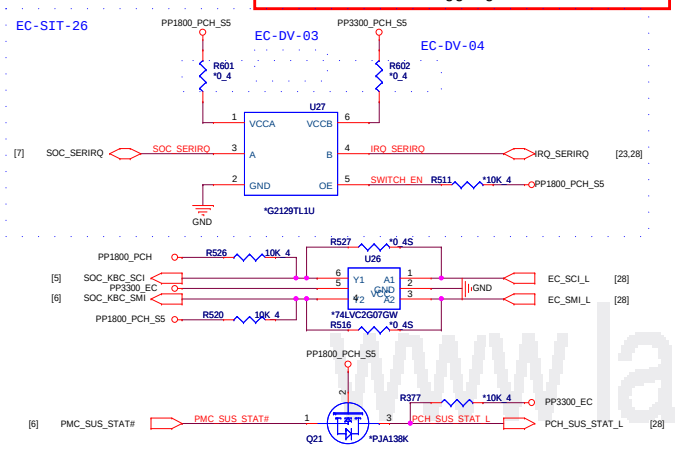
Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	DDR3L MEMORY DOWNx16 B	1A

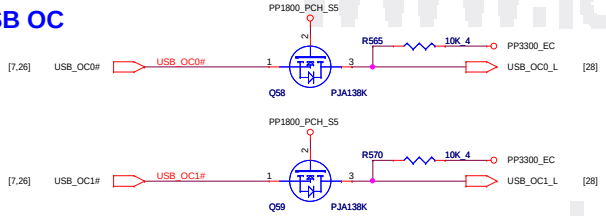
Date: Wednesday, April 16, 2014 Sheet 13 of 50

PWRON SEQUENCE

9/6 EC table says SERIRQ is OD pin, reserve for debugging



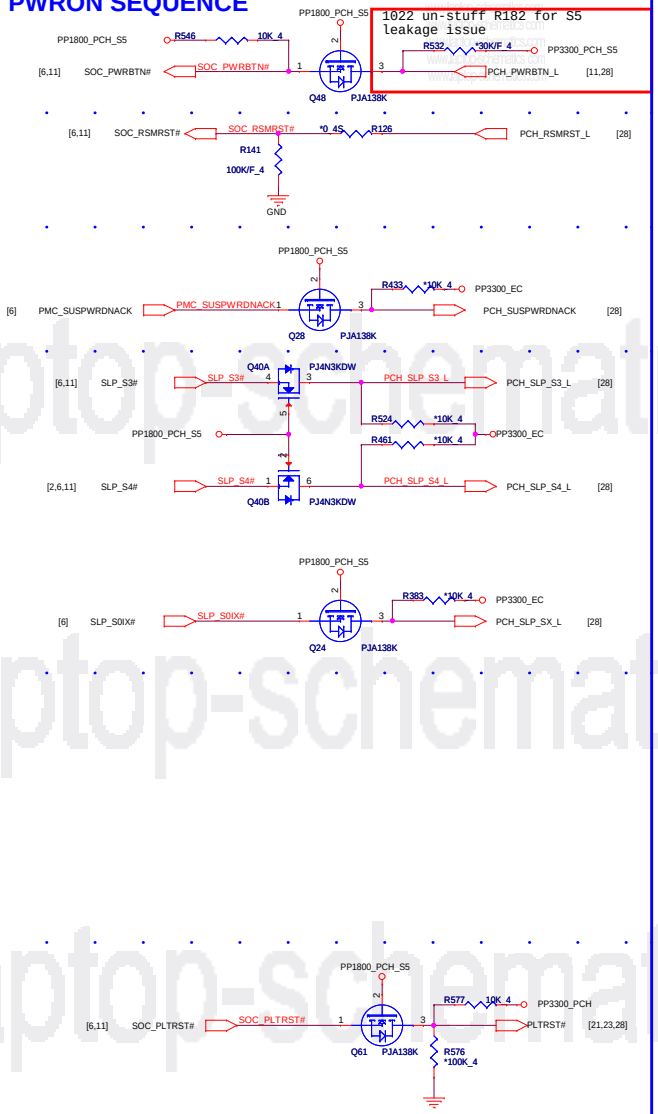
USB OC



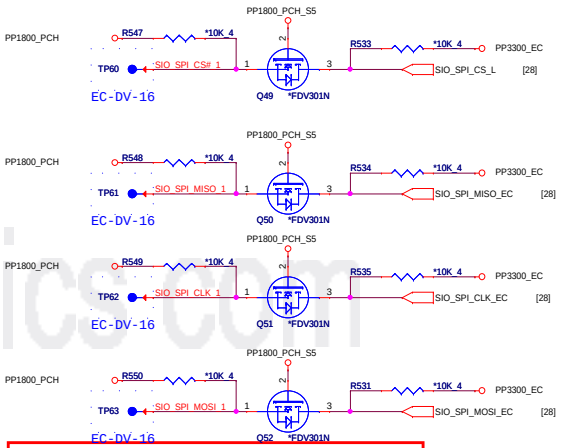
Stuffing for notifying EC

PWRON SEQUENCE

1022 un-stuff R182 for S5 leakage issue



EC-DV-03

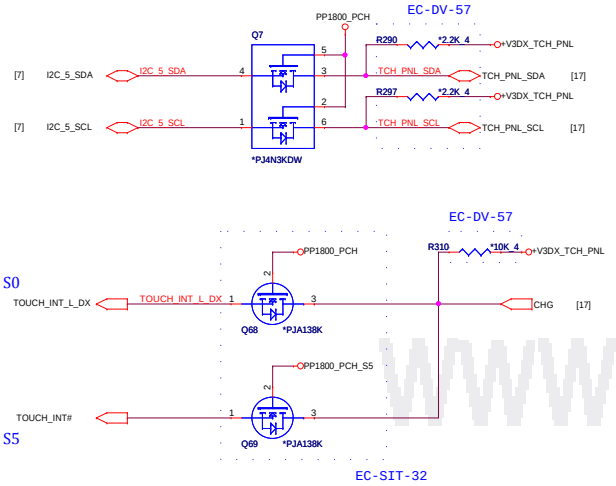


9/6 Need check MOSFET switching speed>15MHz

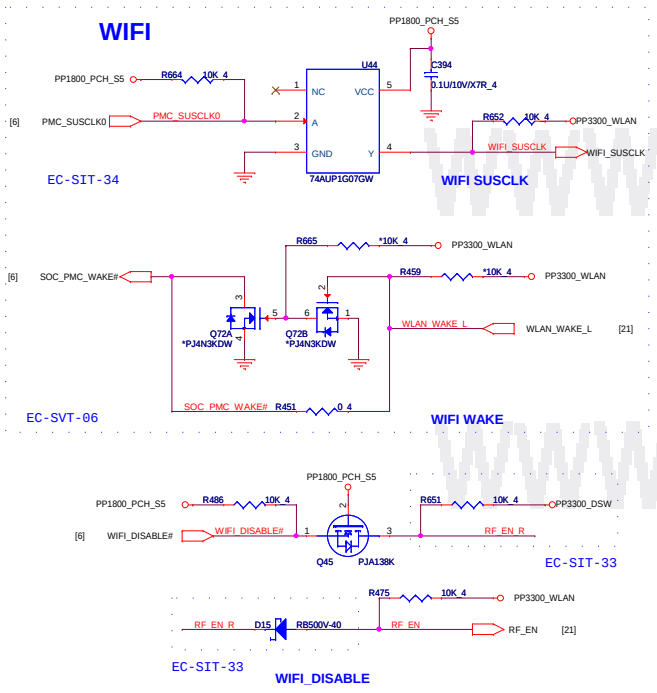
EC-SIT-25

Quanta Computer Inc.	PROJECT : LIMA5B	
Size	Document Number: Level Shfiter (SOC_EC)	Rev 1A
Date: Wednesday, April 16, 2014	Sheet 14 of 50	

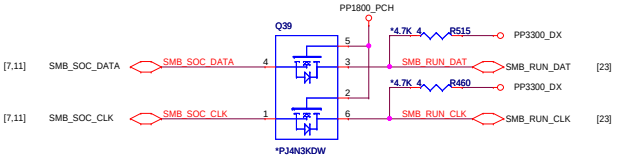
Touch Panel



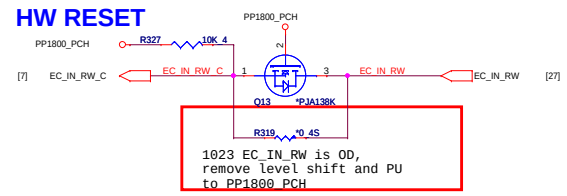
WIFI



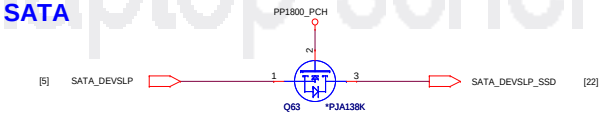
RFID



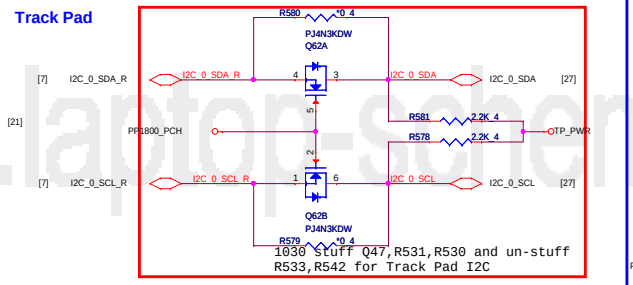
HW RESET



SATA



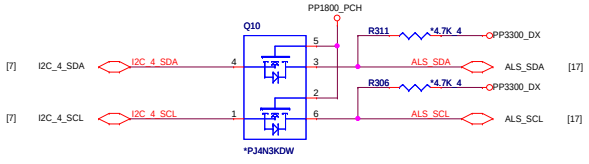
Track Pad



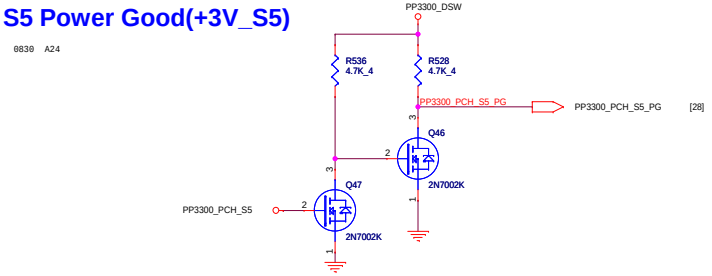
eDP control pin

1107 delete and add in page16

ALS

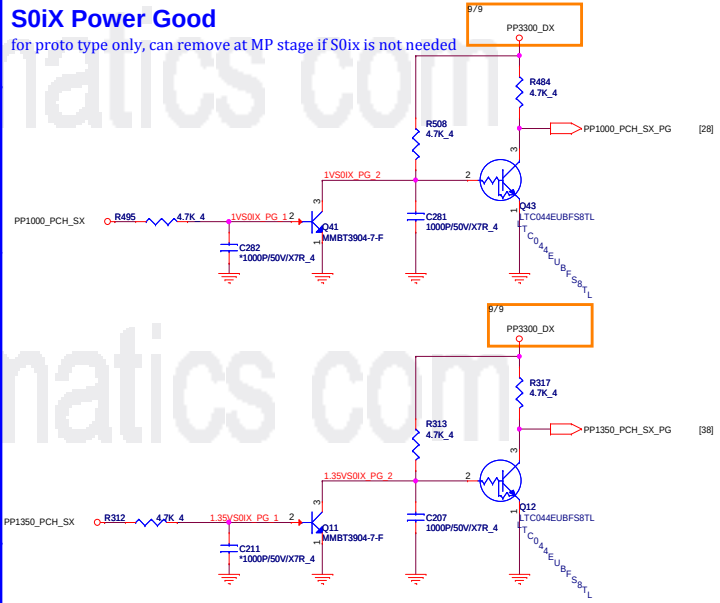


S5 Power Good(+3V_S5)

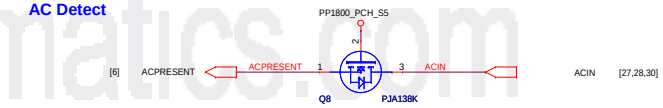


S0iX Power Good

for proto type only, can remove at MP stage if S0ix is not needed



AC Detect

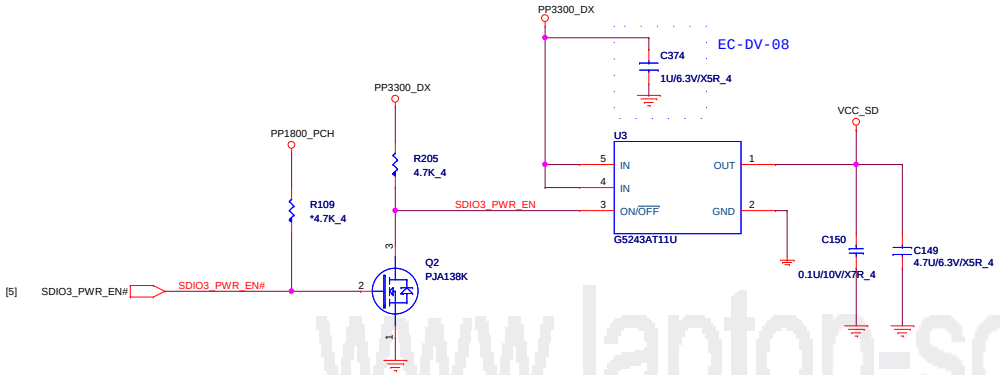


Quanta Computer Inc.
PROJECT : LIMA5B

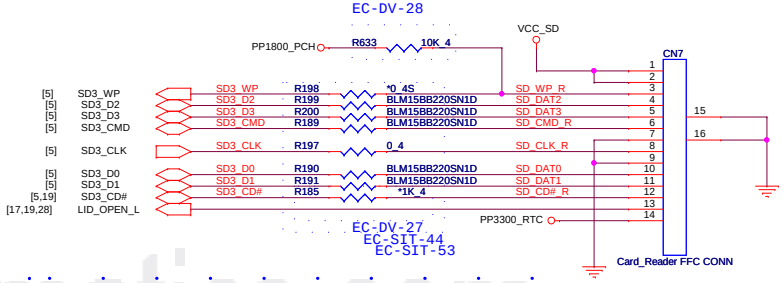
Size	Document Number	Rev
	Level Shfiter (SOC_DEV)	1A
Date: Wednesday, April 16, 2014	Sheet 15 of 50	

[4,5,6,7,9,11,14,15,17,19,20,21,22,25,39,40]
[15,17,20,21,22,23,24,28,29,30,37,38,39,40]
[6,24,25,27,28,30,31]
PP1800_PCH
PP3300_DX
PP3300_RTC

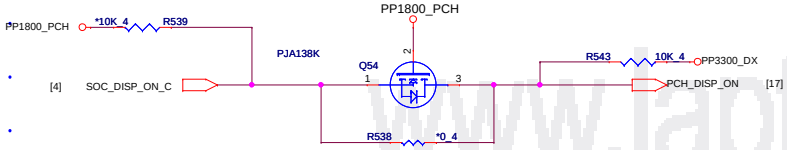
To Card Reader Board (SD/MMC CARD READER CONNECTOR (MMC))

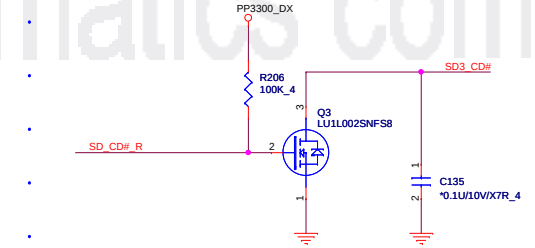


1025 the damping of SDIO change to 0 ohm by Intel request

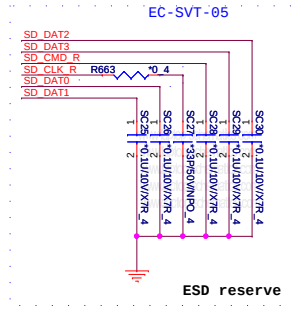


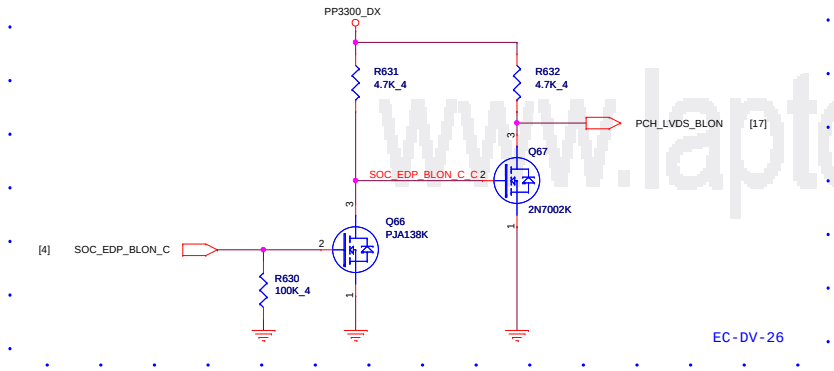
eDP level shifter

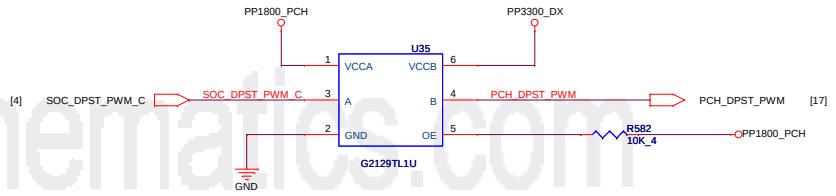




Inverse circuit for normal close SD card socket

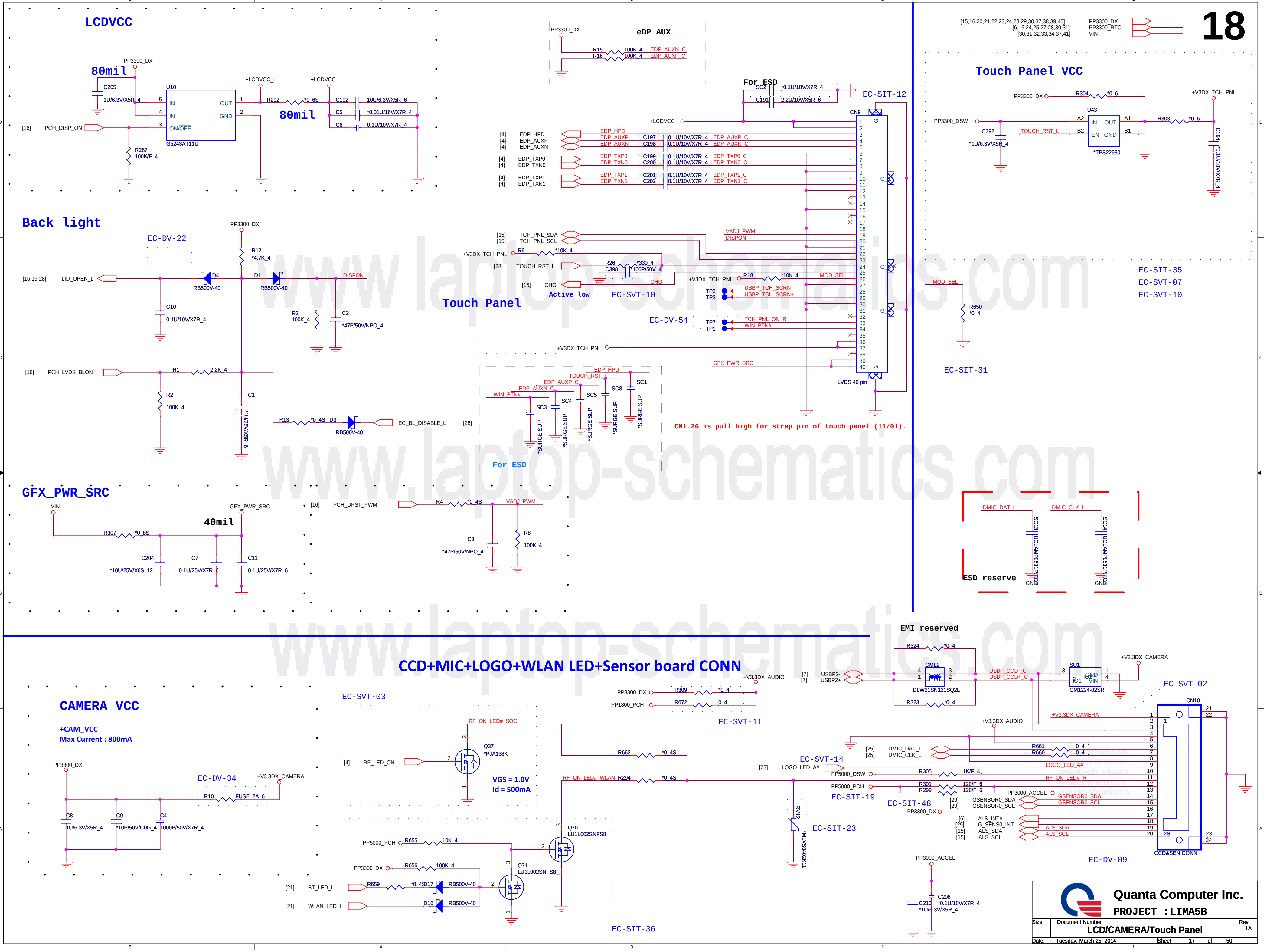


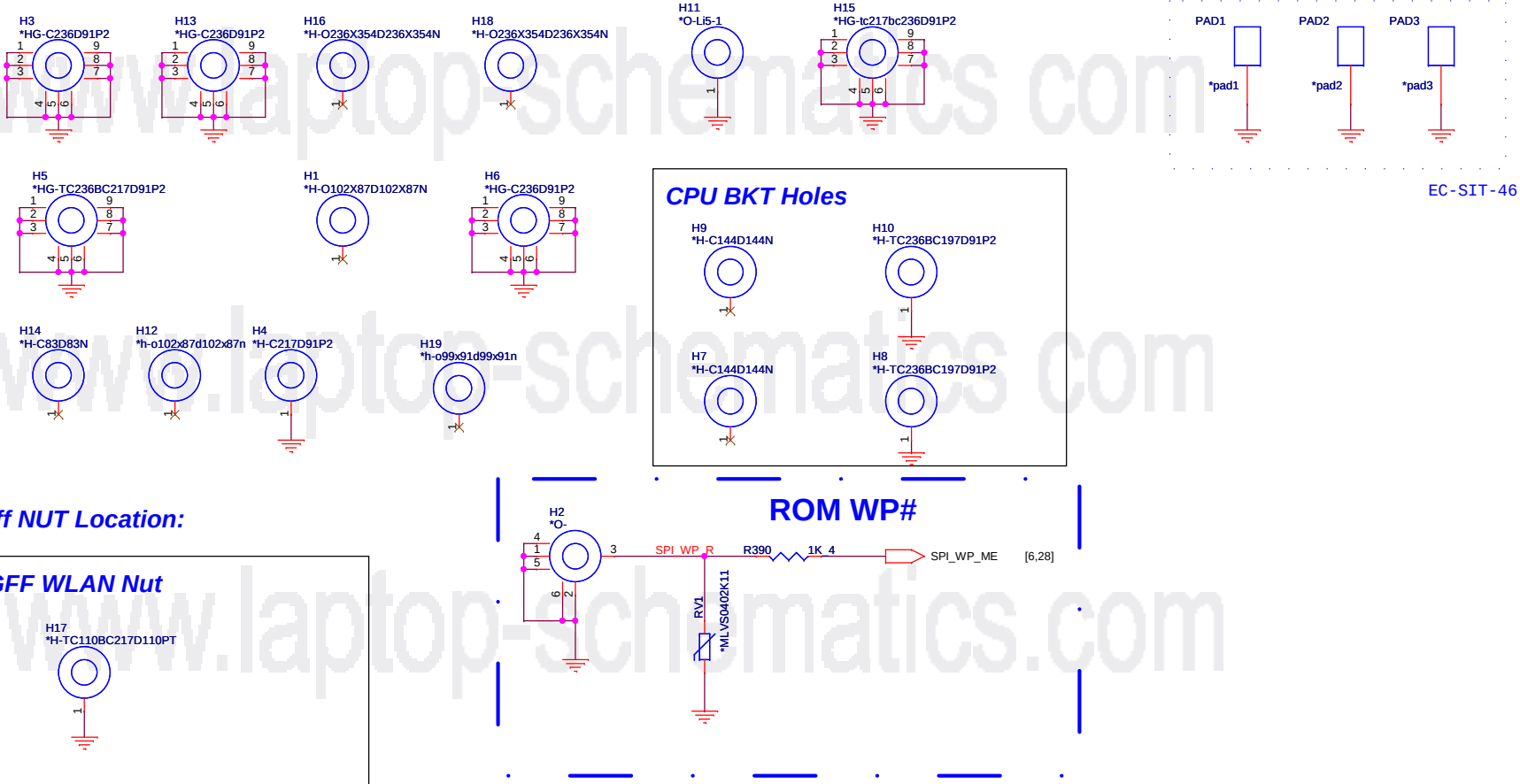




Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	SDIO CR/eDP level shifter	1A
Date: Friday, March 21, 2014	Sheet 16 of 50	


18
LCDVCC
80mil
PP3300_DX
U10
G5243AT11U
PCH_DISP_ON
+LCDVCC_L
+LCDVCC
80mil
eDP AUX
For ESD
EC-SIT-12
CN9
LVDS 40 pin
Touch Panel VCC
U43
*TPS22930
Back light
EC-DV-22
LID_OPEN_L
DISPON
PCH_LVDS_BLON
EC_BL_DISABLE_L
Touch Panel
Active low
EC-SVT-10
EC-DV-54
For ESD
CN1.26 is pull high for strap pin of touch panel (11/01).
EC-SIT-35
EC-SVT-07
EC-SVT-10
EC-SIT-31
ESD reserve
GFX_PWR_SRC
VIN
40mil
PCH_DPST_PWM
VADJ_PWM
EMI reserved
CCD+MIC+LOGO+WLAN LED+Sensor board CONN
CAMERA VCC
+CAM_VCC
Max Current : 800mA
EC-DV-34
EC-SVT-03
VGS = 1.0V
Id = 500mA
EC-SVT-11
EC-SIT-14
EC-SIT-19
EC-SIT-48
EC-SIT-23
EC-SVT-02
CN10
CCD&SEN CONN
EC-DV-09
EC-SIT-36
BT_LED_L
WLAN_LED_L
Quanta Computer Inc.
PROJECT : LIMA5B
Document Number
LCD/CAMERA/Touch Panel
Rev 1A
Date: Tuesday, March 25, 2014
Sheet 17 of 50



EC-SIT-46

PROJECT : LI5

Quanta Computer Inc.

Size	Document Number	Rev
B	Screw Hole	1A

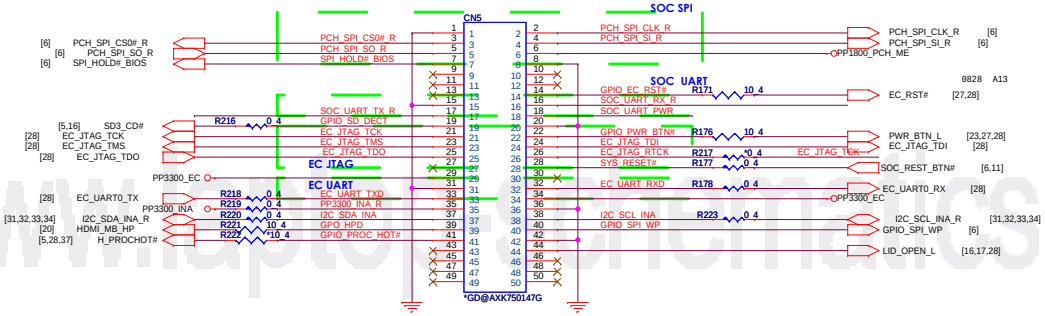
Date: Wednesday, April 16, 2014 Sheet 18 of 50

GOOGLE Debug Port(MPC)

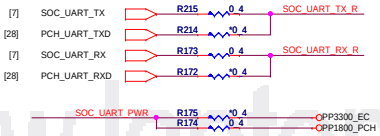
50 pin BTB is MUST, don't use 42 pin

Socket part number AXK750147G

```
PIN7 OD     PIN39 OD   PIN49 OD
PIN14 OD    PIN41 OD   PIN50 OD
PIN19 OD    PIN43 OD
PIN22 OD    PIN44 OD
PIN28 OD    PIN45 OD
PIN30 OD    PIN46 OD
PIN37 OD    PIN47 OD
PIN38 OD    PIN48 OD
```



1021 change footprint and PN



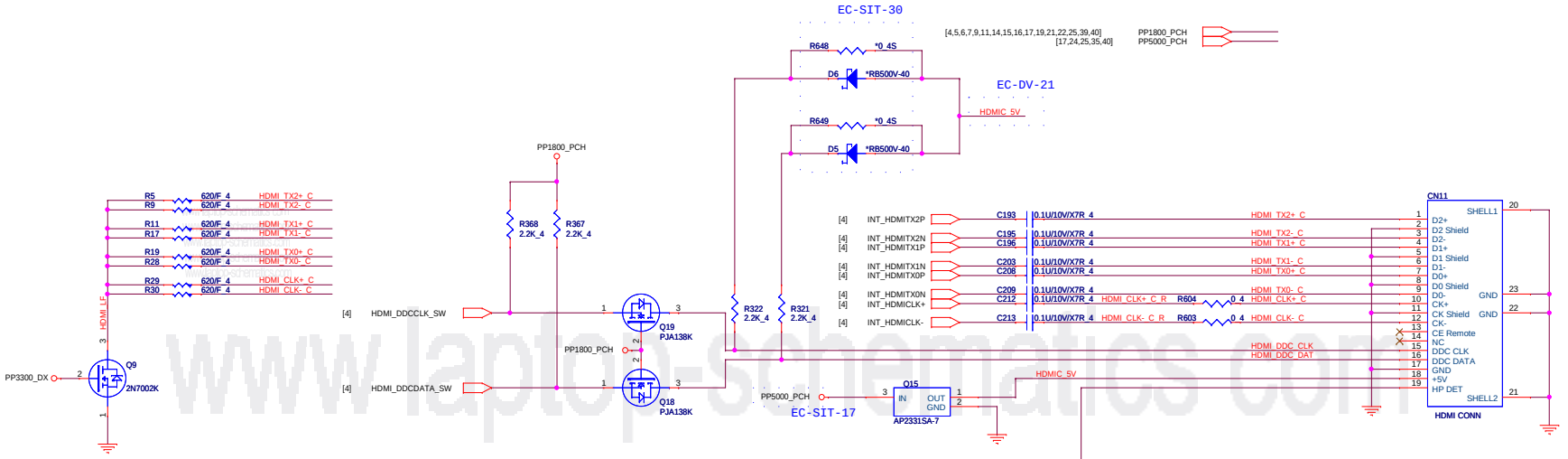
9/6 using optional instead of level shifted, defult is from SoC

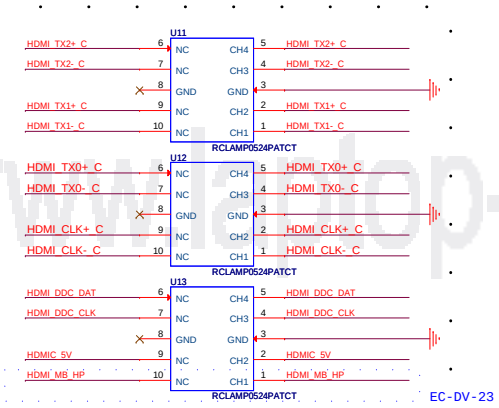
9/13 add pull up

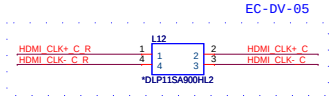
Quanta Computer Inc.

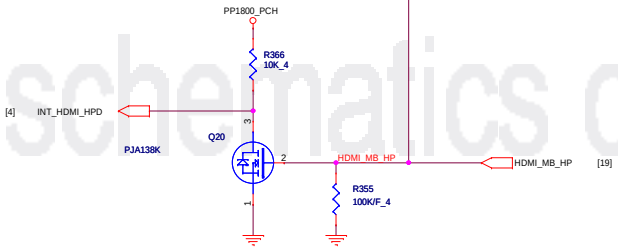
PROJECT : LIMA5B

Size	Document Number	Rev
	Google Debug	1A
Date: Friday, March 21, 2014	Sheet 19 of 50	





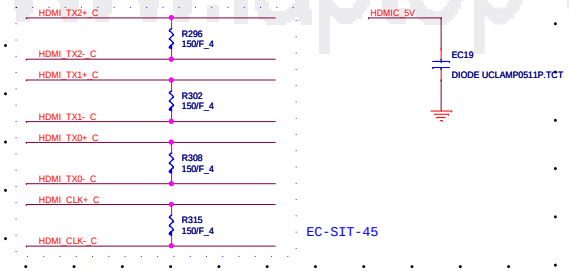




For ESD

Layout note:Place close to HDMI Conn

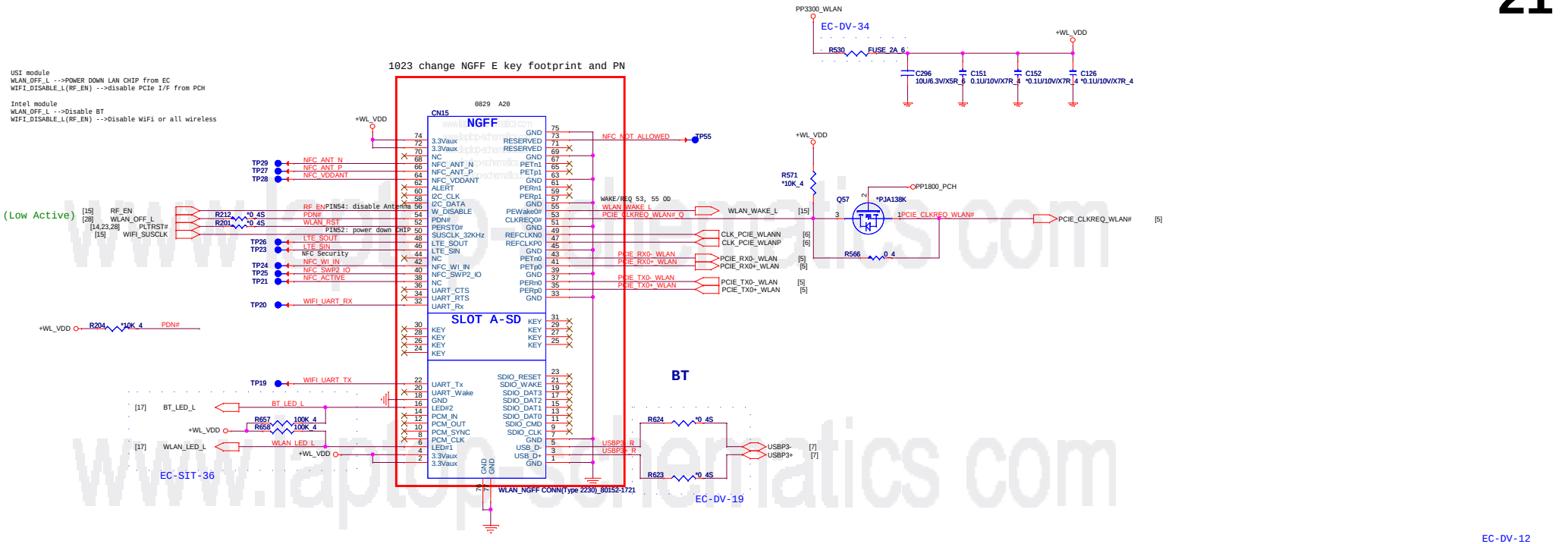
EMI reserve for HDMI



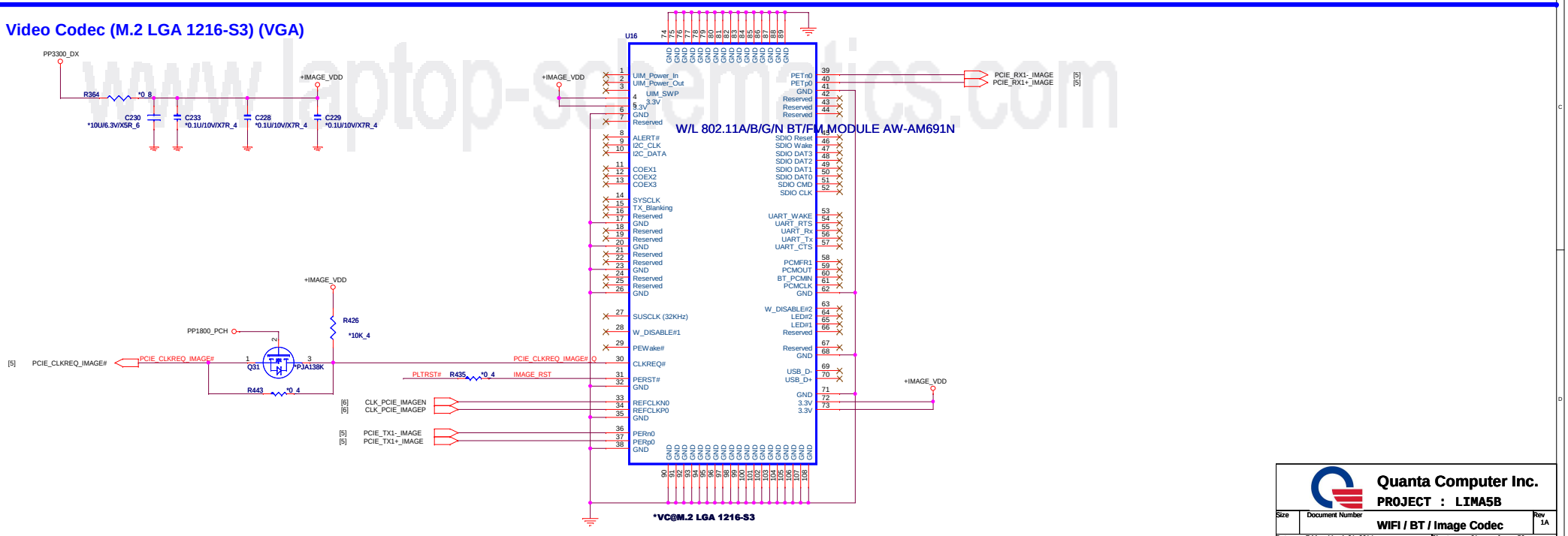
Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	HDMI CONN	1A
Date: Friday, March 21, 2014	Sheet 20 of 50	

WIFI/BT COMBO (NGFF E KEY)



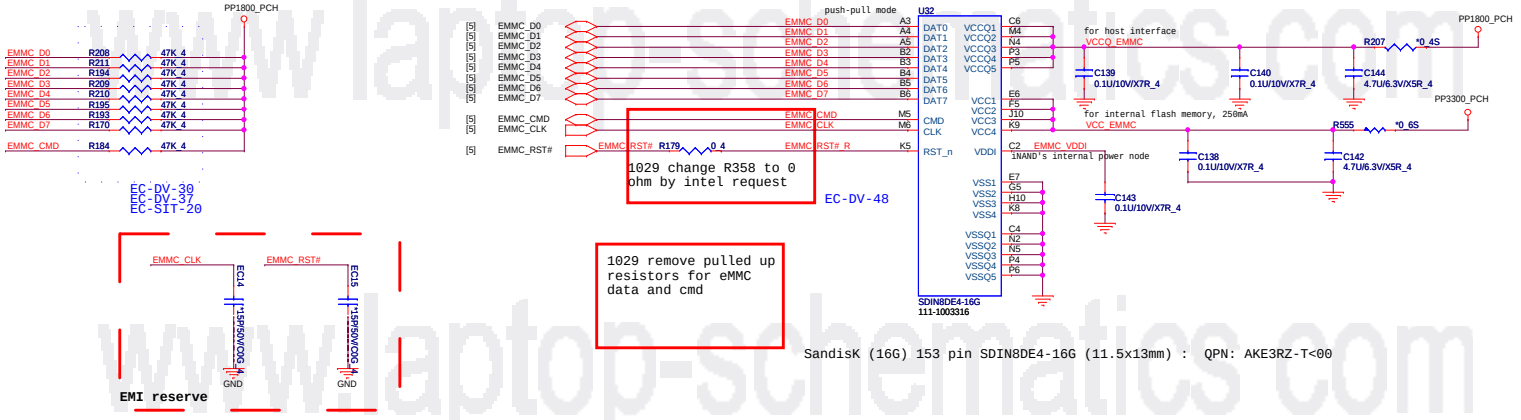
Video Codec (M.2 LGA 1216-S3) (VGA)



Quanta Computer Inc.			
PROJECT : LIMA5B			
Size	Document Number		Rev
	WIFI / BT / Image Codec		1A
Date: Friday, March 21, 2014		Sheet 21 of 50	

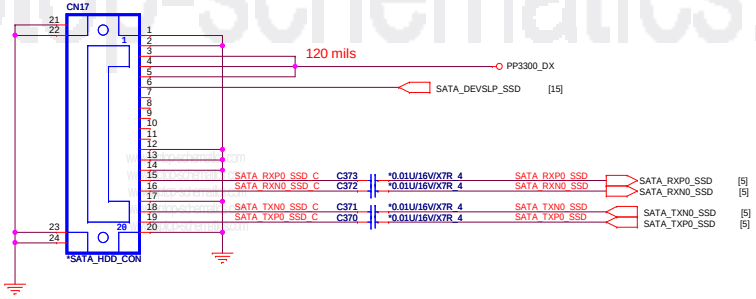
EMMC (CBS)

Add pulled up resistors for
sandisk debugging



SandisK (16G) 153 pin SDIN8DE4-16G (11.5x13mm) : QPN: AKE3RZ-T<00

To SSD board



Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	SSD NGFF/ EMMC	1A
Date: Wednesday, April 16, 2014	Sheet 22 of 50	

Stuff for touch panel SKU

EC-SIT-54

[19,27,28] PWR_BTN_L — PWR_BTN_L — SW4 — Power Switch — RV9 AVLC_5S_02_100

EC-SIT-45

Power Switch

[6] Rotate_BTN_L_SOC — R202 *0_4

[28] Rotate_BTN_L_EC — R192 *0_4

[28] Mute_BTN_L_EC — R203 *0_4

SW1 — *Mute Switch — RV3 AVLC_5S_02_100

Stuff for non touch panel SKU

EC-SIT-45

Rotation / Mute Switch

Volume up/down Switch

[28] VOL_DOWN_BTN_L — SW2 — Volume Up switch — RV7 AVLC_5S_02_100

[28] VOL_UP_BTN_L — SW3 — Volume Down switch — RV8 AVLC_5S_02_100

EC-SIT-22

EC-SIT-45

LED Driver

EC-SVT-14

PP5000_DSW — R232 *0_4S — R234 10K_4 — Q4 LU1L002SNFS8 — Q6 LU1L002SNFS8 — Q5 LU1L002SNFS8

[28] LOGO_LED_L — R233 100K_4

LOGO_LED_A# [17] — RV11 *MLVS0402X11

EC-SIT-23

LOGO_LED_C# — R260 *0_4S — SC16 UCLAMP0511P.TCT

R259 1.5K/F_4 — PP5000_DSW

EC-SVT-04
EC-SIT-48

EC-SVT-14

EC-SIT-10

CN8 LED_CON

to C cover logo LED

EMI Cap.

PP3300_DX — EC28 EC29 EC30 EC31 EC32 EC33 — *1000P/50V/X7R_4 / *100P/50V_4

PP3300_DX — EC34 EC35 EC37 EC36 EC38 EC39 — *1000P/50V/X7R_4 / *100P/50V_4

EC-SIT-23

PP5000 — EC16 EC8 EC3 EC7 — *0.1U/25V/X5R_4

PP5000 — EC10 EC1 — PP3300_WLAN — *0.1U/25V/X5R_4

PP3300_WLAN — EC12 EC11 — *0.1U/25V/X5R_4

EC-DV-51

+VCC_GFX — EC4 EC2 — *0.1U/25V/X5R_4

+VCC_CORE — EC6 EC9 — *0.1U/25V/X5R_4

PP3300_DSW — EC24 EC25 — *0.1U/25V/X5R_4

PP3300_DX — EC26 EC27 — *0.1U/25V/X5R_4

TPM (CLG)

4 x100nF (place close to device VDD/GND pins)

PP3300_DX — R537 2.2_6

TPM_VDD — C280 C289 C278 C293 — 0.1U/10V/X7R_4

If stuff ST TPM, C293 change to 10uF (CH6101M9B02)

TPM_VDD — R510 *20K_4

pin5,6,9,19,25,28 are difference between both

EC-DV-31

TPM_GPIO — R525 0_4 — TPM_PP — R519 *4.7K_4 — TPM_VDD

0411 FAE : install R342 value is 4K7, and PIN7 wo an internal PD

U25 TPM SLB9655

GPIO/NC6 NC2 PP NC13 NC14 NC8 NC12 NC3 NC1 GND[1] GND[2] GND[3] GND[4]/NC25

VDD[4] VDD[3]/NC5 VDD[2] VDD[1]/NC15 — R636 0_4 — R637 0_4

near pin 21 as possible

C285 *10P/50V/C0G_4

LCLK — PCLK_TPM [7]
LFRAME# — LPC_LFRAME# [7,28]
LAD3 — LPC_LAD3 [7,28]
LAD2 — LPC_LAD2 [7,28]
LAD1 — LPC_LAD1 [7,28]
LAD0 — LPC_LAD0 [7,28]
NC28/LPCPD# — PLTRST# [14,21,28]
LRESET#[1] LRESET#[2]/NC9 — TPM_RST_R — R529 0_4
SERIRQ NC15 — SERIRQ_R — R485 *0_4 — IRQ_SERIRQ [14,28]

EC-SIT-38

R605 10K_4 — TPM_VDD

EC-DV-06

SLB9655TT1.2FW4.32GOOG

0411 FAE : a 0ohm between pin9 to LRESET signals

R635 0_4

EC-DV-31

If change to ST, un-stuff R510, R635, R529 ,R636, andR637, ST PN is ST33ZP24AR28PVSM

RFID

PP3300_DX — R483 *4.7K_4

[32] HWPG — PLTRST# — D13 *RB500V-40 — D14 *RB500V-40 — PROT

PP3300_DX

R463 *100K_4 — R462 *100K_4 — PROT

U23 L1 L2 PROT VCC WP SCL SDA GND

[15] SMB_RUN_CLK
[15] SMB_RUN_DAT

*32@RFIDPCA24S08DP TSSOP

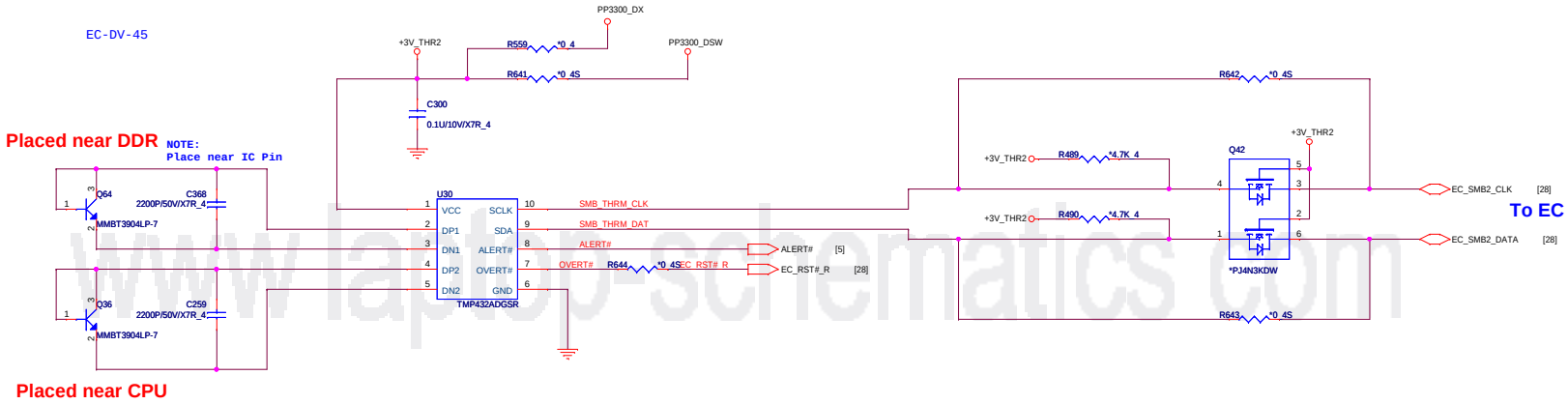
PP3300_DX — C266 *0.1U/10V/X7R_4 — R481 *1K_4

Quanta Computer Inc.
PROJECT : LIMA5B

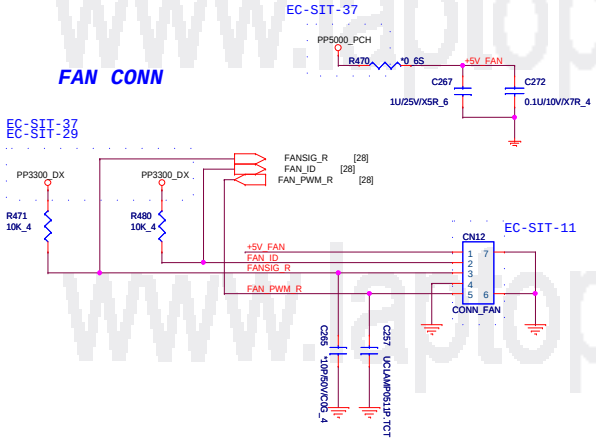
Size	Document Number	Rev
	TPM/LED/SW/RFID/EMI	1A
Date: Wednesday, March 26, 2014	Sheet 23 of 50	

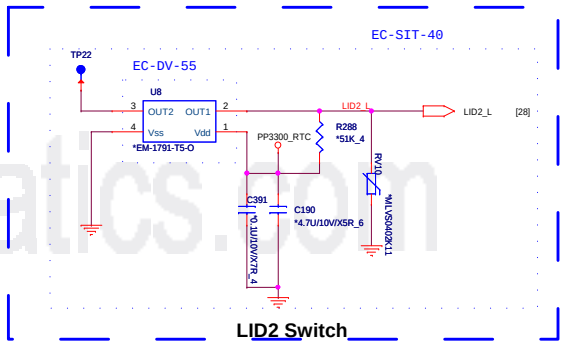
Charger IC / DDR / WLAN Thermal Sensor

U30 Placed near Charger IC.



FAN CONN

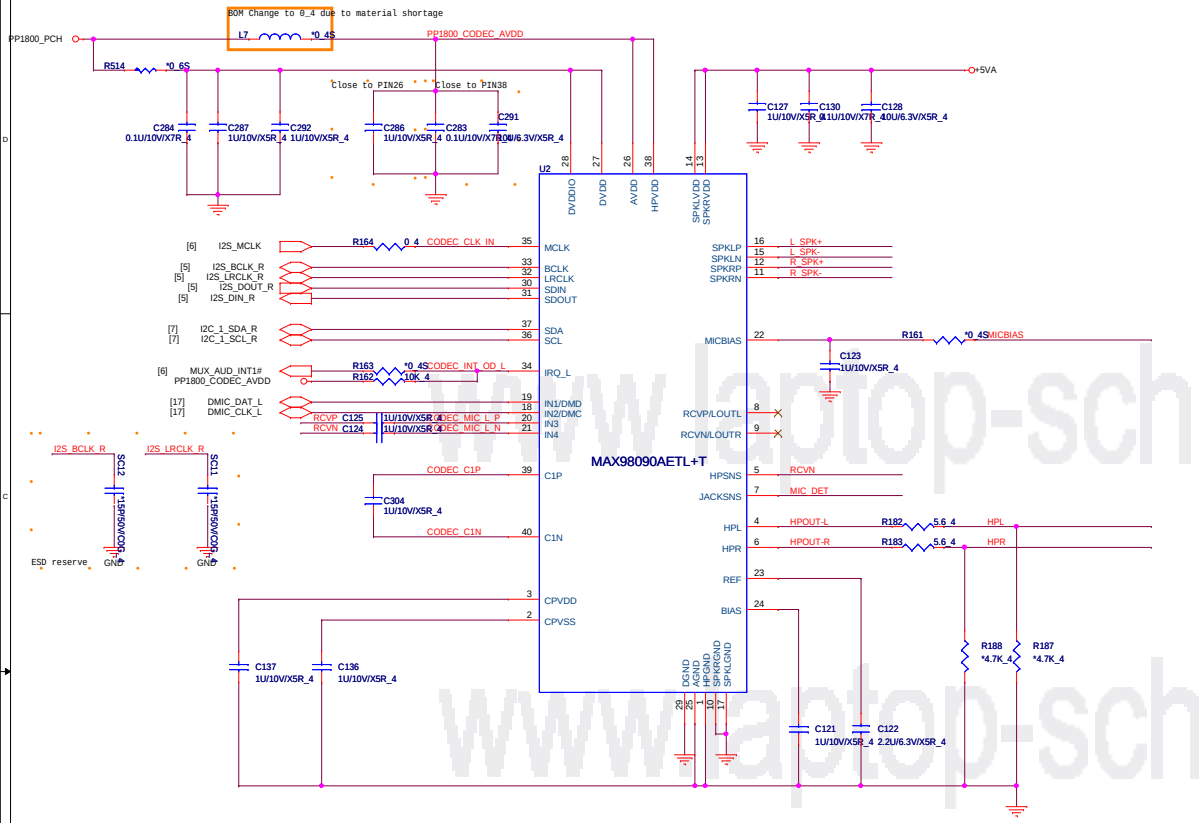




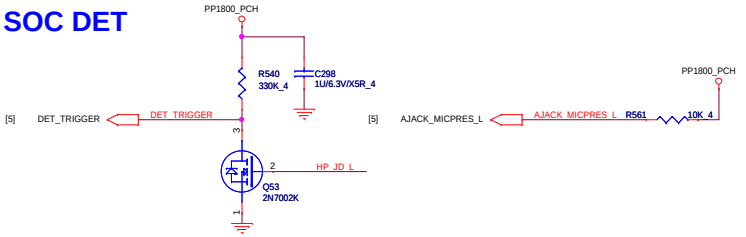
Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	Thermal Sensor / DB / FAN	1A
Date: Wednesday, April 16, 2014	Sheet 24 of 50	

AUDIO CODEC (ADO)



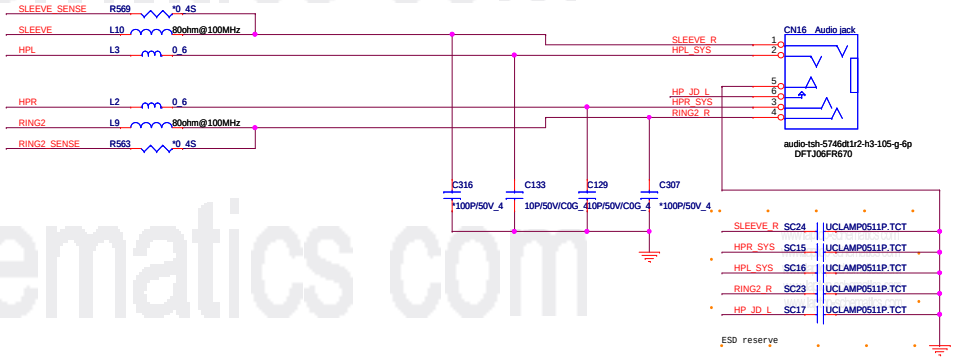
SOC DET



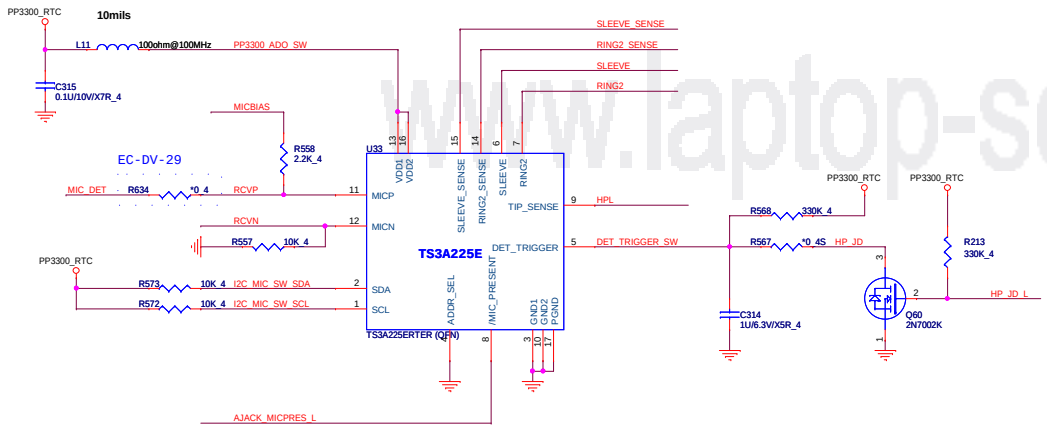
HEADPHONE/Mic combo(ADO)

combo jack
Normal open

P/N: DFTJ06FR652
Normal Open
PIN1 --> L?
PIN2 --> R?
PIN3 --> GND/MIC?
PIN4 --> MIC/GND?
PIN5 --> JD?
PIN6 --> GND?
PIN7 --> Shielding?
Need to check pin define (LI5 connector)

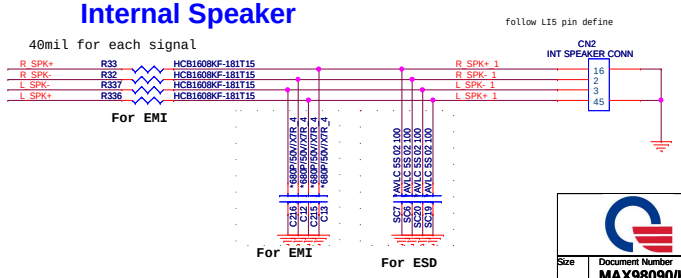


Audio Headset Switch



Codec PWR 5V(ADO)

Internal Speaker



Quanta Computer Inc.
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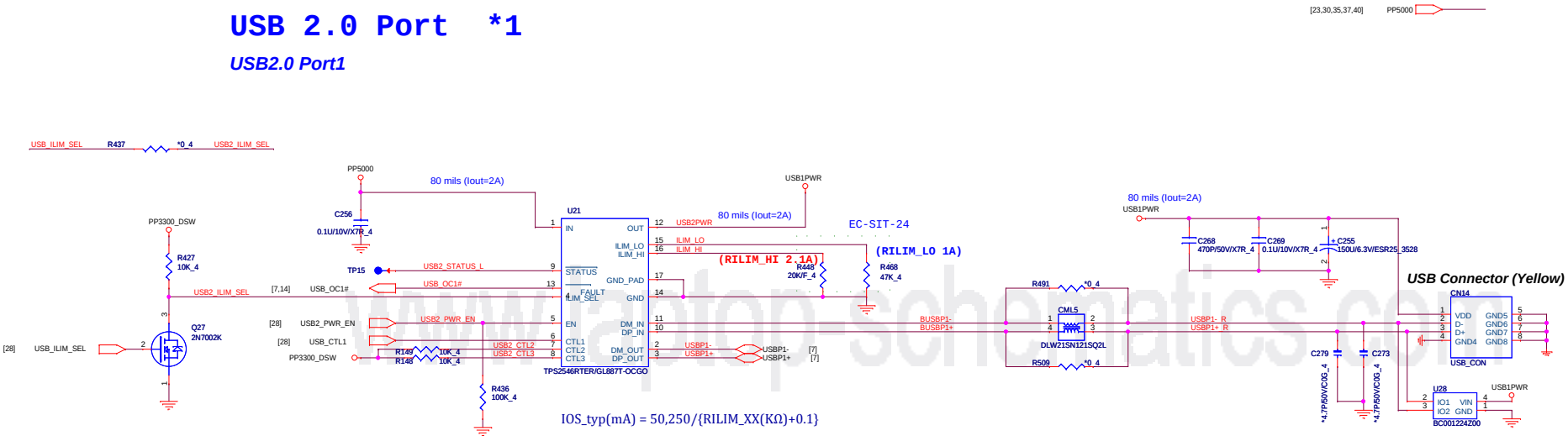
Size	Document Number	Rev
	MAX98090/HP/SPK	1A
Date: Wednesday, April 16, 2014	Sheet 25 of 50	

USB 2.0 Port *1

USB2.0 Port1

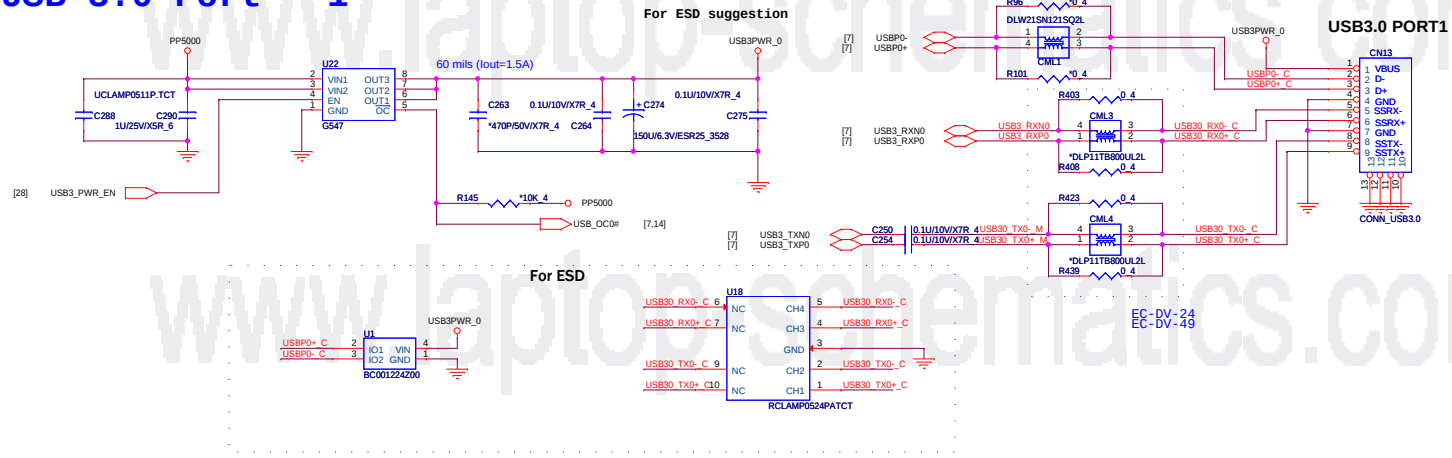


$$IOS\_typ(mA) = 50{,}250/\{RILIM\_XX(K\Omega)+0.1\}$$

RILIM_LO is optional and the ILIM_LO pin may be left unconnected if the following conditions are met:
1. ILIM_SEL is always set high
2. Load Detection - Port Power Management is not used
3. Mouse / Keyboard wake function is not used

If conditions 1 and 2 are met but the mouse / keyboard wake function is also desired, it is recommended to use
RILIM_LO < 80.6 kΩ.
The following equation programs the typical current limit:
(1)
RILIM_XX corresponds to either RILIM_HI or RILIM_LO as appropriate.

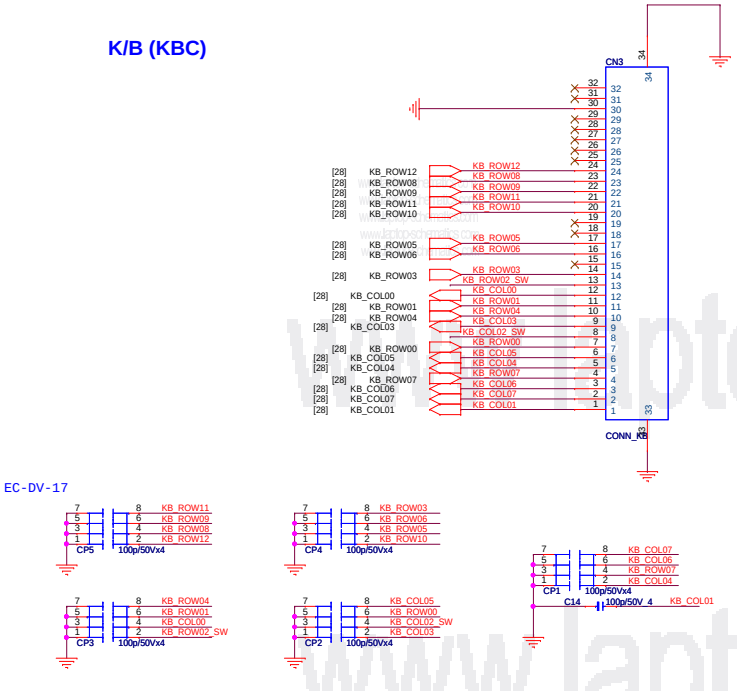
USB 3.0 Port *1



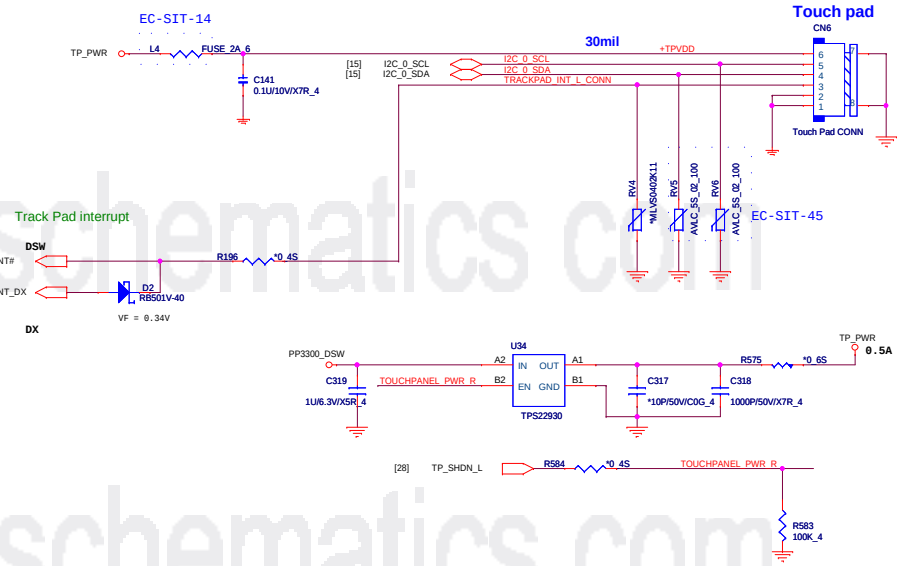
Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	USB2.0/USB3.0	1A
Date: Wednesday, April 16, 2014	Sheet 26 of 50	

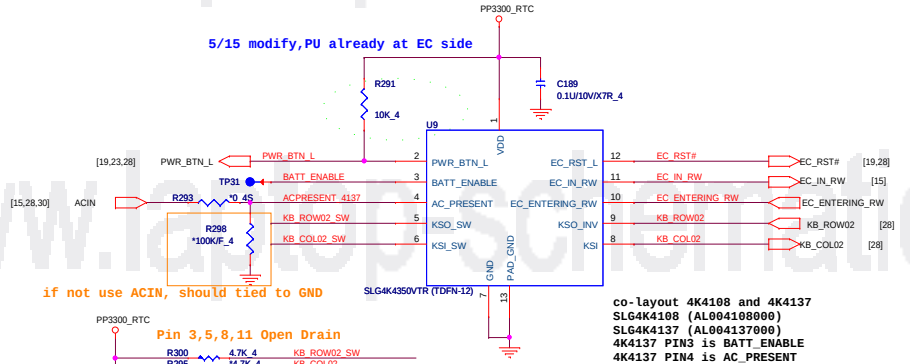
K/B (KBC)



Track PAD BOARD CONN (TPD)



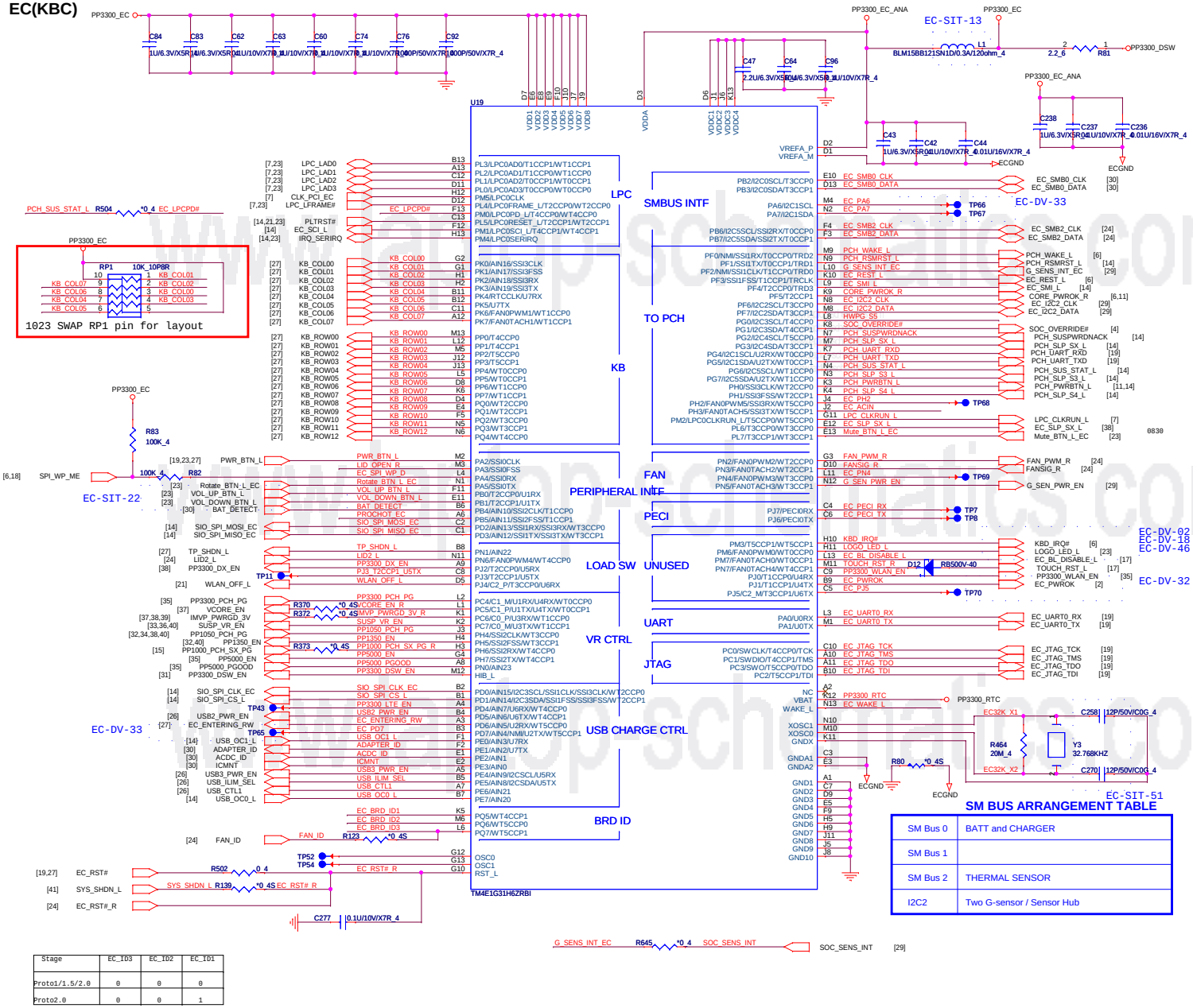
HOLELESS RESET 2-CHIP(KBC)



Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	KB/TP/HW Reset	1A
Date: Wednesday, April 16, 2014	Sheet 27 of 50	

EC(KBC)



SM BUS ARRANGEMENT TABLE

SM Bus 0	BATT and CHARGER
SM Bus 1	
SM Bus 2	THERMAL SENSOR
I2C2	Two G-sensor / Sensor Hub

Stage	EC_ID3	EC_ID2	EC_ID1
Proto1/1.5/2.0	0	0	0
Proto2.0	0	0	1

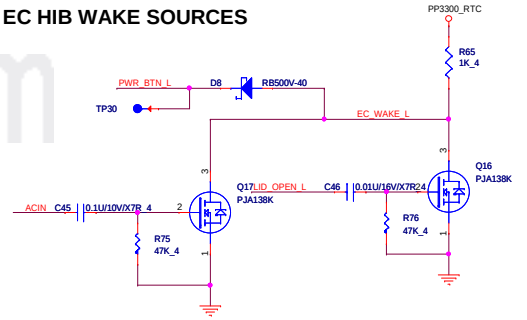
SM BUS/I2C PU(KBC)

BATT and CHARGER
EC_SMB0_CLK R506 4.7K_4
EC_SMB0_DATA R507 4.7K_4

THERMAL SENSOR
EC_SMB2_CLK R375 4.7K_4
EC_SMB2_DATA R374 4.7K_4

Two G-sensor / Sensor Hub
EC_I2C2_CLK R428 4.7K_4
EC_I2C2_DATA R447 4.7K_4

EC HIB WAKE SOURCES



EC-SIT-54

Rotate_BTN_L_EC	R518	*10K_4
Mute_BTN_L_EC	R517	*10K_4
VOL_DOWN_BTN_L	R522	10K_4
VOL_UP_BTN_L	R523	10K_4

HWPG(KBC)

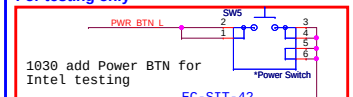
PP3300_PCH_S5_PG [15] — R122 *0_4S — HWPG_S5

OD pin list

EC_REST_L
BAT_LED0
BAT_LED1

SMBUS
IRQ_SERIRQ
EC_BL_DISABLE_L

For testing only



Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	KBC TI TM4E1G31H6ZRBI	1A
Date: Wednesday, April 16, 2014	Sheet 28 of 50	

PP3300_DX
+3.3V_SEN_HUB
R353 *0_6
C234 *0.1U/10V/X7R_4
C239 *0.1U/10V/X7R_4
C246 *0.1U/10V/X7R_4
C245 *0.1U/10V/X7R_4
C222 *0.1U/10V/X7R_4
C244 *0.1U/10V/X7R_4
Place all capacitors close to IT8350.

+3.3V_SEN_HUB
AVCC
R318 *33_4
L6 *PBY160808T-181Y-N_2A_6
L5 *PBY160808T-181Y-N_2A_6
C223 *1000P/50V/X7R_4
C219 *0.1U/10V/X7R_4
ADOGND

G-SENSOR on MB

G_SENS1_INT
PP3000_ACCEL
U14
Vdd
IO Vdd
GND
INT
SDA
SCL
RSVD
NC
NC
ADDR
GSENSOR1_SDA
GSENSOR1_SCL
PP3000_ACCEL
C214 *1U/6.3V/X5R_4
close to pin1
*KXCJ9-1008
ADDR: 0X0F

+3.3V_SEN_HUB
AVCC
+3.3V_SEN_HUB
R434 *100K_4
D11 *RB500V-40
C248 *1U/6.3V/X5R_4
WRST#
U15 *IT8350E_LQFP-48
VSTBY
VSTBY
VSTBY
VSTBY
VSTBY
AVCC
WRST#
FSCE#/GPG3
FMOSI/GPG4
FMISO/GPG5
FSCK/GPG7
FSPI
GPH5/ID5/DM
GPH6/ID6/DP
USB
RXD/SIN0/GPB0
TXD/SOUT0/GPB1
UART
PWRSW/GPE4
NC
JTCKC
JTMSC
GPG6
GPIO
SM BUS
SMCLK0/GPB3
SMDAT0/GPB4
SMCLK2/GPF6
SMDAT2/GPF7
SMCLK4/GPE0
SMDAT4/GPE7
RAW_SENS_SCL
RAW_SENS_SDA
ANGLE_SENS_SCL
ANGLE_SENS_SDA
HUB_GSEN_SCL_R
HUB_GSEN_SDA_R
PWM
PWM0/GPA0
PWM1/GPA1
PWM4/SMCLK5/GPA4
PWM5/SMDAT5/GPA5
PWM6/SSCK/GPA6
A/D
ADC0/GPI0
ADC1/SMINT0/GPI1
ADC2/SMINT1/GPI2
ADC3/SMINT2/GPI3
ADC4/SMINT3/GPI4
ADC5/GPI5
SSPI
SSCE0#/GPG2
KSO17/SMISO/GPC5
KSO16/SMOSI/GPC3
CLOCK
CK32KE/GPJ7
CK32K/GPJ6
VSS
VSS
VSS
VCORE
AVSS
C247 *0.1U/10V/X7R_4
ADOGND
IT8350E
LQFP-48

+3.3V_SEN_HUB
R386 *4.7K_4
R411 *4.7K_4
R402 *0_4
R417 *0_4
GSENSOR_SCL_C
GSENSOR_SDA_C
R415 *0_4S GSENSOR0_SCL
R498 *0_4S GSENSOR1_SCL
GSENSOR0_SCL [17]
R453 *0_4S GSENSOR1_SDA
R472 *0_4S GSENSOR0_SDA
GSENSOR0_SDA [17]

R332 *0_4 SOC_SENS_INT [28]
G_SENS1_INT_R
G_SENS0_INT_R
R331 *0_4 G_SENS1_INT
R330 *0_4 G_SENS0_INT
R329 *10K_4
R328 *10K_4

GSENSOR_SDA_C
R615 *0_4S EC_I2C2_DATA
EC_I2C2_DATA [28]
GSENSOR_SCL_C
R617 *0_4S EC_I2C2_CLK
EC_I2C2_CLK [28]

[17] G_SENS0_INT
G_SENS0_INT
G_SENS1_INT
D23 *BAT54C
G_SENS_INT_EC
G_SENS_INT_EC [28]

+3.3V_SEN_HUB
R358 *100K_4
R363 *100K_4

Use Internal Crystal
GPG2 Pull High Enable mirror function.
GPG2 Pull Low Disable mirror function.

EC-DV-20

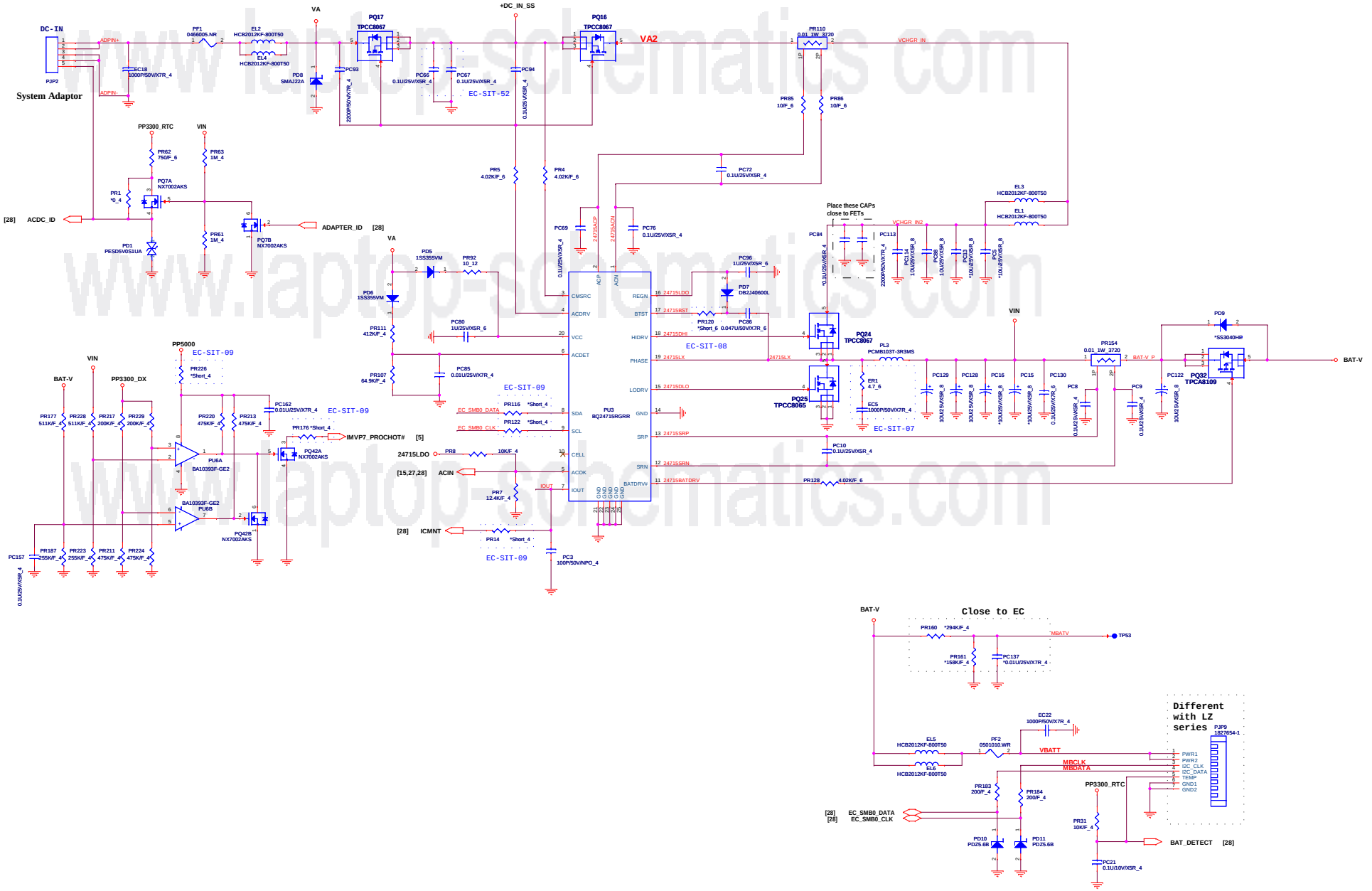
PP3300_DSW
U45
IN
EN
OUT
GND
A2
B2
A1
B1
*TPS22930
C395 *1U/6.3V/X5R_4
G_SEN_PWR_EN_R
C397 *10P/50V/C0G_4
C396 *1000P/50V/X7R_4
R670 *FUSE_2A_6
PP3000_ACCEL
[28] G_SEN_PWR_EN
R671 *0_4S
G_SEN_PWR_EN_R
R669 *100K_4

leakage

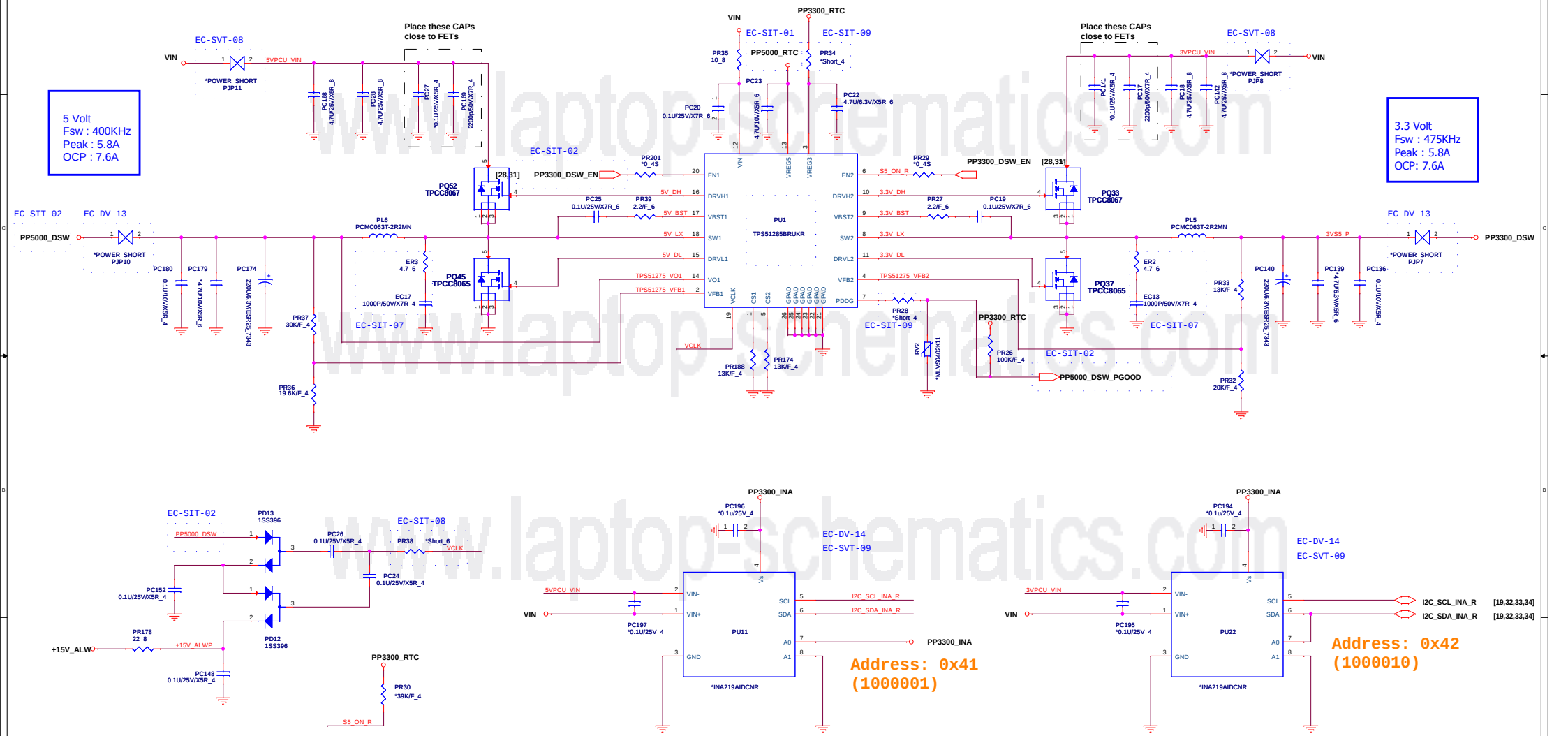
To EC I2C2

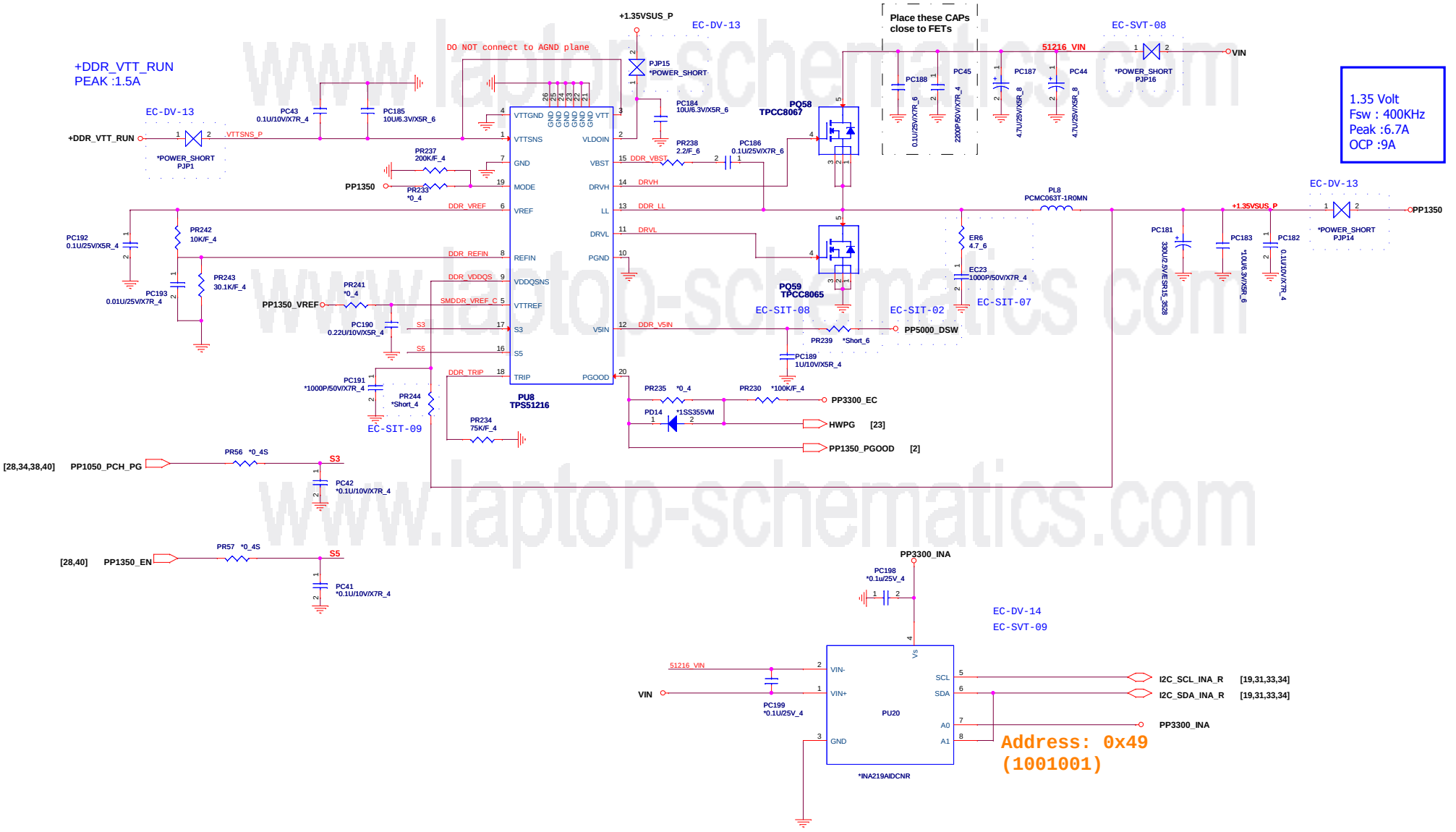
ANGLE_SENS_SDA R97 *0_4
RAW_SENS_SDA R452 *0_4
+3.3V_SEN_HUB
R454 *4.7K_4
EC_SENS_SDA
RAW_SENS_SCL R497 *0_4
ANGLE_SENS_SCL R90 *0_4
+3.3V_SEN_HUB
R496 *4.7K_4
EC_SENS_SCL
Q35
*P.J4N3KDW
EC_I2C2_DATA_C R607 *0_4 EC_I2C2_DATA
EC_I2C2_CLK_C R606 *0_4 EC_I2C2_CLK
Closed to Level shifter MOS (Q35)

Quanta Computer Inc.
PROJECT : LIMA5B
Size
Document Number
Sensor Hub (IT8350)
Rev 1A
Date: Friday, March 21, 2014
Sheet 29 of 50



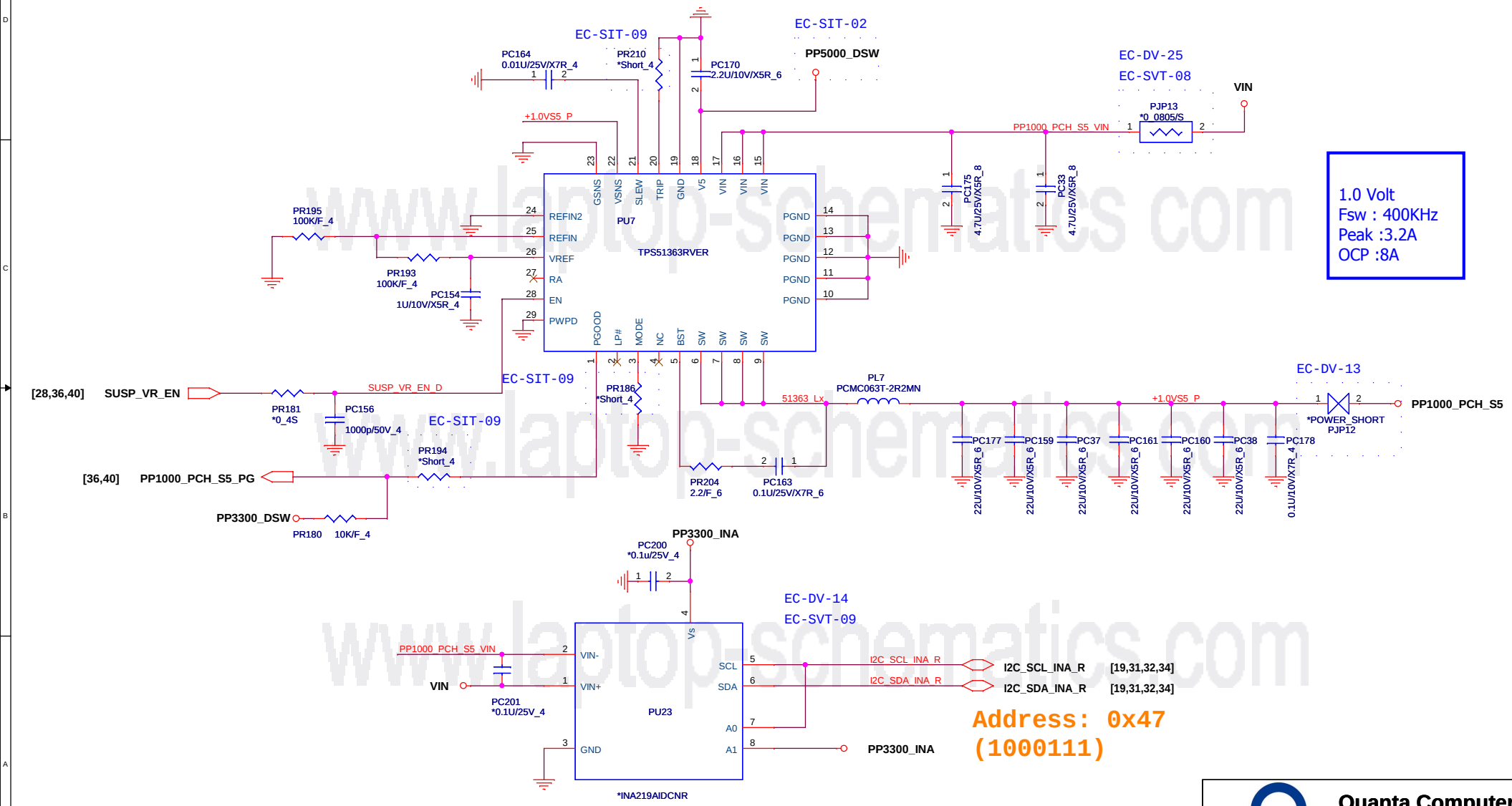
Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number	Rev
	Charger (BQ24715)	1A
Date: Wednesday, April 16, 2014	Sheet 30 of 50	


5 Volt
Fsw : 400KHz
Peak : 5.8A
OCP : 7.6A
3.3 Volt
Fsw : 475KHz
Peak : 5.8A
OCP: 7.6A
Place these CAPs close to FETs
Place these CAPs close to FETs
PP3300_RTC
PU1
TPS5128SBRUKR
PQ52 TPCC8067
PQ45 TPCC8065
PQ33 TPCC8067
PQ37 TPCC8065
PL6 PCMC063T-2R2MN
PL5 PCMC063T-2R2MN
PP5000_DSW
PP3300_DSW
PP3300_DSW_EN
PP5000_DSW_PGOOD
PP3300_INA
PU11
PU22
*INA219AIDCNR
Address: 0x41
(1000001)
Address: 0x42
(1000010)
Quanta Computer Inc.
PROJECT : LIMA5B
+3VS5/+5VS5 (TPS51285BRUKR)
Wednesday, April 16, 2014

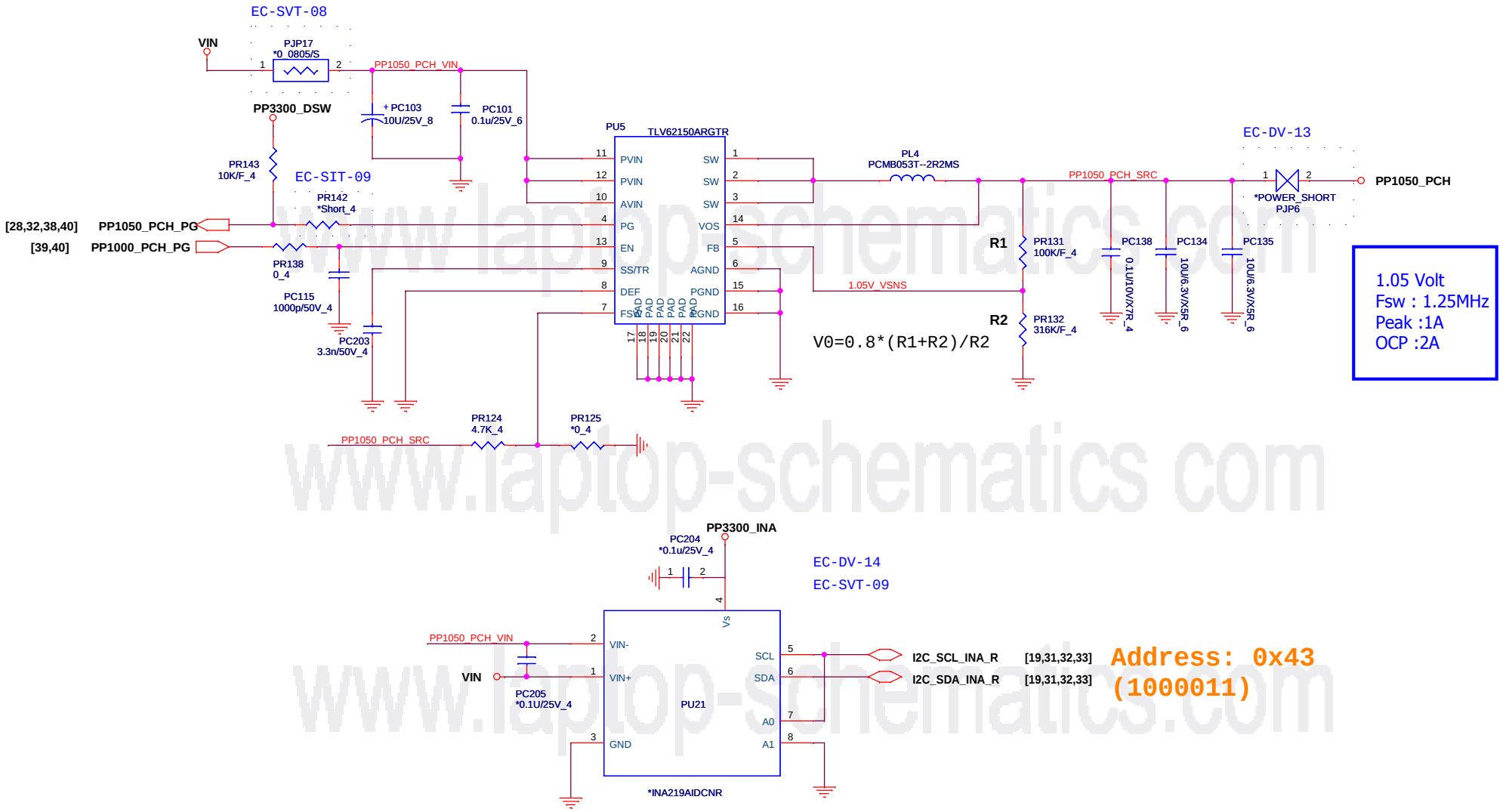


Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	1.35V DDR Power(TPS51216)	1A
Date: Wednesday, April 16, 2014	Sheet 32 of 50	



Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: +1.0VS5(TPS51363)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 33 of 50	

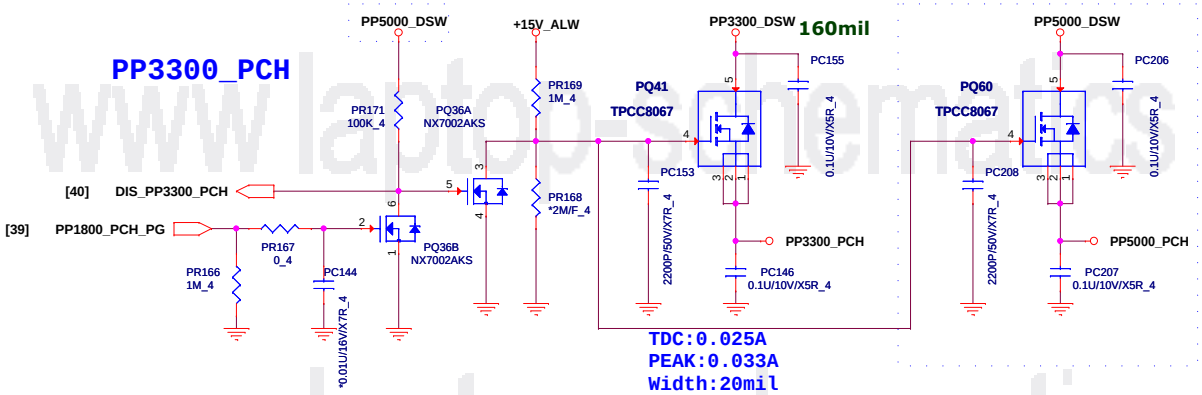


Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	+1.05V (TLV62150ARGTR)	1A
Date: Wednesday, April 16, 2014	Sheet 34 of 50	

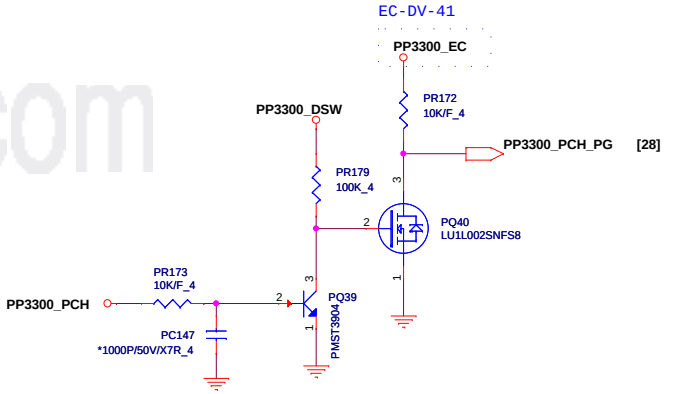
PP3300_PCH

EC-SIT-02



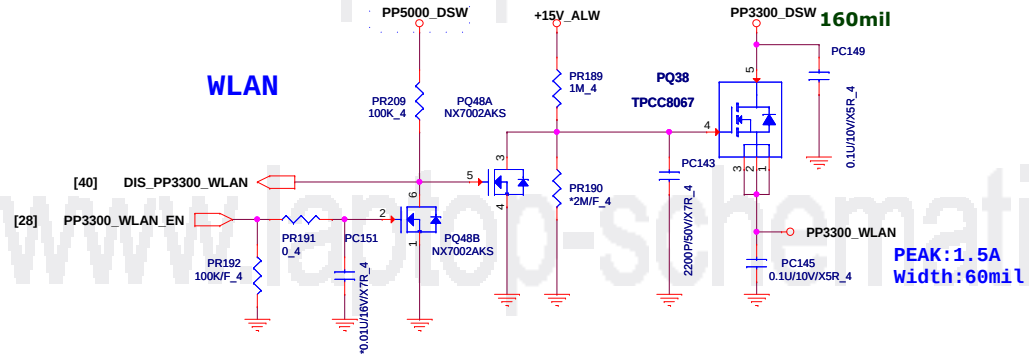
EC-SIT-04

EC-DV-41



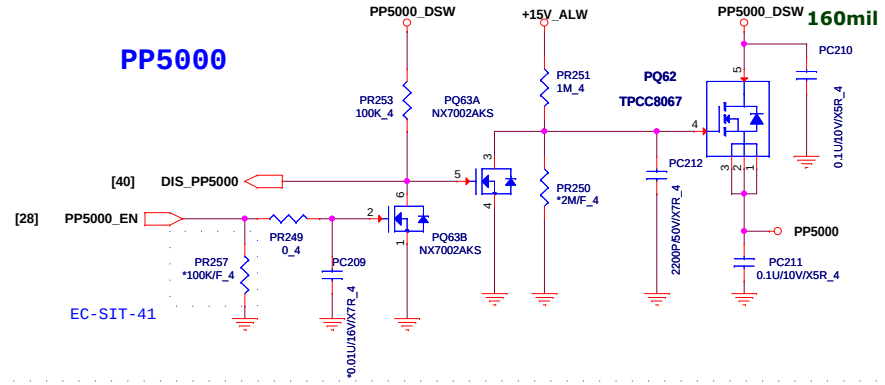
WLAN

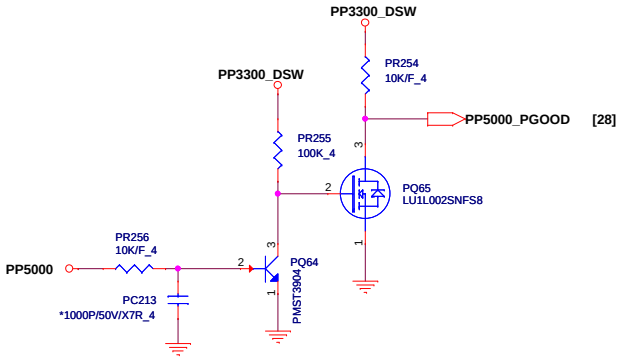
EC-SIT-02



EC-SIT-03

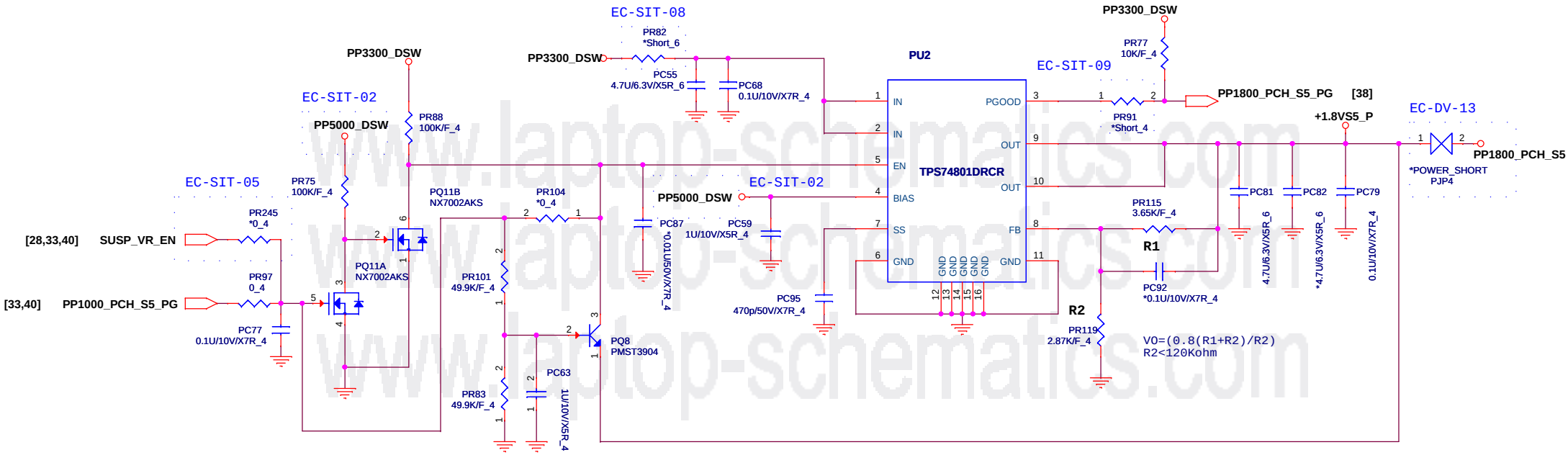
PP5000



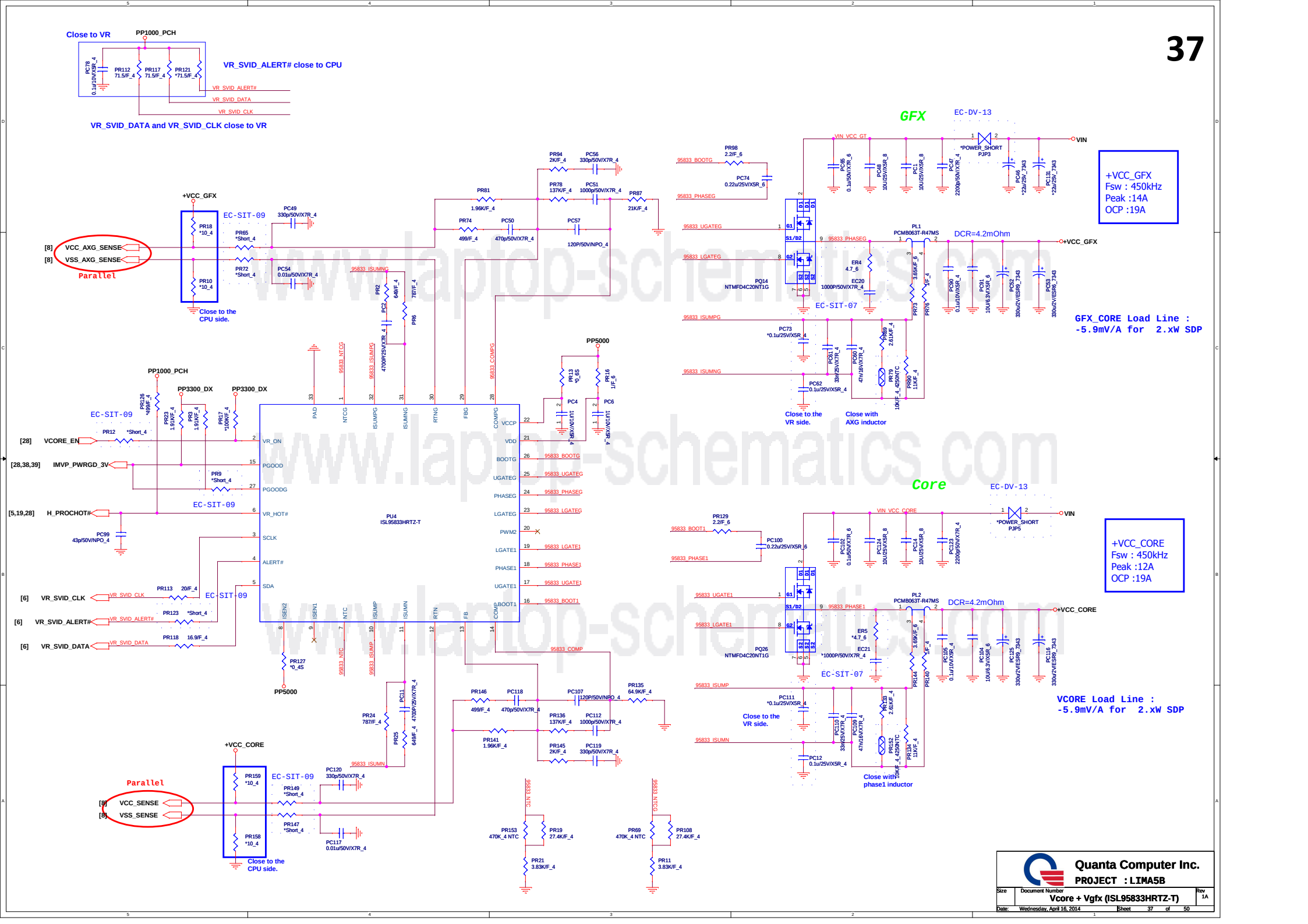


Quanta Computer Inc.
PROJECT :LIMA5B

Size	Document Number	Rev
	Load Switch	1A
Date: Wednesday, April 16, 2014	Sheet 35 of 50	

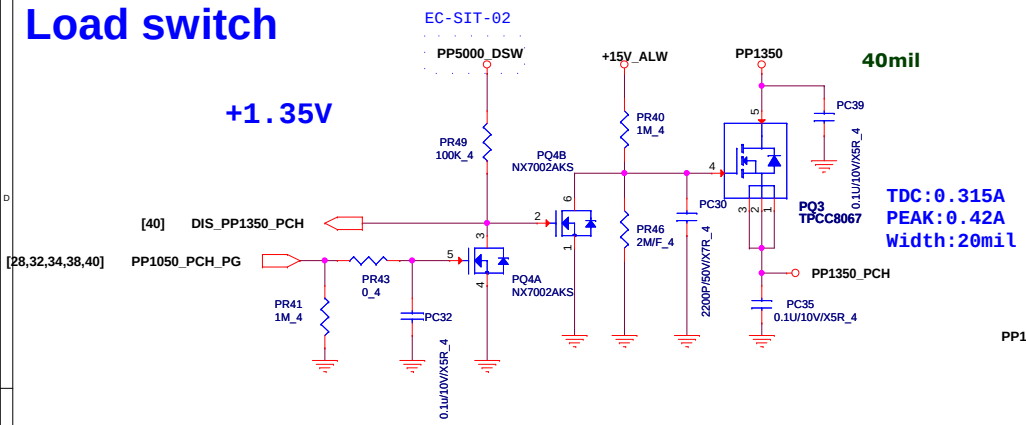


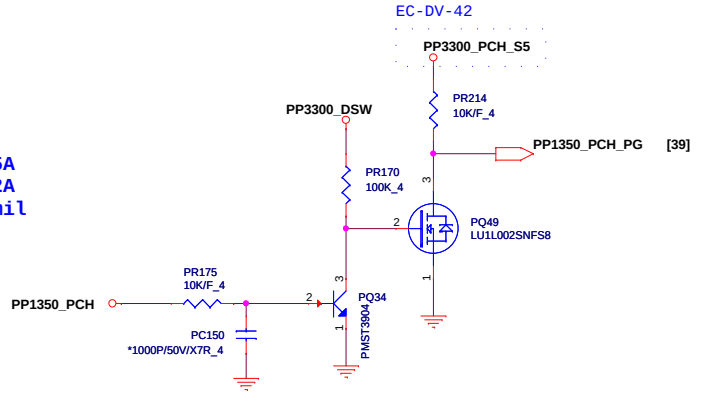
Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: +1.8VS5(TPS74801)	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 36 of 50	

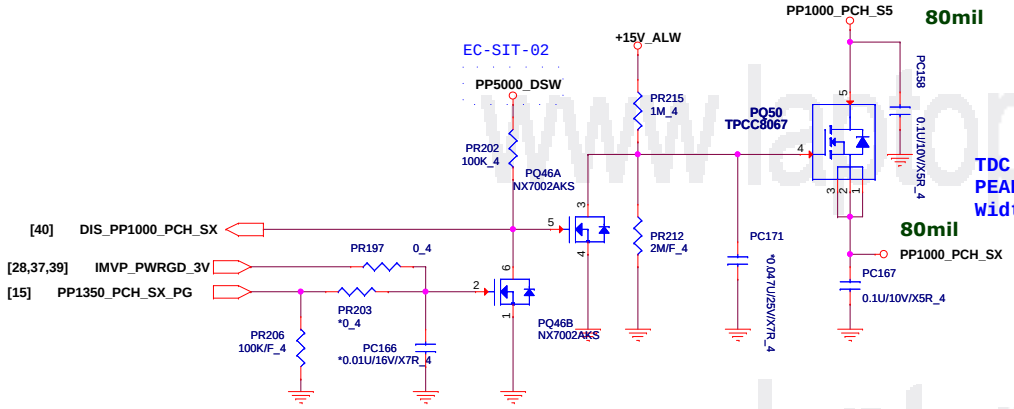


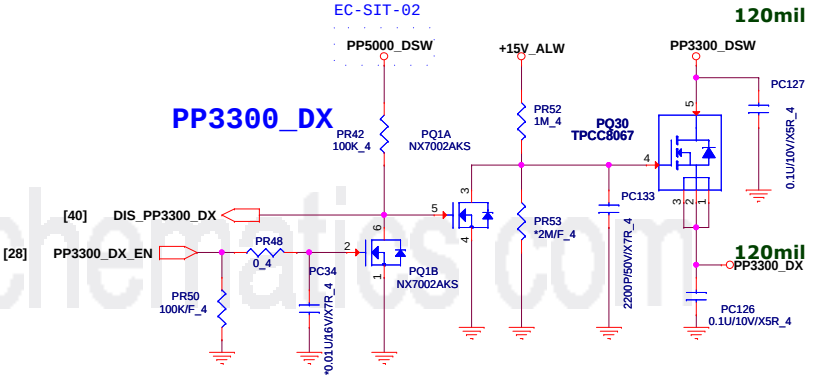
Load switch

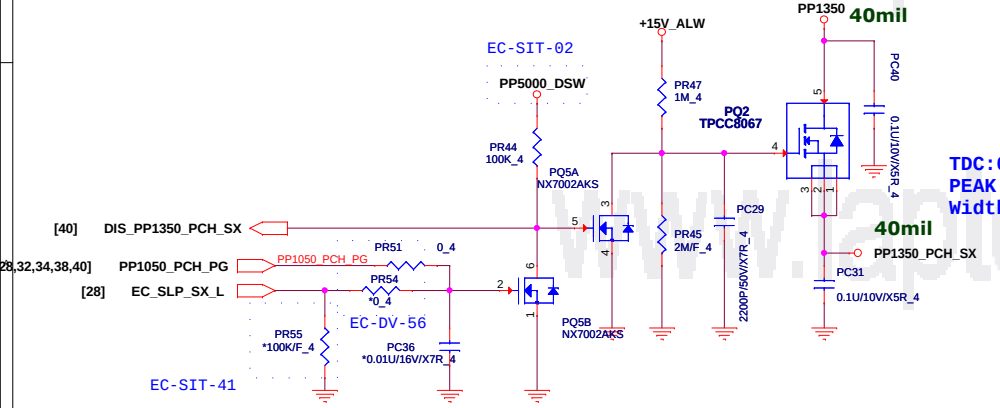
+1.35V

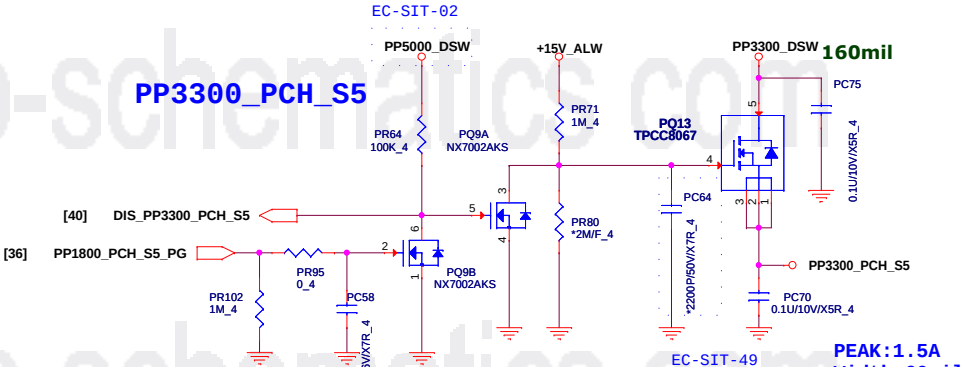




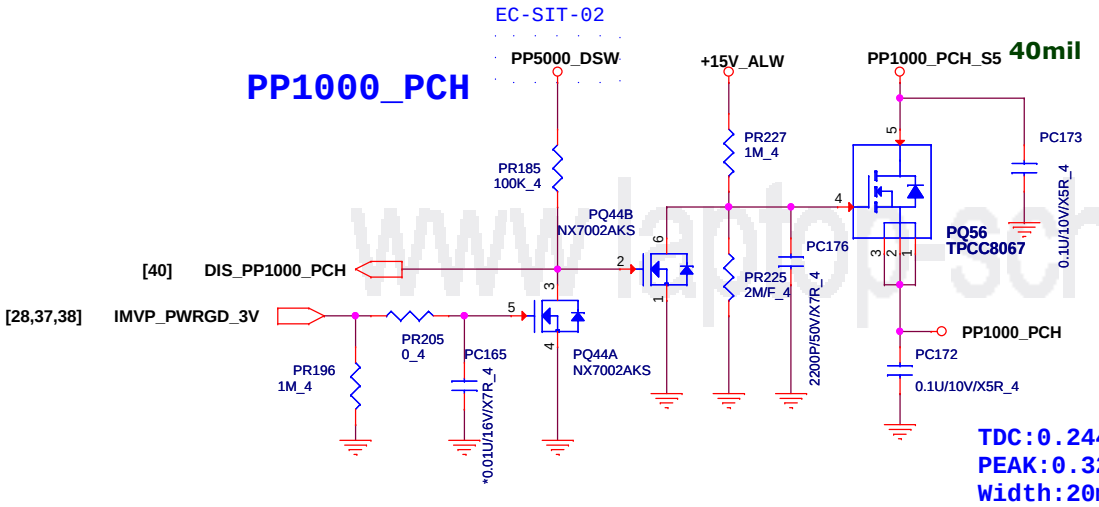


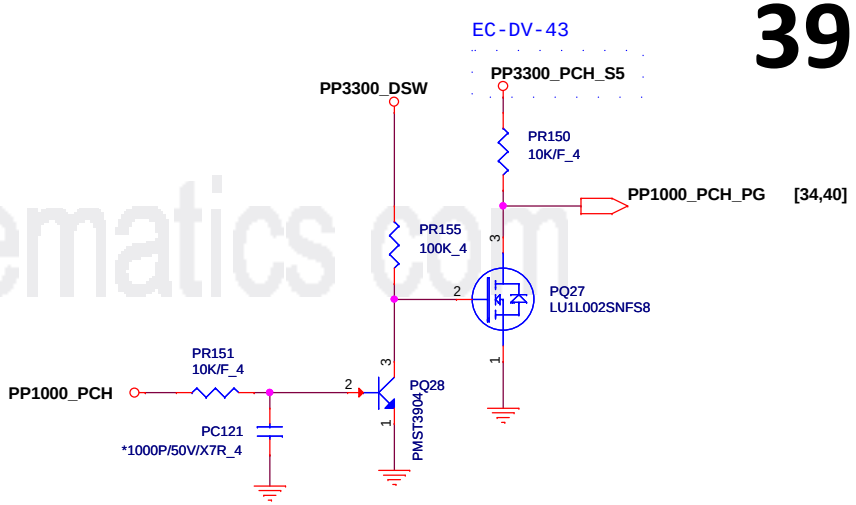


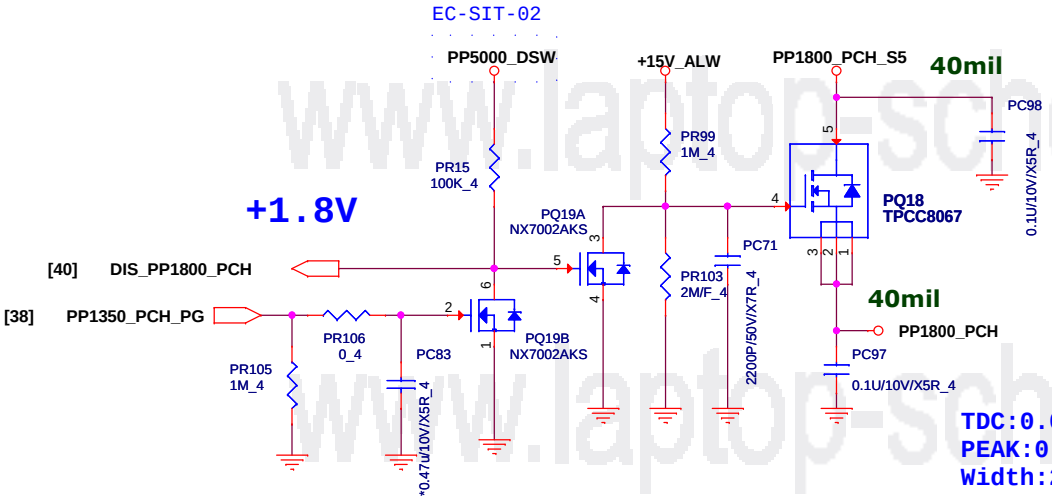


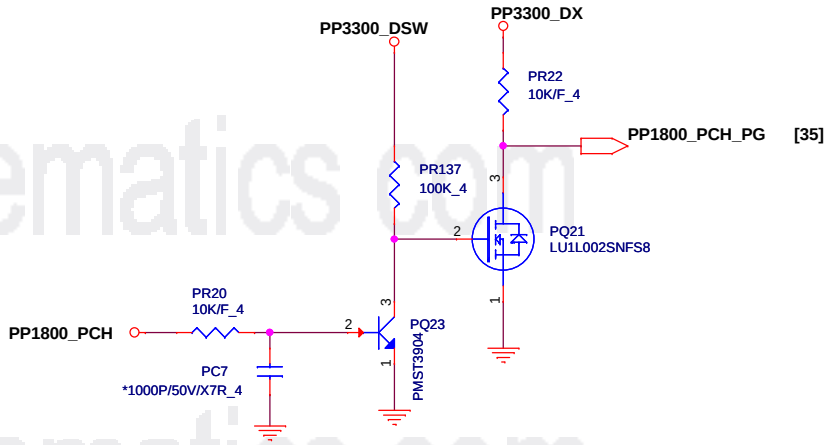


Quanta Computer Inc.		
PROJECT :LIMA5B		
Size	Document Number: Load Switch 1	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 38 of 50	





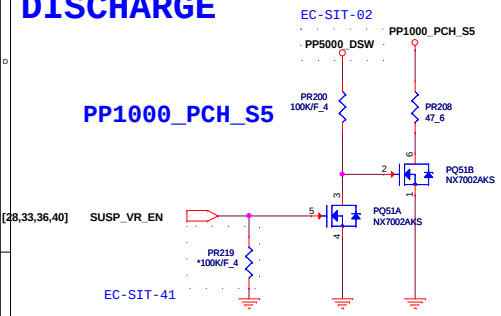




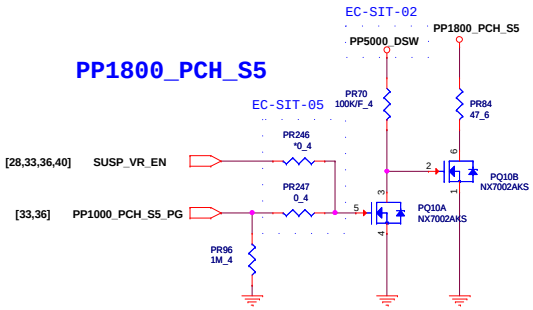
Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Load Switch 2	Rev: 1A
Date: Wednesday, April 16, 2014	Sheet 39 of 50	

DISCHARGE

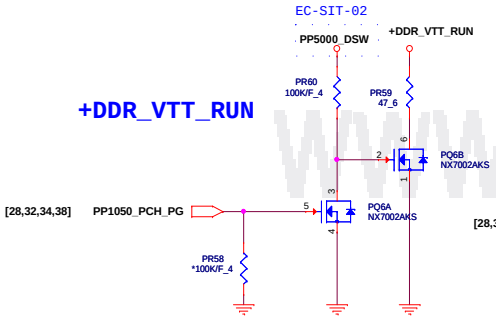
PP1000_PCH_S5



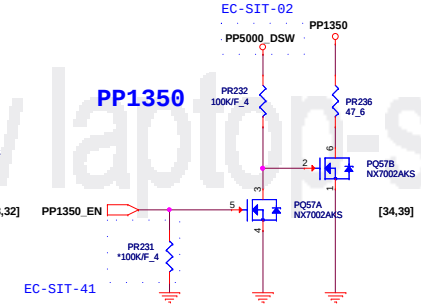
PP1800_PCH_S5



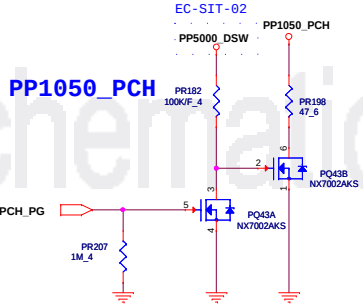
+DDR_VTT_RUN



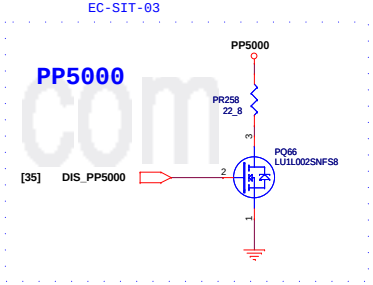
PP1350



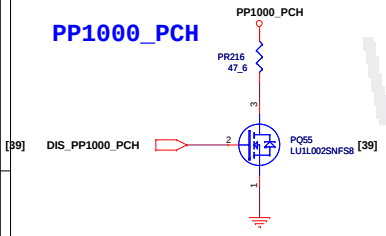
PP1050_PCH



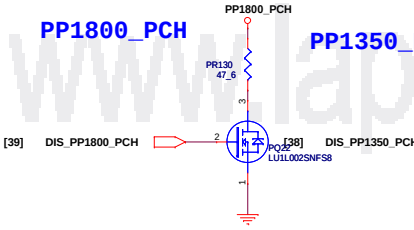
PP5000



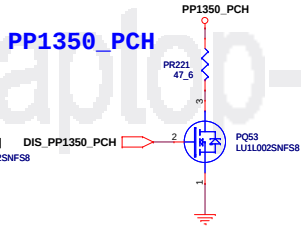
PP1000_PCH



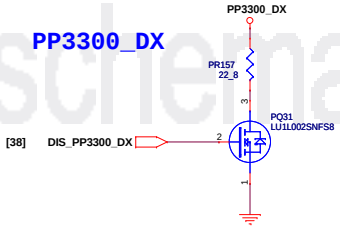
PP1800_PCH



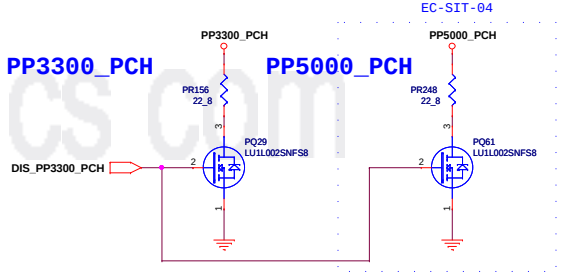
PP1350_PCH



PP3300_DX

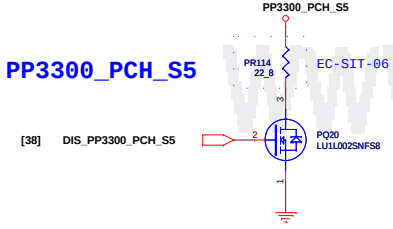


PP3300_PCH

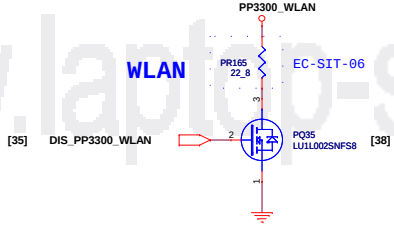


PP5000_PCH

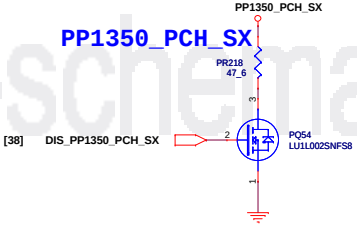
PP3300_PCH_S5



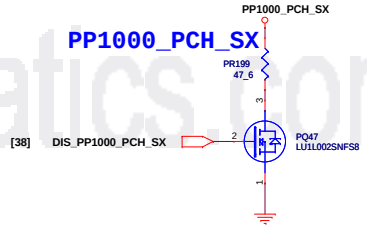
WLAN



PP1350_PCH_SX

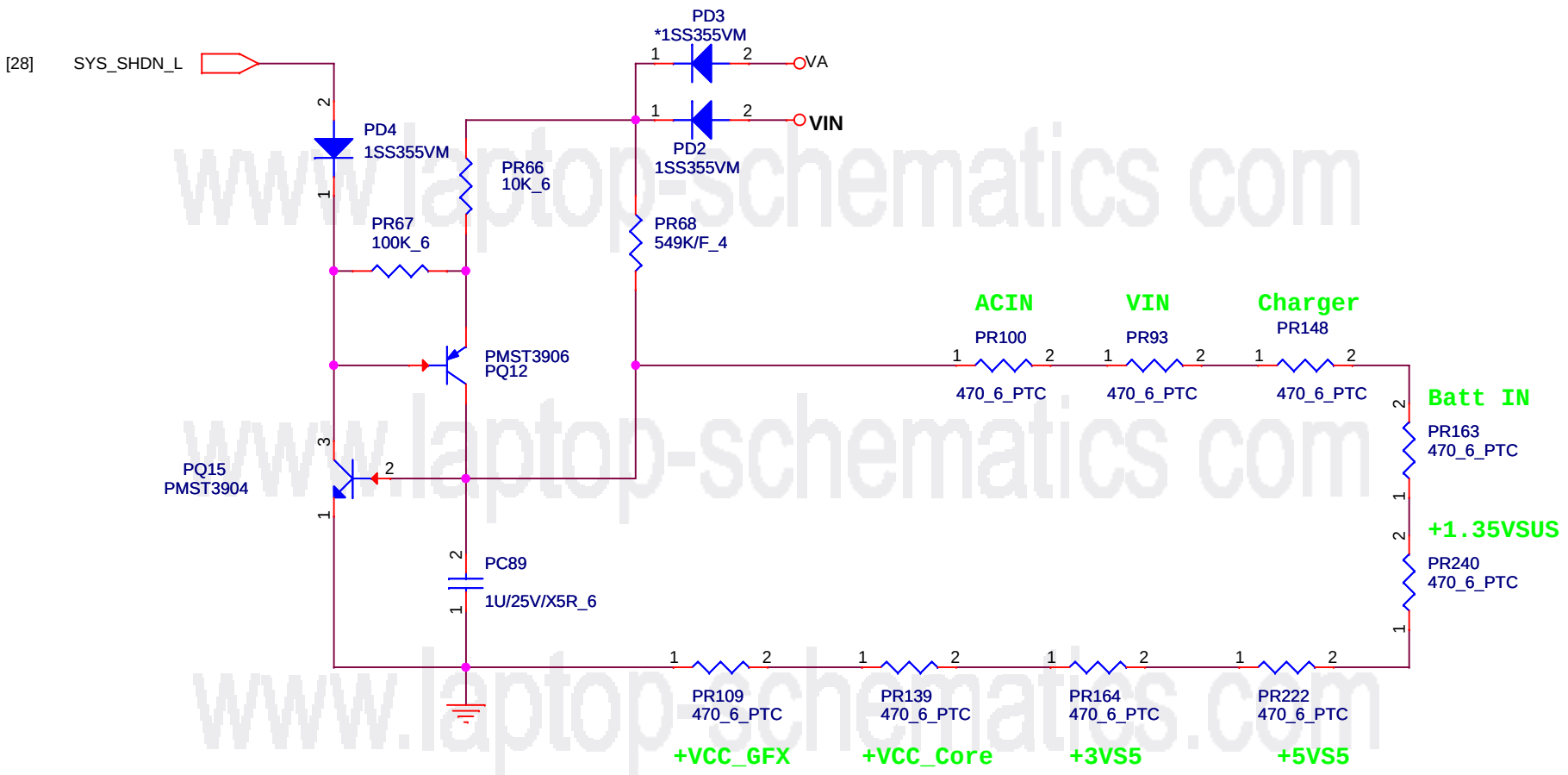


PP1000_PCH_SX



Quanta Computer Inc.
PROJECT : LIMA5B

Size	Document Number	Rev
	Discharge	1A
Date: Wednesday, April 16, 2014	Sheet 40 of 50	

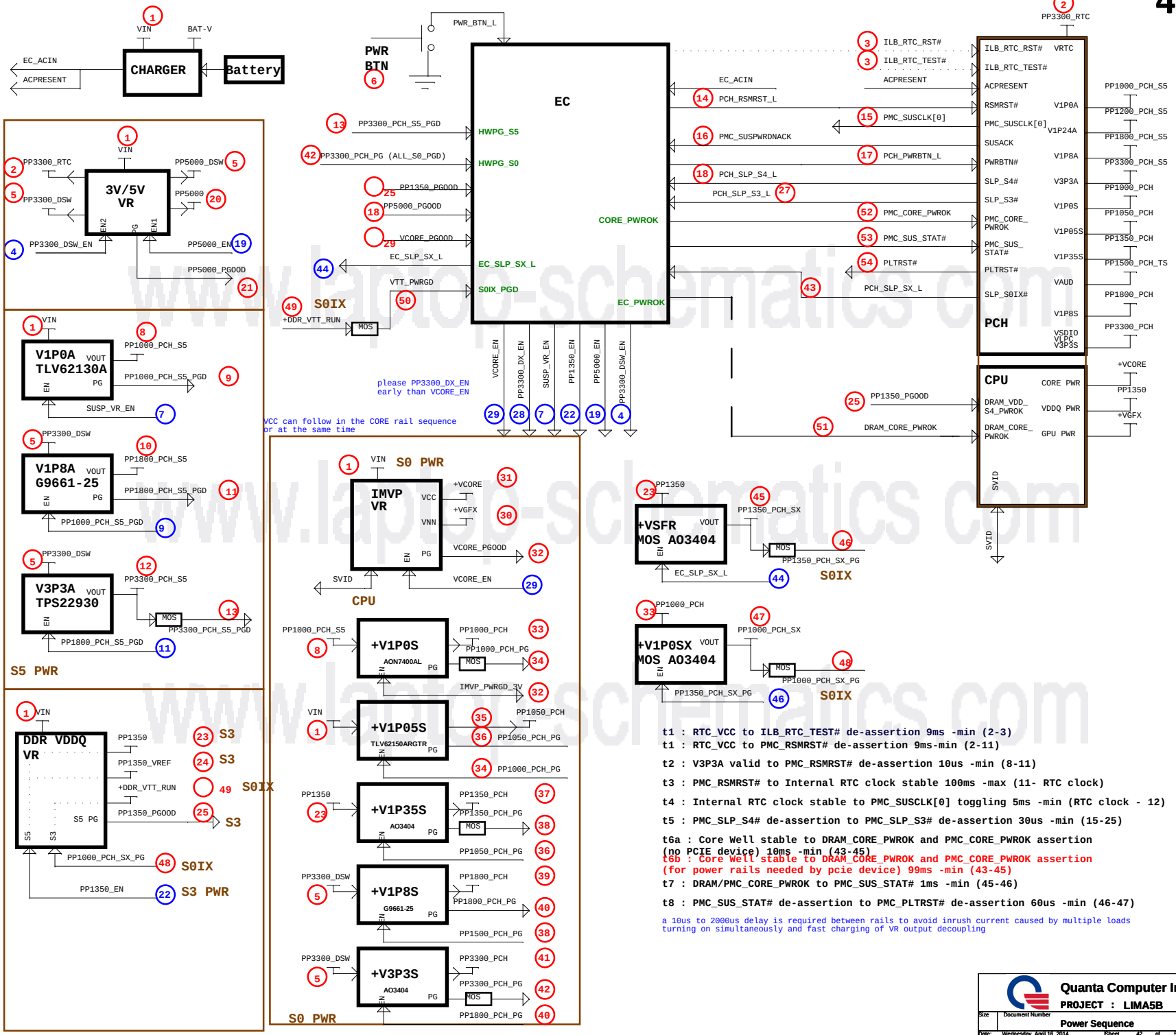


Quanta Computer Inc.

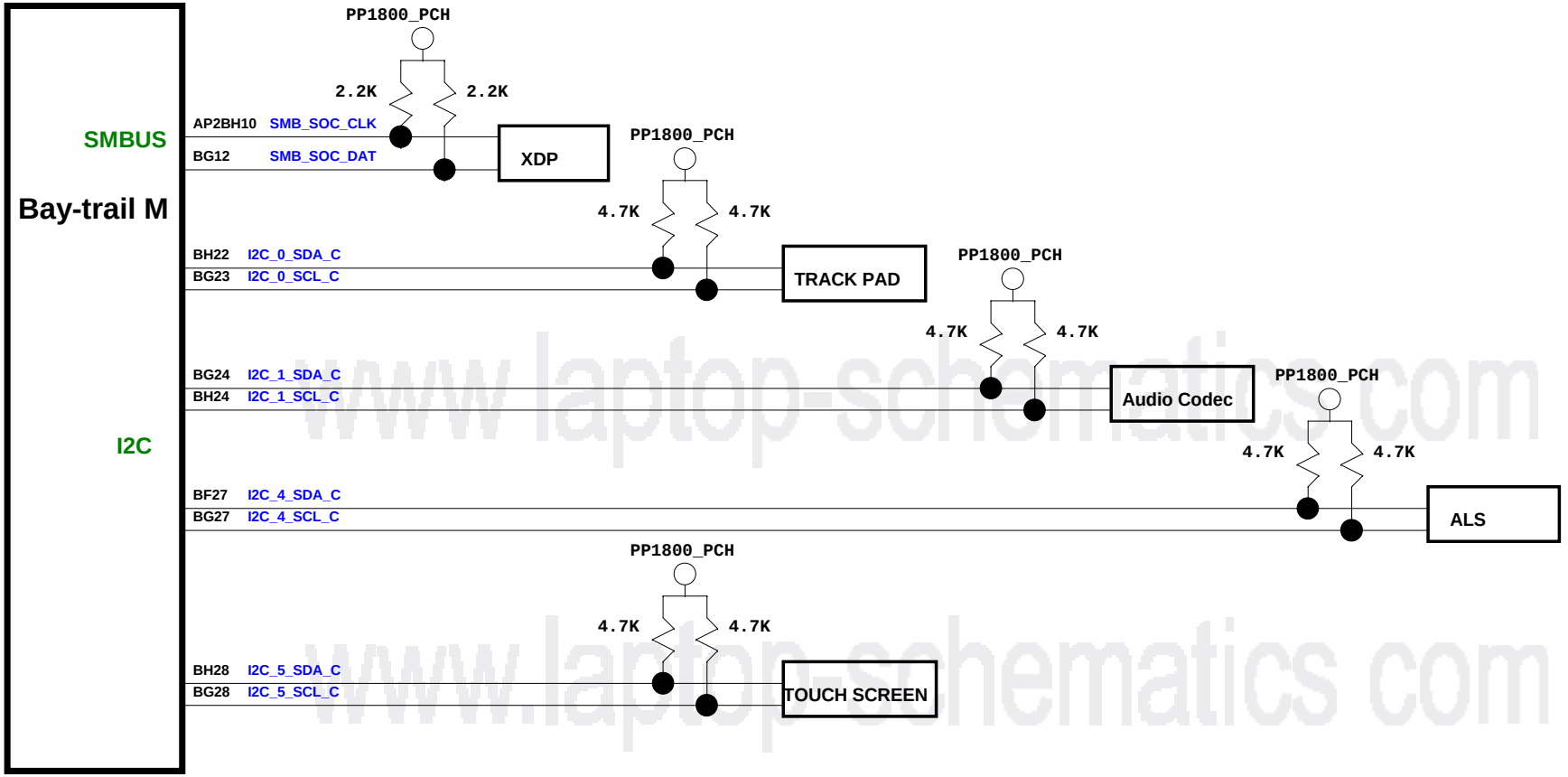
PROJECT : LIMA5B

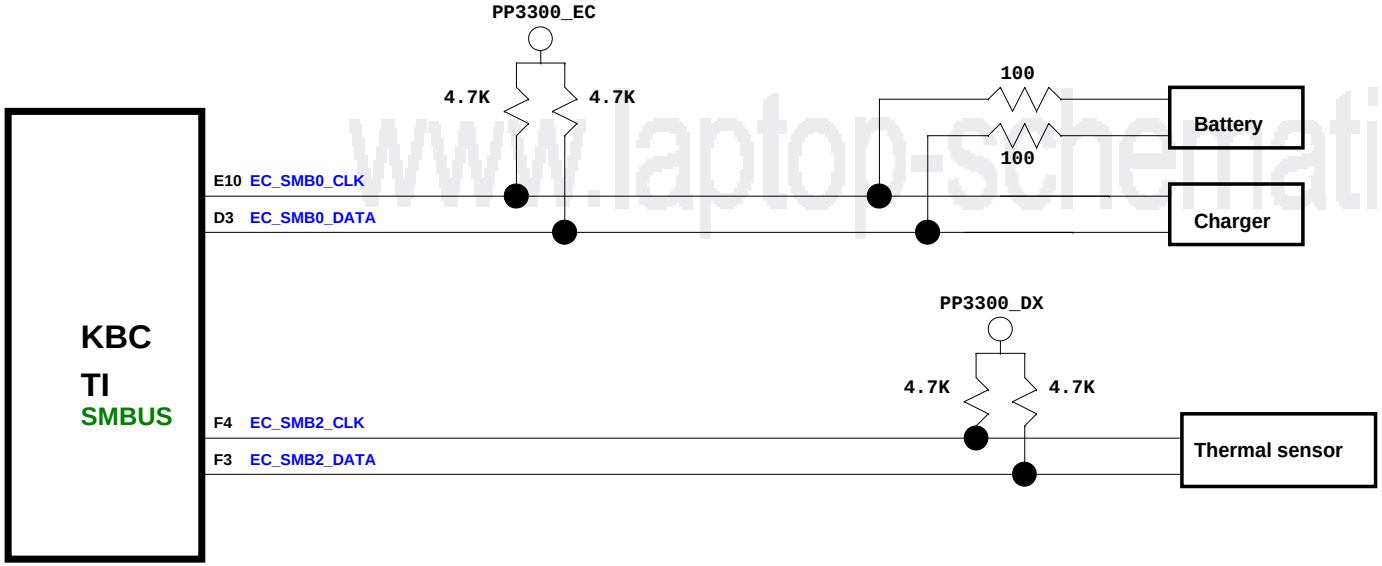
Size	Document Number	Rev
	PTC	1A
Date: Wednesday, April 16, 2014	Sheet 41 of 50	

Support S0iX

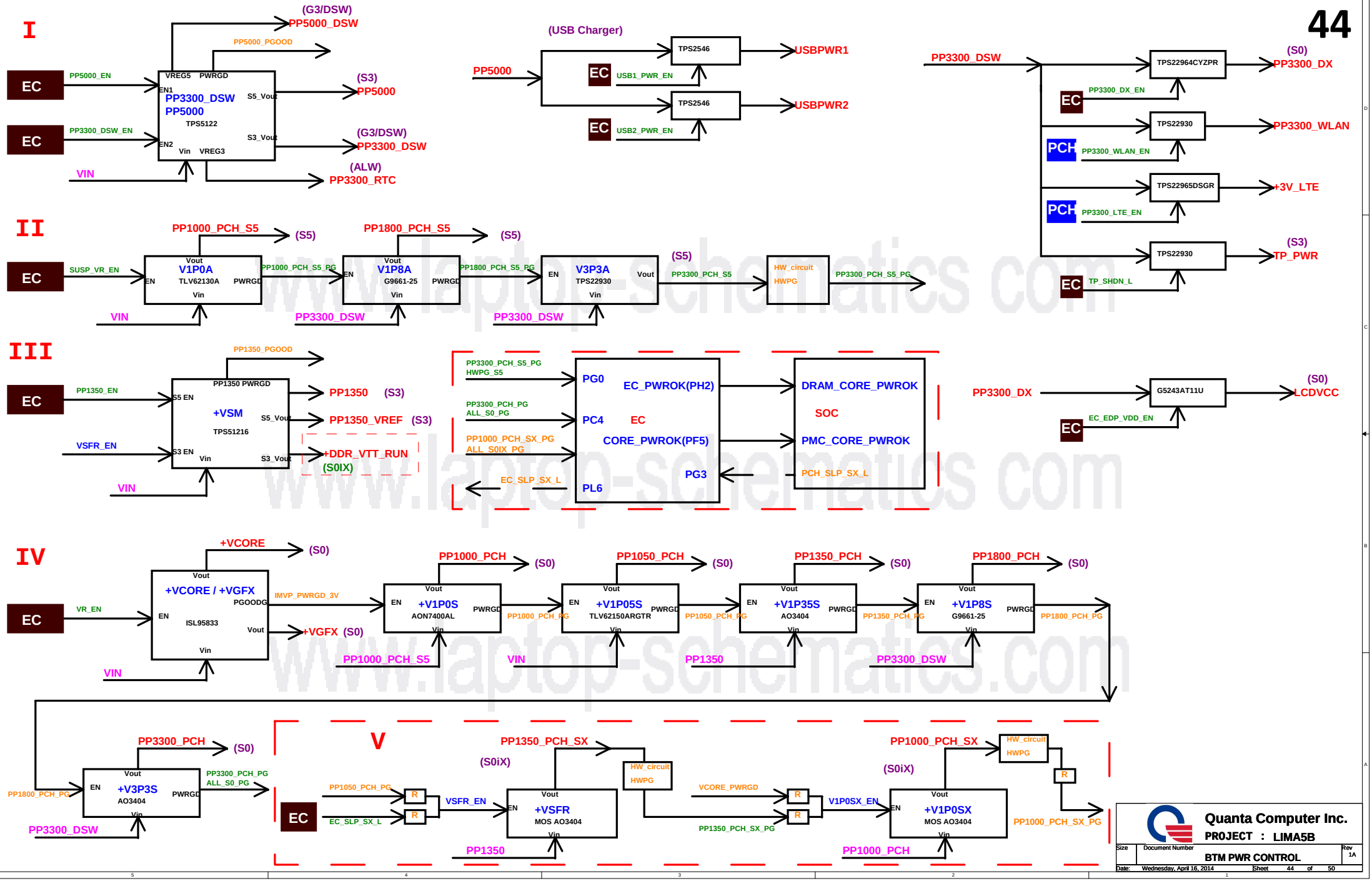


Quanta Computer Inc.	
PROJECT : LIMA5B	
Size	Document Number: Power Sequence
Rev	1A
Date: Wednesday, April 16, 2014	Sheet 42 of 50



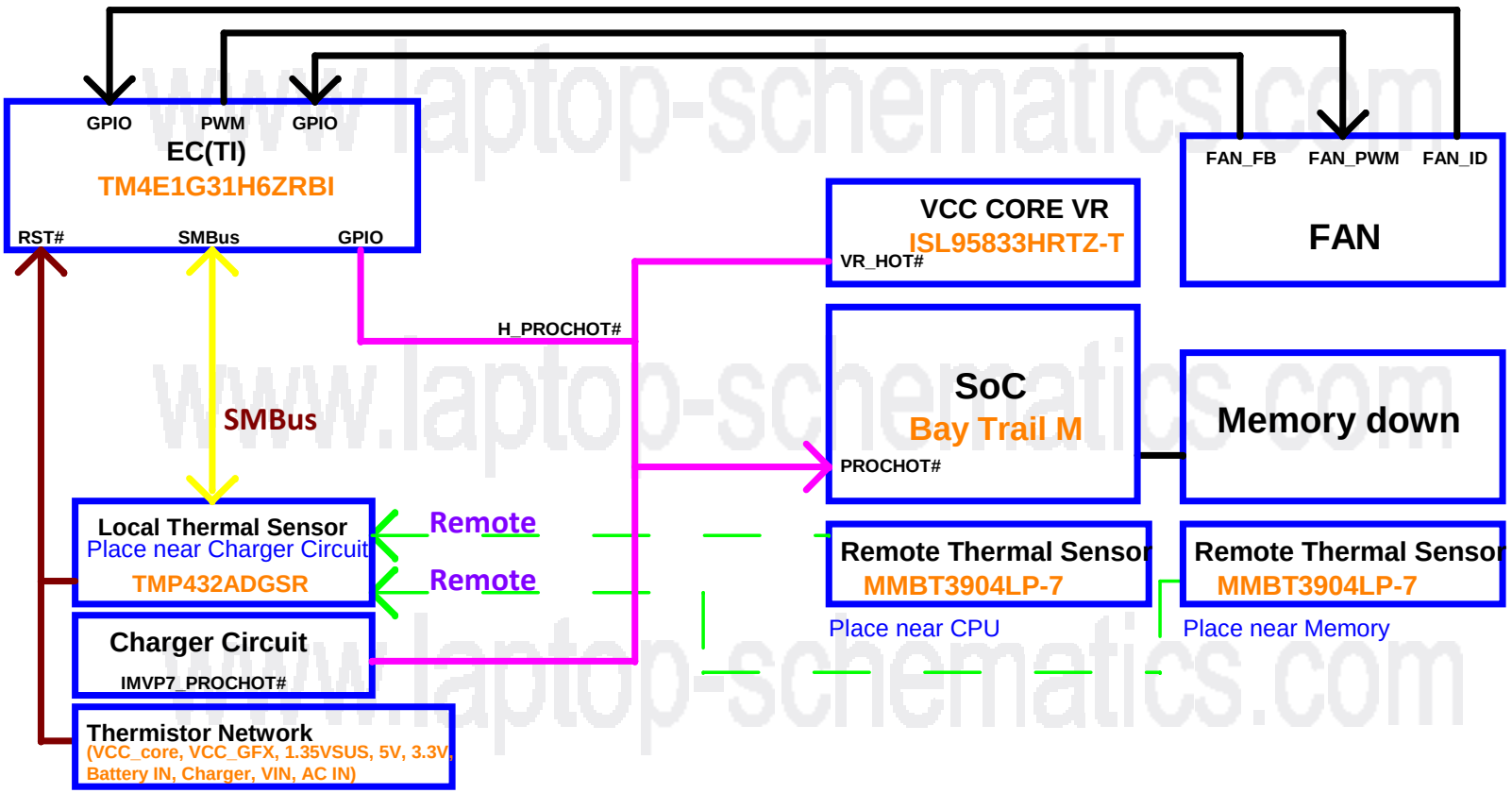


Quanta Computer Inc.
PROJECT : LIMA5B
Size | Document Number: SMBUS_I2C | Rev 1A
Date: Wednesday, April 16, 2014 | Sheet 43 of 50



Quanta Computer Inc.
PROJECT : LIMA5B
BTM PWR CONTROL
Size | Document Number | Rev 1A
Date: Wednesday, April 16, 2014 | Sheet 44 of 50

Thermal Block Diagram



Quanta Computer Inc.		
PROJECT : LIMA5B		
Size	Document Number: Thermal Block Diagram	Rev 1A
Date: Wednesday, April 16, 2014	Sheet 45 of 50	

LI□A5B Schematic EC Tracking Record A to B version(SDV/FVT Planar)

EC #	Page	Description	Part Affected
EC-DV-01	6	Pull up according to page 34 of Intel check list	R599
EC-DV-02	6,28	Add Net: KBD_IRQ# and R600 for following Rambi.	R600 and Net
EC-DV-03	14	Remove R512, because SERIQR of TPM needs 3V (Follow Rambi).	R512
EC-DV-04	14	Add 0 ohm, R601 and R602, on VCCA and VCCB for debugging (Follow Rambi).	R601 and R602
EC-DV-05	20	Add R603 and R604 and reserve L12 (Follow Rambi).	R603, R604, and L12
EC-DV-06	23	Add R605 to pull up on SERIRQ_R to TPM_VDD (Follow Rambi).	R605
EC-DV-07	42,44	Update power sequence and power tree (Follow Rambi).	
EC-DV-08	16	Add C374 for U3 input inrush current (Follow Rambi).	C374
EC-DV-09	17	Change connecting CN10.13 from GND to PP3300_DSW for supporting G-sensor on S3/S5.	CN10.13
EC-DV-10	28	VOL_UP_BTN_L change connecting from U19.F11 to U19.B9, and VOL_DOWN_BTN_L change connecting from U19.E11 to U19.C5 for Google suggestion.	U19.F11, U19.B9, U19.E11, and U19.C5
EC-DV-11	28	G_SENS1_INT_EC connect to U19.F11, and G_SENS2_INT_EC connect to U19.E11 for Google suggestion.	U19.F11 and U19.E11
EC-DV-12	21	Add PCIE re-driver because of layout problem.	U41, C375~C382, and R608~R614
EC-DV-13	31,32,33, 34,36,37	PJP1, PJP3, PJP4, PJP5, PJP6, PJP7, PJP10, PJP12, PJP14, and PJP15 change to short pad.	PJP1, PJP3, PJP4, PJP5, PJP6, PJP7, PJP10, PJP12, PJP14, and PJP15
EC-DV-14	31,32,33, 34	Add PU11, PU20, PU21, PU22, and PU23 current sense IC.	PU11, PU20, PU21, PU22, and PU23
EC-DV-15	34	Change PWM IC from TPS51312 to TLV62150.	
EC-DV-16	6,14	Delete SPI net from SOC to level shifter, and add test point.	TP56~TP63
EC-DV-17	27	Stuff CP1~CP5 and C14 for ESD suggestion.	CP1~CP5 and C14
EC-DV-18	23,28	Rotate_BTN_L_EC connect to U19.H11.	
EC-DV-19	21	Add CML6, R623, and R624 for Intel suggestion.	CML6, R623, and R624
EC-DV-20	29	Change structure of Yoga mode connection (two G-sensor).	
EC-DV-21	20	HDMI_DDC_DATA and HDMI_DDC_CLK change to pull up to HDMIC_5V.	D6 and D5
EC-DV-22	17	Remove R14 because LID_OPEN_L have R392 to pull up	R14
EC-DV-23	20	HDMI_HPD change to HDMI_MB_HP for connecting to HDMI connector.	Net name change
EC-DV-24	26	Stuff R403, R408, R423, and R439, and un-stuff CML3 and CML4 for EA test.	R403, R408, R423, R439, CML3, and CML4
EC-DV-25	33	Change footprint of PJP13 for power suggestion.	PJP13
EC-DV-26	16	Add a pull down on SoC_EDP_BLON_C and using double inverting OD FETs structure (Follow Rambi) Delete R554, R574, and Q55.	R630, R631, R632, Q66, Q67, R554, R574, and Q55
EC-DV-27	16	R185 changes to 1K to isolate SD socket and servo/SoC (Follow Rambi)	R185
EC-DV-28	16	Add R633 pull up to PP1800_PCH (Follow Rambi)	R633
EC-DV-28	8	Change C95, C20, C21, C72, C97, and C73 to 0603 22uF for ACLL issue (Follow Rambi)	C95, C20, C21, C72, C97, and C73

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EC #	Page	Description	Part Affected
EC-DV-29	25	Reserve R634 connection from RCVP to MIC_DET as back up in case driver needs to be through codec using JACKSNS pin (Follow Rambi).	R634
EC-DV-30	22	Change value of pulled up resistors for eMMC I/F (Follow Rambi)	R208, R211, R194, R209, R210, R195, R193, R170, and R184
EC-DV-31	23	Co-layout ST and Infineon TPM (Follow Rambi)	R635, R636, and R637
EC-DV-32	28	Move EC_PWROK from PH2 to PJ1, and VOL_UP_BTN_L from PJ1 to PH2 (Follow Rambi)	U19.J4 and U19.B9
EC-DV-33	28	Add test point, TP65~TP67, on unused pins of EC.	TP65, TP66, and TP67
EC-DV-34	17,21	Change R10 and R530 to 2A fuse (0603)	R10 and R530
EC-DV-35	6,7, 28,29	Change structure of Yoga mode connection (two G-sensor) and EC pinout define.	
EC-DV-36	8	Add C383 and C384 for ACLL issue.	C383 and C384
EC-DV-37	22	All Pulled up resistors of eMMC data/cmd to be un-stuffed,and R184 change to 47K ohm as well (Follow Rambi)	R170, R184, R193, R194, R195, R208, R209, R210, and R211
EC-DV-38	5	Swap CLKREQ_WLAN and CLKREQ_IMAGE for CLKREQ and CLK pins are aligned (Follow Rambi)	
EC-DV-39	28	Board ID of proto2 change to 001 (Follow Rambi).	R98 and R95
EC-DV-40	29	Add R639 and R640 for layout problems of length.	R639 and R640
EC-DV-41	35	Change pull up power of PP3300_PCH_PG to PP3300_EC (Follow Rambi).	
EC-DV-42	38	Change pull up power of PP1350_PCH_PG to PP3300_PCH_S5 (Follow Rambi).	
EC-DV-43	39	Change pull up power of PP1000_PCH_PG to PP3300_PCH_S5 (Follow Rambi).	
EC-DV-44	12,13	C329 and C339 change from 0.2pF to 3.3pF for Intel suggestion.	C329 and C339
EC-DV-45	24	Change thermal sensor design for following Rambi.	
EC-DV-46	28	Change connection of LOGO_LED_L from U19.L11 to U19.H11, and Rotate_BTN_L_EC from U19.H11 to U19.N1.	
EC-DV-47	28	Connect SOC_SENS_INT to U19.L10.	
EC-DV-48	22	Remove R167 on eMMC CLK (Follow Rambi).	R167
EC-DV-49	26	Change CML3 and CML4 to DLP11TB800UL2 for Intel suggestion.	CML3 and CML4
EC-DV-50	2	Add decoupling caps (0.1uF), C385~C390, for Intel suggestion.	C385~C390
EC-DV-51	23	Add decoupling caps (0.1uF), EC24~EC27, for EMI suggestion.	EC24~EC27
EC-DV-52	4	Connect RF_LED_ON to U20.D32 (GPIO26) for Google suggestion.	
EC-DV-53	17	Power of touch panel select to PP3300_DSW for Google suggestion.	R303 and R304
EC-DV-54	17	Delete TCH_PNL_ON and add test point (TP71) for Google suggestion.	TP71
EC-DV-55	24	Change Hall sensor IC of U8.	U8
EC-DV-56	38	Un stuff PR54 and stuff PR51 (Follow Rambi)	PR54 and PR51
EC-DV-57	15	Un stuff R290, R297, and R310 for Touch panel detect issue.	R290, R297, and R310

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EC #	Page	Description	Part Affected
EC-SIT-01	35	PP5000_DSW net rename to PP5000_RTC	
EC-SIT-02	31~40	PP5000 net rename to PP5000_DSW	
EC-SIT-03	35,40	Add PP5000 load switch and discharge schematic	PQ60,PQ66, PR258, PC206~PC208
EC-SIT-04	35,40	Add PP5000_PCH load switch and discharge schematic	PQ61~PQ65, PR248~PR257, PC209~PC213
EC-SIT-05	36,40	Reserved SUSP_VR_EN for PP1800_PCH_S5 power rail EN	PR245, PR246, PR247
EC-SIT-06	40	Change PR114 and PR165 value and footprint	PR114, PR165
EC-SIT-07	30~32,37	Stuff for ESD solution	ER1~ER6,EC5,EC13,EC17,EC20,EC21,EC23
EC-SIT-08	30~32,36	Change 0 ohm to 0603 short pad for cost saving.	PR120,PR38,PR239,PR82
EC-SIT-09	30~37	Change 0 ohm to 0402 short pad for cost saving.	PR14,PR116,PR122,PR176,PR226,PR28,PR34,PR244,PR186,PR210,PR194, PR142,PR91,PR147,PR149,PR65,PR72,PR123,PR9,PR12
EC-SIT-10	23	Change Pin define of CN8.	CN8
EC-SIT-11	24	Change Pin define of CN12.	CN12
EC-SIT-12	17	Change footprint and Quanta PN of CN9.	CN9
EC-SIT-13	28	Change footprint and Quanta PN of L1.	L1
EC-SIT-14	27	Change L4 from 0 ohm to 2A fuse.	L4
EC-SIT-15	7	Add RAM_ID3 on GPIO_S5_40 (U20.J3).	R646 and R647
EC-SIT-16	7	Modify RAM ID table.	
EC-SIT-17	20	Change HDMI power from PP5000 to PP5000_PCH.	
EC-SIT-18	25	Change Audio 5V power from PP5000 to PP5000_PCH.	
EC-SIT-19	17	Change RF LED power from PP5000 to PP5000_PCH.	
EC-SIT-20	22	Stuff R170, R184, R193, R194, R195, R208, R209, R210, and R211 for eMMC debug.	R170, R184, R193, R194, R195, R208, R209, R210, and R211
EC-SIT-21	1~29	Update function code.	
EC-SIT-22	23,28	Swap Net of Volume UP and Volume DOWN.	
EC-SIT-23	17,23	Reserve RV11, RV12, and EC29~EC39 for ESD and EMI suggestion.	RV11, RV12, and EC29~EC39
EC-SIT-24	26	R448 change from 25.5K ohm to 20K ohm because of changing charge current.	R448
EC-SIT-25	14	Un-staff Q49~Q52, R547~R550, R531, and R533~R535 because Google does not support them.	Q49~Q52, R547~R550, R531, and R533~R535
EC-SIT-26	14	Un-staff U27, R601, R602, and R511 for leakage issue.	U27, R601, R602, and R511
EC-SIT-27	16	Reserve SC25~SC30 for ESD suggestion.	SC25~SC30
EC-SIT-28	17	Stuff R304, and un-stuff R303 for changing power of Touch panel from S5 to S0.	R303 and R304
EC-SIT-29	24	Change FANSIG_R and FAN_ID pull high power rail from PP3300_DX to PP3300_DSW, because Fan power rail is PP5000.	
EC-SIT-30	20	Un-stuff D5 and D6, and add R648 and R649 for cost saving.	D5, D6, R648 and R649
EC-SIT-31	17	Reserve R650 because Touch control board will change design.	R650

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EC #	Page	Description	Part Affected
EC-SIT-32	15	Delete Q14, and add Q68 and Q69 for leakage current issue.	Q14, Q68, and Q69
EC-SIT-33	15	Add R651 and D15 for leakage current issue.	R651 and D15
EC-SIT-34	15	Q38 change to U42 for leakage current issue.	Q38 and U42
EC-SIT-35	17	Change Touch panel power rail to S3 state.	U43, C392, R653, R303, R304, and C194
EC-SIT-36	4,17,21	Change RF LED design from SOC GPIO to WLAN module.	
EC-SIT-37	24	Change Fan power rail from S3 state to S0 state.	
EC-SIT-38	23	Un-stuff R485 for leakage current issue (follow Rambi).	R485
EC-SIT-39		R115,R122,R123,R126,R13,R132,R137,R140,R157,R159,R169,R189,R190,R191,R196,R197,R198 R199,R200,R201,R207,R212,R294,R314,R325,R326,R333,R334,R335,R338,R339,R340,R35,R36 R370,R372,R373,R384,R4,R404,R41,R413,R48,R482,R513,R53,R56,R560,R562,R57,R584,R63 R66,R74,R80,R138,R152,R292,R309,R34,R354,R40,R455,R470,R474,R555,R575,R144,R153,R307 change from 0 ohm to short pad.	
EC-SIT-40	24	Un-stuff U8, C391, C190, and R288 because LID2 is not necessary.	U8, C391, C190, and R288
EC-SIT-41	35,38,40	Un-stuff PR257, PR231, PR219, and PR55 because EC side has pull-down resisters.	PR257, PR231, PR219, and PR55
EC-SIT-42	28	Un-stuff SW5 because power button is on MB.	SW5
EC-SIT-43	5	Reserve C393 for EMC suggestion.	C393
EC-SIT-44	16	Change R189, R199, R200, R190, R191, and R197 from short pad to 22 ohm bead for EMC suggestion.	R189, R199, R200, R190, R191, and R197
EC-SIT-45	20,23,27	Stuff R296, R302, R308, R315, RV5, RV6, RV3, RV7, RV8, and RV9 for EMC suggestion.	R296, R302, R308, and R315
EC-SIT-46	17,18	Add PAD1, PAD2, and PAD3, and let CN9.45 float.	
EC-SIT-47	7	Modify RAM ID table, add three config.	
EC-SIT-48	17,23	Change R305 and R259 to 1k ohm for meeting spec.	R305 and R259
EC-SIT-49	38	Un-stuff PC64 for power up sequence time.	PC64
EC-SIT-50	06	Change C231 and C232 from 15 pF to 8.2 pF for Xtal vendor suggestion.	C231 and C232
EC-SIT-51	28	Change C258 and C270 from 18 pF to 12 pF for Xtal vendor suggestion.	C258 and C270
EC-SIT-52	30	Stuff PC66 and PC67 for EMC suggestion.	PC66 and PC67
EC-SIT-53	16	R197 change from 75 ohm to 0 ohm and un-stuff SC27 because SD card signal EA has not been tested.	R197 and SC27
EC-SIT-54	6,23,28	Un-stuff SW1, R203, RV3, R357, R517, and R518 because of function dropping.	SW1, R203, RV3, R357, R517, and R518

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EC #	Page	Description	Part Affected
EC-SVT-01	11	Un-stuff R47 for leakage current issue.	R47
EC-SVT-02	17	Reserve R660 and R661 for following Rambi design.	R660 and R661
EC-SVT-03	4,17	Reserve R493, Q37, and R662 for RF LED controlling by SOC GPIO.	R493, Q37, and R662
EC-SVT-04	23	Change R259 to 1.5k ohm for meeting spec.	R259
EC-SVT-05	16	Reserve R663 for EMC suggestion.	R663
EC-SVT-06	15	Delete U42 and Q34, and add U44, C394, R664, Q72, and R665 for following Rambi to solve leakage current issue.	U42, U44, R665, C394, Q72, and R664
EC-SVT-07	17	Reserve R666 for following Rambi design (reserve TOUCH_RST_L as LDO enable pin).	R666
EC-SVT-08	31~34	Change current sense resistor to short pad for cost saving.	PJP8, PJP11, PJP16, PJP13, PJP17
EC-SVT-09	31~34	Un-stuff current sense IC and capacitor for cost saving.	PU11, PU22, PU20, PU23, PU21, PC196~PC201, PC204 and PC205
EC-SVT-10	17	Delete R653, R666, R654, and R27, and add C398 for changing touch panel power control pin.	C398, R653, R666, R654, and R27
EC-SVT-11	17	Change R309 to 0402 package and add R672 for DMIC noise issue.	R309 and R672
EC-SVT-12	6,7,17, 28,29	Add D23, U45, C395 ,C397, C396, R670, R671, R669 and delete R626, R627, R616, R618, R619, R620, R621, R622, R639, R640, R320, R625, R316, and R638 for changing G-sensor connection.	D23, U45, C395 ,C397, C396, R670, R671, R669, R626, R627, R616, R618, R619, R620, R621, R622, R639, R640, R320, R625, R316, and R638
EC-SVT-13	7	Reserve R673 for following Rambi design.	R673
EC-SVT-14	17,23	Change R305, R259, and R234 to connect to PP5000_DSW for supporting in S5 state.	R305, R259, and R234
EC-SVT-15	21	Add U41.21, U41.22, U41.23, U41.24, and U41.25 and connect to GND for IC design.	U41.21, U41.22, U41.23, and U41.24
EC-SVT-16		Change L7,R671,R615,R617,R415,R453,R472,R498,R352,R146,R293,R567,R527,R198,R294,R662, R659,R623,R624,R642,R643,R641,R644,R139,R563,R569,R161,R163,R648,R649,PR56,PR201, PR181,PR127,PR29,R91,R44,R45,R68,R319,PR57,R110,R111,R116,R119,R121,R130,R147,R381, R514,PR13,R516 to shortpad, and delete CML6 to shortpad, and delete CML6 for cost saving.	
EC-SVT-17		Un -stuff R493,Q7,Q68,Q69,Q39,R515,R460,Q10,R311,R306,R6,R26,C398,R18,U43,C392,R303, C194,Q37,R364,C230,C233,R443,R435,C234,C239,C246,C245,C222,C244,L6,L5,C223,C219, D11,R434,C248,C247,R363,R328,R329,R386,R411,C214,U14,D23,U45,C395,C396,R670,R669, Q35,R454, and R496 for non-touch sku.	
EC-SVT-18	1	Update Block Diagram.	
EC-SVT-19	21	Remove R610,R611,R612,R613,R614,C380,C379,C378,C377,R609,TP64,U41, C382,R608,C375,C376,and C381 for battery life issue.	R610,R611,R612,R613,R614,C380,C379,C378,C377,R609,TP64,U41, C382,R608,C375,C376,and C381
EC-SVT-20	29	Change R670 from 0 ohm to 2A fuse for Lenovo suggestion.	R670

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