Page	Title of schematic page	Rev.	Date
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03	Change List	1A	
04	FP2 1/4(PEG&UMI)	1A	
05	FP2 2/4(DDR3 I/F)	1A	
06	FP2 3/4(DP/MISC)	1A	
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08	FCH 1/6(GPIO/USB/AZ)	1A	
09	FCH 2/6(UMI/PCIE/PCI/CLK)	1A	
10	FCH 3/6(SATA/VGA/SPI)	1A	
11	FCH 4/6(POWER)	1A	
12	FCH 5/6(Strap)	1A	
13	FCH 6/6(GND)	1A	
14	DDR3 DIMM-0-STD	1A	
15	DDR3 DIMM-1-STD	1A	
16	WPCE985L & FLASH	1A	
17	LVDS\TS\NFC	1A	
18	CARD READER(RTS5209)	1A	
19	HDMI/THERMAL	1A	
20	USB	1A	
21	LAN (RTL8111GS)	1A	
22	WLAN/KB-BL	1A	
23	HDD/ODD/G-SENSOR/TP/FAN	1A	
24	Audio ALC233-CG	1A	
25	LED/PS/DMIC\Camera	1A	
26	POWER +VCC_CORE (ISL62771)	1A	
27	POWER 3VPCU&RVCC5(TPS51427)	1A	
28	POWER 1.35VSUS/VTT_MEM	1A	
29	POWER +1.1V(G5602R41U)-5A	1A	
30	POWER VCC1.2/VCC2.5/Thermal	1A	
31	POWER(BAT IN / ADA IN/ UL)	1A	
32	POWER CHARGER (ISL88731C)	1A	
33	HOLE/EMI/KB	1A	
34	eDP to LVDS	1A	
35	IO PORT LIST	1A	

* : No mount
I@ : For native eDP output
D@ : For eDP to LVDS output

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

HKA BLOCK DIAGRAM

02

DDR3L : 1.35V
DDR3 : 1.5V

Dual Channel

P14~P15

DDR SYSTEM MEMORY

AMD <CPU>
RICHLAND
BGA827
(31mm X 27mm)

P4~P7

eDP

eDP to LVDS
RTD2136R

LVDS

P35

P17

HDMI

P19

UMI

TOUCH SCREEN

P17

PORT5

Camera P25

PORT7

WiMax/BT P22

PORT6

USB I/O P20

PORT1

USB I/O P20

PORT0

USB I/O P20

PORT1

USB I/O P20

PORT0

P23 HDD SATA0 6Gb/s

P23 ODD SATA1 3Gb/s

USB 2.0

PORT11

PORT10

USB 3.0

AMD <FCH>
BOLTON-M3
BGA656
(24.5mm X 24.5mm)

SATA Gen3

SATA Gen2

USB

PCIE Interfaces

HDA

SPI

P8~P13

5GT/s

PCI-Express Gen2

PCIE2

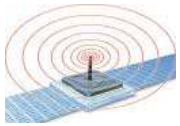
PCIE0

PCIE1

Giga-LAN
RTL8111GS
P21

RJ45

P21



WLAN/BT P22

Card Reader
RTS5227E
P18

SD-XC

P18

Azalia

Audio CODEC
ALC233-CG
P24

SPI ROM
8MB P10

LPC

Thermal Sensor
Beside CPU
Beside HDD
Beside Audio Jack
P19

I2C

NFC
Foxconn
T77H446 P17

Lid Switch
P16

EC
NPCE985L
P16

G Sensor
LIS331DLHTR

SPI P23

PS2/SMBUS P23

Touch Pad

P22,P33

Back Light Keyboard

Power LED
Charge LED
HDD Status LED
Caps Lock LED
Num Lock LED

Button
ASSIST#
Power SW

Woofer

P34

HP Jack

P24

MIC Jack

P24

SPK

P24

DMIC

P24

Change List

MB_SCH_DVT_001

P21 Reserve U30,LR12,LR13,LC21

Reason : For LAN S5 wake up won't be supported.
Possible Risk: No.

MB_SCH_DVT_002

P25 Chang R198 and R309 resistor

Reason : Modify circuit for LED Light
Possible Risk: No.

MB_SCH_DVT_003

P22 Delete R333 0ohm and add F9(0.35A) fuse

P22 Delete R468[100K],Q33[2N7002]

Reason : Modify circuit for KB BL protection.
Possible Risk: No.

MB_SCH_DVT_004

P9 Change part of Crystal Y1 32.768K.

Reason : Original part is EOD.
Possible Risk: No.

MB_SCH_DVT_005

P8 Modify circuit for NFC function.

Change R865,R866 to R861,R864.
change NFC_EN from GPIO166 to GEVENT22#.

Reason : To enable NFC function.
Possible Risk: No.

MB_SCH_DVT_006

P16 Reserve diode KD4 for EC_PWRBTN#.

P22 Reserve diode D12 for WLAN_RF_ON.

Reason :For cost down.
Possible Risk: No.

MB_SCH_DVT_007

P20 Add choke for USB ports.

P25 Add choke for Camera USB interface.

Reason :EMI issue.
Possible Risk: No.

MB_SCH_DVT_008

P7,P11 Change capacitors 22U X5R 0805 to 22U X5R 0603.

Reason :To enlarge the distance between Cap. and Keyboard.
Possible Risk: No.

MB_SCH_DVT_009

P33 Change FCH NUT shape.

Reason :To fit screw's size.
Possible Risk: No.

MB_SCH_DVT_010

P16 Add KR42 10K ohm.

Reason :To fit LVDS panel power sequence.
Possible Risk: No.

MB_SCH_DVT_011

P8 Add SMBUS path from FCH to RTD2136R.

Reason :Reserve the way to flash RTD2136R eFuse.
Possible Risk: No.

MB_SCH_DVT_012

P9,P21 Change Capacitors for XTAL Y2, LY1.

Reason :For more precisely frequency of XTAL.
Possible Risk: No.

MB_SCH_DVT_013

P19 Change Resistor of HDMI signals resistors.

Reason :For better HDMI signal quality.
Possible Risk: No.

POWER

2A-P1
Change PC580 and PC599 from 0.047u to 0.068 for fine tune IC response

2A-P2
add PC617, PC618, PC619, PC620 for meet AMD SPEC of ripple

2A-P3
change PR58 from 255k to 196k for fine tune OCP

2A-P4
change from 3.75k to 3K for fine tune OCP

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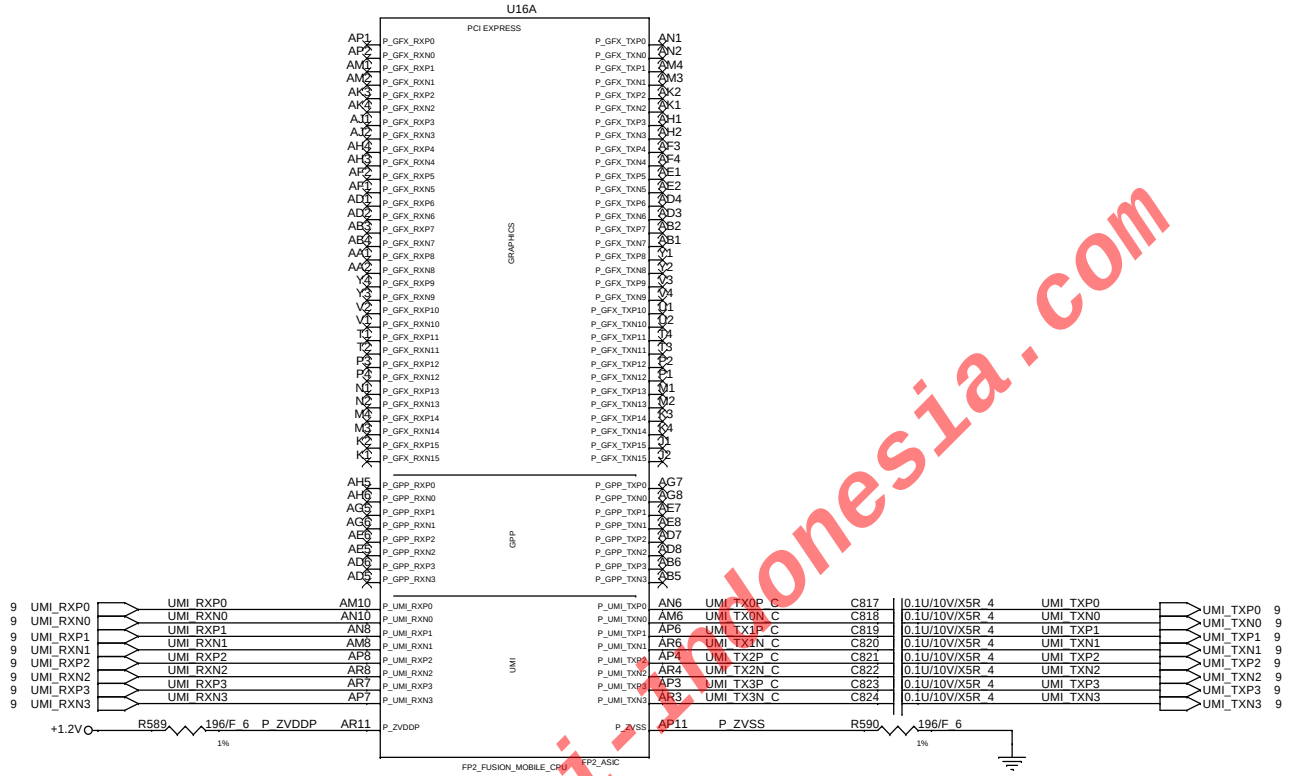

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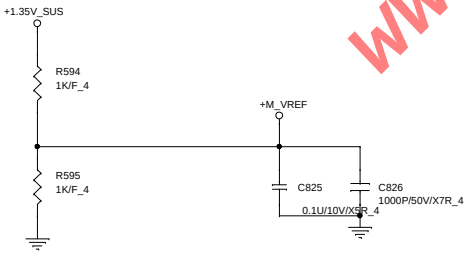
Quanta Computer Inc.		
PROJECT : HKB		
Size	Document Number: FP2 1/4(PEG&UMI)	Rev: 1A
Date: Tuesday, April 23, 2013	Sheet 4 of 36	



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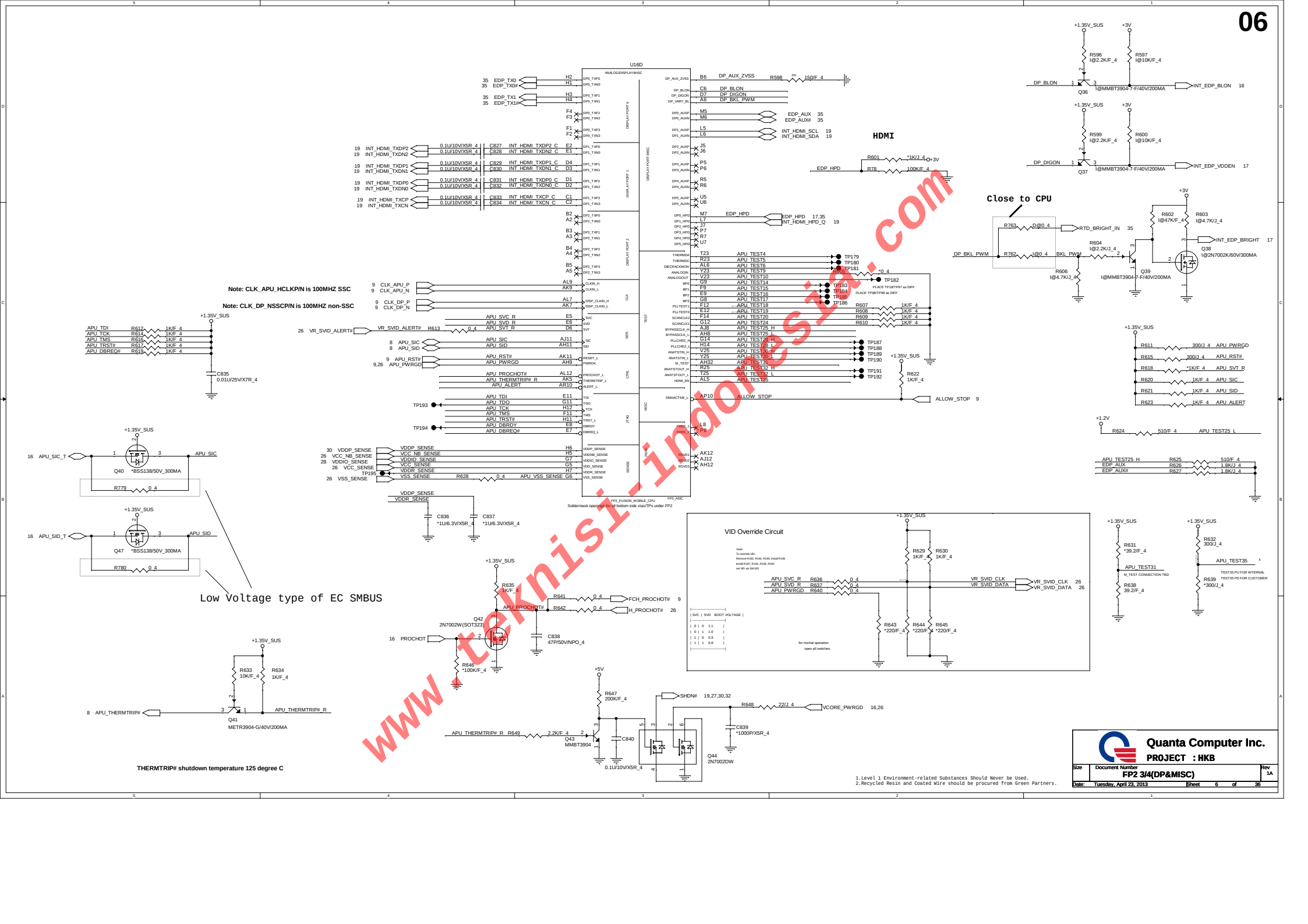
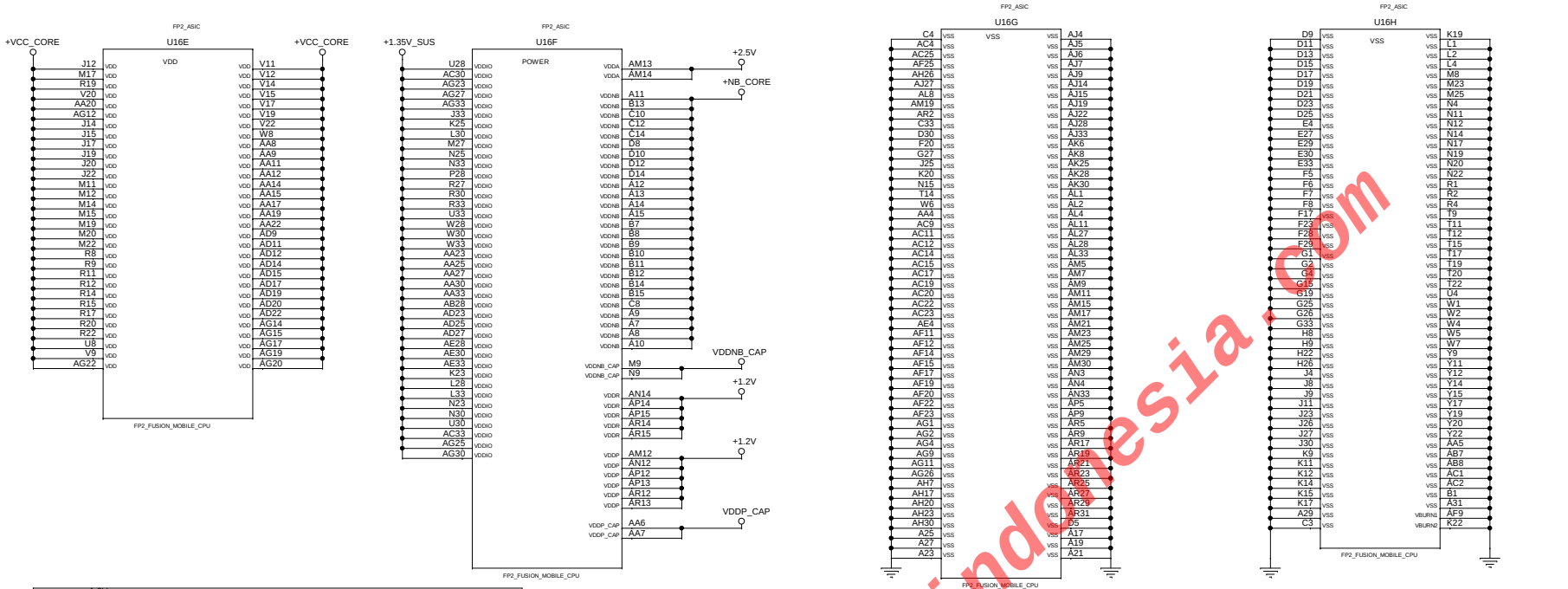
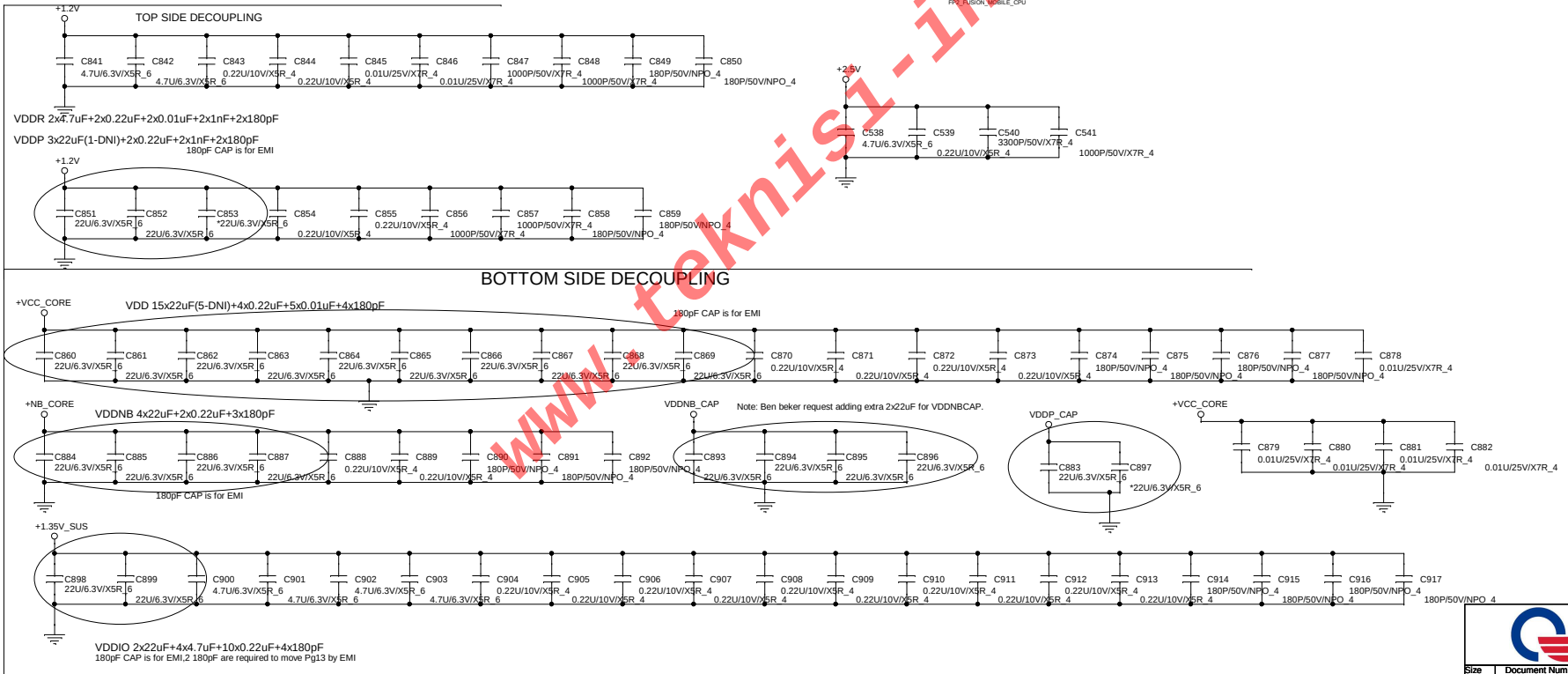
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	FP2 2/4(DDR3 I/F)	1A
Date: Tuesday, April 23, 2013	Sheet 5 of 36	







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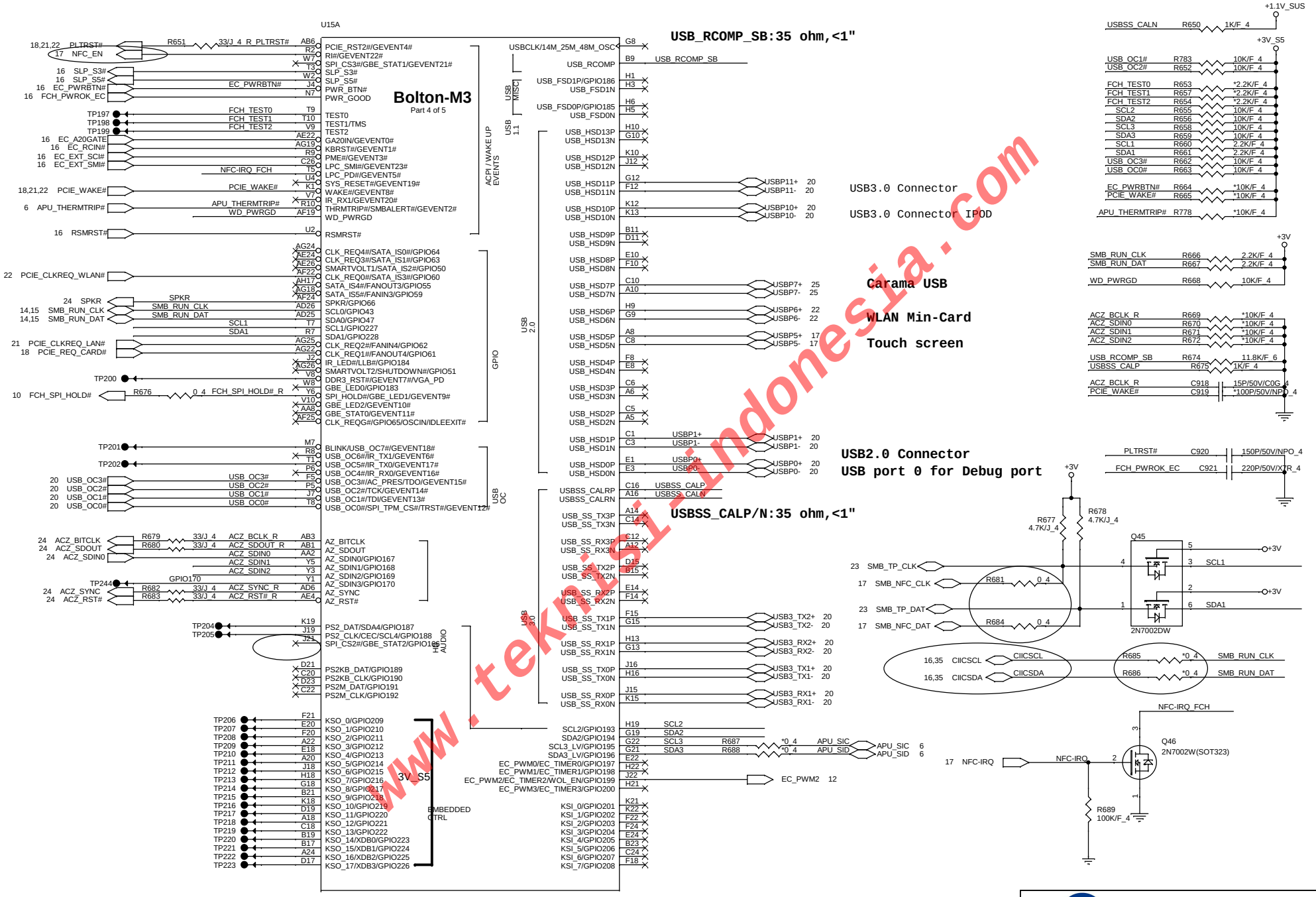
PROJECT : HKB

Size	Document Number	Rev
	FP2 4/4(POWER&GND)	1A
Date: Thursday, April 25, 2013	Sheet 7 of 36	

FCH 1/5(GPIO/USB/AZ)



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Quanta Computer Inc.		
PROJECT : HKB		
Size	Document Number: FCH 1/6(GPIO/USB/AZ)	Rev: 1A
Date: Tuesday, April 23, 2013	Sheet 8 of 36	

FCH 2/5(UMI/PCIE/PCI/CLK/LPC)

Place these PICE AC coupling cap close to FCH

PCIE_CALP/N_FCH:55 ohm,<1"

U15E

Bolton-M3

Part 1 of 5

PCI EXPRESS INTERFACES

PCI INTERFACE

PCI CLKS

CLOCK GENERATOR

LPC

APU

S5 PLUS

SI

20MIL

*SHORT_PAD

DMIC_DETECT:
High : Single DMIC
Low : Dual DMIC

Internal PU 8.5k to 3V

USE GROUND GUARD FOR 32K_X1 AND 32K_X2

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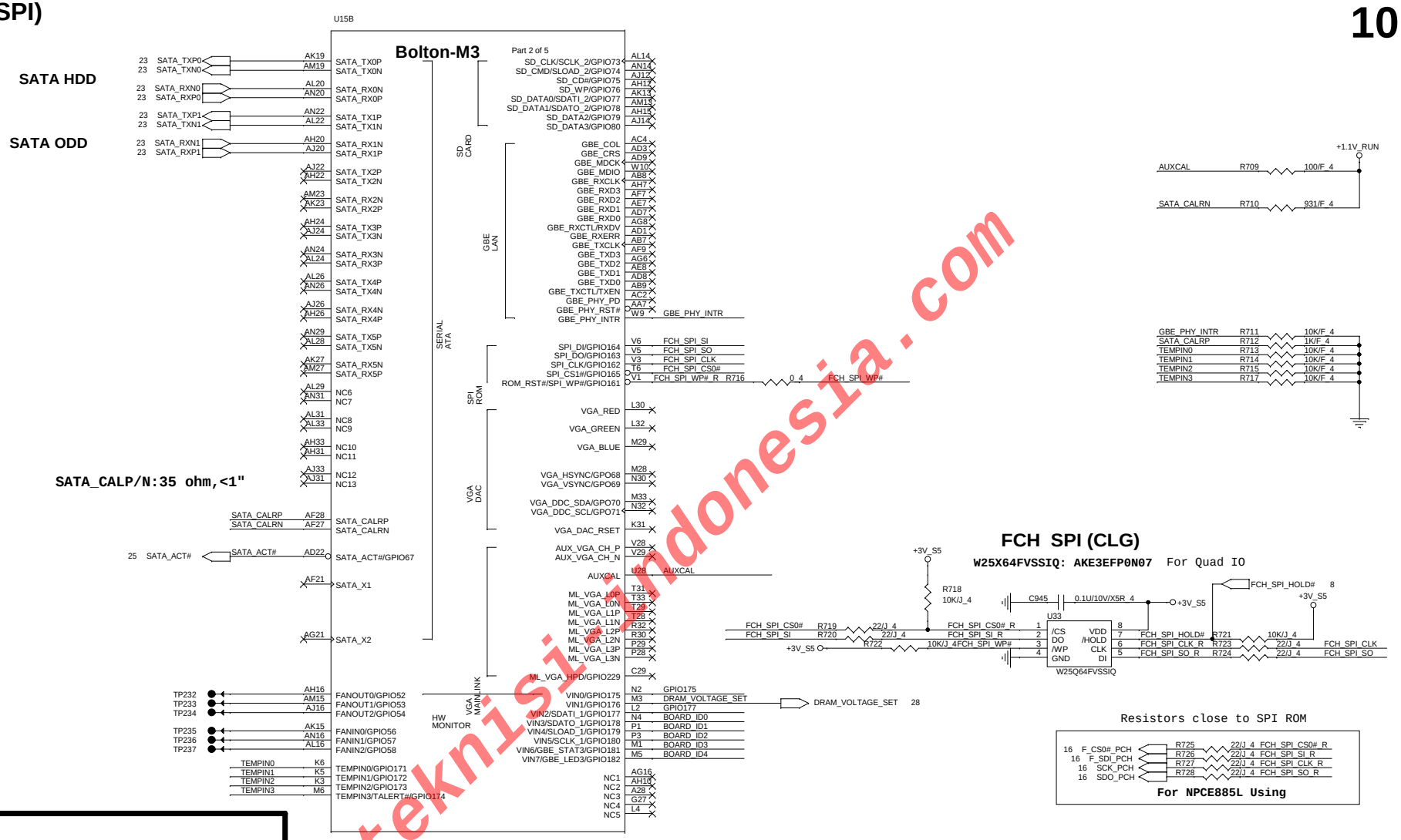
Quanta Computer Inc.

PROJECT : HKB

Size	Document Number	Rev
	FCH 2/5(UMI/PCIE/PCI/CLK/LPC)	1A
Date: Tuesday, April 23, 2013	Sheet 9 of 36	

FCH 3/5(SATA/VGA/SPI)



SIZE	Board ID0
HKA 14"	0
HKB 15"	1

I/F	Board ID1
eDP	0
LVDS	1

CPU	Board ID2	Board ID3
A4	0	0
A6	0	1
A8	1	0
A10	1	1

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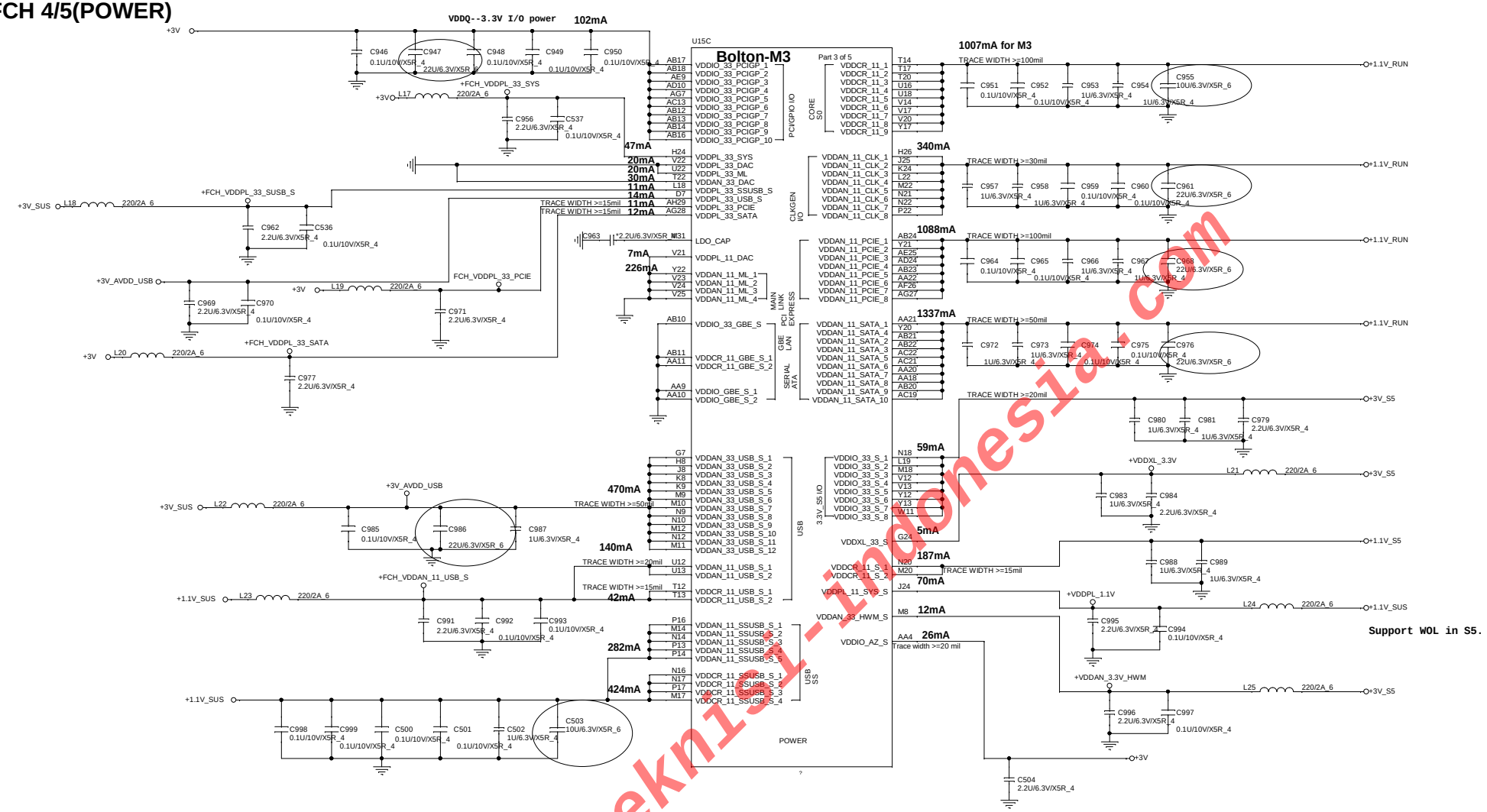
PROJECT : HKB

Size	Document Number	Rev
	FCH 3/6(SATA/VGA/SPI)	1A
Date: Tuesday, April 23, 2013	Sheet 10 of 36	

FCH 4/5(POWER)



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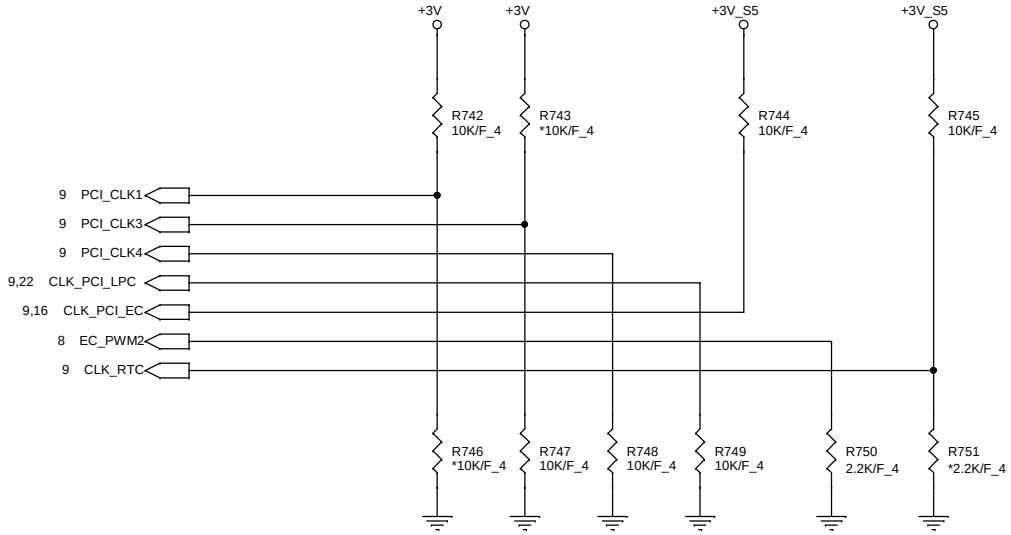
STRAPS PINS

OVERLAP COMMON PADS WHERE POSSIBLE FOR DUAL-OP RESISTORS.



REQUIRED STRAPS

	--------	PCI_CLK1	--------	PCI_CLK3	PCI_CLK4	(LPCCLK0) CLK_PCI_LPC	(LPCCLK1) CLK_PCI_EC	EC_PWM2	CLK_RTC
PULL HIGH	--------	ALLOW PCIE Gen2 DEFAULT	--------	USE DEBUG STRAP	Reserved	AMD internal EC ENABLED	CLKGEN ENABLED DEFAULT	LPC ROM	S5 PLUS MODE DISABLED DEFAULT
PULL LOW	--------	FORCE PCIE Gen1	--------	IGNORE DEBUG STRAP DEFAULT	Required setting for integrated clock mode DEFAULT	EC DISABLED DEFAULT	CLKGEN DISABLED	SPI ROM DEFAULT	S5 PLUS MODE enble

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DEBUG STRAPS

12

FCH has 15K Internal Pull Up for PCI_AD[27:23]

remove reserve pull low resistor reserve test point only.

	PCI_AD27		PCI_AD25	PCI_AD24	PCI_AD23
PULL HIGH	USE PCI PLL DEFAULT		normal REFCLK DEFAULT	USE DEFAULT PCIE STRAPS DEFAULT	DISABLE PCI MEM BOOT DEFAULT
PULL LOW	BYPASS PCI PLL		Inverted REFCLK	USE EEPROM PCIE STRAPS	ENABLE PCI MEM BOOT

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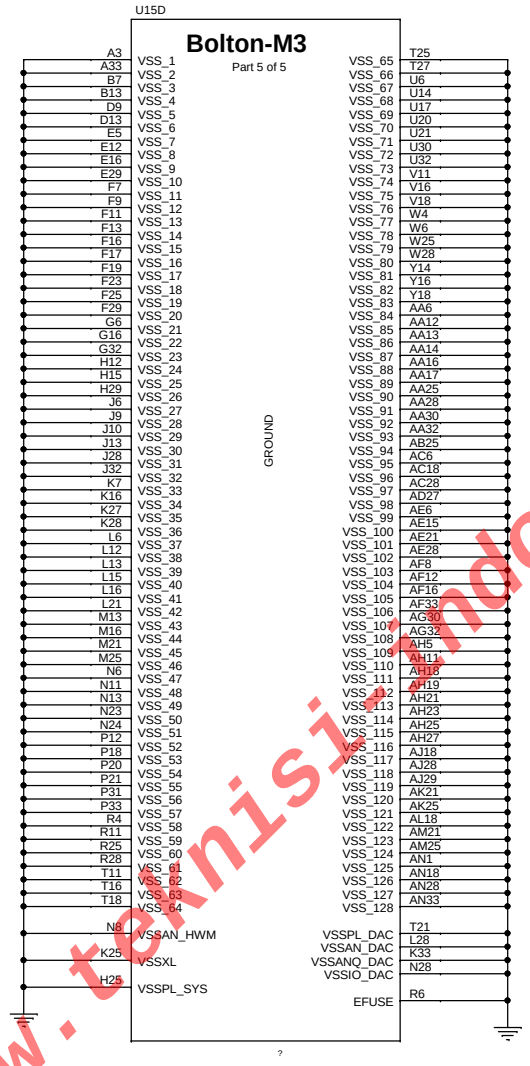
PROJECT : HKB

Size	Document Number	Rev
	FCH 5/6(Strap)	1A

Date: Tuesday, April 23, 2013 Sheet 12 of 36



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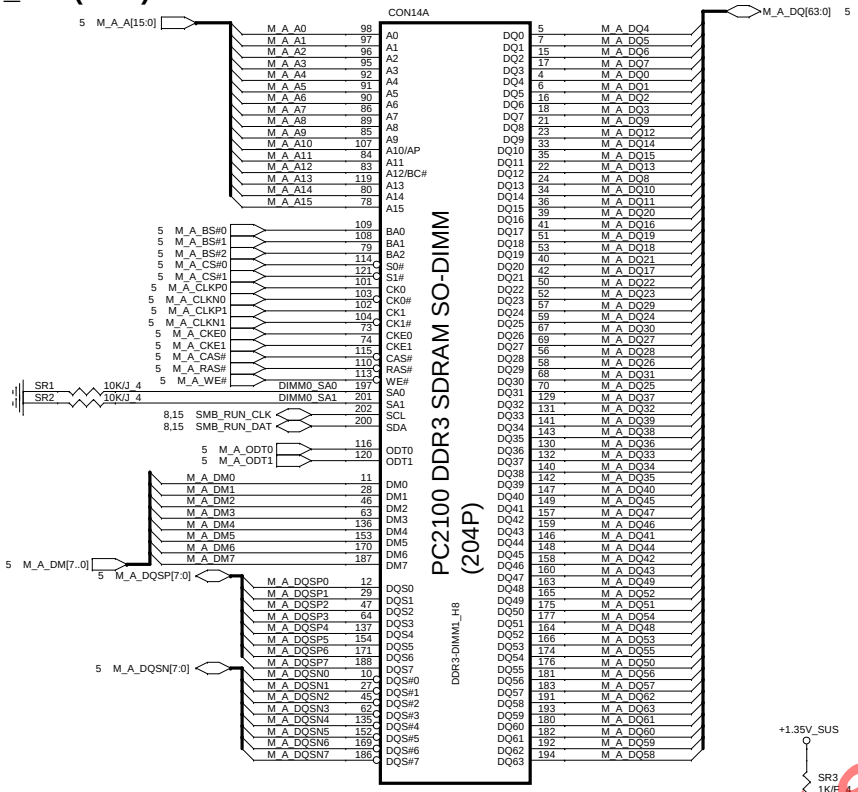
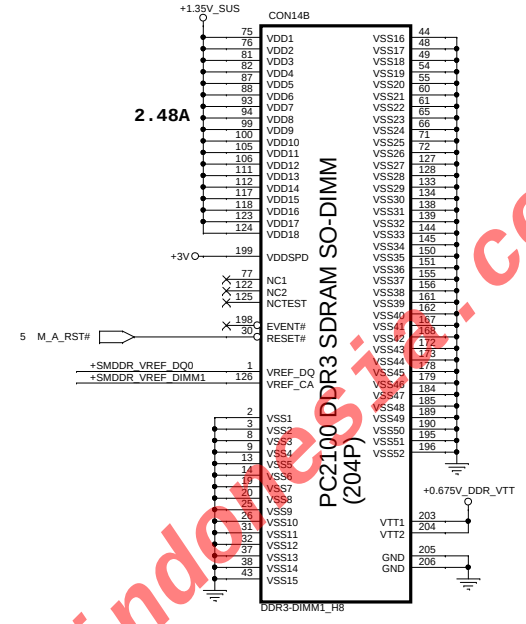
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	FCH 6/6(GND)	1A
Date: Tuesday, April 23, 2013	Sheet 13 of 36	

DDR_RVS(DDR)



STD Type



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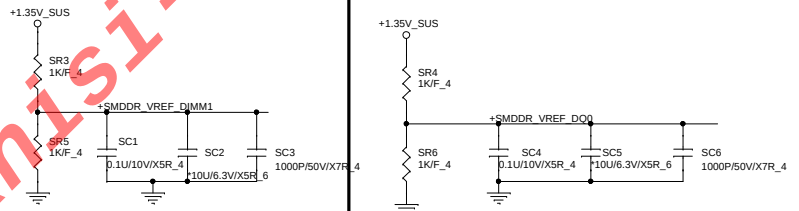
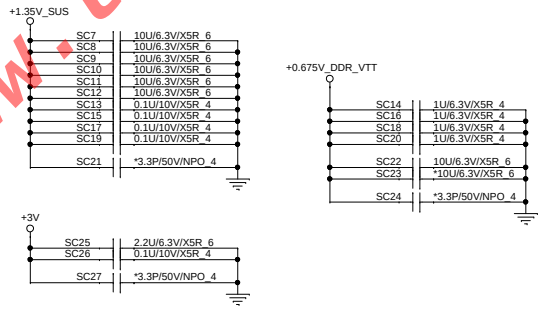


Place these Caps near So-Dimm1.



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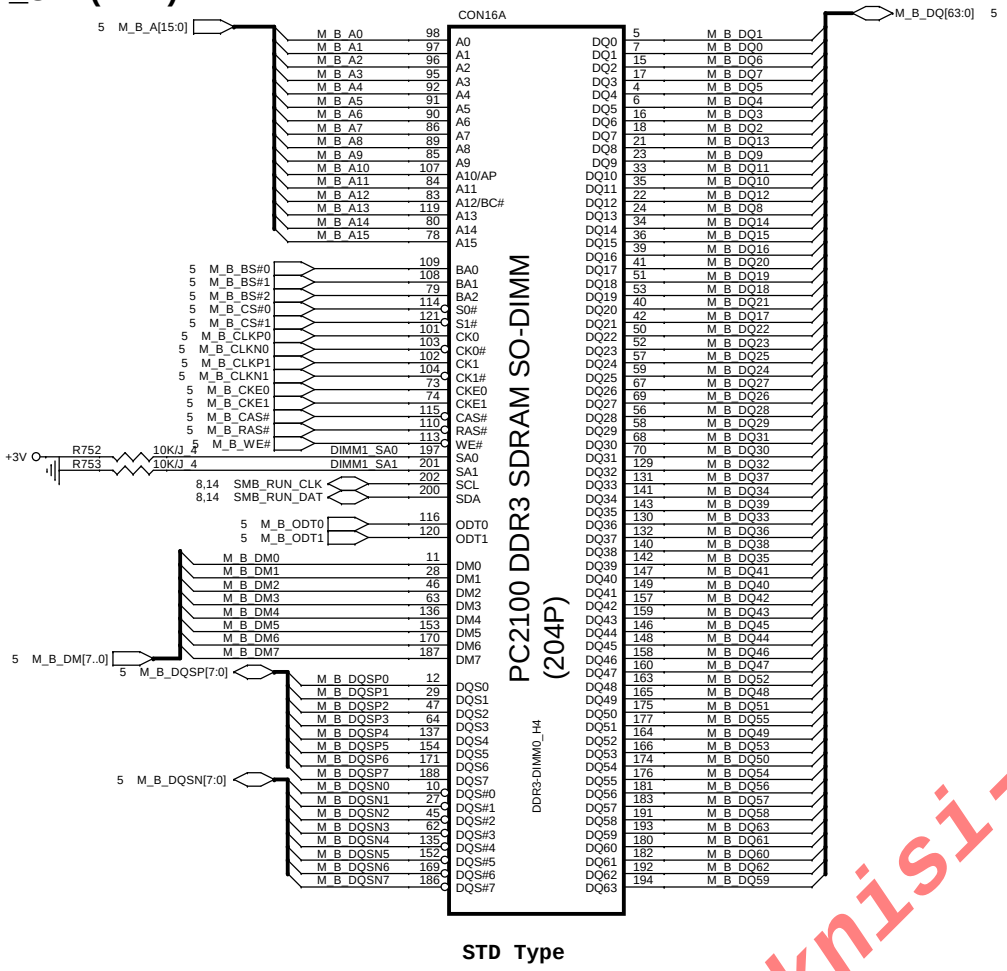
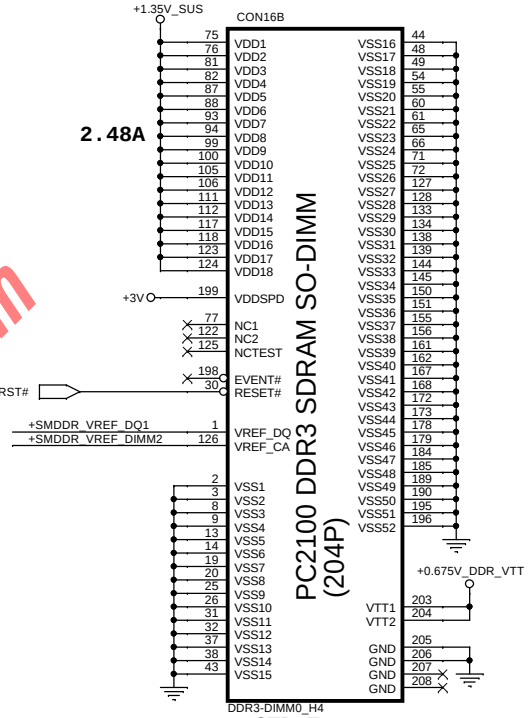
Quanta Computer Inc.		
PROJECT : HKB		
Size	Document Number: DDRIII SO-DIMM-0	Rev: 1A
Date: Tuesday, April 23, 2013	Sheet 14 of 36	

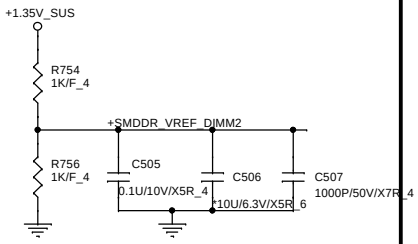
DDR_STD(DDR)

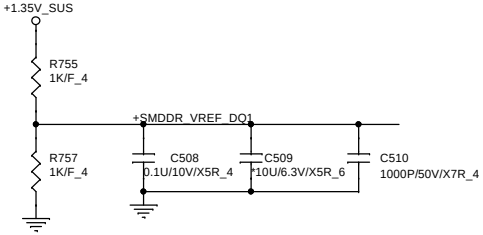


STD Type

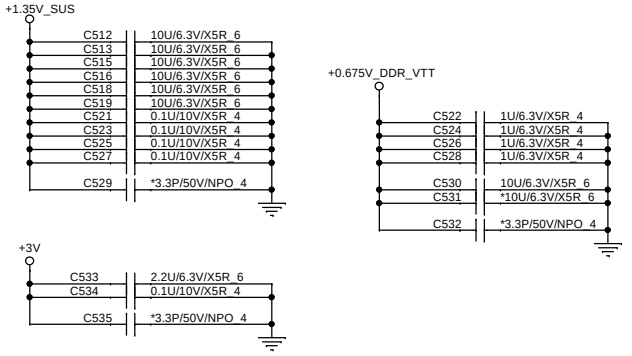


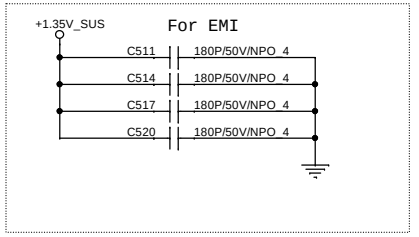
STD Type





Place these Caps near So-Dimm1.





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Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	DDRIII SO-DIMM-1	1A
Date: Tuesday, April 23, 2013	Sheet 15 of 36	

**** Straping Pin,Can not pull low.**
Note the input leakage current to the strap pins must be less than 10uA.

Since ECSCI is OD, no need for a back-drive protection diode on this signal. But note there is internal PU in chipset at default

Magnetic Lid Switch

KU3
+3VPCU — 1 IN, OUT — 2 LID#, GND — 3
E-CMOS

E-CMOS :AL002618001/EC2618NLB1GR
PROLIFIC : AL003661003/PT3661-BB
BCD : AL009249000/AH9249NTR-G1

Charger IC
Battery
eDP to LVDS
Therm1
Therm2
APU DTS

KU2 — PC985L_0

LPC: LAD0/GPIOF1, LAD1/GPIOF2, LAD2/GPIOF3, LAD3/GPIOF4, LRESET#/GPIOF7, LCLK/GPIOF5, LFRAME#/GPIOF6, GA20/GPIO85, SERIRQ/GPIOF0, SMI#/GPIO65, ECSCI#/GPIO54, KBRST#/GPIO86, GPIO67/N2TMS

SPI: F_SDI/F_SDIO1, F_SDIO/F_SDIO0, F_SCK, F_CS0#

A/D: AD0/GPIO90, AD1/GPIO91, AD2/GPIO92, AD3/GPIO93, AD4/GPIO05, AD5/GPIO04, AD6/GPIO03, AD7/GPIO07/VD_IN2

D/A: DA0/GPIO94, DA1/GPIO95, DA2/GPIO96, DA3/GPIO97

PWM: A_PWM0/GPIO15, B_PWM/GPIO21, C_PWM/GPIO13, D_PWM/GPIO32, H_PWM/GPIO33/VD1_EN#, G_PWM/GPIO66, E_PWM/GPIO45, PWM/GPIO40/1_WIRE

KB: KBSIN0/GPIOA0/N2TCK, KBSIN1/GPIOA1/N2TMS, KBSIN2/GPIOA2, KBSIN3/GPIOA3, KBSIN4/GPIOA4, KBSIN5/GPIOA5, KBSIN6/GPIOA6, KBSIN7/GPIOA7; KBSOUT0/GPOB0/JENK#/SOUT_CR/GPO81/F_WP#/F_SDIO2, KBSOUT1/GPIOB1/TCK, KBSOUT2/GPIOB2/TMS, KBSOUT3/GPIOB3/TDI, KBSOUT4/GPOB4/JEN0#**, KBSOUT5/GPIOB5/TDO, KBSOUT6/GPIOB6/RDY#, KBSOUT7/GPIOB7, KBSOUT8/GPIOC0, KBSOUT9/GPOC1/SDP_VIS#, KBSOUT10/P80_CLK/GPIOC2, KBSOUT11/P80_DAT/GPIOC3, KBSOUT12/GPO64/TEST#, KBSOUT13/GP(I)O63/TRIST#, KBSOUT14/GP(I)O62/XORTR#, KBSOUT15/GPIO61/XOR_OUT, KBSOUT16/GPIO60, KBSOUT17/GPIO57

GPIO: LPCPD#/GPIO10, CLKRUN#/GPIO11, GPIO16, GPIO30/F_WP#, GPIO36, GPIO41/F_WP#, GPIO70, GPIO71, GPIO72, GPIO24, TA1/GPIO56, TMS/GPIO43, SOUT_CR/GPIO83, TDI/GPIO44, GPIO51/N2TCK

PS/2: RDY#/GPIO52/PSDAT3, TDO/GPIO50/PSCLK3, PSDAT2/GPIO27, PSCLK2/GPIO26, PSDAT1/GPIO35, PSCLK1/GPIO37

CIR: GPIO34, TRST#/GPIO46, SIN_CR/GPIO87

PCEI: PECI, VTT, TCK/GPIO42

SMB: TA2/GPIO20/IOX_DIN_DIO, TB1/GPIO14, TB2/GPIO01, SCL1/GPIO17/N2TCK, SDA1/GPIO22/N2TMS, SCL2/GPIO73/N2TCK, SDA2/GPIO74/N2TMS, SCL3A/GPIO23/N2TCK, SDA3A/GPIO31/N2TMS, SCL4A/GPIO47/N2TCK, SDA4A/GPIO53/N2TMS, GPIO00/EXTCLK/F_SDI3

I/O Expansion: SPI_MISO/GPIO77, **SPI_MOSI/GPO76, SPI_SCK/GPIO75, SPI_CS#/GPIO02, GPIO06/IOX_DOUT, GPIO82/IOX_LDSH/VD_OUT1, GPIO84/IOX_SCLK/VD_OUT2, CLKOUT/GPIO55/IOX_DIM_DIO

VD_IN1/GPIO80, EXT_RST#, VCORF

VCC_POWER_ON_RESET

MODEL ID	
High	HK8/HK9(KR29 mount KR30 no mount)
Low	GD5/GD6(KR29 no mount KR30 mount)

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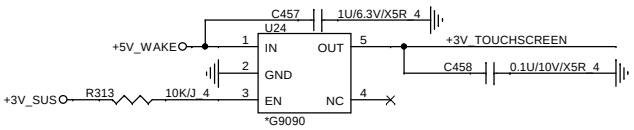
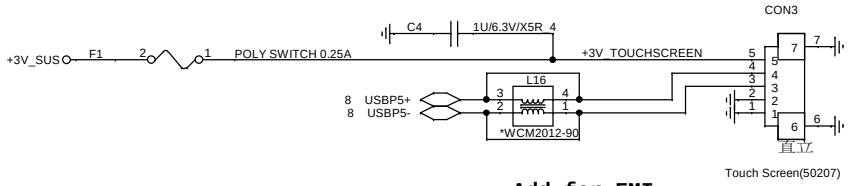
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	NPCE985L	1A
Date: Tuesday, April 23, 2013	Sheet 16 of 36	

Touch Screen



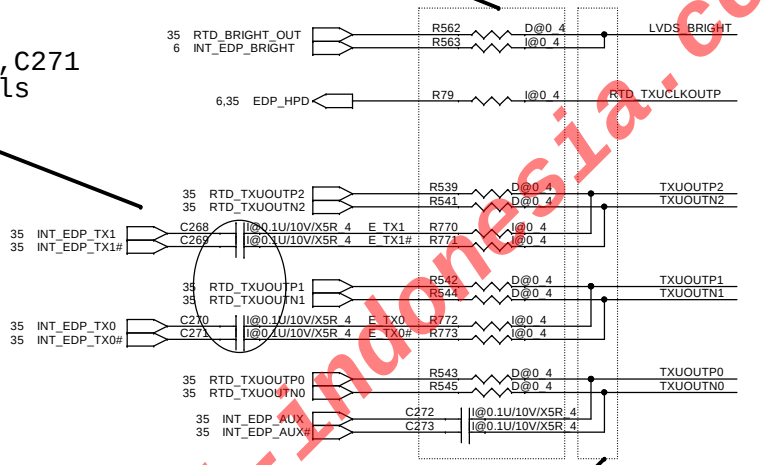


Add for EMI

Camera HD specification
Voltage: Max. 3.6V
Current : Max. 200mA
OCP: 200mA ~ 300mA

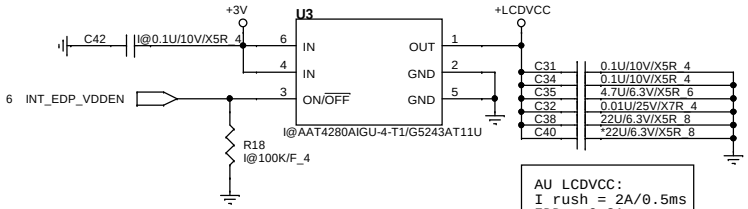
Distance between C268,C269,C270,C271 and CON5 must larger than 500 mils

Close to connector

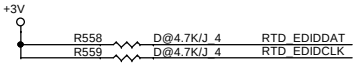


Branches are as short as possible!!

NB LVDS enable

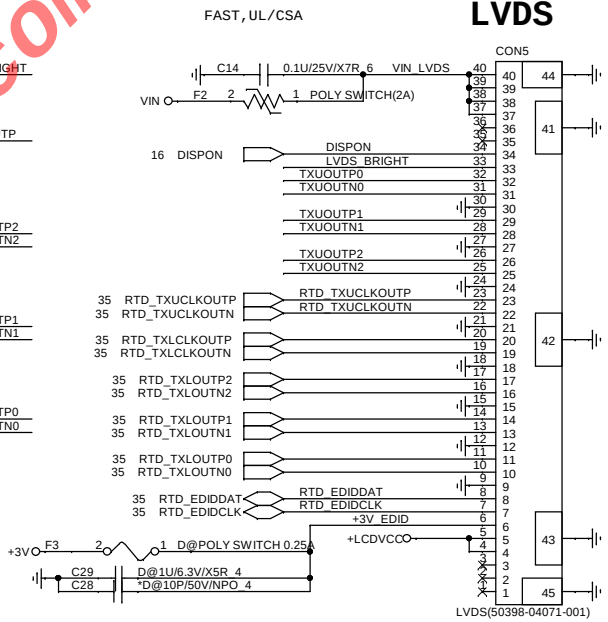


AU LCDVCC:
I rush = 2A/0.5ms
IDD = 0.3A

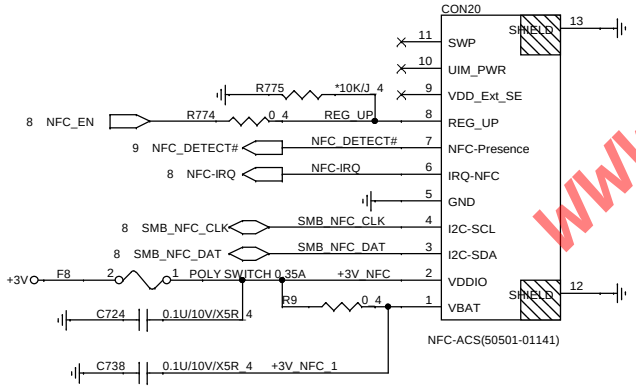


LVDS

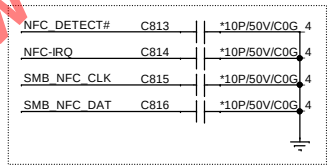
FAST,UL/CSA

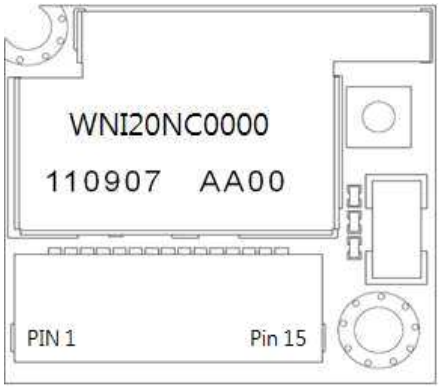


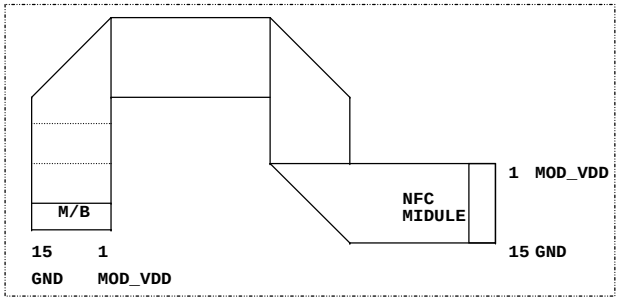
NFC



For EMI.
Close to CON20





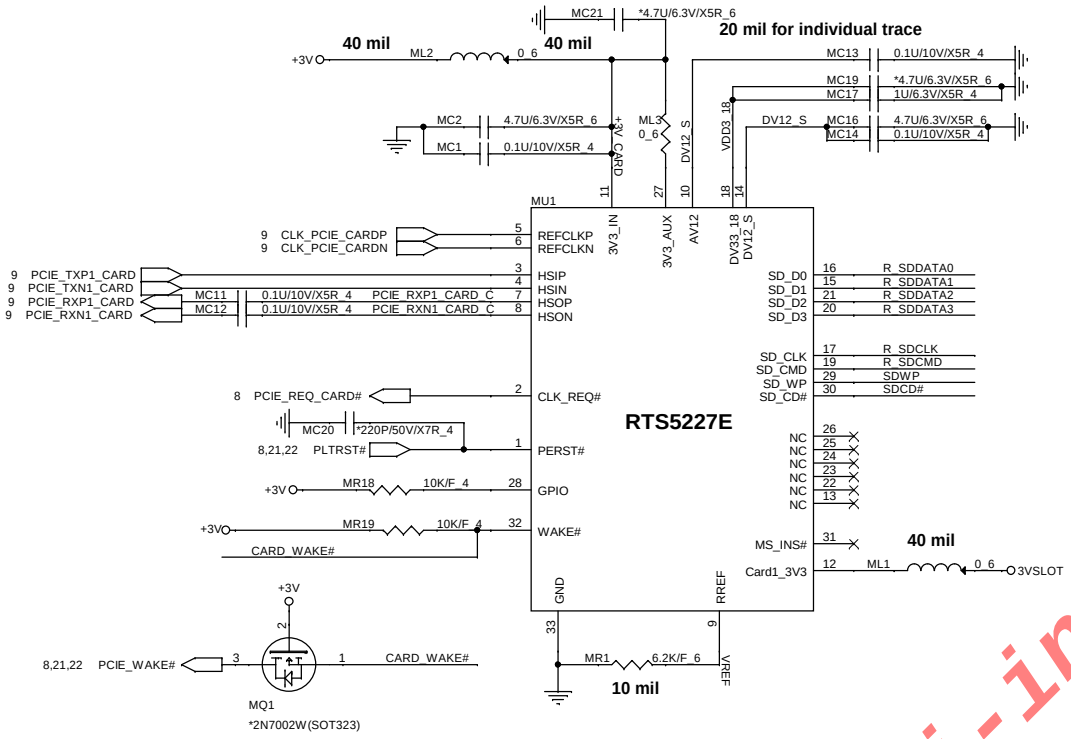


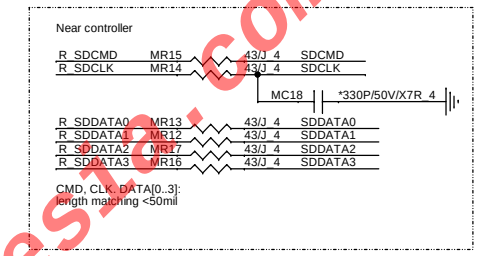
NFC module :
Vender : Samsung SNC-i20
Power consumption : Max. 160mW/48mA
Power Ripple +/- 50mV

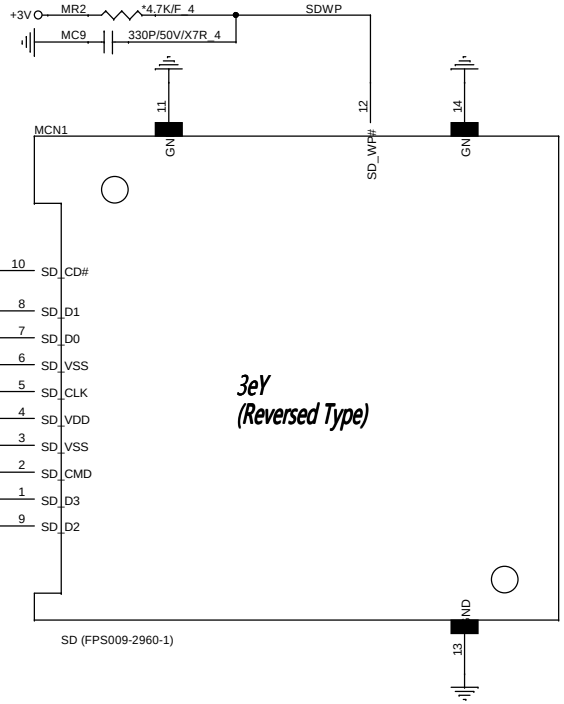
1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc.
PROJECT : HKB

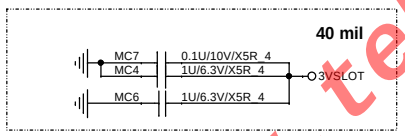
Size	Document Number	Rev
	LVDS\TS\NFC	1A
Date: Tuesday, April 23, 2013	Sheet 17 of 36	







These component need to close to Slot



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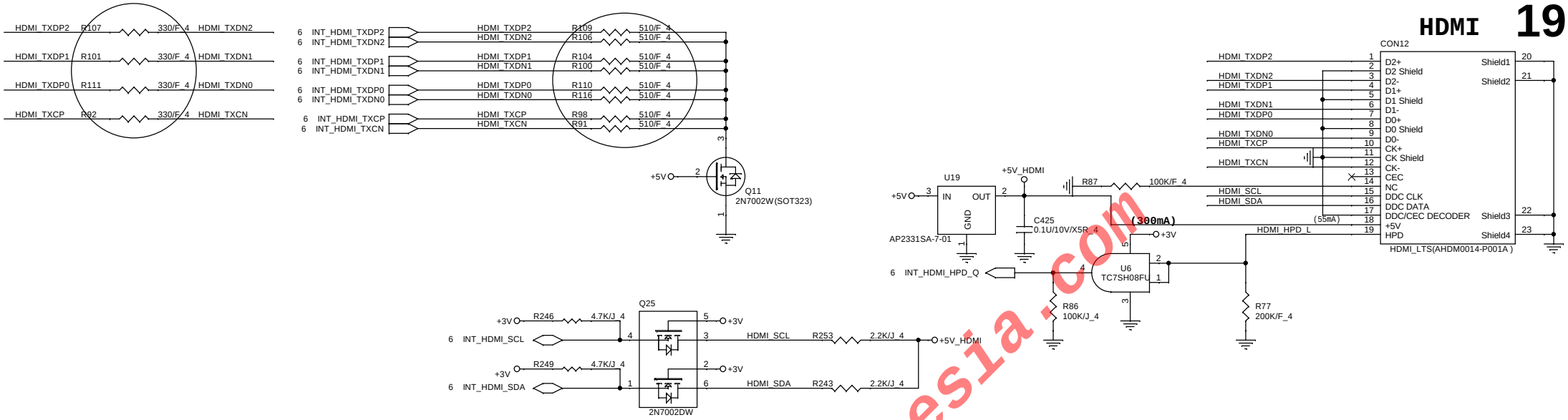
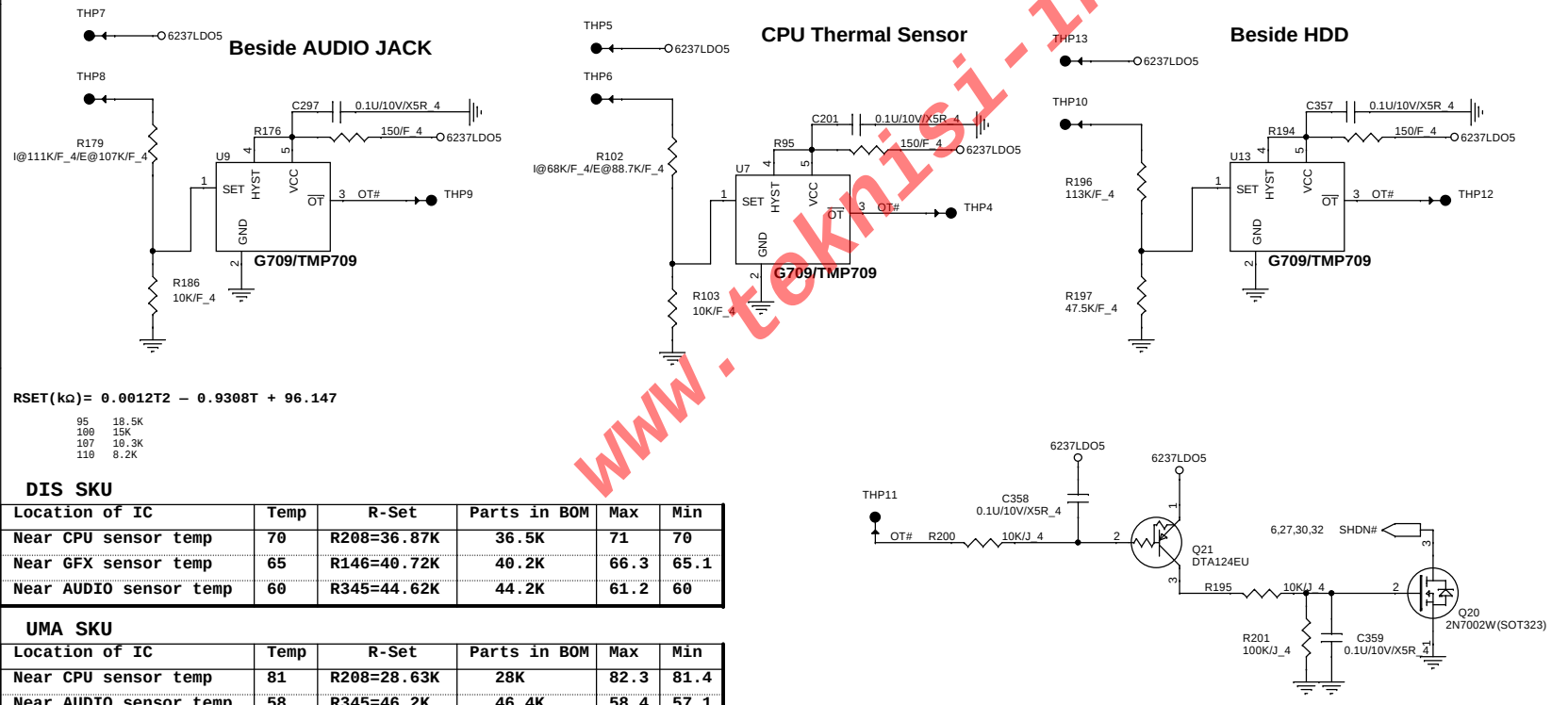
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	Card Reader(RTS5227E)	1A
Date: Tuesday, April 23, 2013	Sheet 18 of 36	



H/W Thermal Protect



RSET(kΩ)= 0.0012T2 – 0.9308T + 96.147

95	18.5K
100	15K
107	10.3K
110	8.2K

DIS SKU

Location of IC	Temp	R-Set	Parts in BOM	Max	Min
Near CPU sensor temp	70	R208=36.87K	36.5K	71	70
Near GFX sensor temp	65	R146=40.72K	40.2K	66.3	65.1
Near AUDIO sensor temp	60	R345=44.62K	44.2K	61.2	60

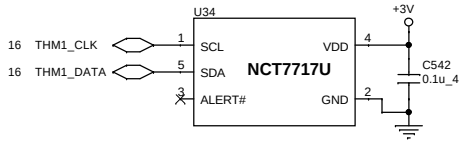
UMA SKU

Location of IC	Temp	R-Set	Parts in BOM	Max	Min
Near CPU sensor temp	81	R208=28.63K	28K	82.3	81.4
Near AUDIO sensor temp	58	R345=46.2K	46.4K	58.4	57.1

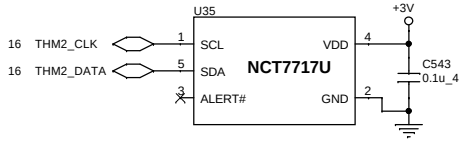
1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Thermal Request

Close to FIN



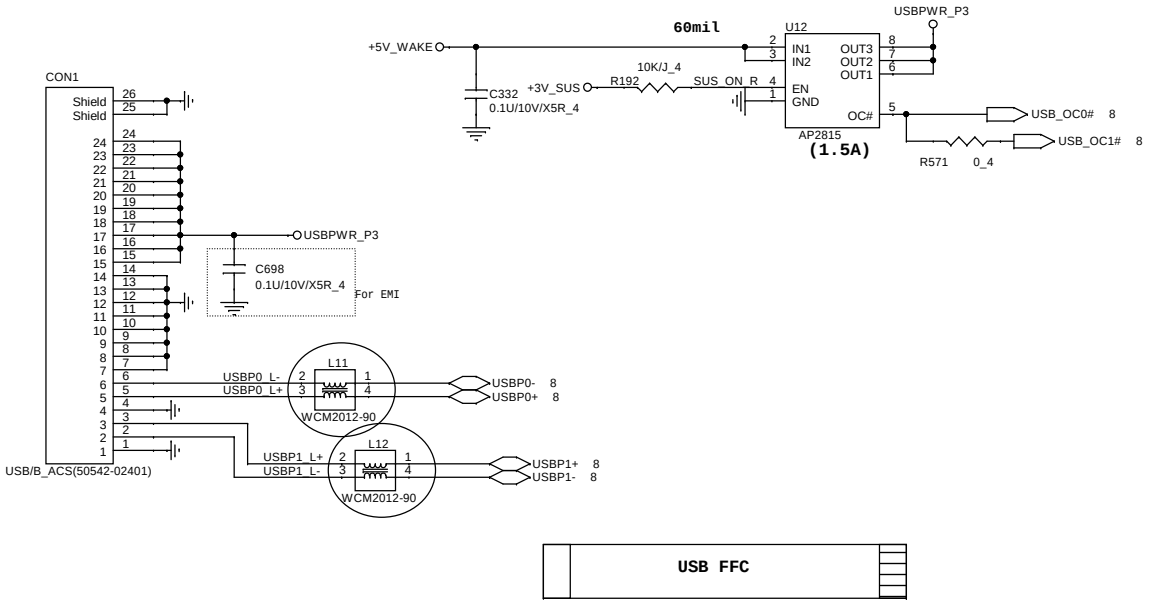
Far away heat portion



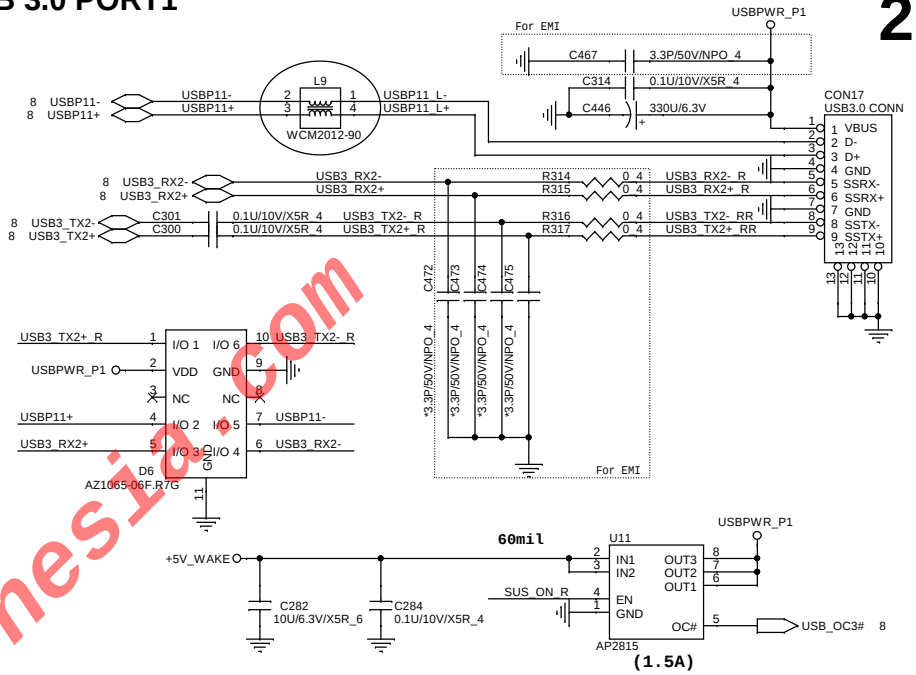
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	HDMI/Thermal	1A
Date: Friday, May 03, 2013	Sheet 19 of 36	

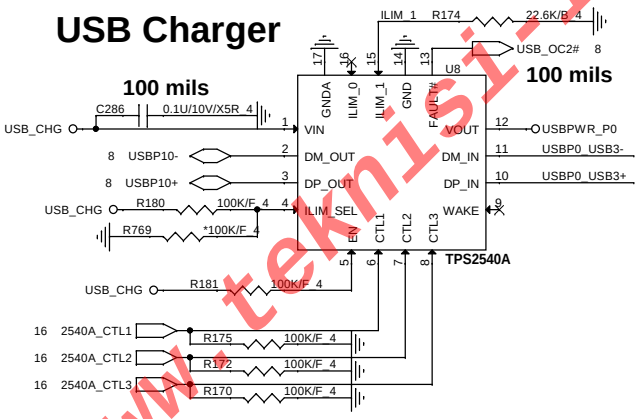
MB to USB board



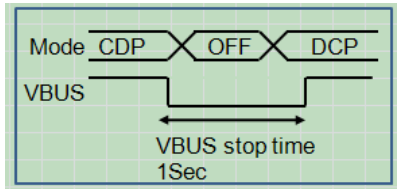
USB 3.0 PORT1



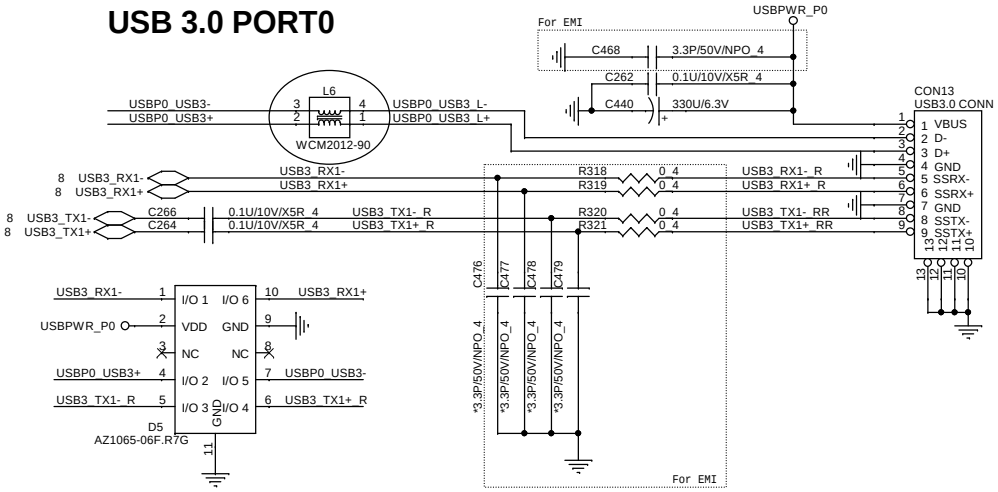
USB Charger



SDP : Standard Downstream Port
CDP : Charging downstream Port
DCP : Dedicated Charging Port
Enable/Disable : setting by BIOS



USB 3.0 PORT0



CTL_1	CTL_2	CTL_3	TPS 2540A/2543 Truth Table
0	0	0	OUT discharge, power switch OFF
0	X	1	DCP,Auto-detect(S3/S4/S5, 1.5A)
X	1	0	SDP, USB2.0 mode(S0, 0.5A)
1	0	0	DCP, BC SPEC1.2 only(S3/Deep standby/S4/S5, 1.5A)
1	0	1	DCP, Divider mode only(S3/S4/S5, 1.5A)
1	1	1	CDP (S0, 1.5A)

System State	USB Battery Charging Setting			
	Disable	C(1 2 3)	Enable	C(1 2 3)
S0	SDP	(X 1 0)	CDP	(1 1 1)
S3	SDP	(X 1 0)	DCP BC	(1 0 0)
DS3	Charger OFF	(0 0 0)	DCP BC	(1 0 0)
S4	Charger OFF	(0 0 0)	DCP BC	(1 0 0)
S5	Charger OFF	(0 0 0)	DCP BC	(1 0 0)

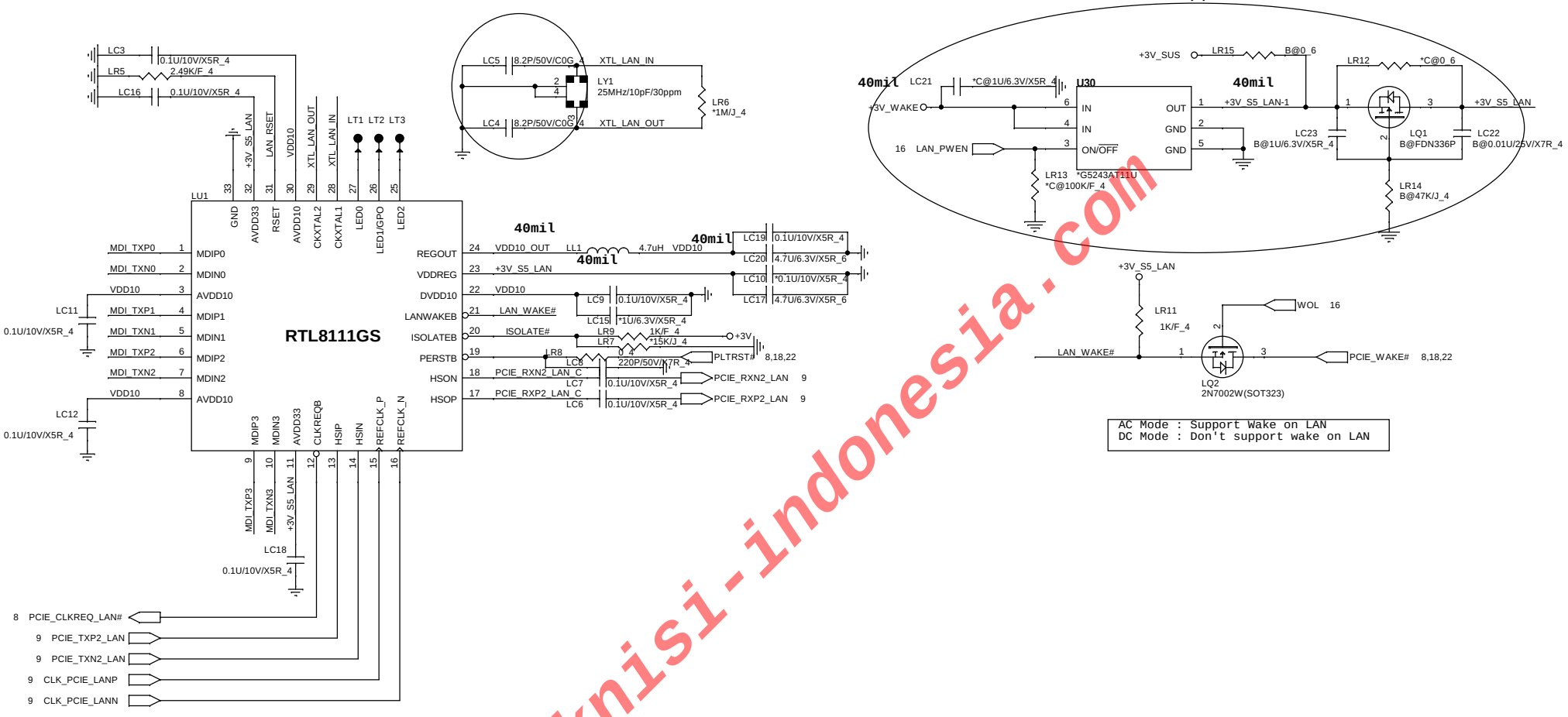
ILIM_SEL	(I LIMIT(A)= 48000/R)	
HI	I_LIM_1	
LO	I_LIM_0	48000/22.6K=2.123A

1.Level 1 Environment-Related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	USB/USB Charger	1A
Date: Tuesday, April 23, 2013	Sheet 20 of 36	

B@ : Support S3 WOL
C@ : Support S5 WOL

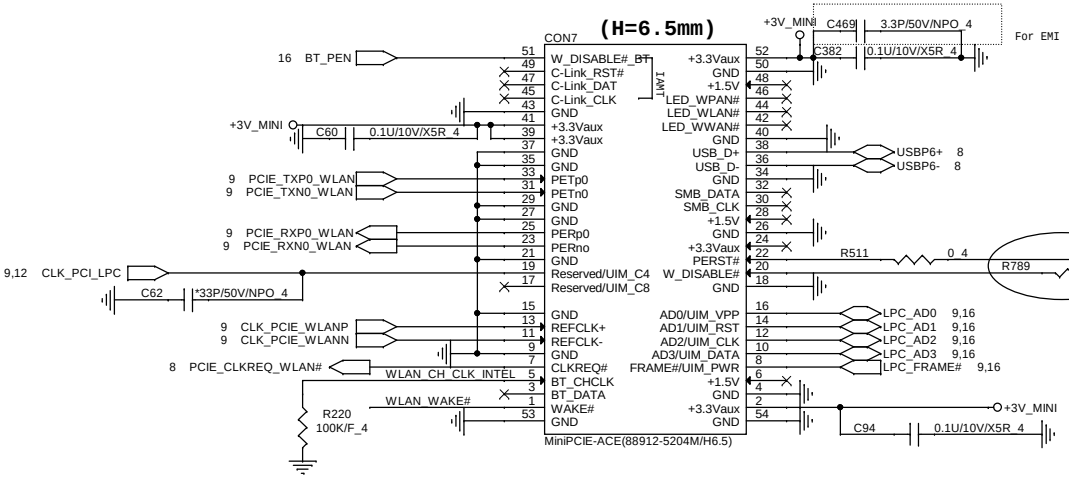


1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

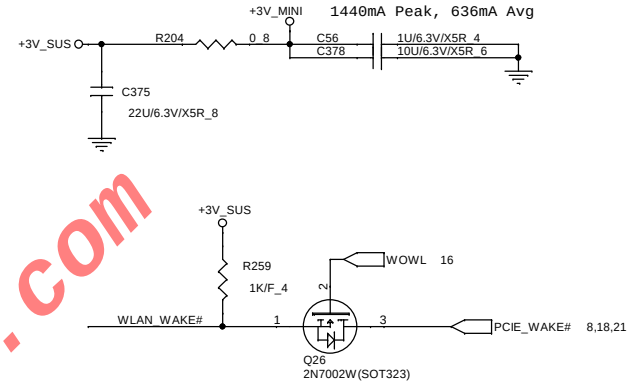
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	LAN RTL8111GS	1A
Date: Thursday, April 25, 2013	Sheet 21 of 36	

WLAN/WIMAX/WIDI

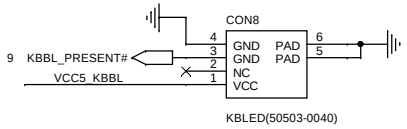


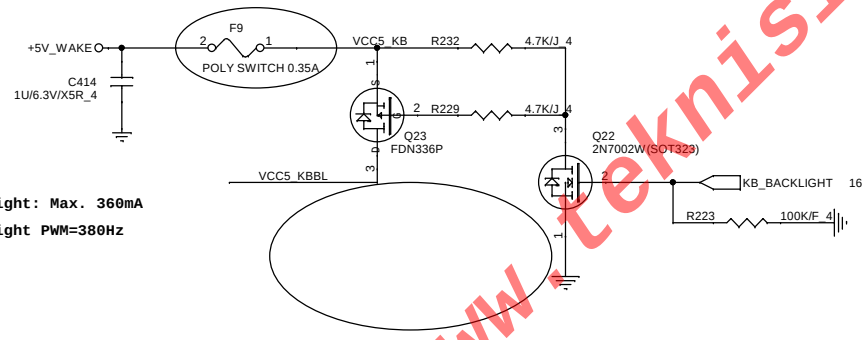
WLAN+Bluetooth
20 : Internal Pull high 25K ~ 58K



AC Mode : Support Wake on WLAN
DC Mode : Don't support wake on WLAN

KB BACKLIGHT





KB Backlight: Max. 360mA

KB Backlight PWM=380Hz

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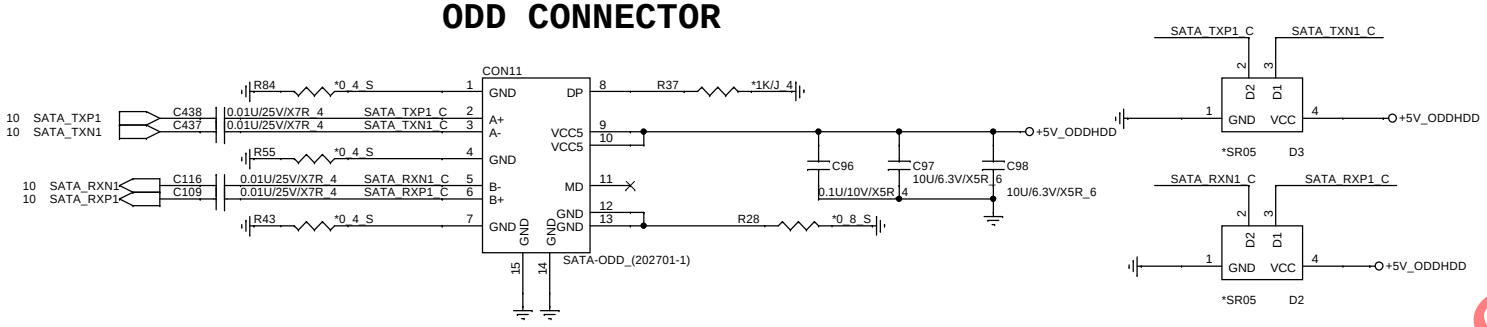
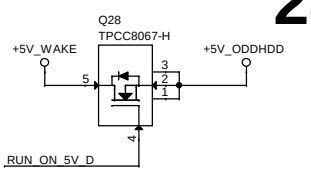
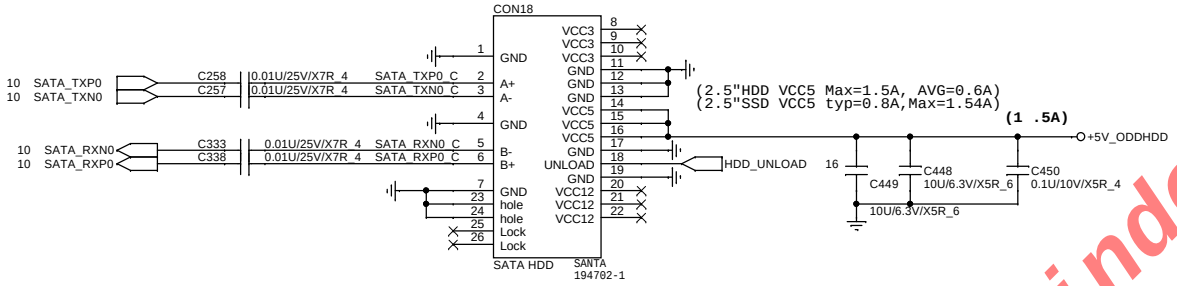
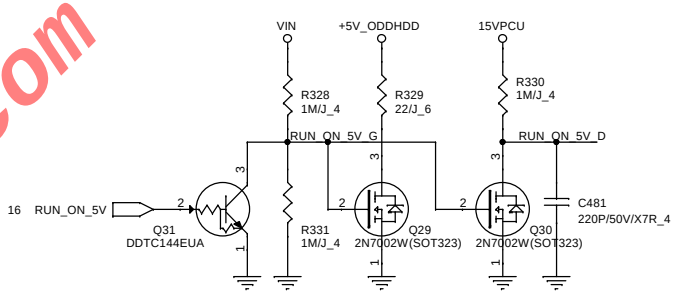
ODD CONNECTOR

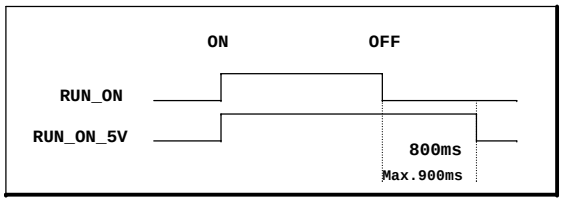




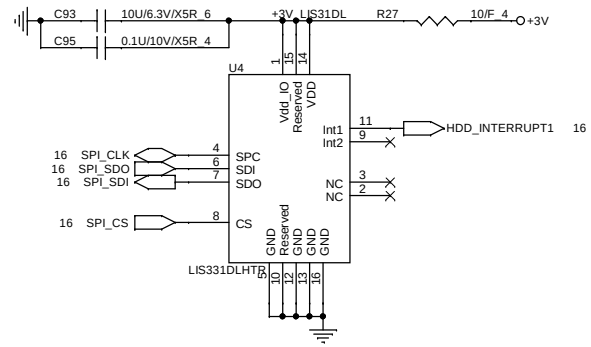
HDD CONNECTOR

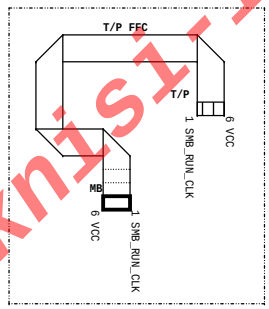




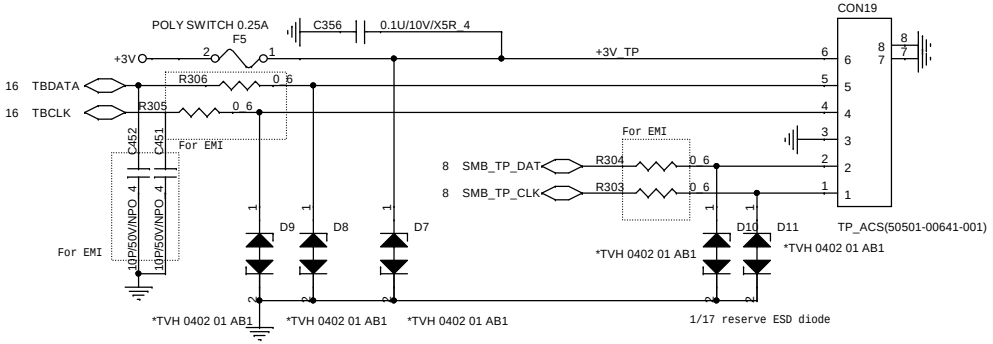


HDD PROTECT SPI INTERFACE

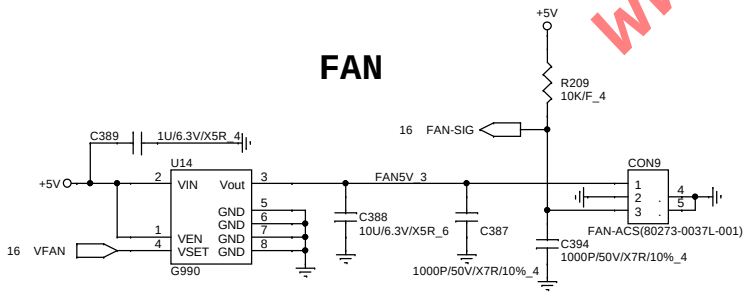




T/P Board to T/P

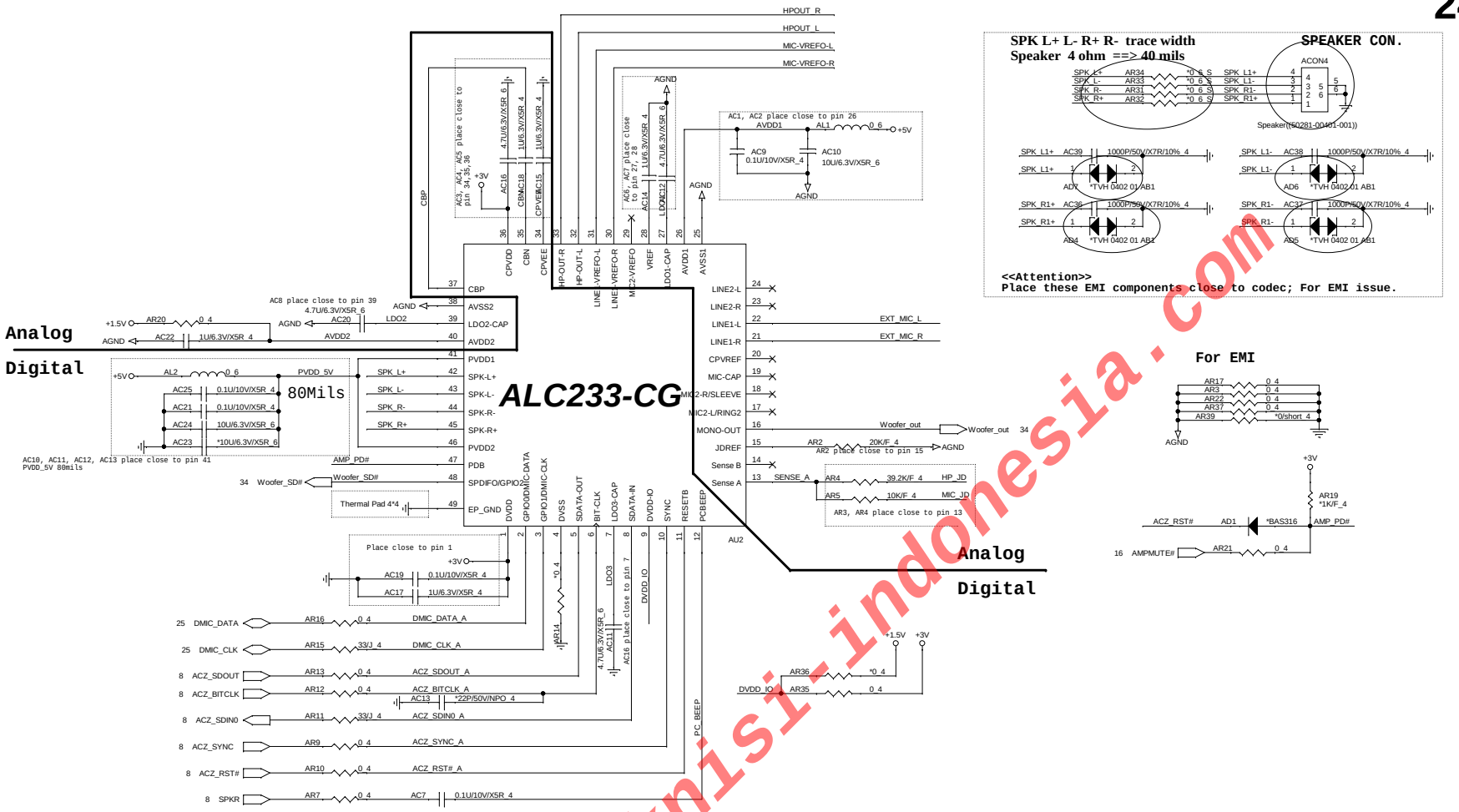


FAN



1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc. PROJECT : HKB		
Size	Document Number HDD/ODD/Gsensor/TP/FAN	Rev 1A
Date: Tuesday, April 23, 2013	Sheet 23 of 36	



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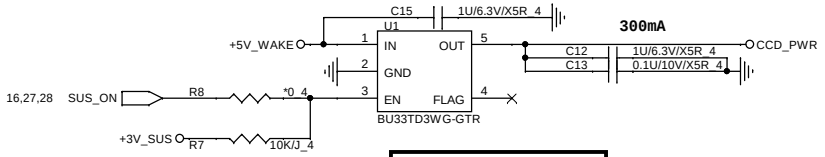
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc.		
PROJECT : HKB		
Size	Document Number	Rev
	AUDIO(ALC233-CG)HP&MIC	1A
Date: Tuesday, April 23, 2013	Sheet 24 of 36	

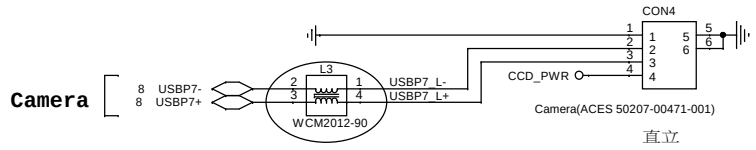
Camera

USB Camera Power

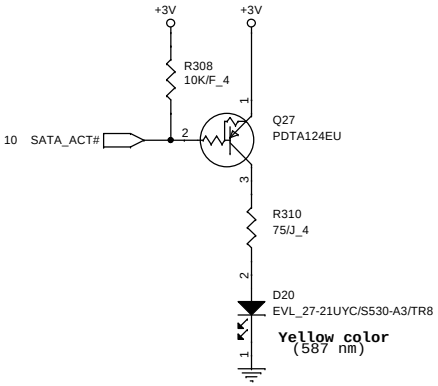


Camera HD specification
Voltage: Max. 3.6V
Current : Max. 200mA
OCP: 200mA ~ 300mA

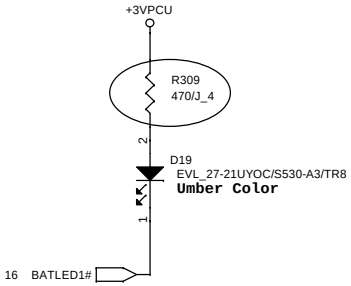
Camera



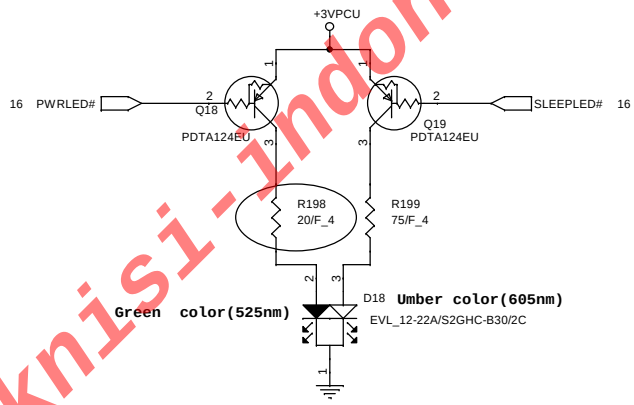
SATA LED



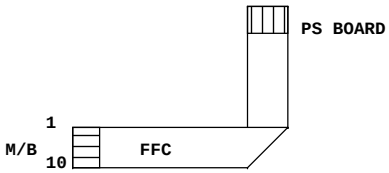
BATTERY LED



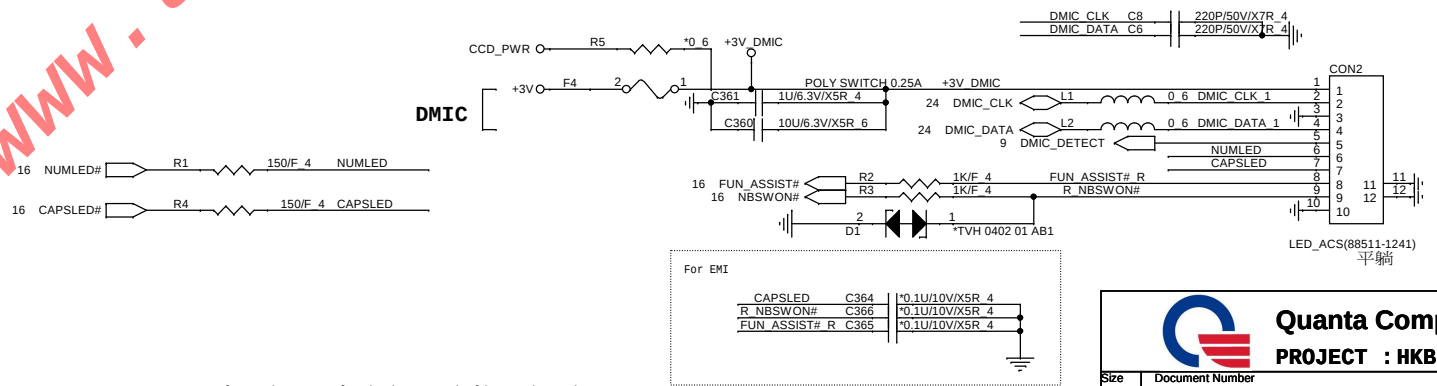
Power/Sleep LED



PS BOARD



Power SW Board Connector



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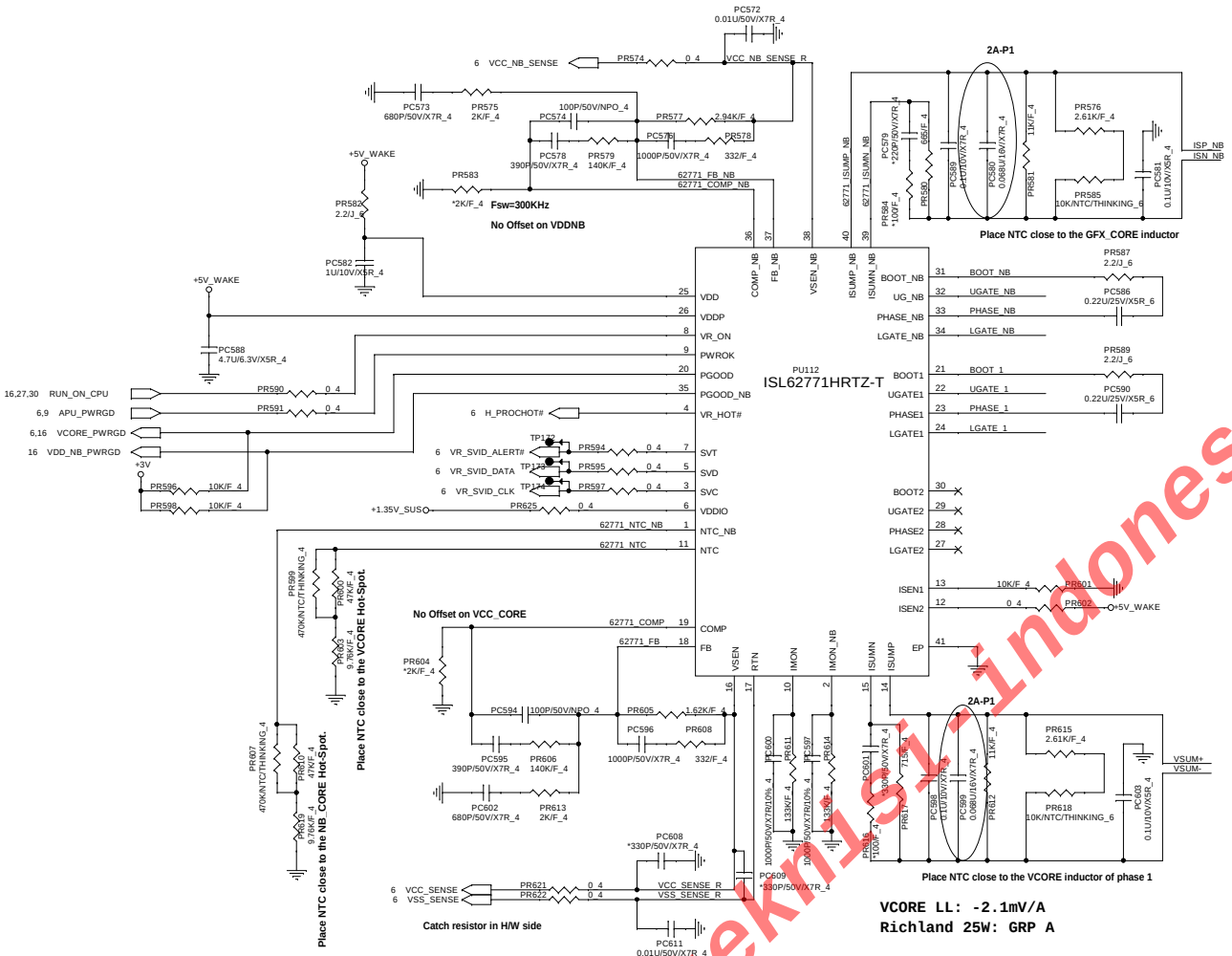
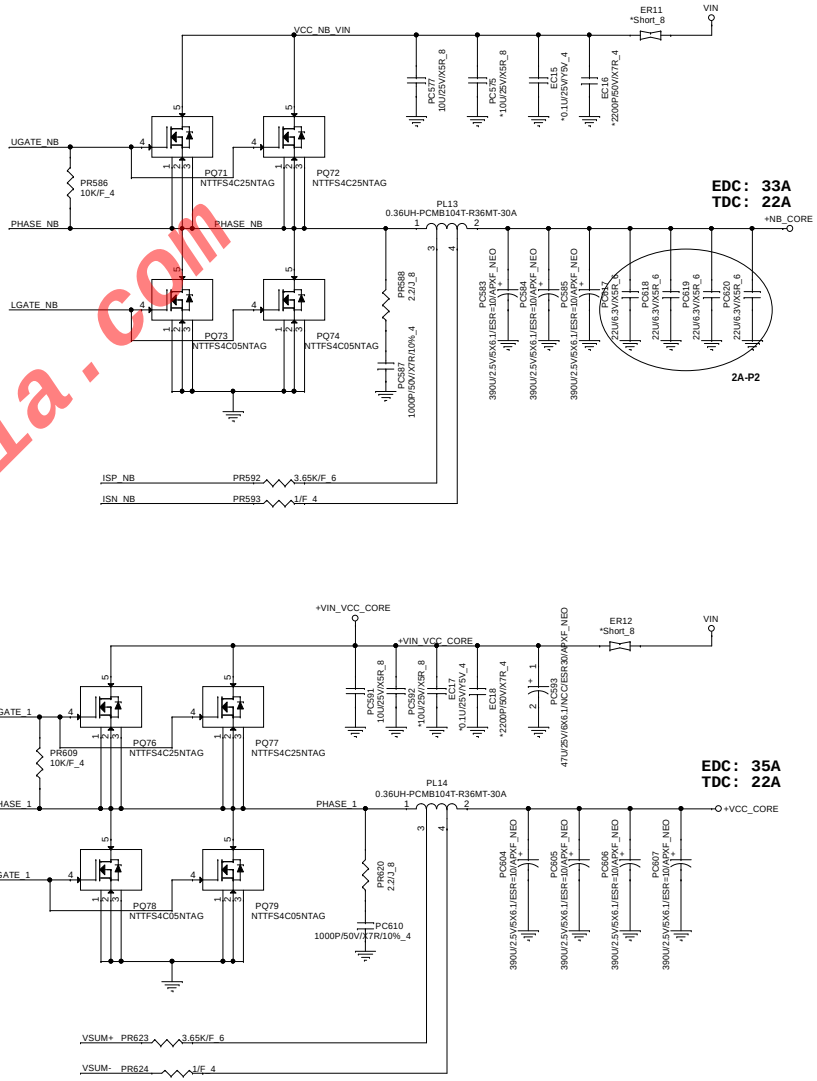
Quanta Computer Inc.
PROJECT : HKB

Size	Document Number	Rev
	LED/PS/DMIC\Camera	1A
Date: Tuesday, April 23, 2013	Sheet 25 of 36	

Richland 25W: GRP A
VDD_NB LL: -4.0mV/A



VCORE LL: -2.1mV/A
Richland 25W: GRP A



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Quanta Computer Inc.		
PROJECT : HKA		
Size	Document Number: +VCC_CORE (ISL62771)	Rev: 1A
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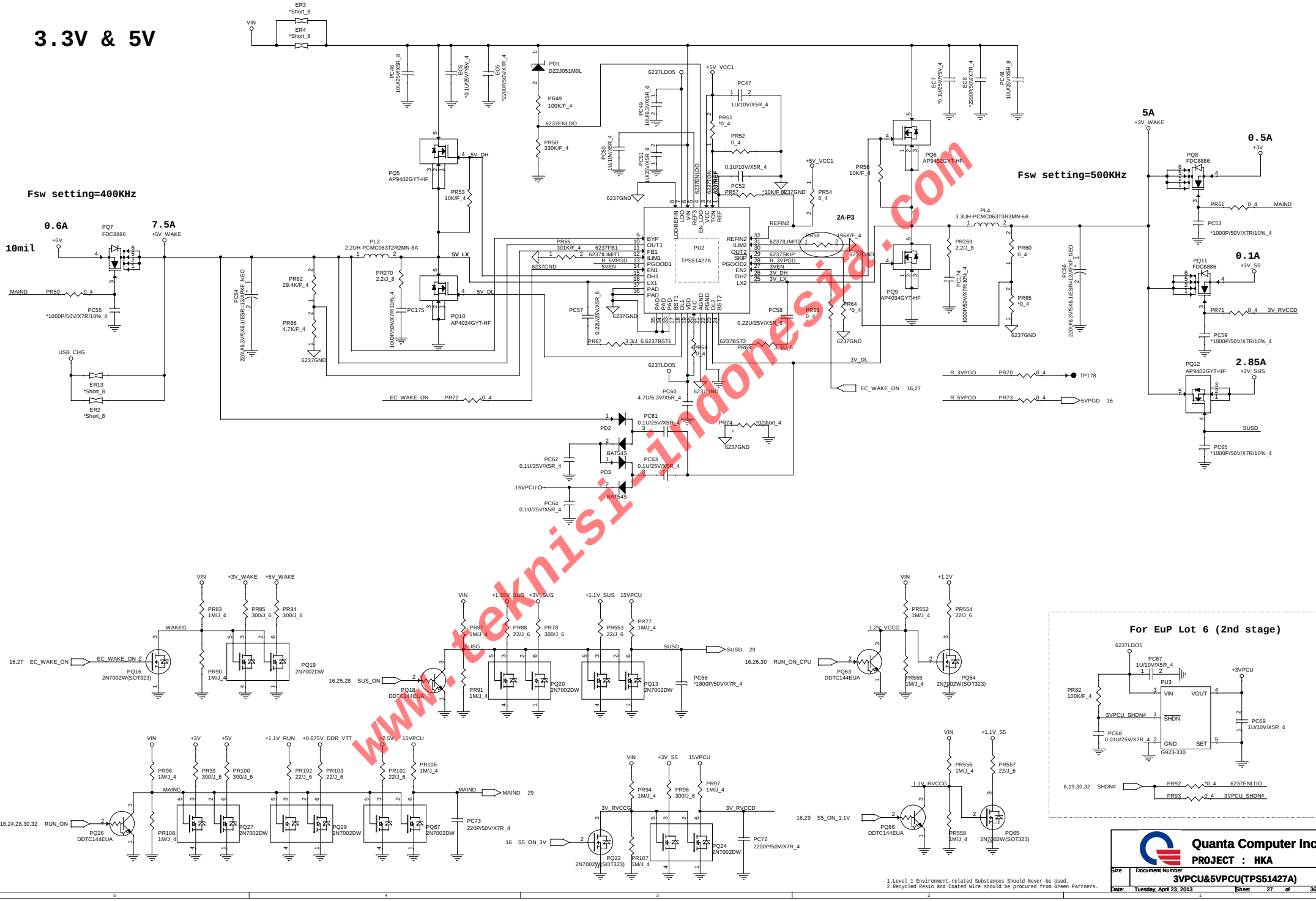
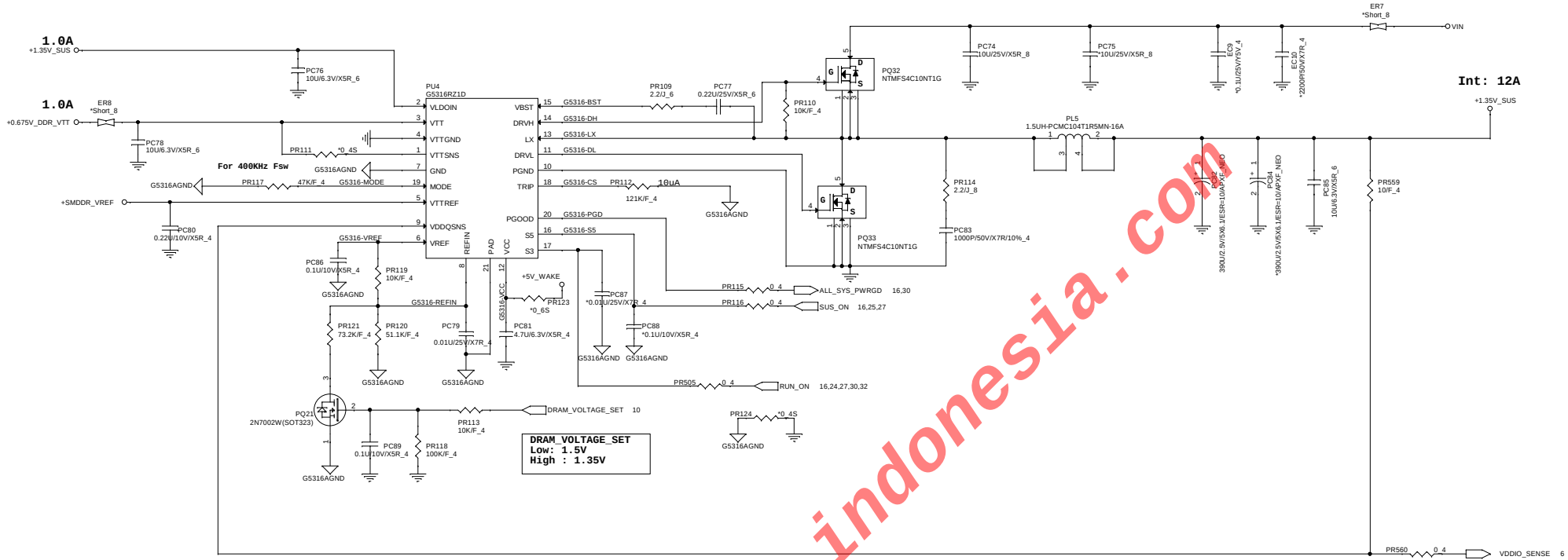
3.3V & 5V



1.35VSUS & VTT_MEM



MODE	Resistor on Mode	Fsw	Discharge Mode
3	200Kohm	400KHz	Tracking discharge
2	100Kohm	300KHz	
1	68Kohm	300KHz	**Non-tracking discharge**
0	**47Kohm**	**400KHz**	

STATE	S3	S5	1.5VSUS	VTTREF	VTT
S0	1	1	On	On	On
S3	0	1	On	On	Off/High Z
S4/S5	0	0	Off	Off	Off

1.Level 1 Environment-related Substances Should Never be Used.
2.Recycled Resin and Coated Wire should be procured from Green Partners.

Quanta Computer Inc.
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	1.35VSUS/VTT_MEM	1A

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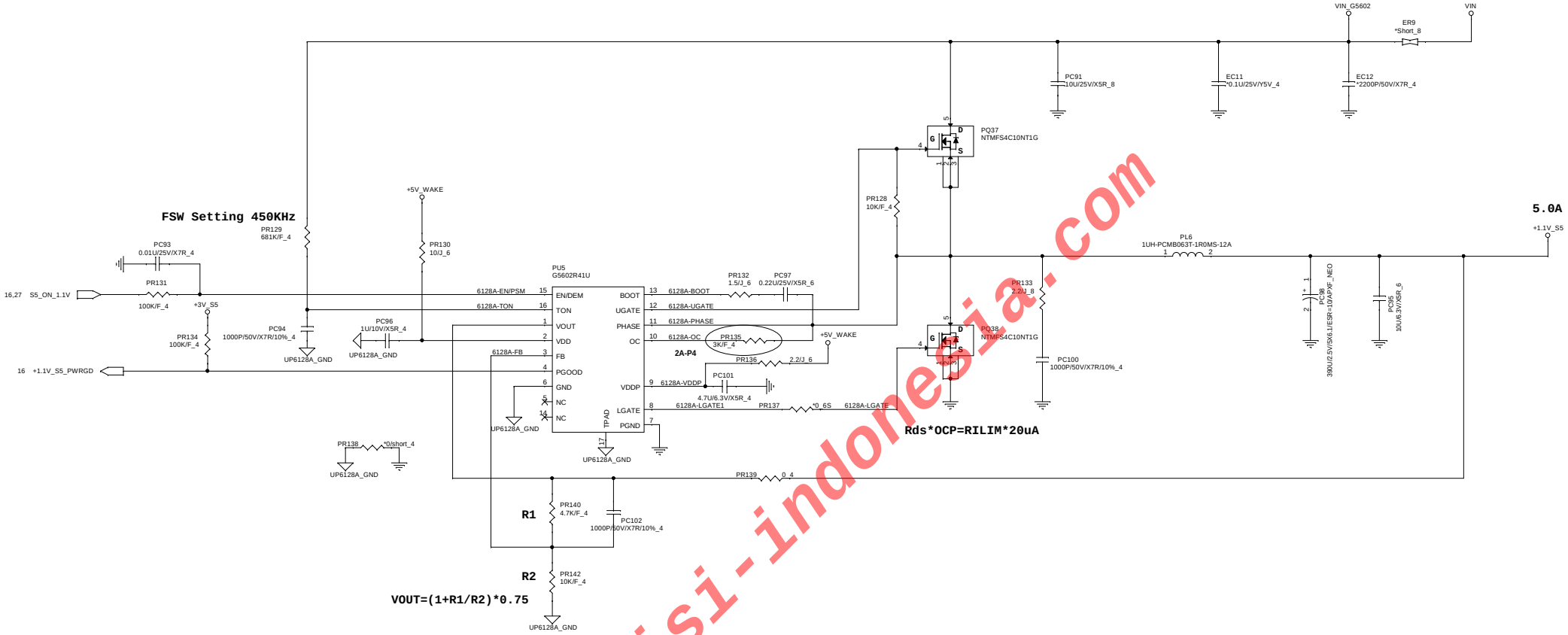

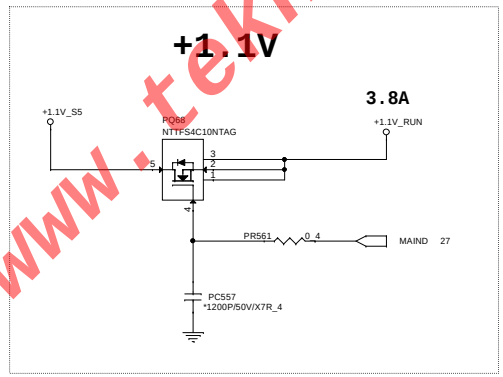

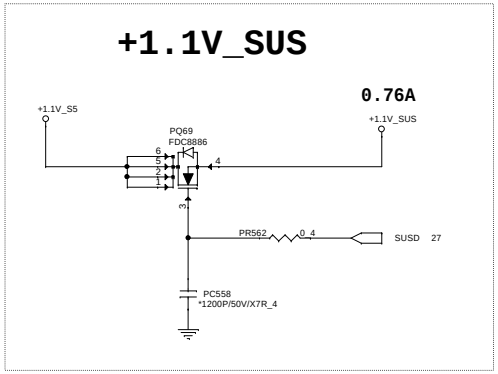

1.Level 1 Environment-related Substances Should Never be Used.
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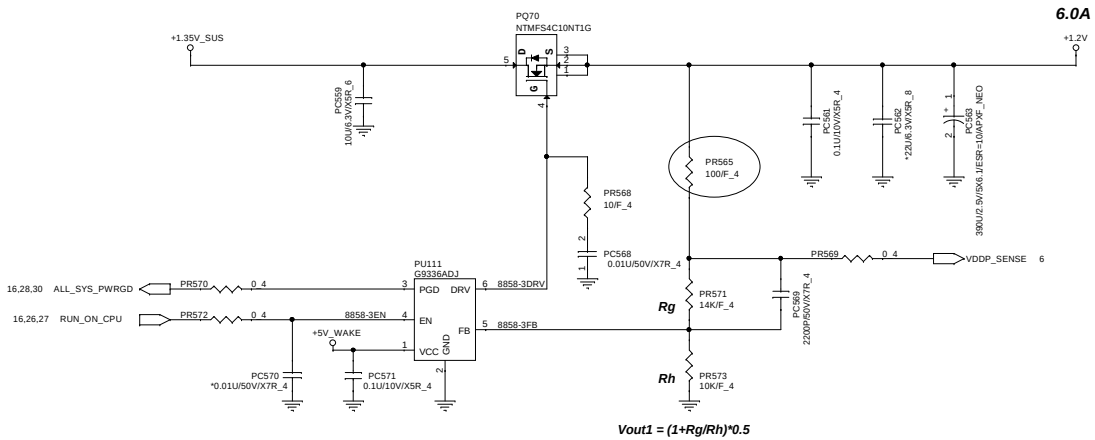
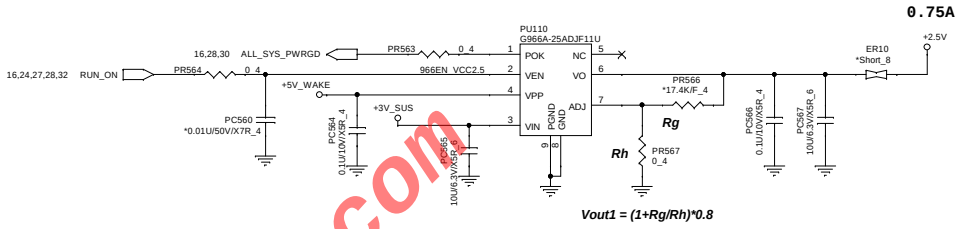
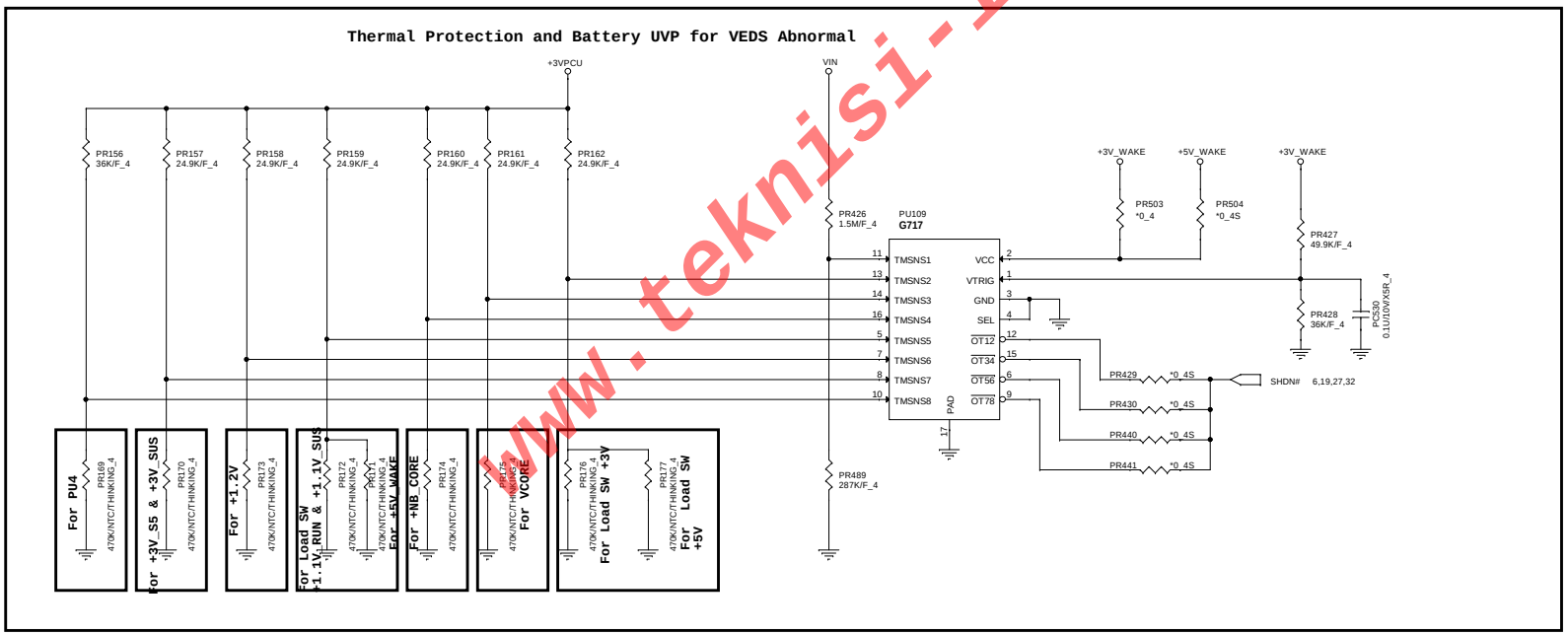
VCC1.2



VCC2.5





1.Level 1 Environment-related Substances Should Never be Used.
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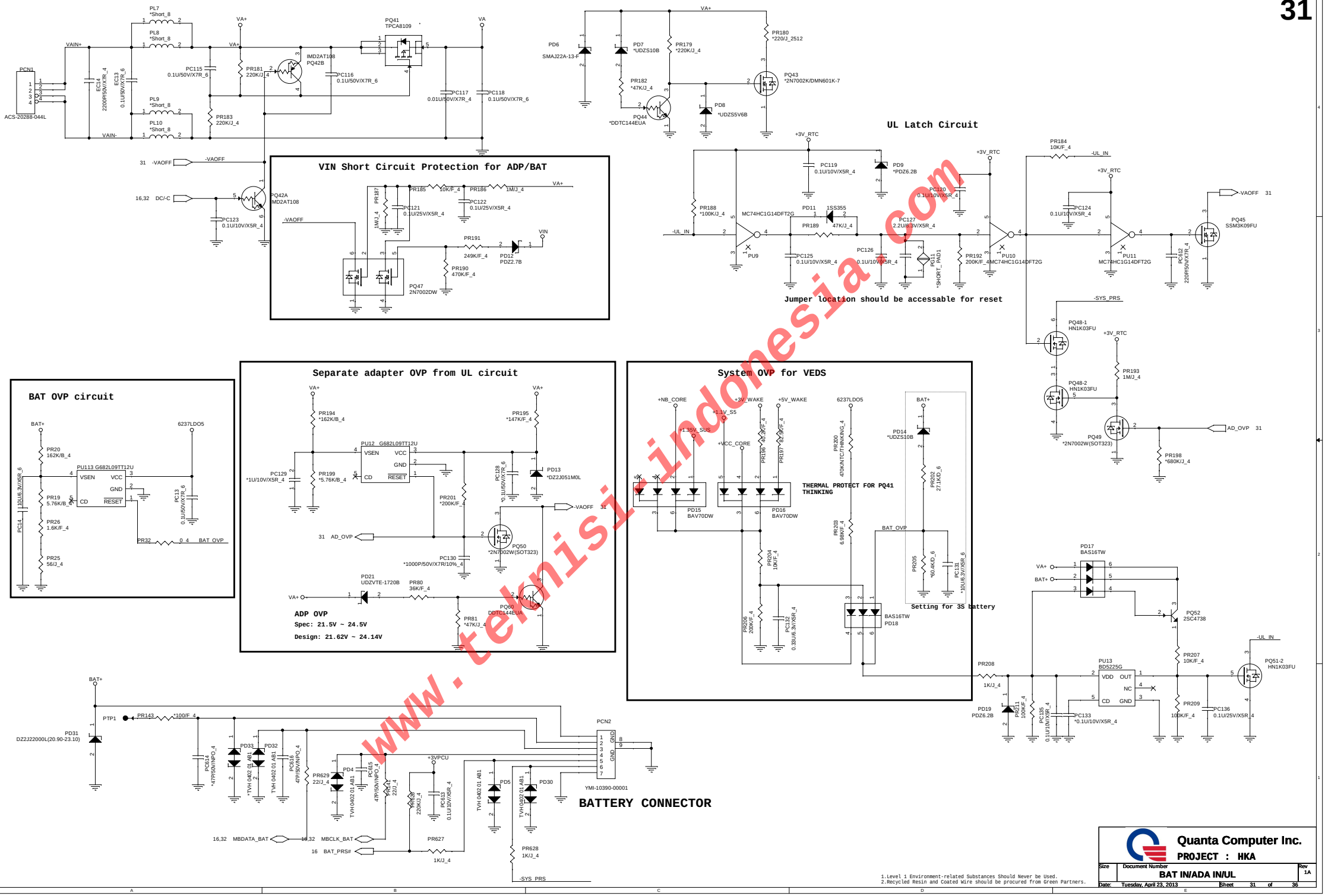

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	BAT IN/ADA IN/UL	1A
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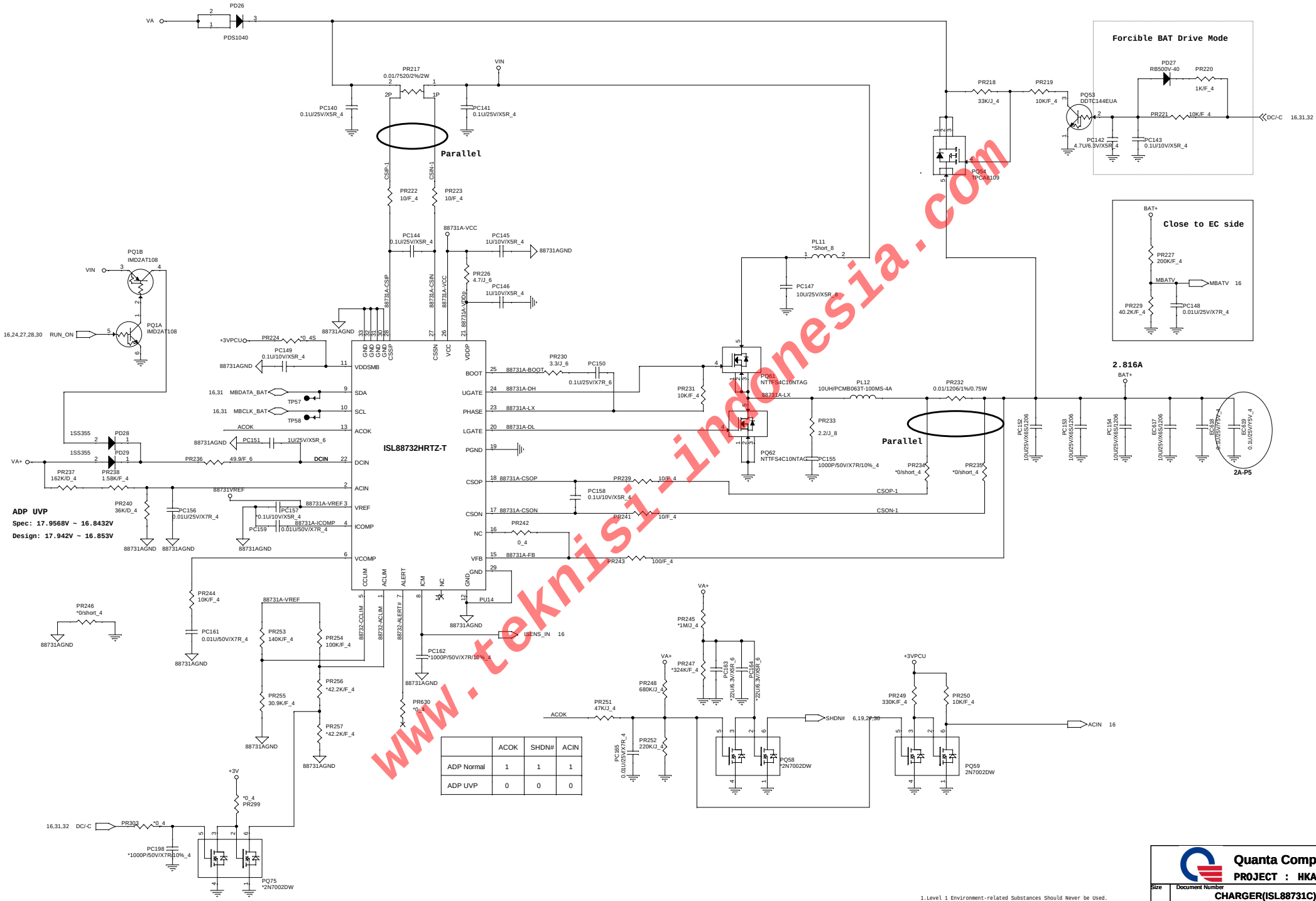

H7 * HG-E315X315D177P2
H3 *O-HK1-12-F
H5 *hg-e236x236d102p2
H1 *O-HK8-1
H13 *O-HK1-12-b
H10 *O-HK1-12-c
H11 *O-HK1-12
H2 *O-HK8-2
H8 *O-HK1-12

H21 *H-TC197BC91D91P2
H22 *H-TC197BC91D91P2
H23 *H-TC197BC95D95P2
H24 *H-TC197BC95D95P2

H9 *h-o102x126d102x126n
H14 *h-e571x315d102p2
H12 *H-E492X315D102P2-B
R202 0_8
AGND

WLAN NUT
H15 H-TC197BC122D122P2

FCH NUT
H18 H-C256D161PT
H19 H-C256D161PT

KEY BOARD Connector

CON6
KB_ACS(88513-260N)

16	MY15	MY15	1
16	MY14	MY14	2
16	MY13	MY13	3
16	MY12	MY12	4
16	MY11	MY11	5
16	MX7	MX7	6
16	MY10	MY10	7
16	MX6	MX6	8
16	MX5	MX5	9
16	MY9	MY9	10
16	MX4	MX4	11
16	MY8	MY8	12
16	MY7	MY7	13
16	MY6	MY6	14
16	MY5	MY5	15
16	MY4	MY4	16
16	MY3	MY3	17
16	MX3	MX3	18
16	MY2	MY2	19
16	MY1	MY1	20
16	MY0	MY0	21
16	MX2	MX2	22
16	MX1	MX1	23
16	MX0	MX0	24
16	MY17	MY17	25
16	MY16	MY16	26

27
28

MX0	C386	68P/50V/C0G_4
MX1	C385	68P/50V/C0G_4
MX2	C384	68P/50V/C0G_4
MY0	C383	68P/50V/C0G_4
MY1	C380	68P/50V/C0G_4
MY2	C377	68P/50V/C0G_4
MX3	C379	68P/50V/C0G_4
MY3	C376	68P/50V/C0G_4
MY4	C374	68P/50V/C0G_4
MY5	C57	68P/50V/C0G_4
MY6	C49	68P/50V/C0G_4
MY7	C58	68P/50V/C0G_4
MY8	C52	68P/50V/C0G_4
MX4	C373	68P/50V/C0G_4
MY9	C372	68P/50V/C0G_4
MX5	C50	68P/50V/C0G_4
MX6	C46	68P/50V/C0G_4
MY10	C43	68P/50V/C0G_4
MX7	C45	68P/50V/C0G_4
MY11	C44	68P/50V/C0G_4
MY12	C41	68P/50V/C0G_4
MY13	C55	68P/50V/C0G_4
MY14	C53	68P/50V/C0G_4
MY15	C39	68P/50V/C0G_4
MY17	C545	68P/50V/C0G_4
MY16	C546	68P/50V/C0G_4

+3VPCU

MX0	R14	10K/J_4
MX1	R15	10K/J_4
MX2	R16	10K/J_4
MX3	R17	10K/J_4
MX4	R19	10K/J_4
MX5	R203	10K/J_4
MX6	R205	10K/J_4
MX7	R206	10K/J_4

+3V	C267 C315 C337 C334 C336 C335 C105	*1000P/50V/X7R/10%_4
+5V_WAKE	C253 C254	*1000P/50V/X7R/10%_4
+VCC_CORE	C66 C63	*1000P/50V/X7R/10%_4
+NB_CORE	C1 C3	*1000P/50V/X7R/10%_4
+3V_SUS	C251	*1000P/50V/X7R/10%_4
+1.1V_RUN	C104 C428 C409	*1000P/50V/X7R/10%_4
+3V_S5	C170 C59	*1000P/50V/X7R/10%_4
VIN	C11 C22 C5 C36 C7 C299	*1000P/50V/X7R/10%_4
+0.675V_DDR_VTT	C250	*1000P/50V/X7R/10%_4

VIN	C802 C803	*1000P/50V/X7R/10%_4 → +5V
VIN	C801	*1000P/50V/X7R/10%_4 → +NB_CORE
VIN	C800 C807	*1000P/50V/X7R/10%_4 → +3V
+5V_WAKE	C799 C798 C808	*1000P/50V/X7R/10%_4 → +3V
+5V_WAKE	C794 C793	*1000P/50V/X7R/10%_4 → +3V_WAKE
+5V_WAKE	C797 C796	*1000P/50V/X7R/10%_4 → +3V_SUS
+5V_WAKE	C792 C791	*1000P/50V/X7R/10%_4 → +5V_ODDHDD
+5V_WAKE	C785	*1000P/50V/X7R/10%_4 → +5V
+3V	C790 C789	*1000P/50V/X7R/10%_4 → +3V_WAKE
+3V	C263	*1000P/50V/X7R/10%_4 → +3V_S5
+3V	C810 C811	*1000P/50V/X7R/10%_4 → +3V_SUS
+3V	C795 C809	*1000P/50V/X7R/10%_4 → +1.1V_RUN
+3V	C786	*1000P/50V/X7R/10%_4 → +VCC_CORE
+3V	C812	*1000P/50V/X7R/10%_4 → +2.5V
+1.1V_RUN	C783	*1000P/50V/X7R/10%_4 → +2.5V
+1.1V_RUN	C781	*1000P/50V/X7R/10%_4 → +3V_S5
+5V	C784	*1000P/50V/X7R/10%_4 → +0.675V_DDR_VTT

1.Level 1 Environment-related Substances Should Never be Used.
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PROJECT : HKA

Size	Document Number	Rev
	HOLE/EMI/KB	1A

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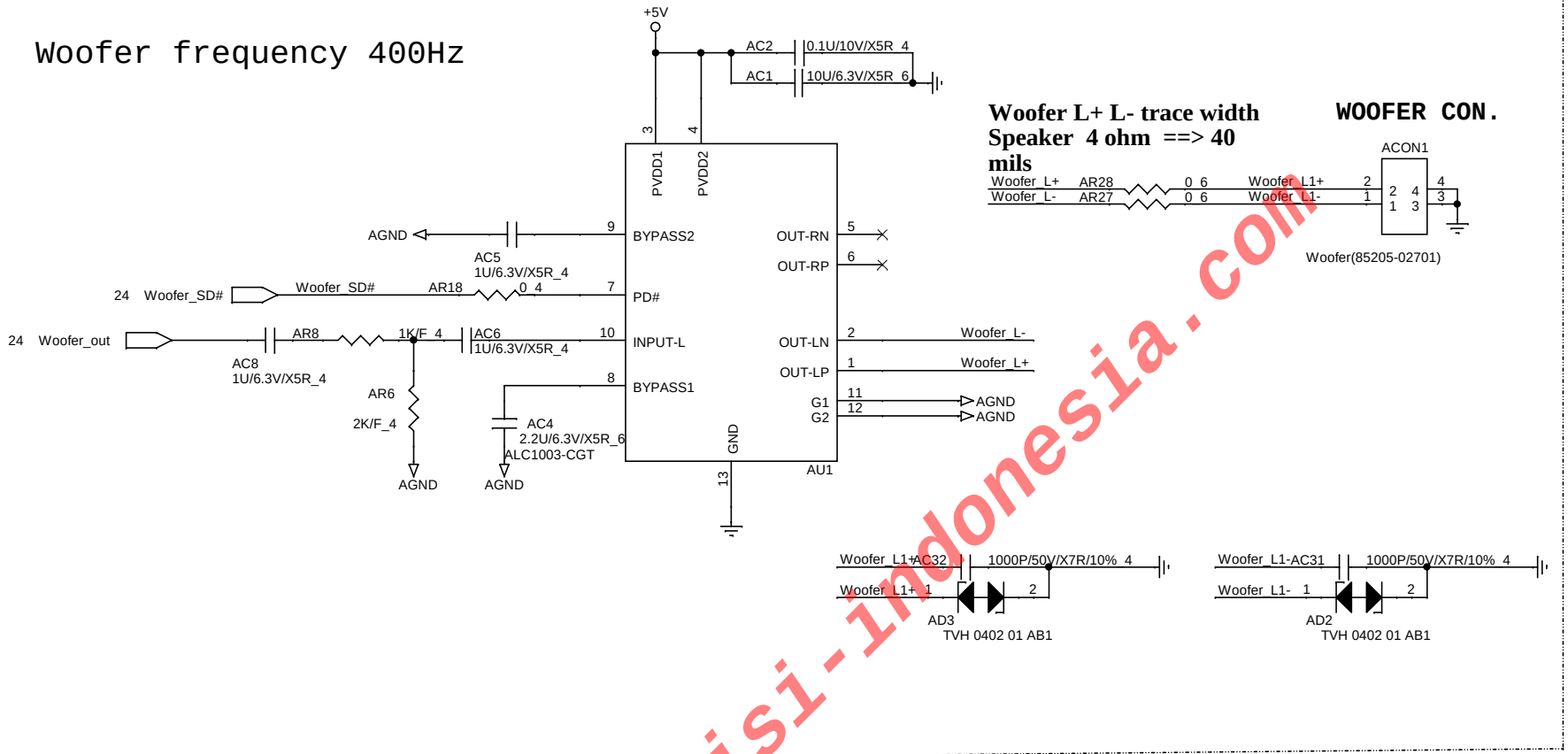
Woofer frequency 400Hz



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Quanta Computer Inc.		
PROJECT : HKB		
Size	Document Number: Woofer(ALC1003-CGT)	Rev: 1A
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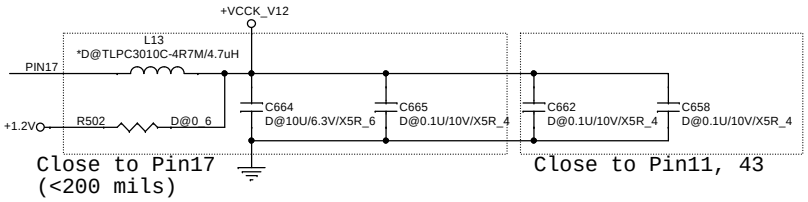
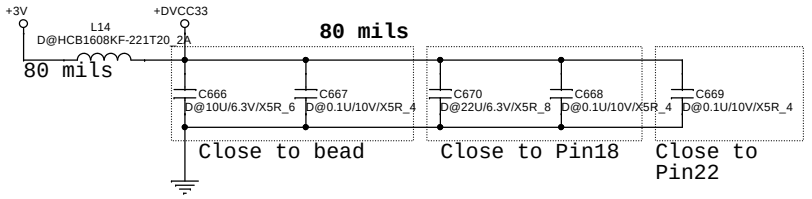
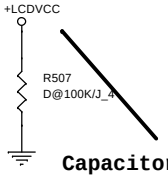
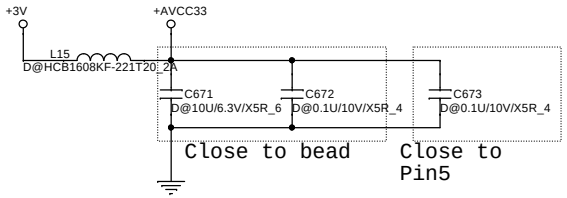
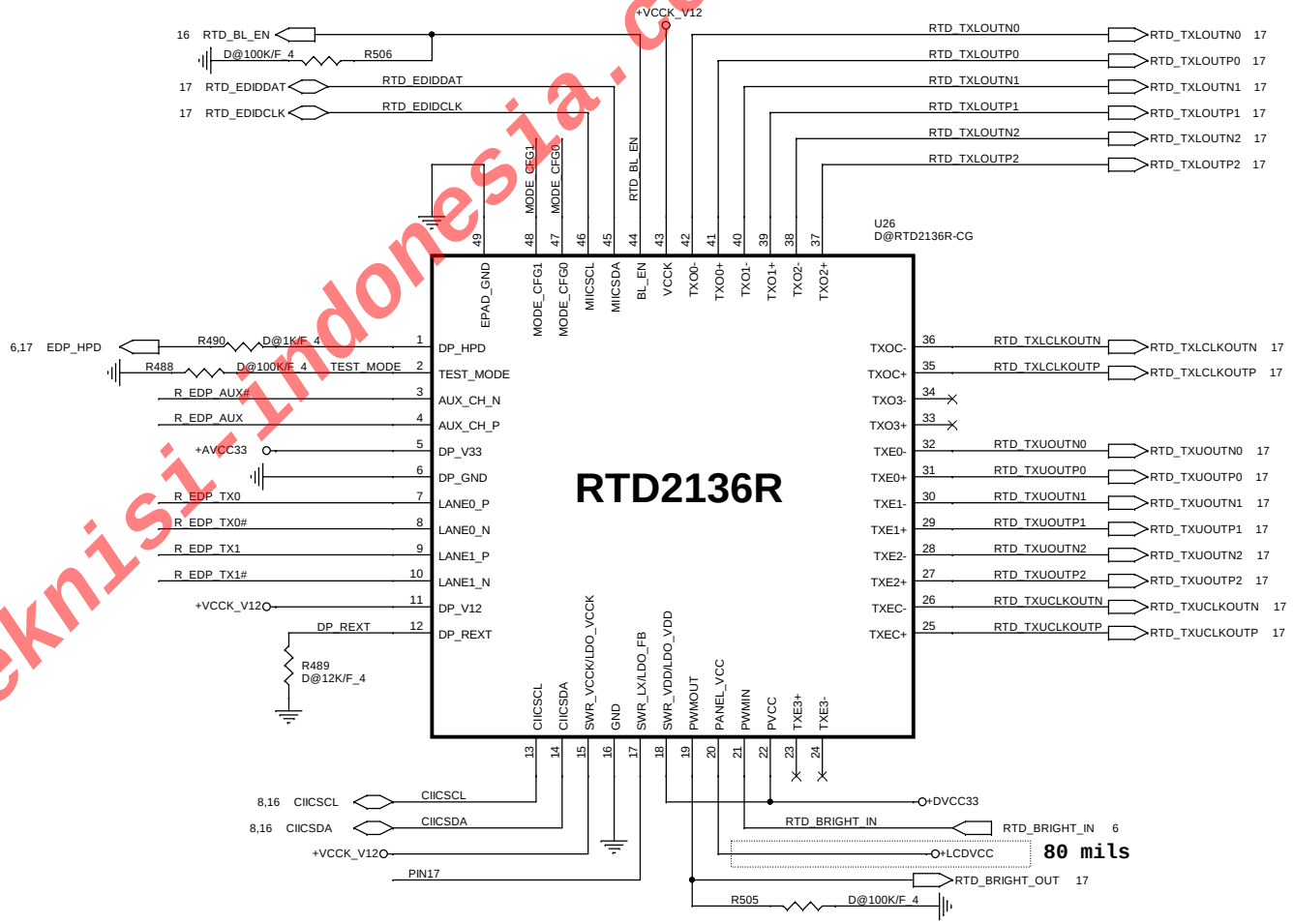


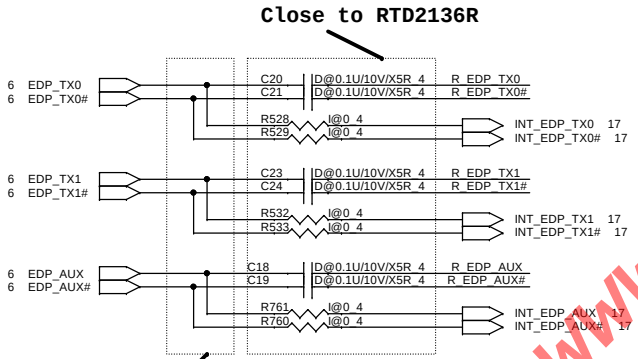


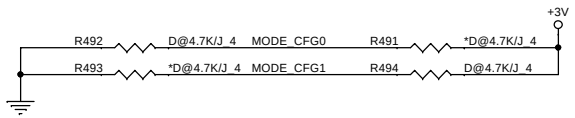


Capacitors are on Page 17.

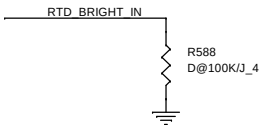








		MODE_CFG0(PIN47)	
		0	1
MODE_CFG1(PIN48)	0	X	EP MODE
	1	ROM ONLY MODE	EEPROM MODE



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PROJECT : HKB

Size	Document Number	Rev
	eDP to LVDS	1A
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I/O PORT LIST

USB PORT Architecture	
PORT 0	USB2.0
PORT 1	USB2.0
PORT 2	N/A
PORT 3	N/A
PORT 4	N/A
PORT 5	Touch Screen
PORT 6	WiMAX/BT
PORT 7	Camera
PORT 8	N/A
PORT 9	N/A
PORT 10	USB3.0
PORT 11	USB3.0
PORT 12	N/A
PORT 13	N/A

PCIE BUS	
PORT 0	WLAN Port
PORT 1	CARD READER
PORT 2	GLAN(RTL8111GS)
PORT 3	N/A

SATA BUS	
PORT 0	HDD
PORT 1	ODD
PORT 2	N/A
PORT 3	N/A
PORT 4	N/A
PORT 5	N/A

M/B ID LIST

SIZE	Board ID0
HKA 14"	0
HKB 15"	1

I/F	Board ID1
eDP	0
LVDS	1

CPU	Board ID2	Board ID3
A4	0	0
A6	0	1
A8	1	0
A10	1	1

SM BUS LIST

SM BUS	MBCLK/MBDATA	WRITE	READ	Function
ISL88732HRTZ-T	0001 001X	0001 0010	0001 0011	Charger

SM BUS	MBCLK_BAT/MBDATA_BAT	WRITE	READ	Function
VGP-BPS35A	0001 011X	0001 0110	0001 0111	Battery

SM BUS	SMB0_RUN_CLK/SMB0_RUN_DAT	WRITE	READ	Function
DIMM Module 0	1010 000X	1010 0000	1010 0001	DDRIII
DIMM Module 1	1010 010X	1010 0100	1010 0101	DDRIII

SM BUS	SMB1_RUN_CLK/SMB1_RUN_DAT	WRITE	READ	Function
Synaptics	0010 110X	0010 1100	0010 1101	Click PAD

POWER MAP

	S0	S3	S4	S5 (Charger Enable)	S5 (Charger Disable)
RUN_ON_CPU	H	L	L	L	L
+NB_CORE	H	L	L	L	L
+VCC_CORE	H	L	L	L	L
+1.2V	H	L	L	L	L
RUN_ON	H	L	L	L	L
+5V	H	L	L	L	L
+3V	H	L	L	L	L
+2.5V	H	L	L	L	L
+1.1V_RUN	H	L	L	L	L
+0.75V_DDR_VTT	H	L	L	L	L
SUS_ON	H	H	L	L	L
+1.35V_SUS	H	H	L	L	L
+3V_SUS	H	H	L	L	L
+1.1V_SUS	H	H	L	L	L
S5_ON_1.1V	H	H	*H/L	L	L
+1.1V_S5	H	H	*H/L	L	L
S5_ON_3V	H	H	*H/L	L	L
+3V_S5	H	H	*H/L	L	L
EC_WAKE_ON	H	H	*H/L	H	L
+3V_WAKE	H	H	*H/L	H	L
+5V_WAKE	H	H	*H/L	H	L
RUN_ON_5V	H	L	L	L	L
+5V_ODDHDD	H	L	L	L	L

* H: If wake up event exists.