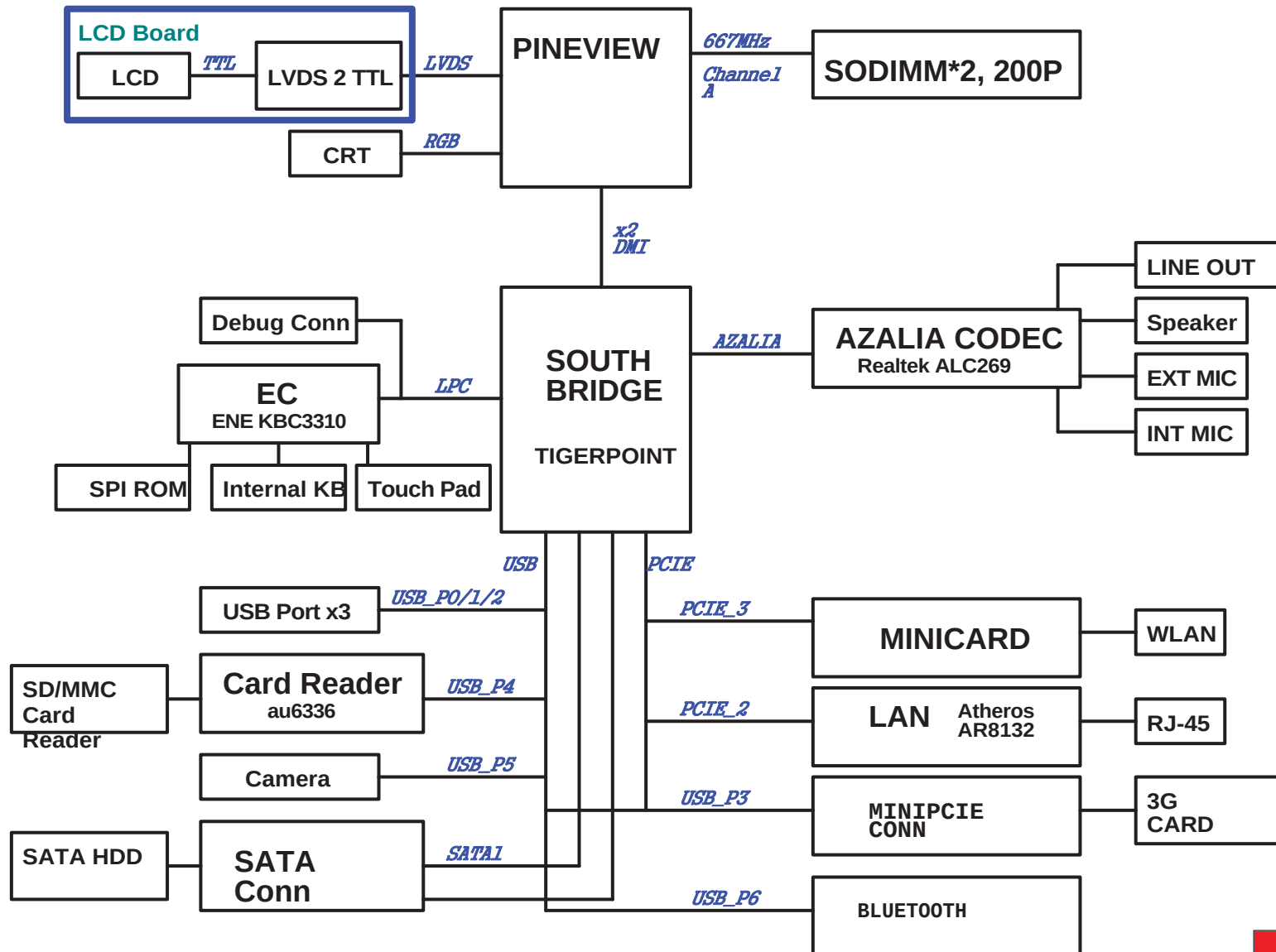


CLOCK GEN
IDT427



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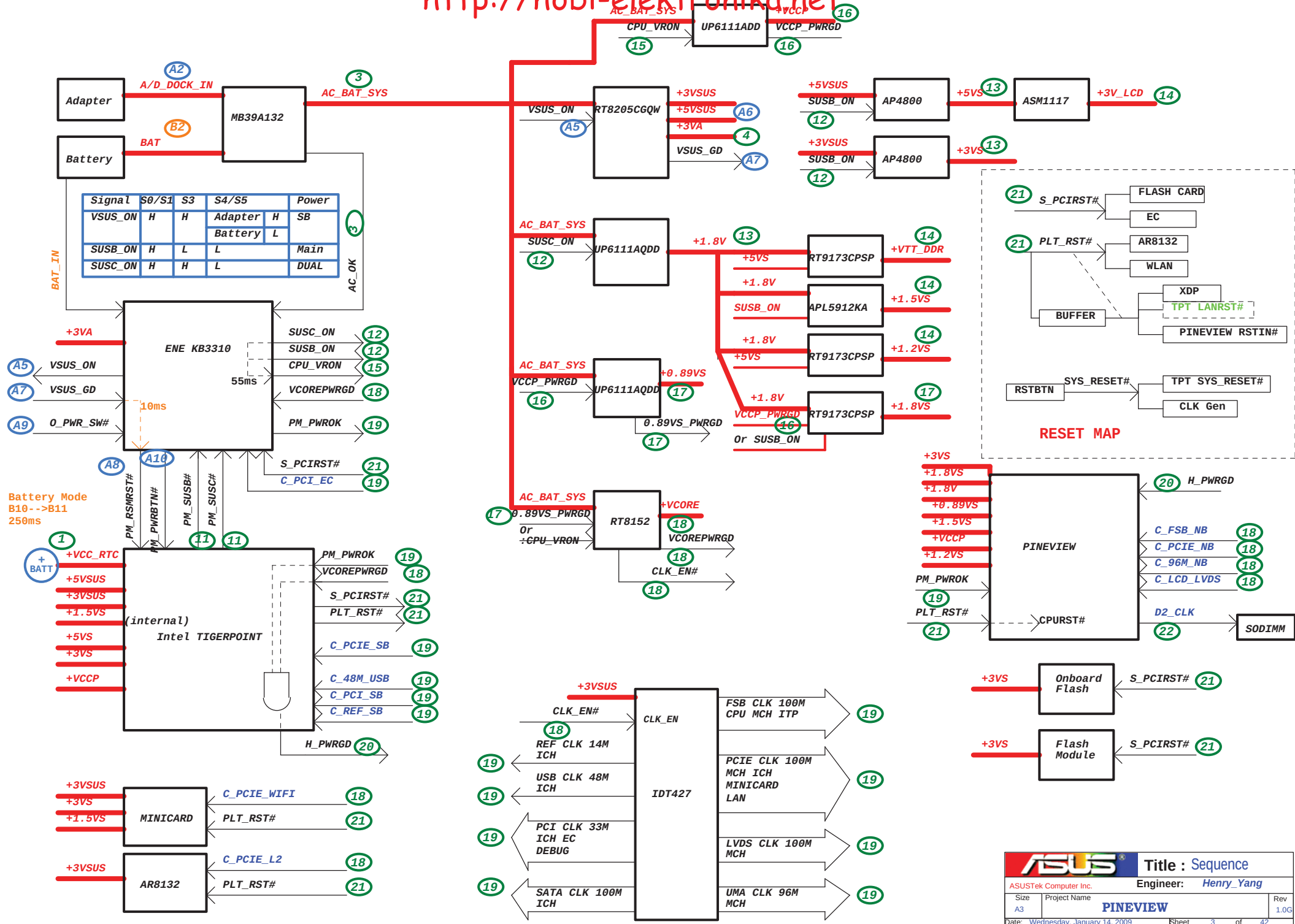
ICH7M GPIO DEFAULT&NOW SETTING

Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
AB18	GPIO0/BM_BUSY#	I/O	3.3V	CORE	GPI	BM_BUSY#
C8	GPIO1/REQ5#	I/O	5V	CORE	GPI	REQ5#
G8	GPIO2/PIRQE#	I/OD	5V	CORE	GPI	PIRQE#
F7	GPIO3/PIRQF#	I/OD	5V	CORE	GPI	PIRQF#
F8	GPIO4/PIRQG#	I/OD	5V	CORE	GPI	PIRQG#
G7	GPIO5/PIRQH#	I/OD	5V	CORE	GPI	PIRQH#
AC21	GPIO6	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AC18	GPIO7	I/O	3.3V	CORE	GPI	GPO,WLAN_LED
E21	GPIO8	I/O	3.3V	Resume	GPI	GPI,EXTSMI#
E20	GPIO9	I/O	3.3V	Resume	GPI	GPI,No Function,10K Pull +3VS
A20	GPIO10	I/O	3.3V	Resume	GPI	GPO,WLAN_ON#
B23	GPIO11/SMBALERT#	I/O	3.3V	Resume	Native	SMBALERT#
F19	GPIO12	I/O	3.3V	Resume	GPI	GPI,KBC_SCI#
E19	GPIO13	I/O	3.3V	Resume	GPI	GPO,VCCP_DOWN
R4	GPIO14	I/O	3.3V	Resume	GPI	GPO,1.5VS_DOWN
E22	GPIO15	I/O	3.3V	Resume	GPI	GPI,No Function,10K Pull +3VSUS
AC22	GPIO16/DPRSLVR	I/O	3.3V	CORE	Native	DPRSLVR
D8	GPIO17/GNT5#	I/O	3.3V	CORE	GPO	BIOS_SEL1
AC20	GPIO18/STPPCI#	I/O	3.3V	CORE	GPO	STP_PCI#
AH18	GPIO19/SATA1GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AF21	GPIO20/STPCPU#	I/O	3.3V	CORE	GPO	STP_CPU#
AF19	GPIO21/SATA0GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
A13	GPIO22/REQ4#	I/O	3.3V	CORE	Native	REQ4#
AA5	GPIO23/LDRQ1#	I/O	3.3V	CORE	Native	LDRQ1#
R3	GPIO24	I/O	3.3V	Resume	GPO	GPO,MINICARD1_EN#
D20	GPIO25	I/O	3.3V	Resume	GPO	GPO,DUAL_DOWN

Pin	Pin Name	Type	Tolerance	Powe Well	Default	Now Setting
A21	GPIO26	I/O	3.3V	Resume	GPO	GPO,VCORE_DOWN
B21	GPIO27	I/O	3.3V	Resume	GPO	GPO,CARD_READER_EN#
E23	GPIO28	I/O	3.3V	Resume	GPO	GPO,MODEM_EN#
C3	GPIO29/OC5#	I/O	3.3V	Resume	Native	OC5#
A2	GPIO30/OC6#	I/O	3.3V	Resume	Native	OC6#
B3	GPIO31/OC7#	I/O	3.3V	Resume	Native	OC7#
AG18	GPIO32/CLKRUN#	I/O	3.3V	CORE	GPO	CLKRUN#
AC19	GPIO33/AZ_DOCK_EN#	I/O	3.3V	CORE	GPO	GPO,No Function,NC
U2	GPIO34/AZ_DOCK_RST#	I/O	3.3V	CORE	GPO	GPO,No Function,NC
AD21	GPIO35	I/O	3.3V	CORE	GPO	GPO,CAMERA_EN
AH19	GPIO36/SATA2GP	I/O	3.3V	CORE	GPI	GPI,No Function,10K Pull +3VS
AE19	GPIO37/SATA3GP	I/O	3.3V	CORE	GPI	GPI,PCB_ID0
AE20	GPIO38	I/O	3.3V	CORE	GPI	GPI,PCB_ID1
AD20	GPIO39	I/O	3.3V	CORE	GPI	GPI,PCB_ID2
NA	GPIO40	NA	NA	NA	NA	NA
NA	GPIO41	NA	NA	NA	NA	NA
NA	GPIO42	NA	NA	NA	NA	NA
NA	GPIO43	NA	NA	NA	NA	NA
NA	GPIO44	NA	NA	NA	NA	NA
NA	GPIO45	NA	NA	NA	NA	NA
NA	GPIO46	NA	NA	NA	NA	NA
NA	GPIO47	NA	NA	NA	NA	NA
A14	GPIO48/GNT4#	I/O	3.3V	CORE	Native	BIOS_SEL0
AG24	GPIO49/CPUPWRGD	I/O	V_CPU_IO	V_CPU_IO	Native	CPUPWRGD

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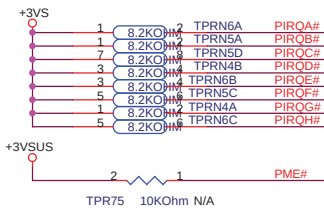
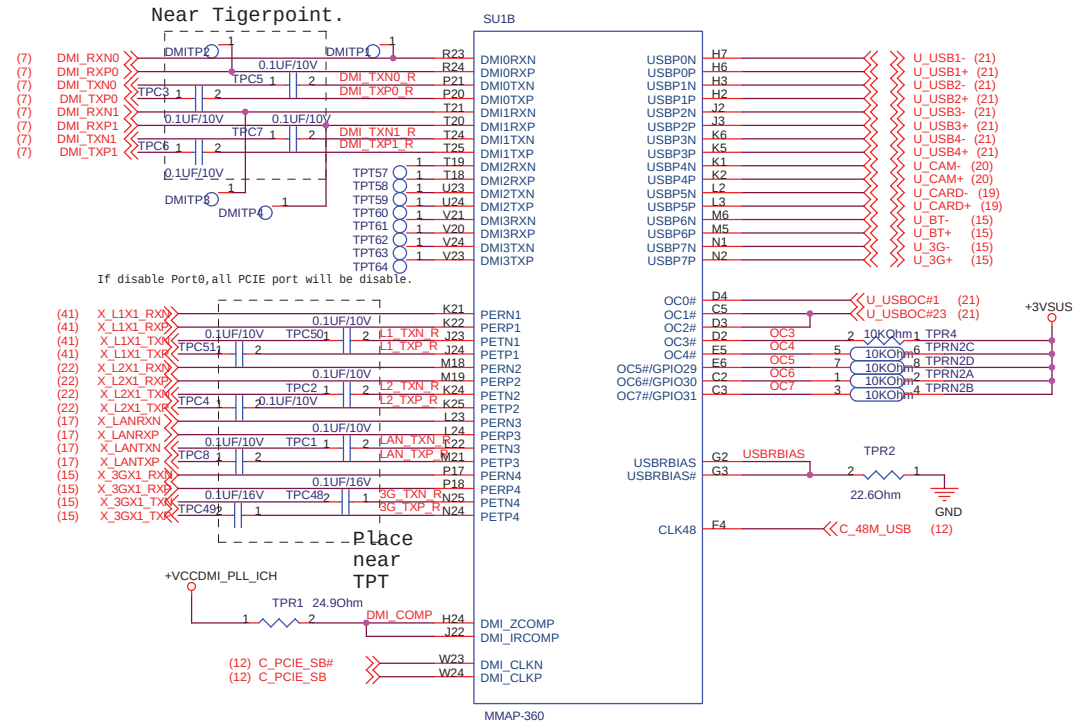
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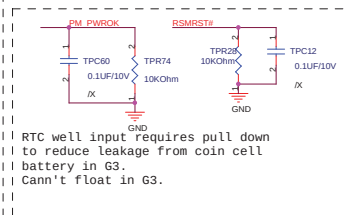
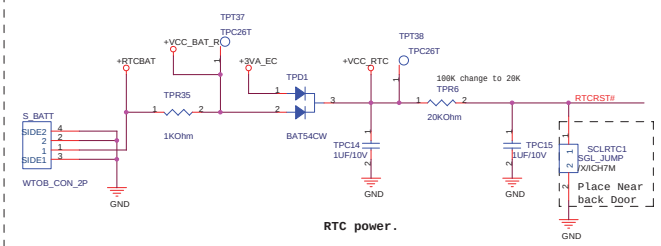
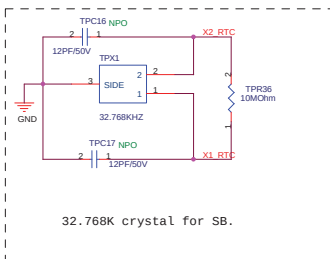
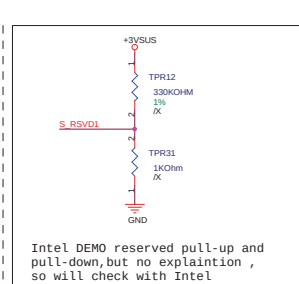
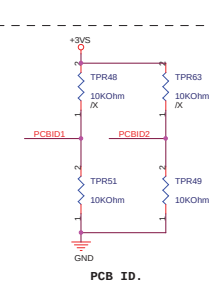
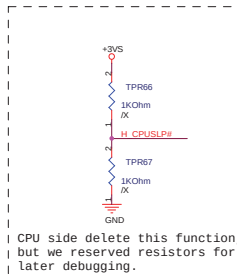
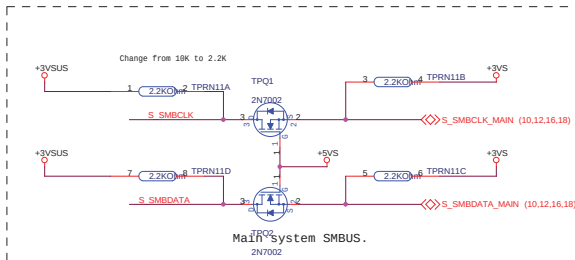
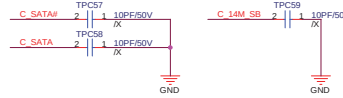
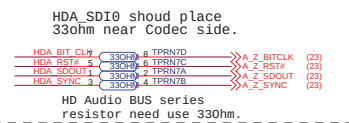
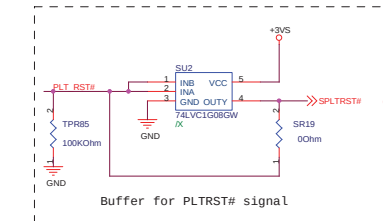
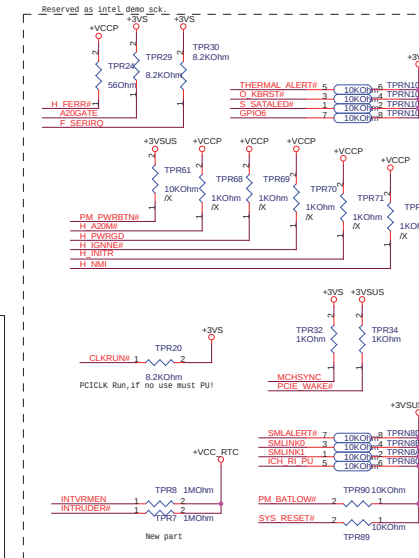
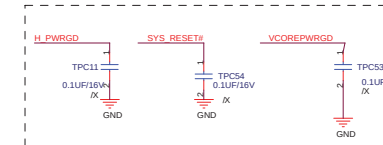
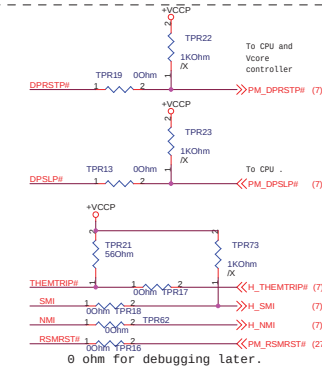
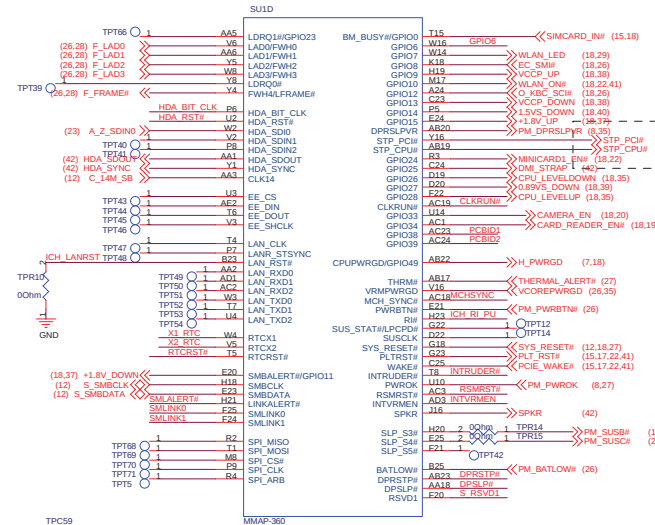
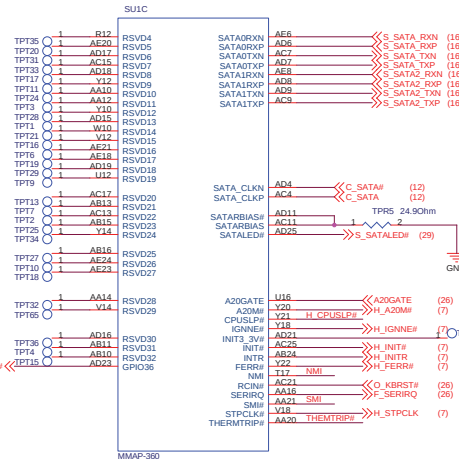
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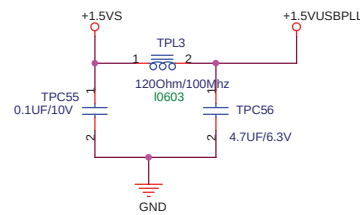
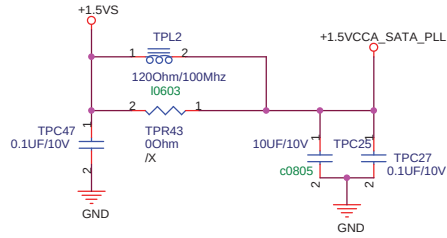
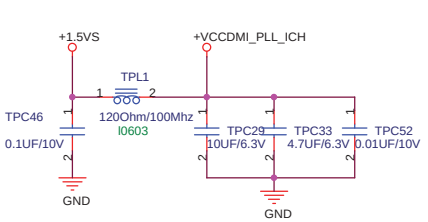
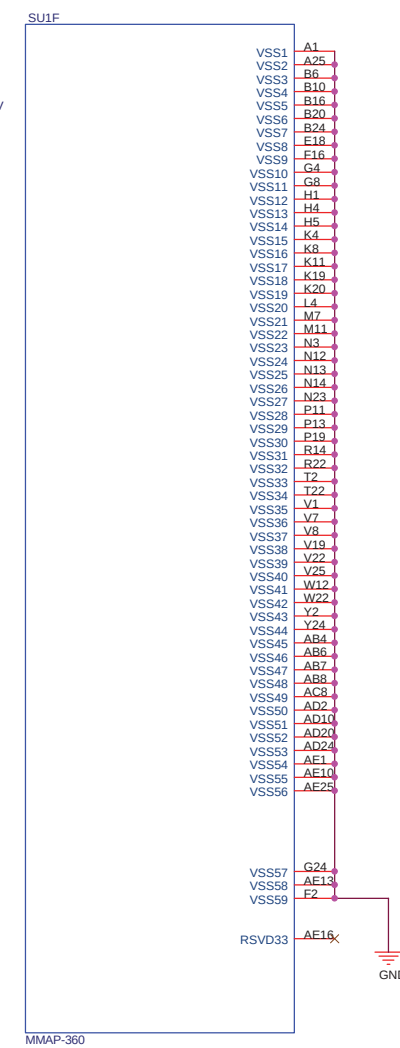
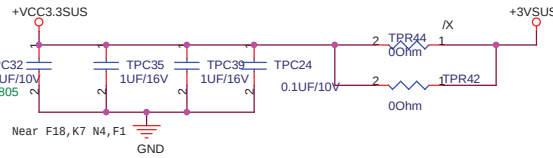
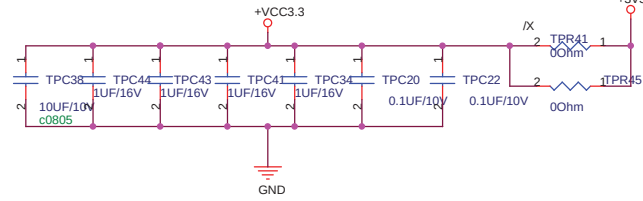
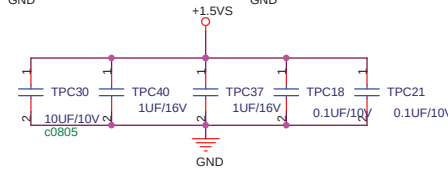
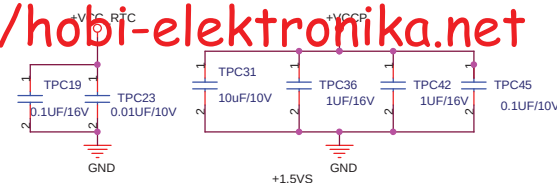
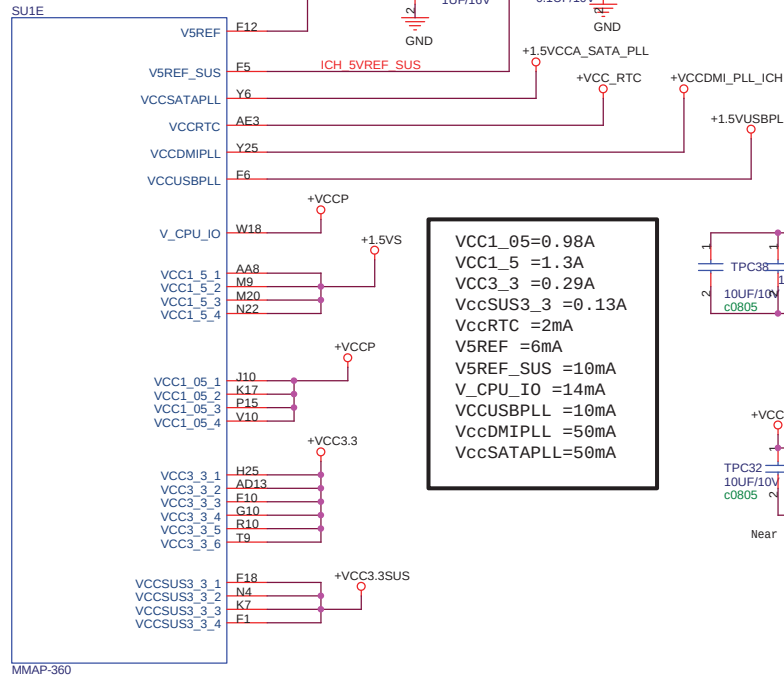
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SATA RX,TX all need AC couple
and place near Connector side
for signal quality.And Traces
to them should match length.
ICH7M need pull down RX,
if no use.

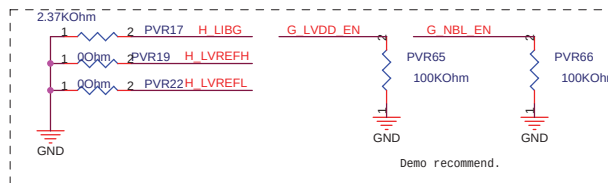
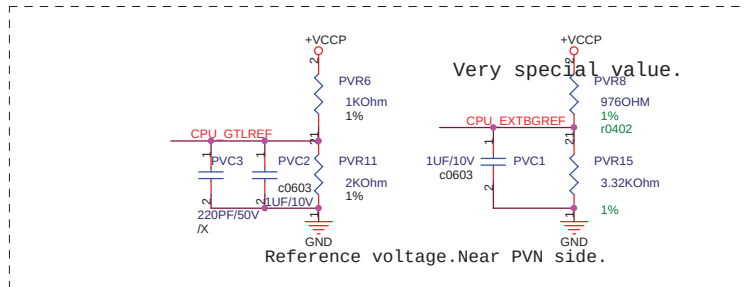
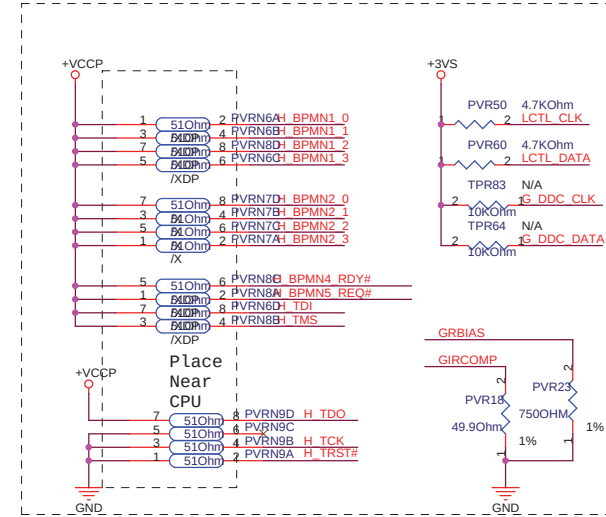
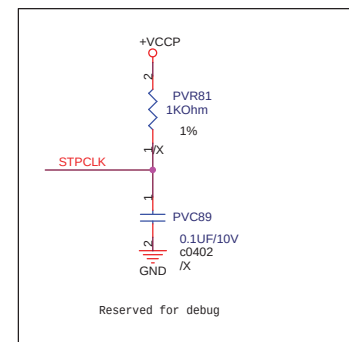
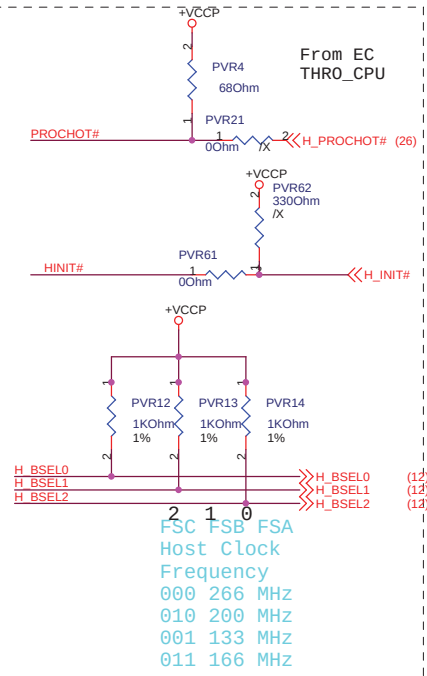
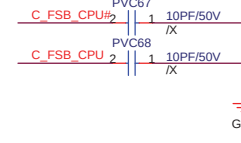
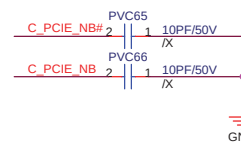
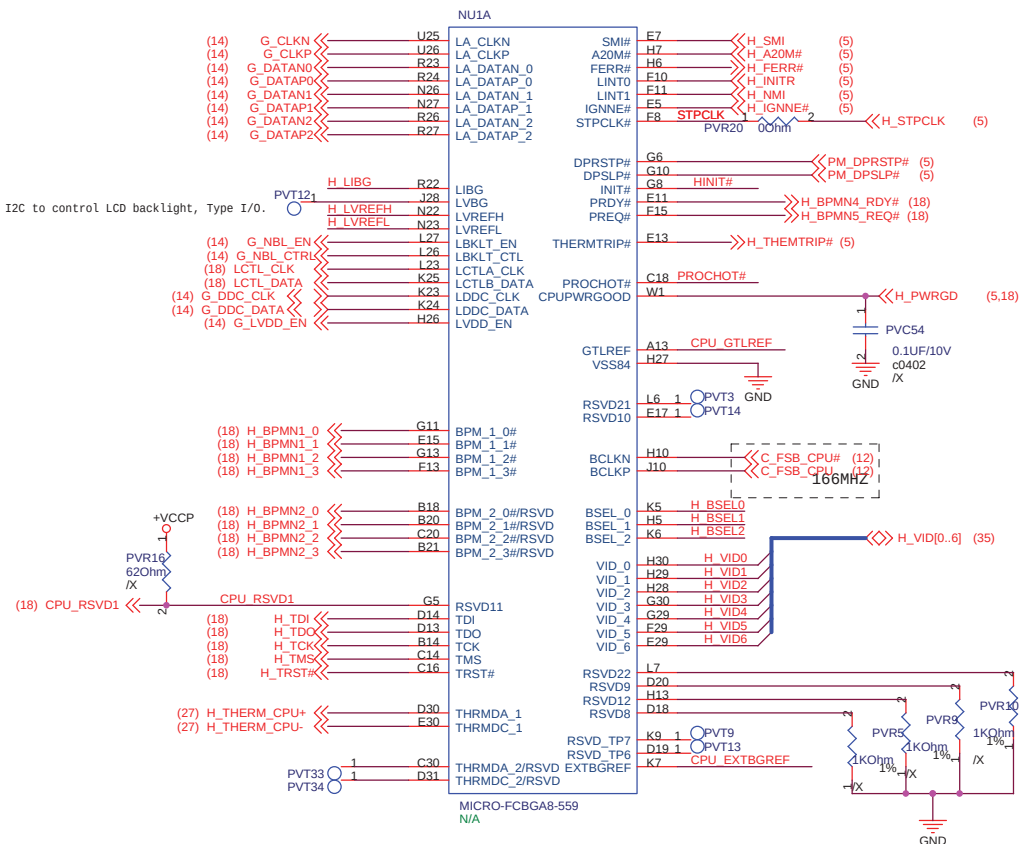




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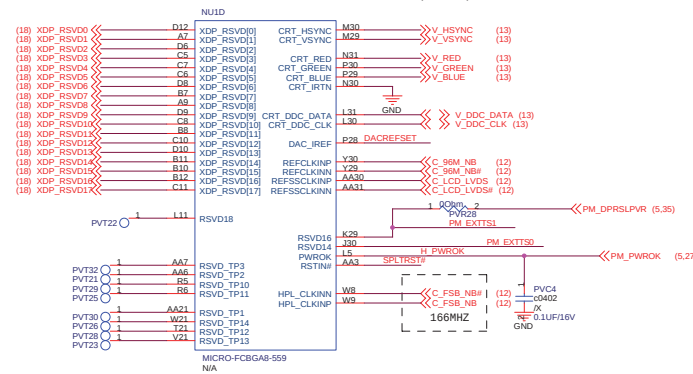


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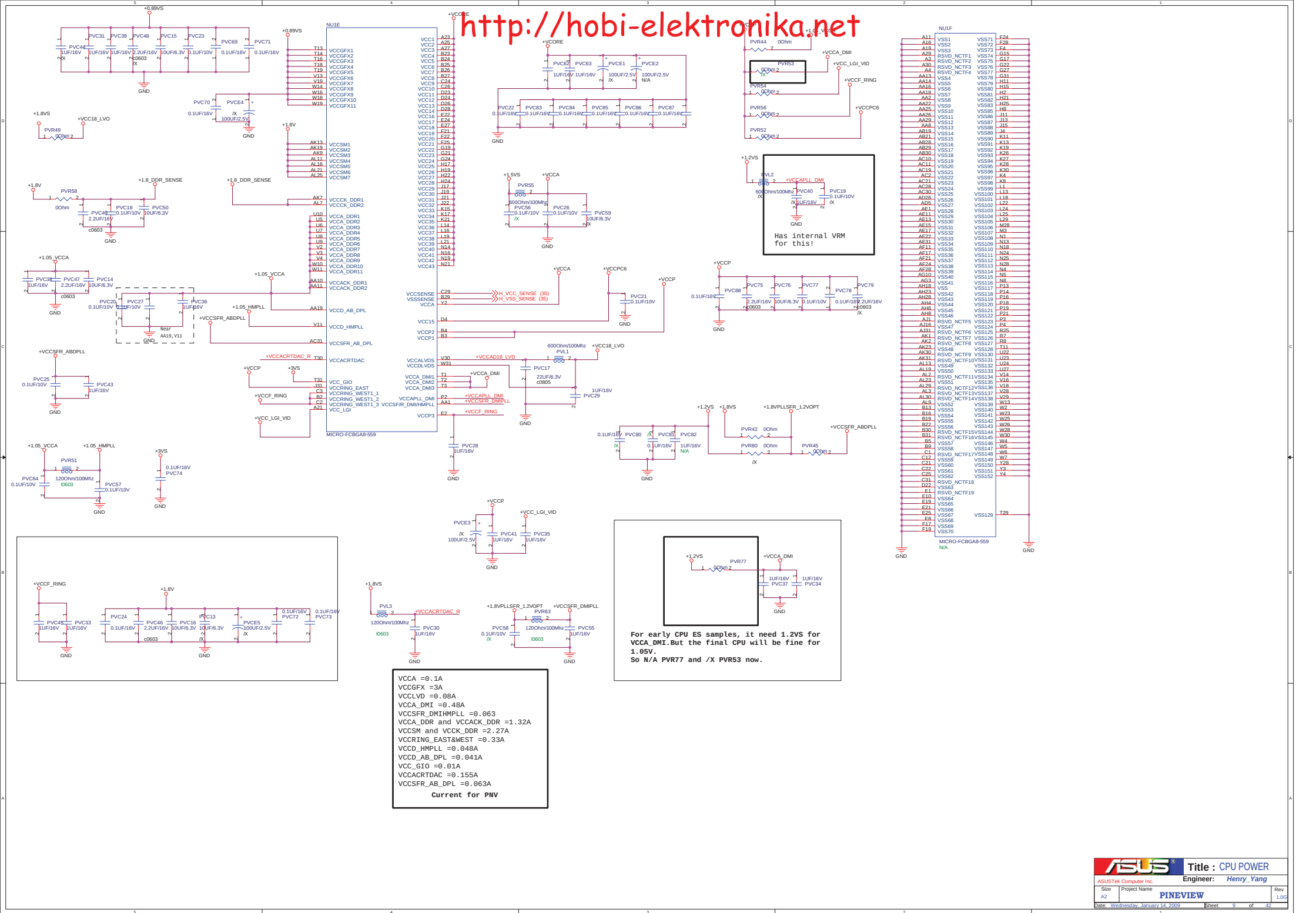
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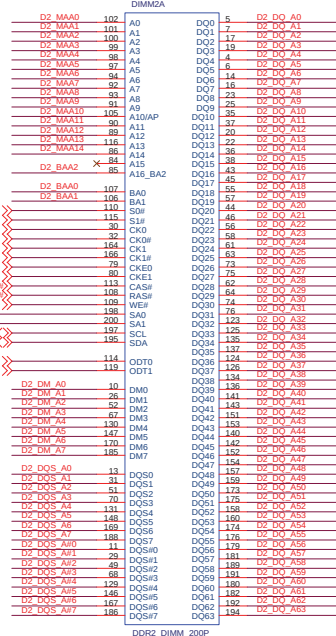
The diagram shows a +3VS supply connected to two pins, PM EXTTS0 and PM EXTTS1. Each pin is connected to the supply through a 10KOhm resistor. The resistors are labeled PVR35 and PVR36. The pins are labeled PM EXTTS0 and PM EXTTS1.



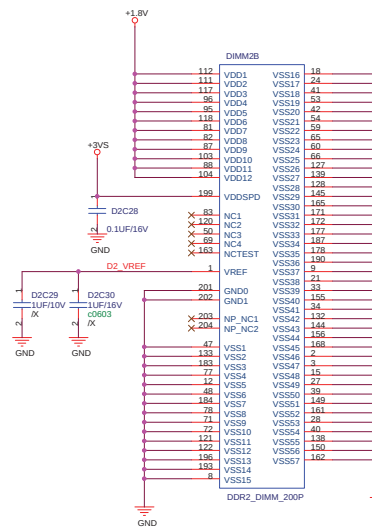
XDP_RSVD0	7	1Kbit	8	PVRIN0
XDP_RSVD1	1	1Kbit	8	PVRIN1A
XDP_RSVD2	5	1Kbit	8	PVRIN1C
XDP_RSVD8	1	1Kbit	8	PVRIN2A
		IX		
XDP_RSVD3	1	1Kbit	2	PVRIN1A
XDP_RSVD4	7	1Kbit	8	PVRIN1D
XDP_RSVD5	3	1Kbit	8	PVRIN1B
XDP_RSVD15	5	1Kbit	8	PVRIN2C
		IX		
XDP_RSVD7	3	1Kbit	4	PVRIN4B
XDP_RSVD16	5	1Kbit	8	PVRIN3C
XDP_RSVD17	1	1Kbit	2	PVRIN3A
XDP_RSVD10	5	1Kbit	8	PVRIN4AC
		IX		
XDP_RSVD11	7	1Kbit	8	PVRIN4AD
XDP_RSVD12	3	1Kbit	4	PVRIN2B
XDP_RSVD13	7	1Kbit	8	PVRIN2D
XDP_RSVD14	3	1Kbit	4	PVRIN3B
		IX		

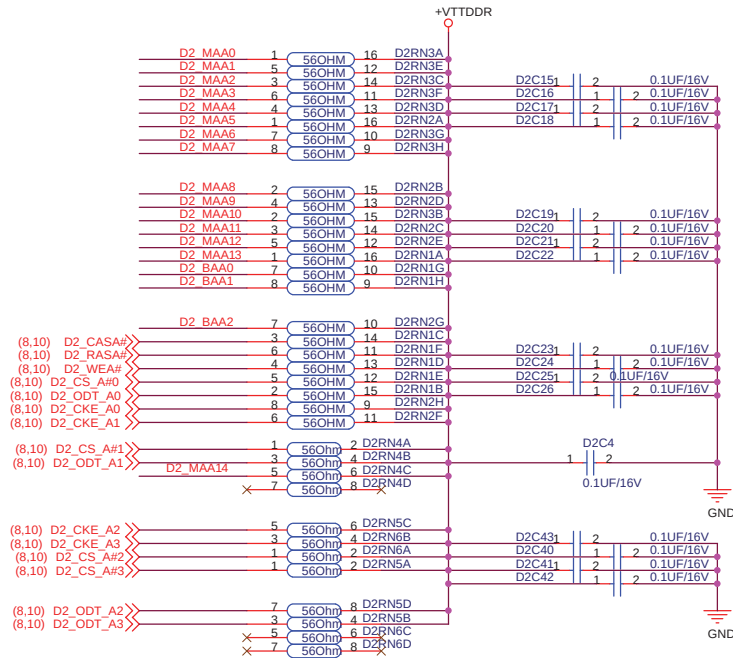
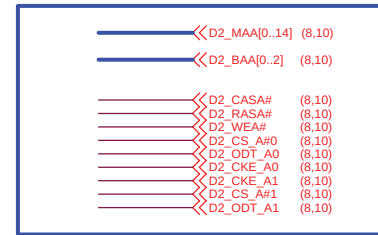
The schematic diagram illustrates the power management circuit for the PWR32 and PWR33 ICs. Both ICs are connected to a 1.8V supply and ground. The PWR32 IC has pins for DDORFREF, DDORFV, and DDORFV. The PWR33 IC has pins for DDORFREF, DDORFV, and DDORFV. The schematic includes resistors (PVR25, PVR25, PVR32, PVR33), capacitors (PVC6, PVC6), and a 1.8V supply. The output of PWR32 is labeled DDORFV and the output of PWR33 is labeled DDORFV. The schematic also shows a 1.8V supply and ground connections.





Use 12G025C22004 H=9.2mm

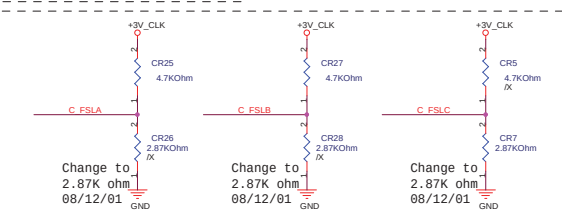
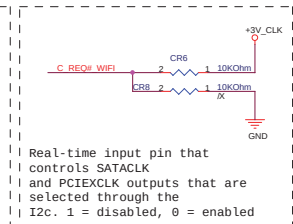
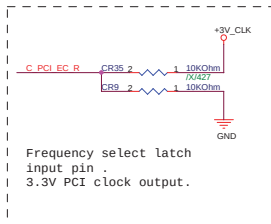
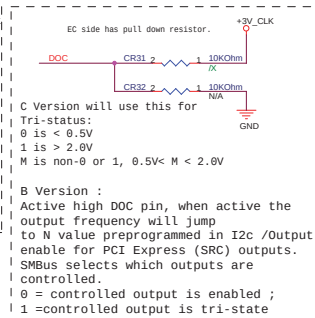
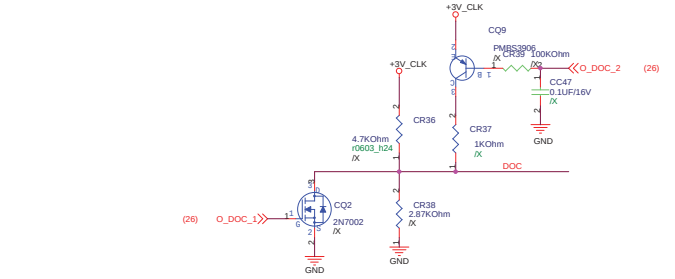
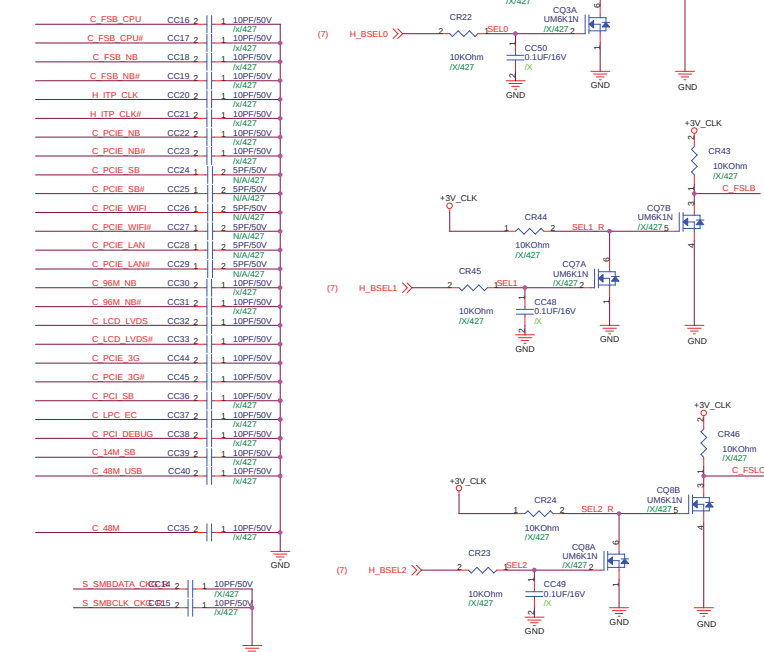
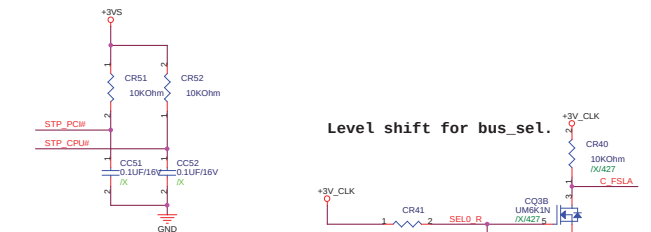




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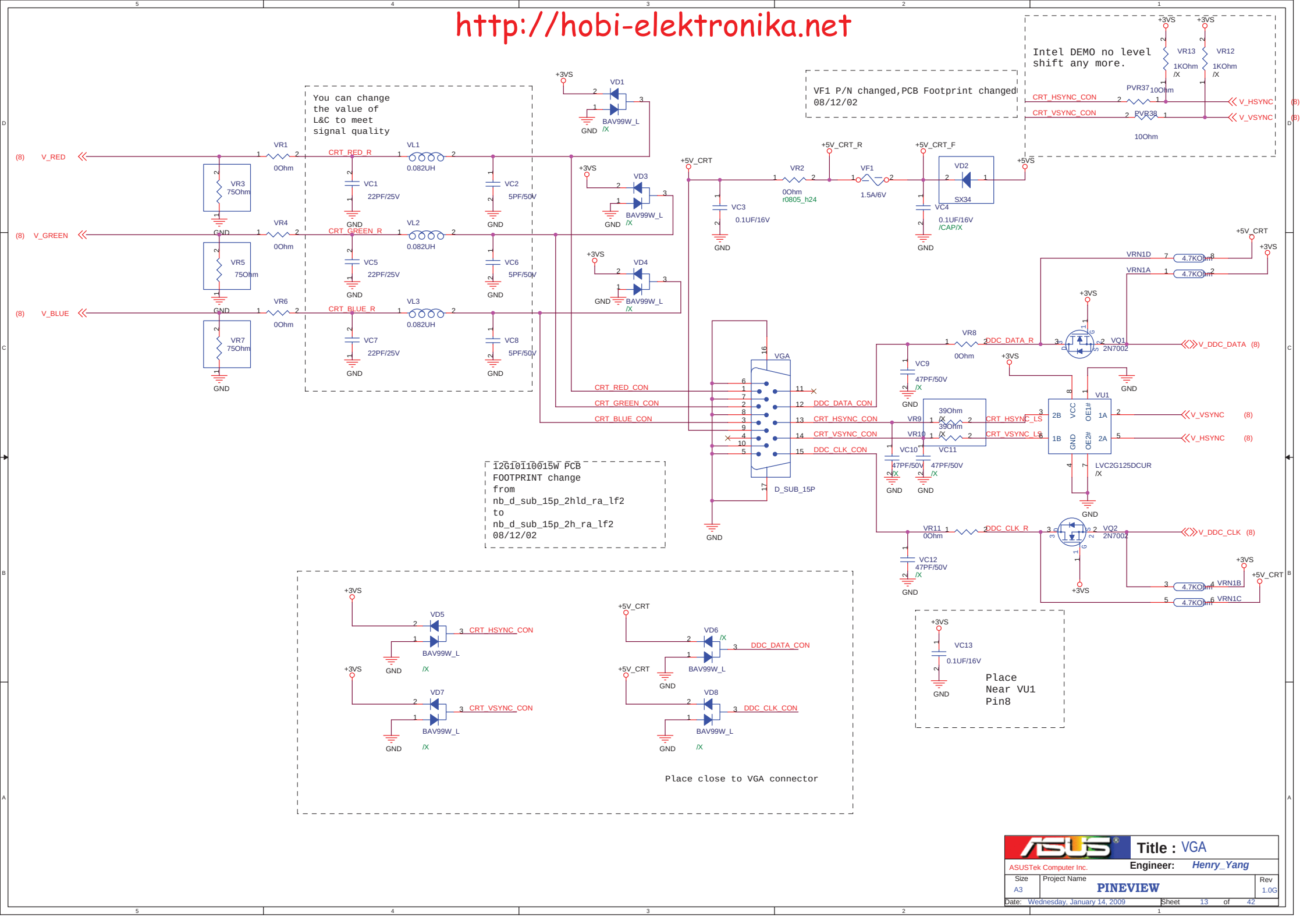
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FSLC	FSLB	FSLA	CPU(MHZ)
0	0	1	133.33
1	0	1	100
0	1	1	166MHZ

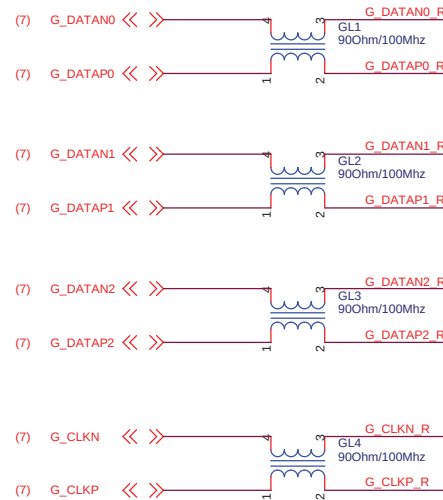
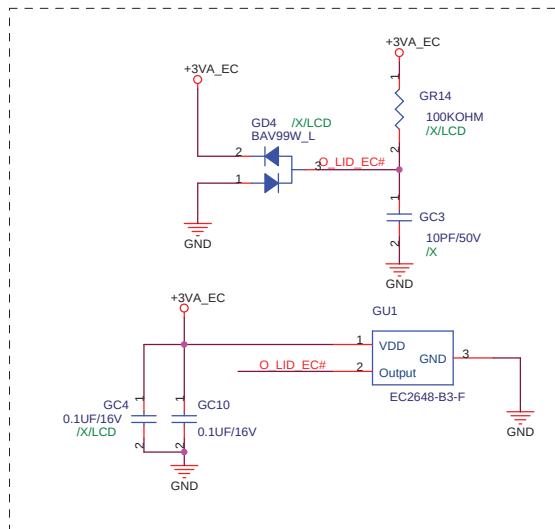
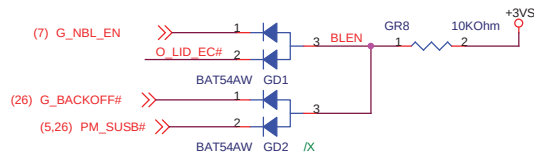
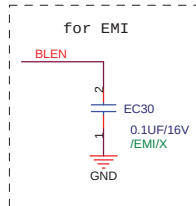
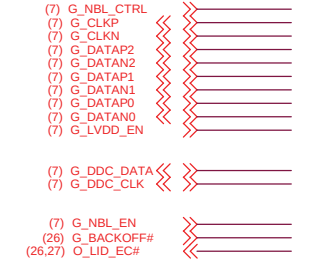
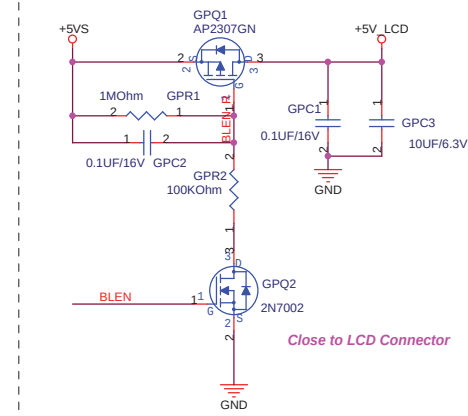
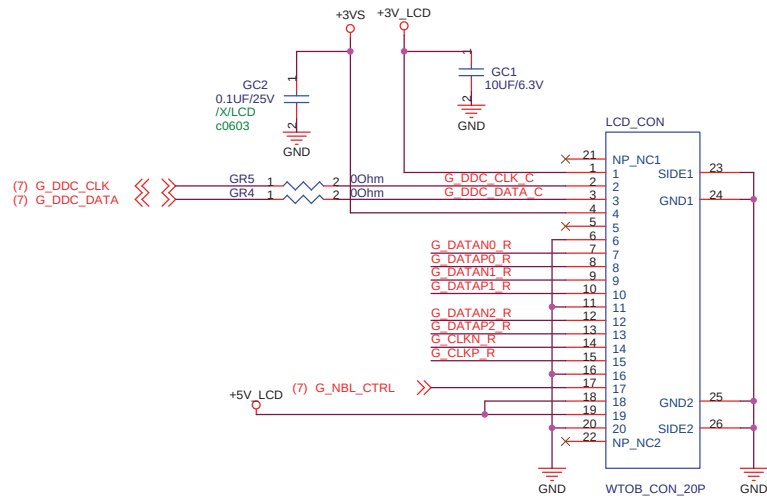
BCLK Select.



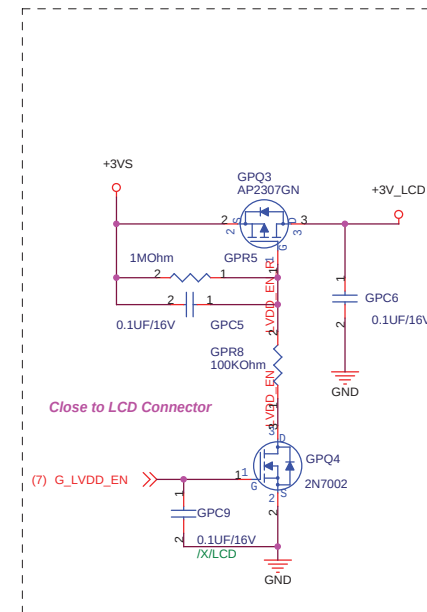
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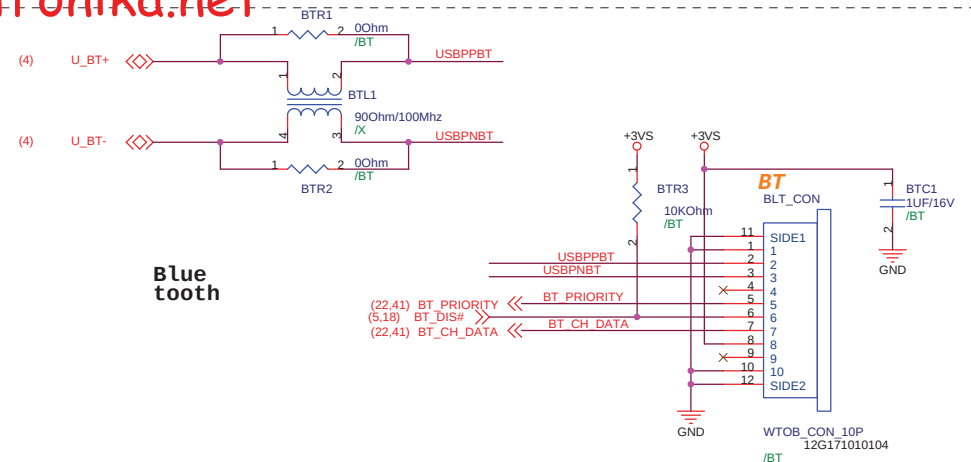
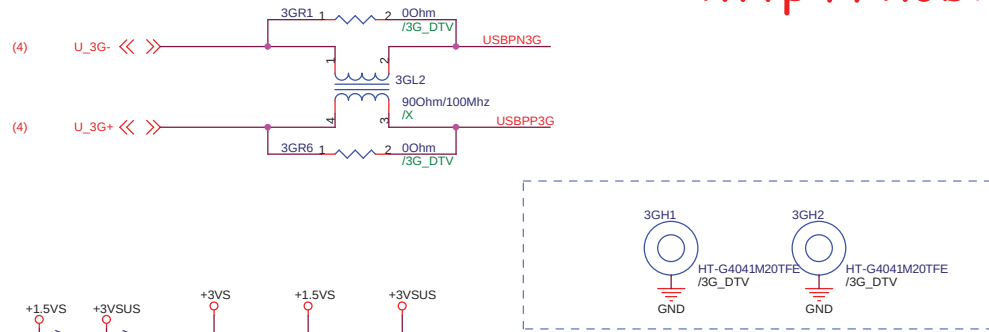
Add for RF request.



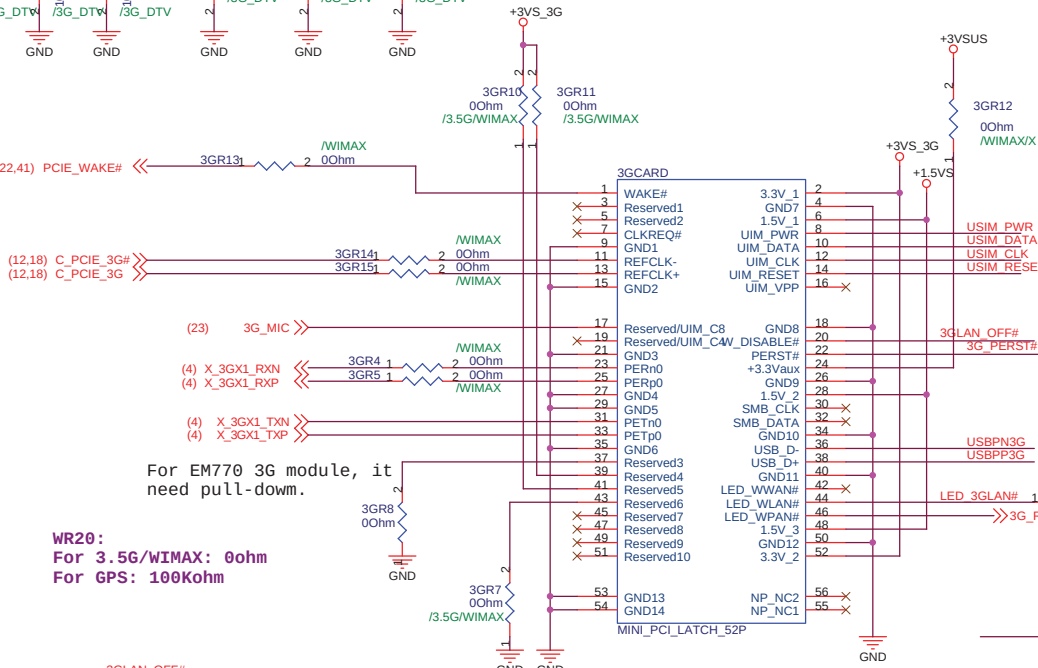
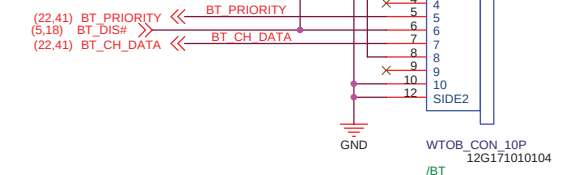
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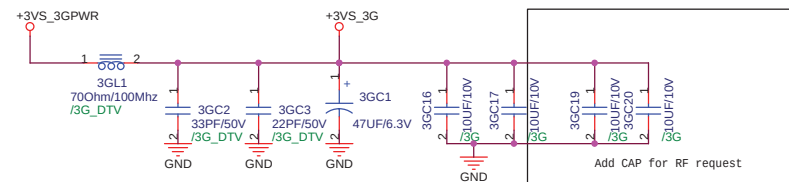
Blue tooth



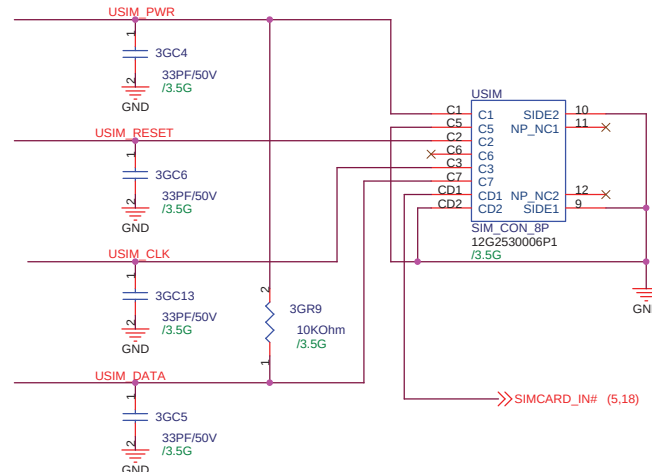
For EM770 3G module, it need pull-down.

WR20:
For 3.5G/WIMAX: 0ohm
For GPS: 100Kohm

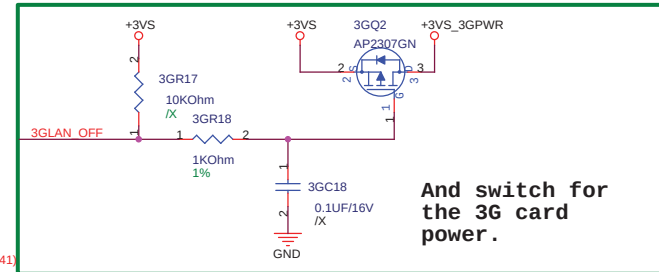
3GCARD use 12603010052L



Power trace must be 30mils or more!!!



CAP Near SIM Socket



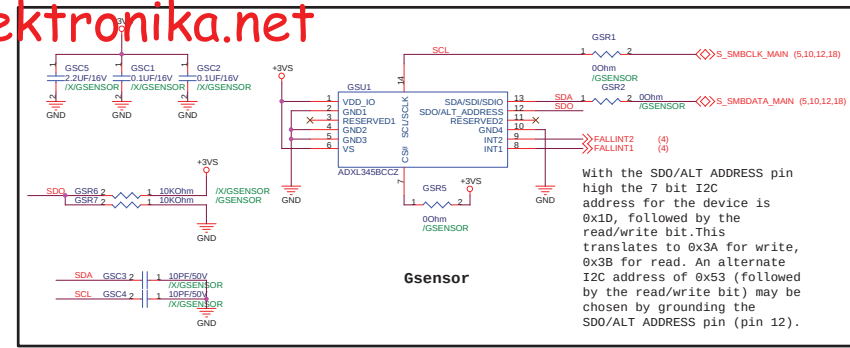
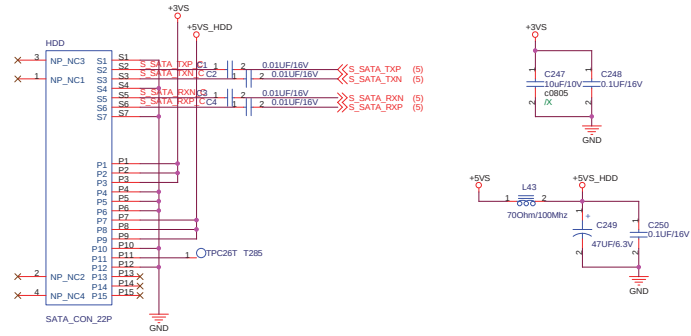
And switch for the 3G card power.

<http://hobi-elektronika.net>

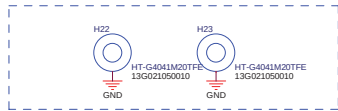
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

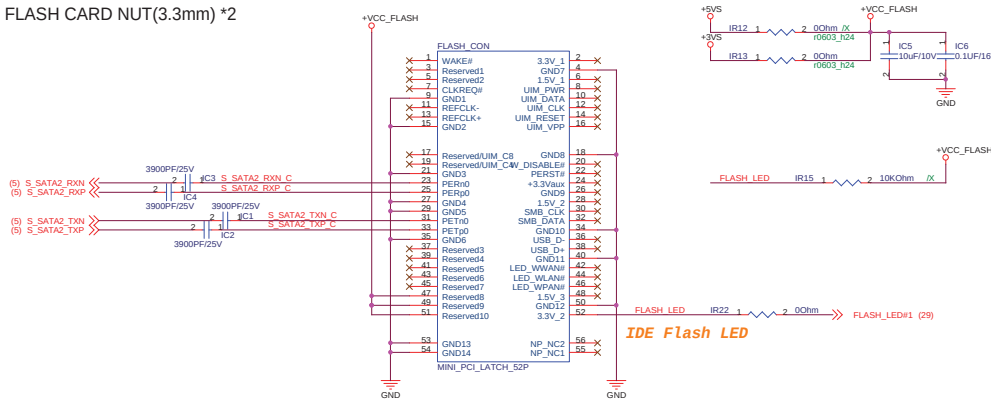
SATA HDD Connector



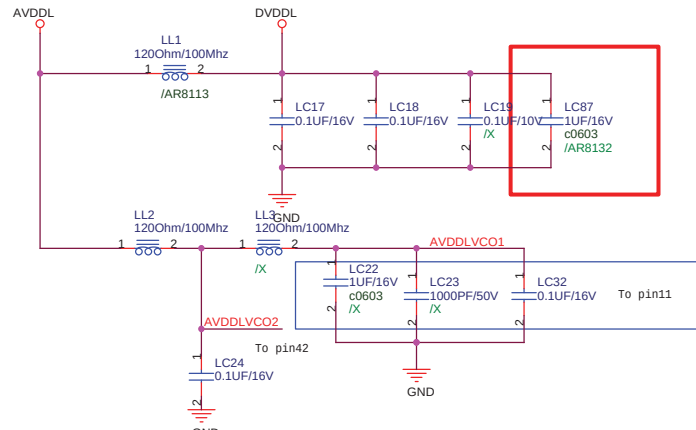
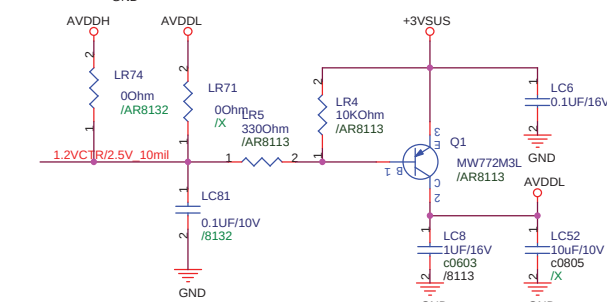
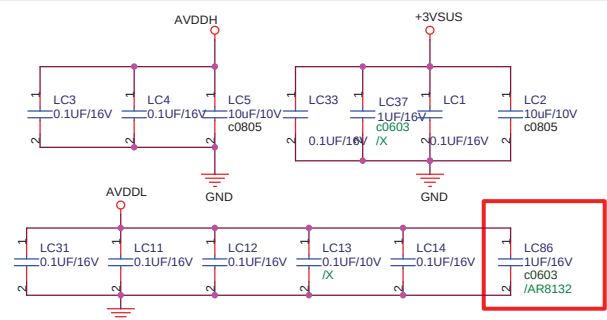
With the SDO/ALT ADDRESS pin high the 7 bit I2C address for the device is 0x10, followed by the read/write bit. This translates to 0x3A for write, 0x3B for read. An alternate I2C address of 0x53 (followed by the read/write bit) may be chosen by grounding the SDO/ALT ADDRESS pin (pin 12).



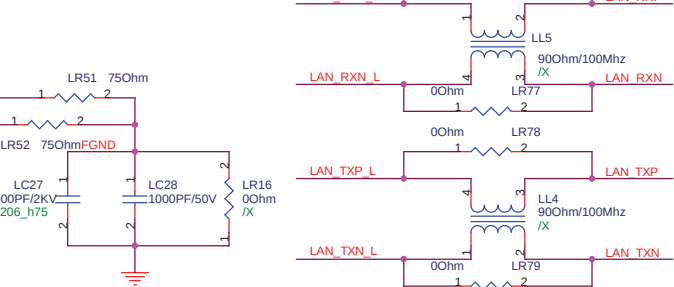
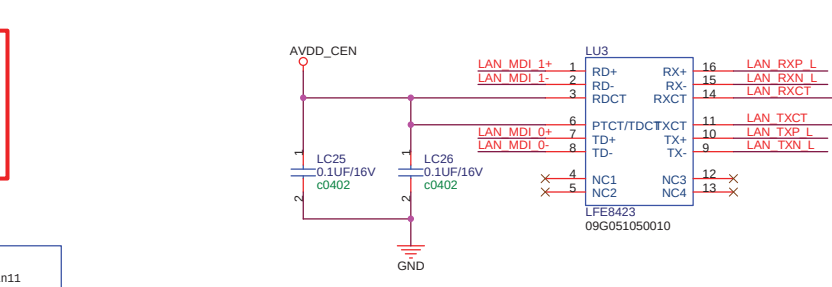
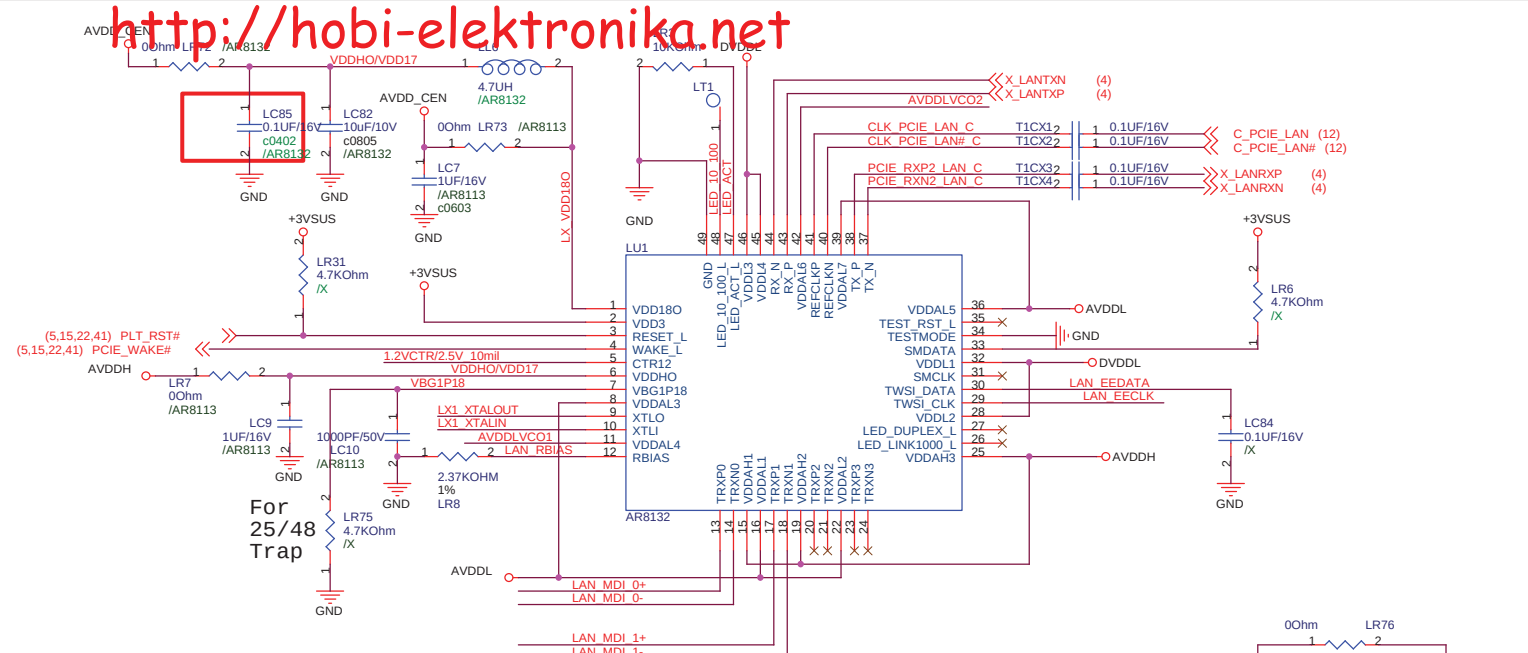
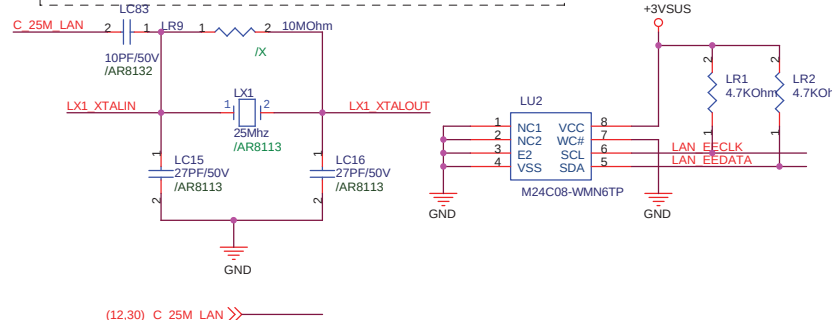
FLASH CARD NUT(3.3mm) *2



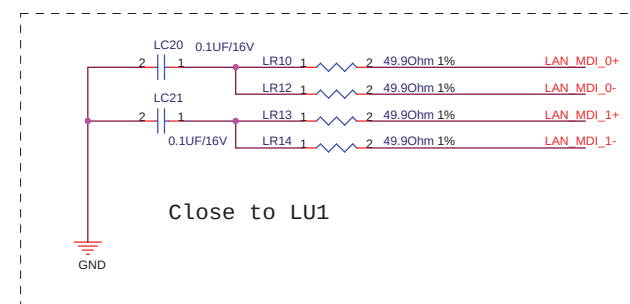
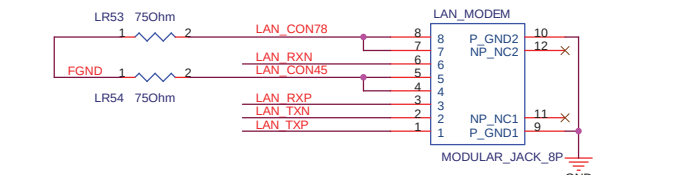
<Variant Name>



if overlocking LL3 Kept and LL2 removed
if not overlocking LL3 removed and LL2 Kept



LAN connector: 12G148301086



<http://hobi-elektronika.net>

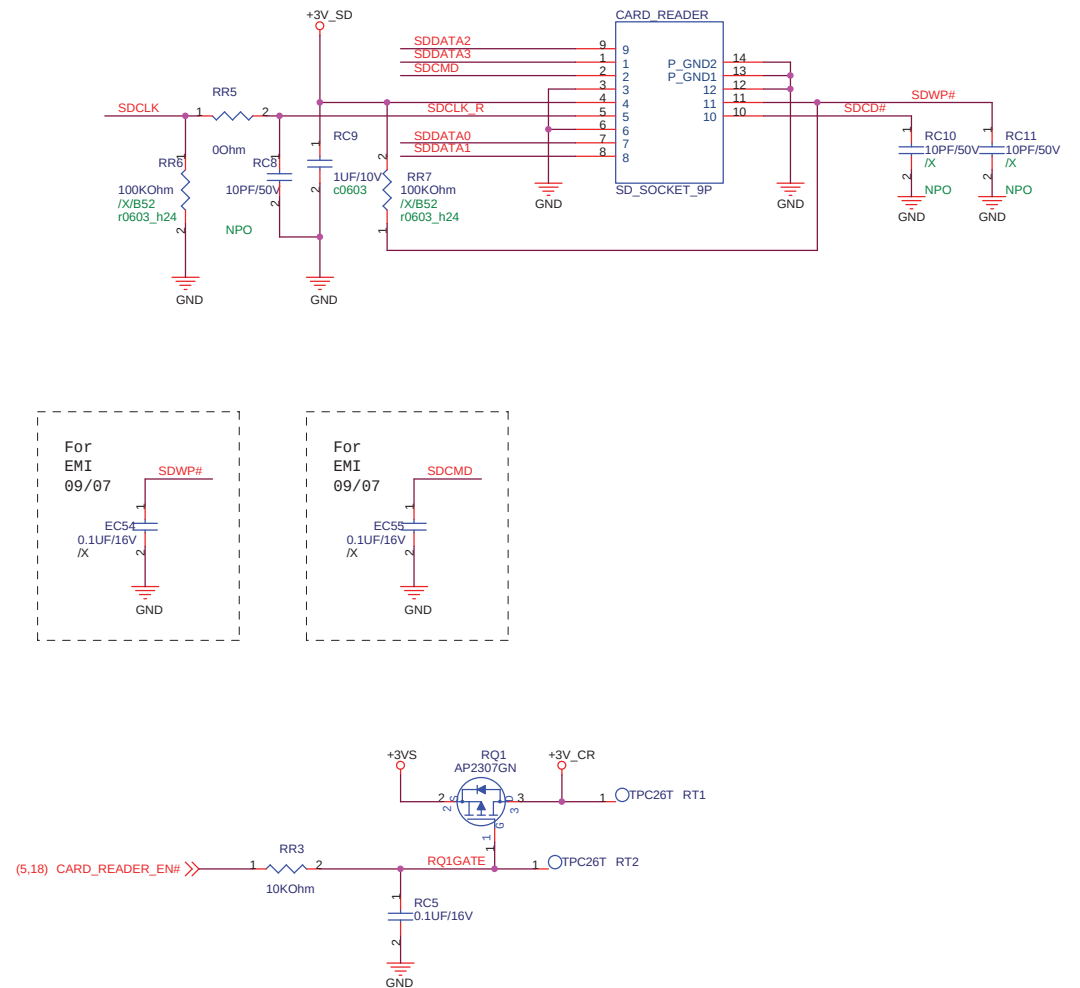
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

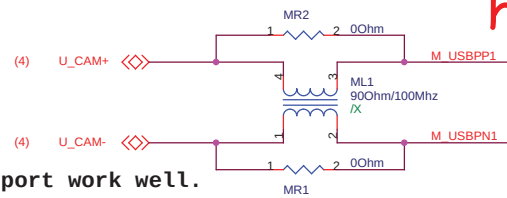
<http://hobi-elektronika.net>



<http://hobi-elektronika.net>

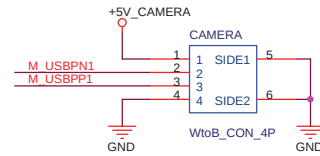
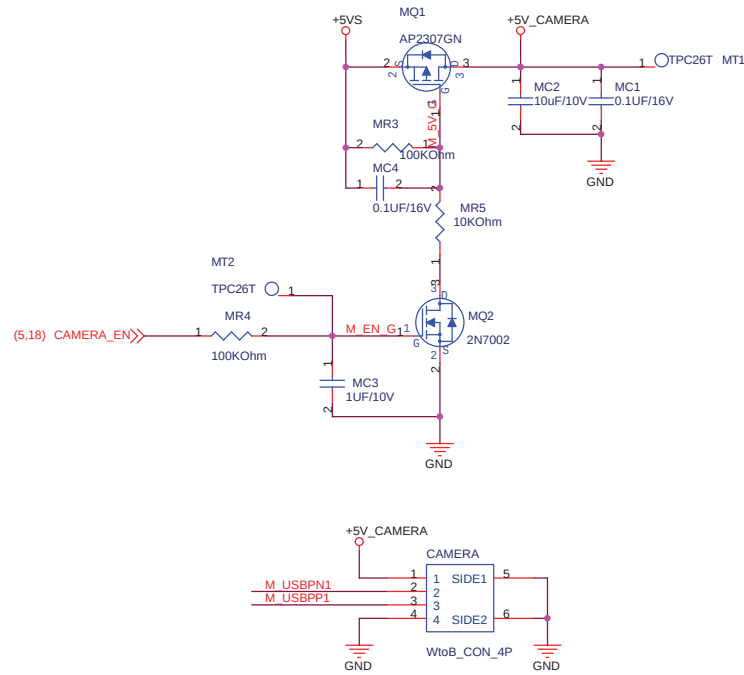
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>



(4) U_CAM+ <>>
(4) U_CAM- <>>
(5,18) CAMERA_EN <>>

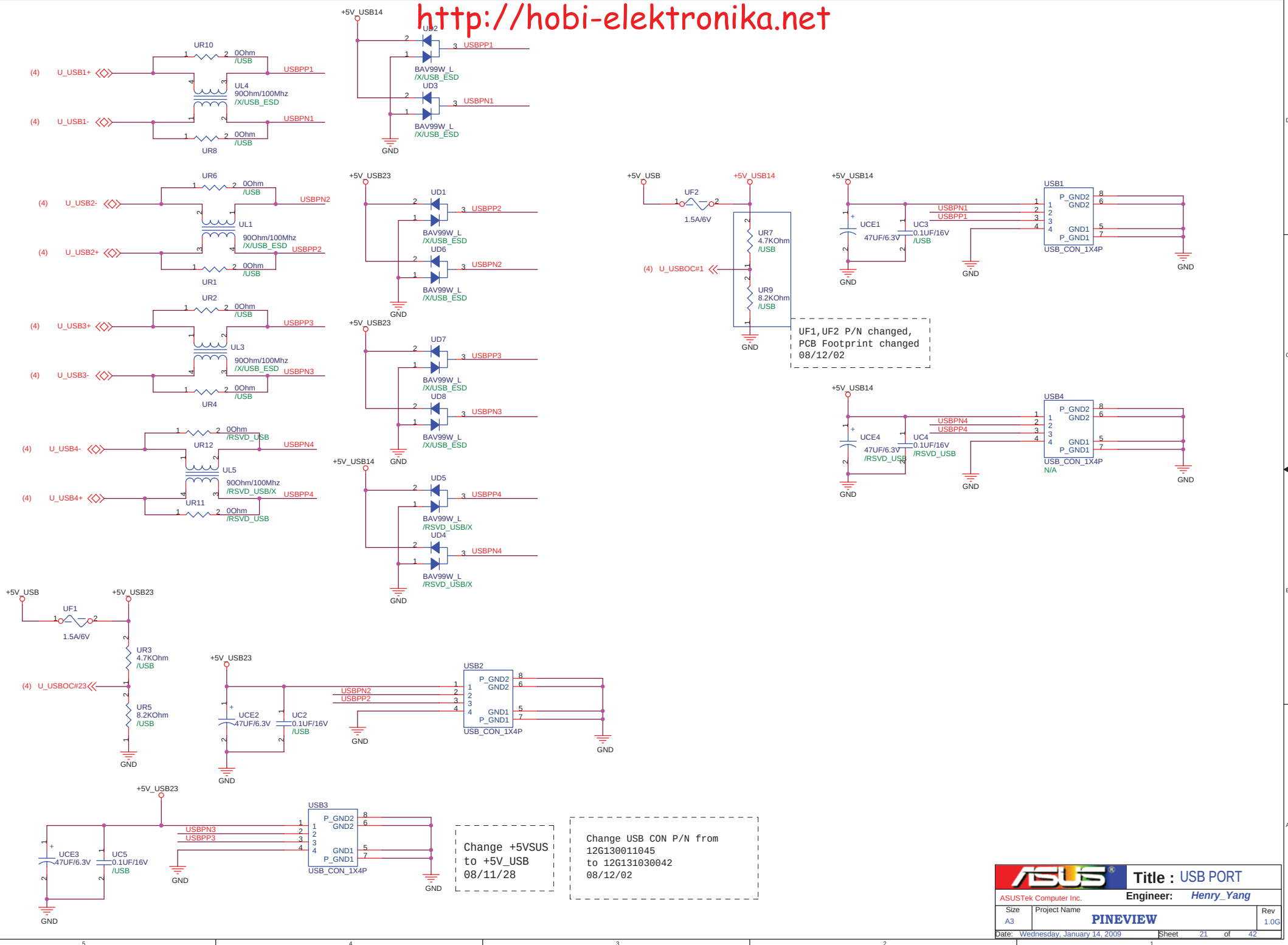
For check if the USB port work well.



<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

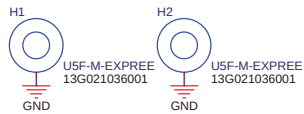
<http://hobi-elektronika.net>



<http://hobi-elektronika.net>

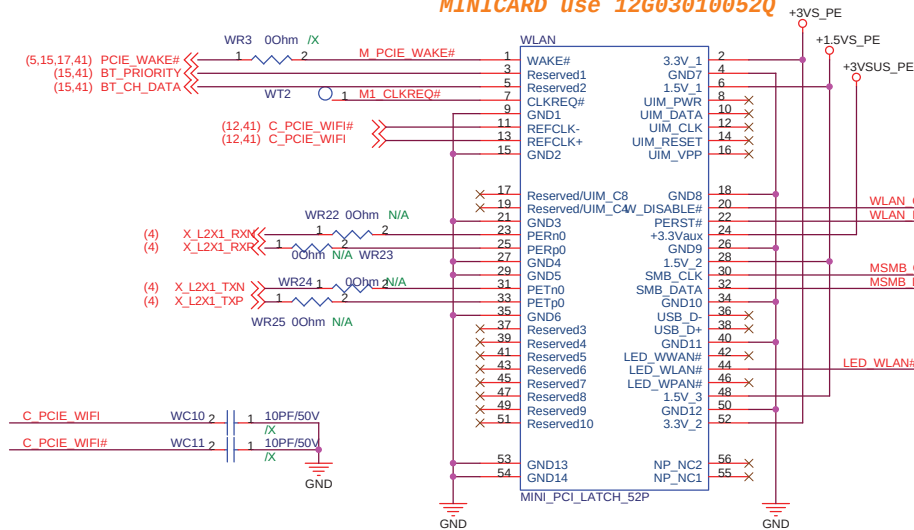
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>



MINI CARD NUT(1.6mm) *2

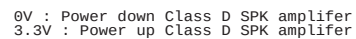
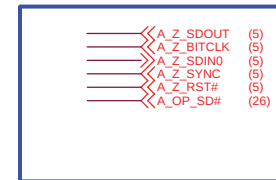
MINICARD use 12G03010052Q



<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

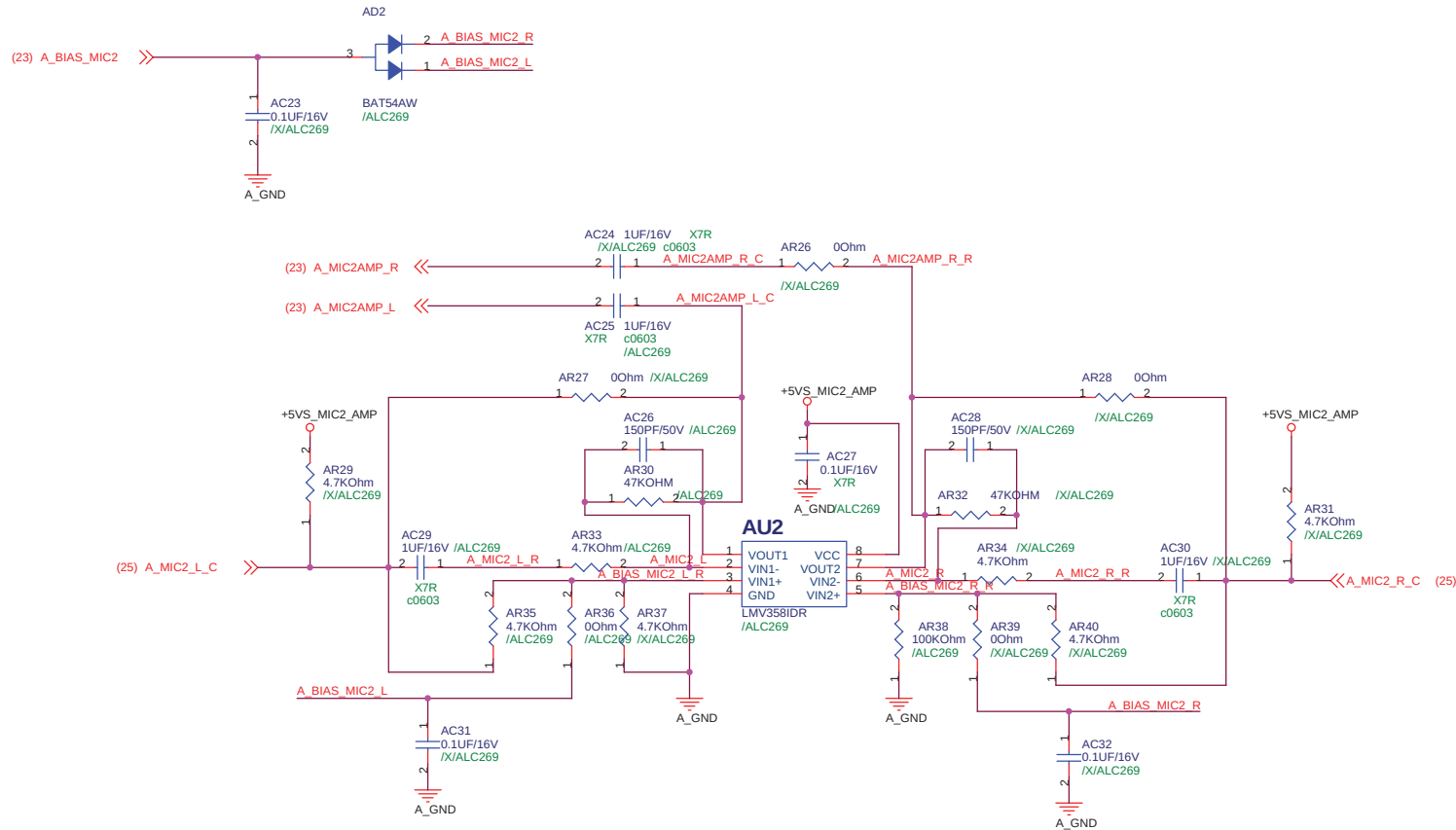
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<http://hobi-elektronika.net>

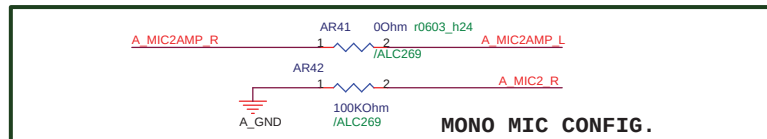
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>



Internal MIC Amp.

FL = 33.86kHz, FH = 22.5kHz

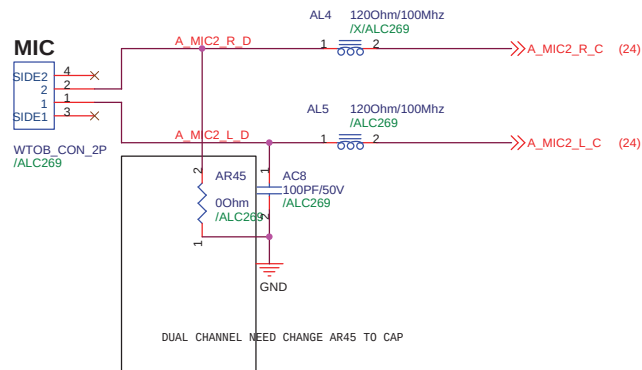


<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

Internal MIC

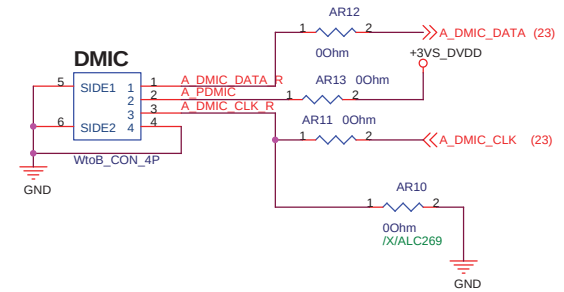
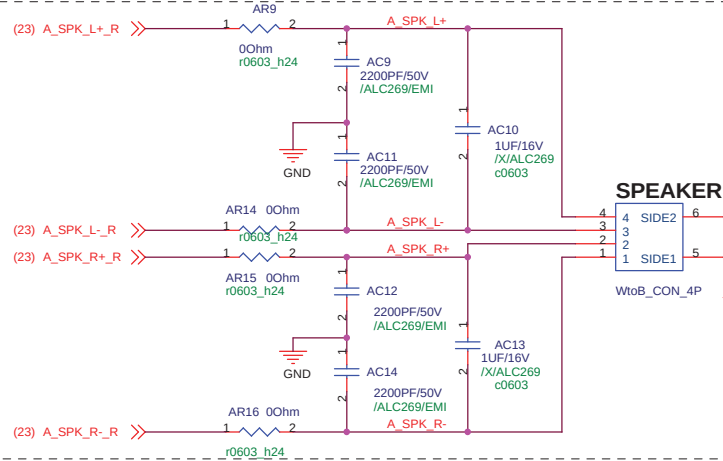


Change AR21,AR22 to 1K 1%
08/11/26

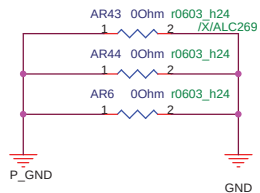
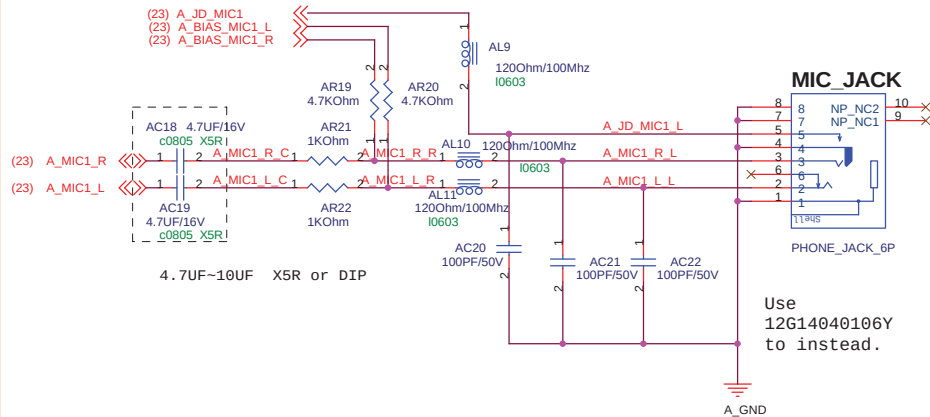
SPEAKER

Demodulation Filter
Placement near
Audio Codec

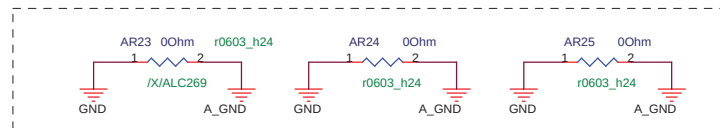
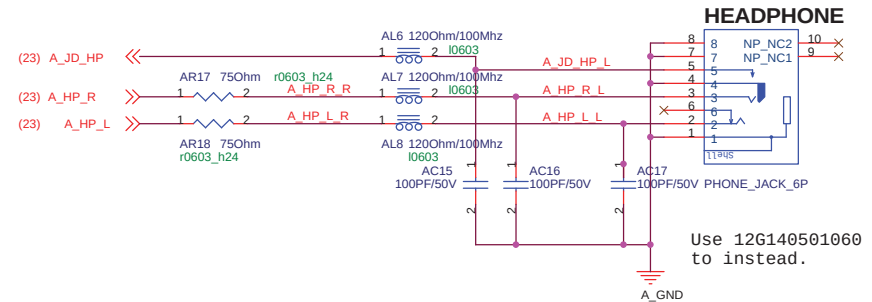
<<Attention>>
you can use LC filter(AR9,AR14,AR15,AR16
mount 8.2uH L ;and mount AC10,AC13) to
eliminate the EMI(please don't use
general beads,because they may influence
the THD+N quality) , AC9/AC11/AC12/AC14
are reserved for EMI fine-tune ; For EMI
issue, All L and C should near to codec



MIC JACK



HEADPHONE

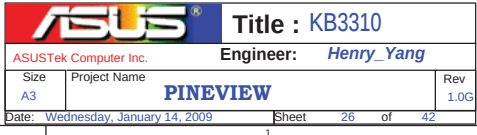


AR24, AR25 can use
0.1UF 11G233310432320
for EMI

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

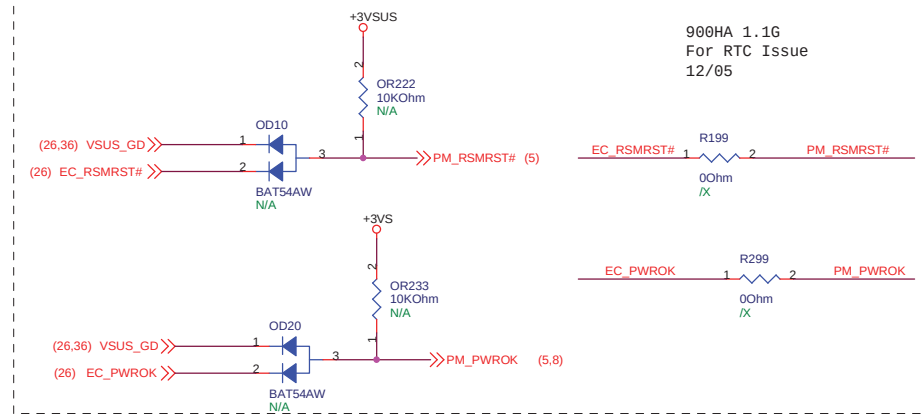
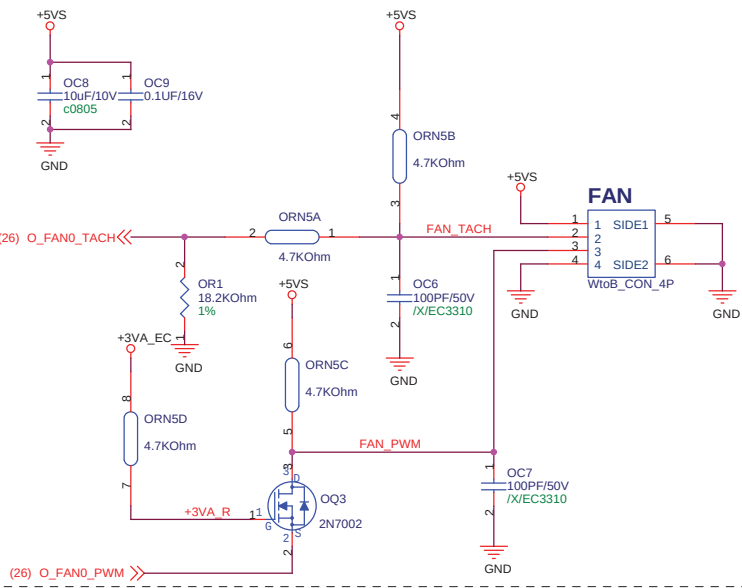
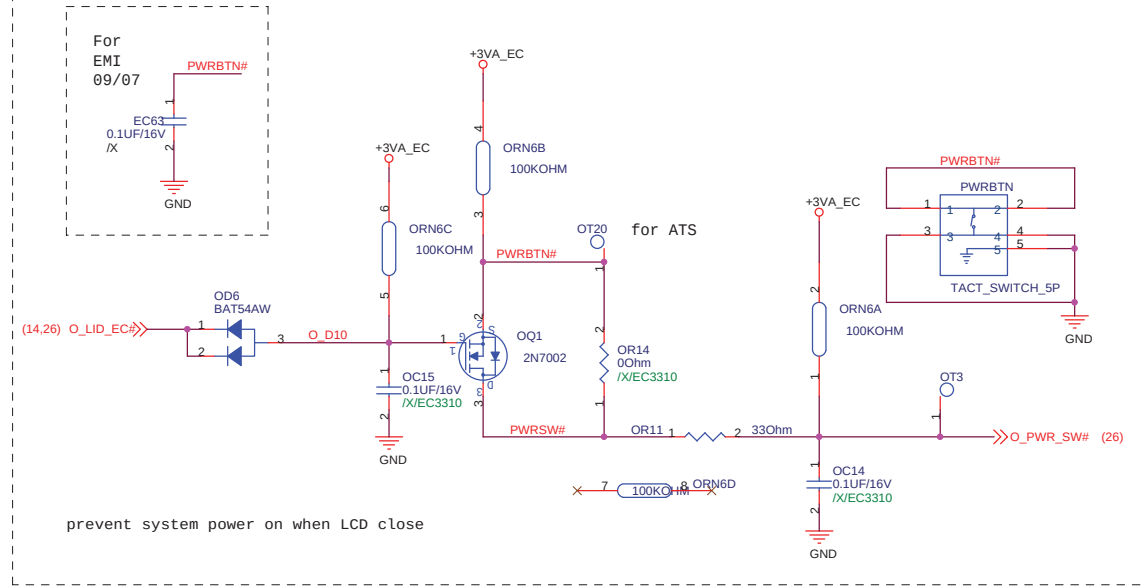
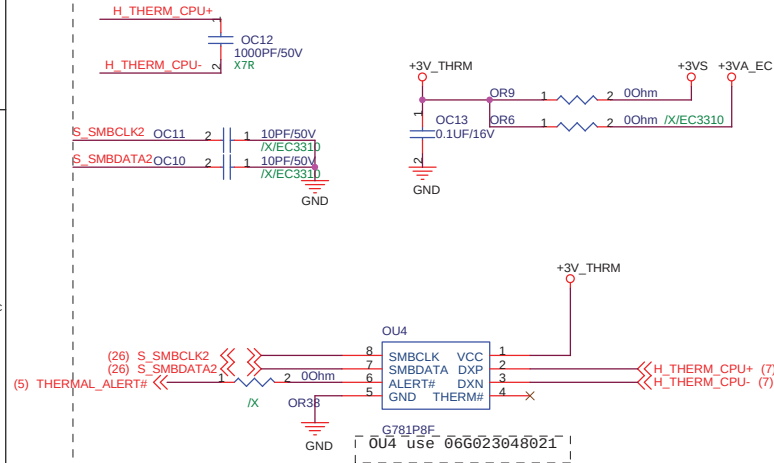


<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

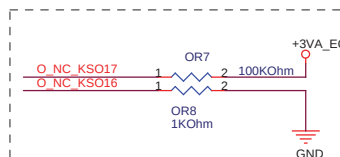
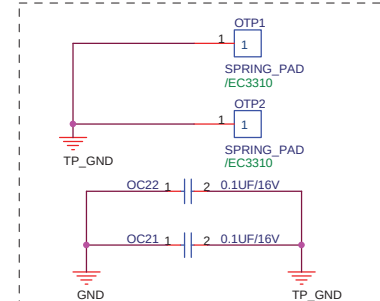
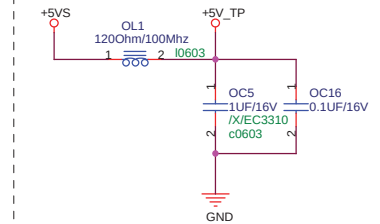
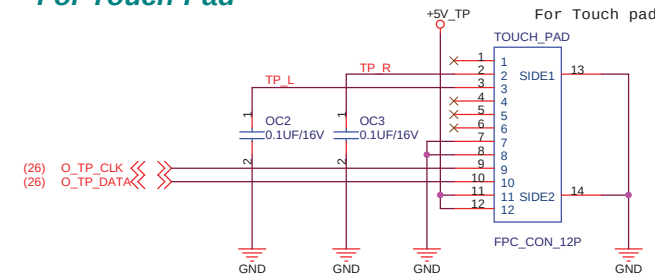
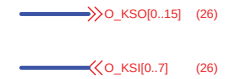
Remove Force_off
function
08/11/28



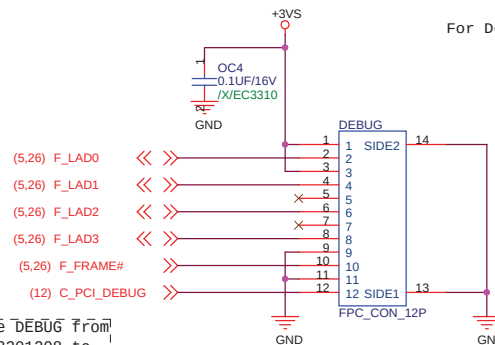
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

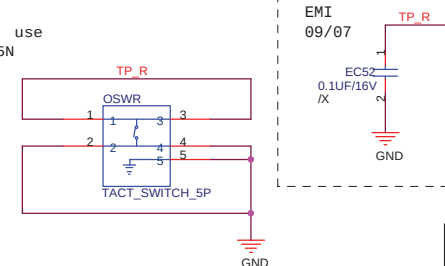
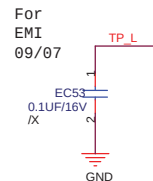
<http://hobi-elektronika.net>



For Debug



```
Debug Card cable use Z96 Touch Pad cable, P/N:
14G124110126, 14G124110120, 14G124110121
14G124110124, 14G124110125 _ _ _ _ _
```



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<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

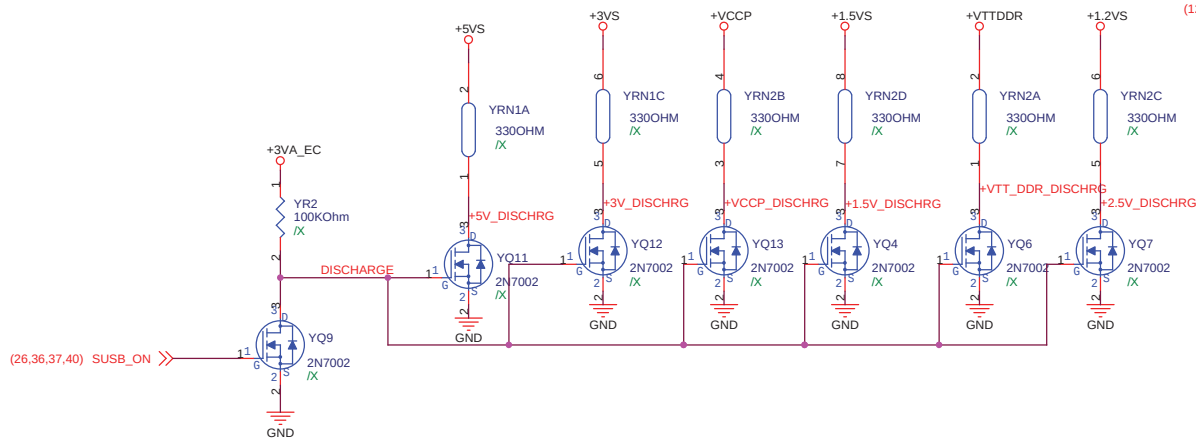
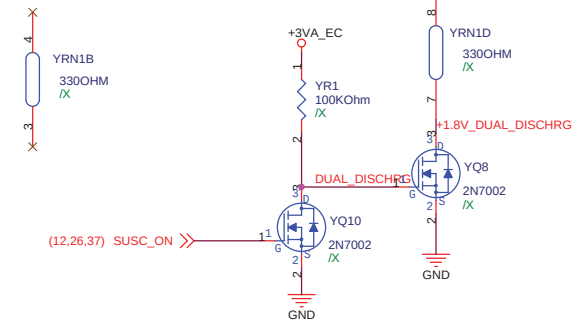
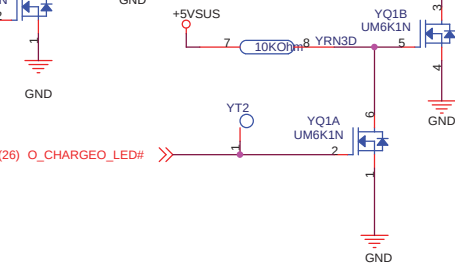
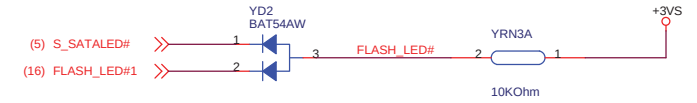
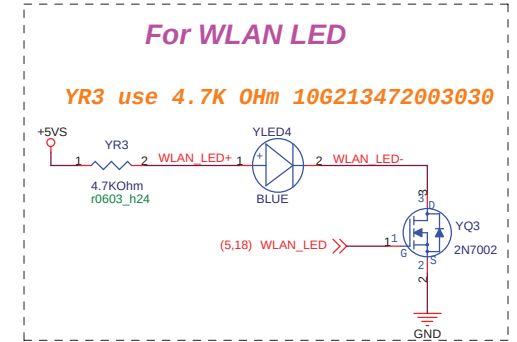
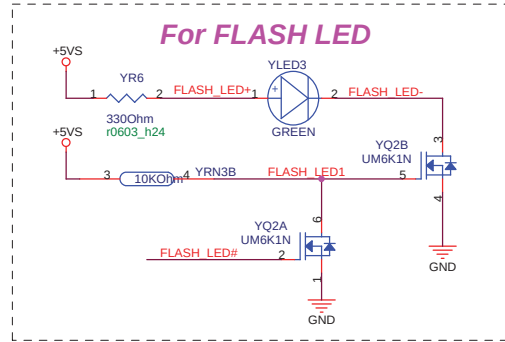
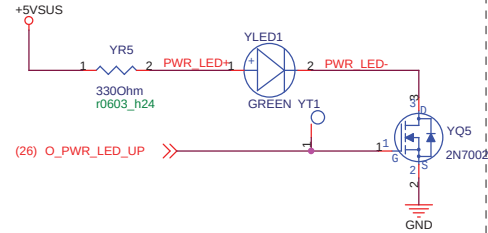
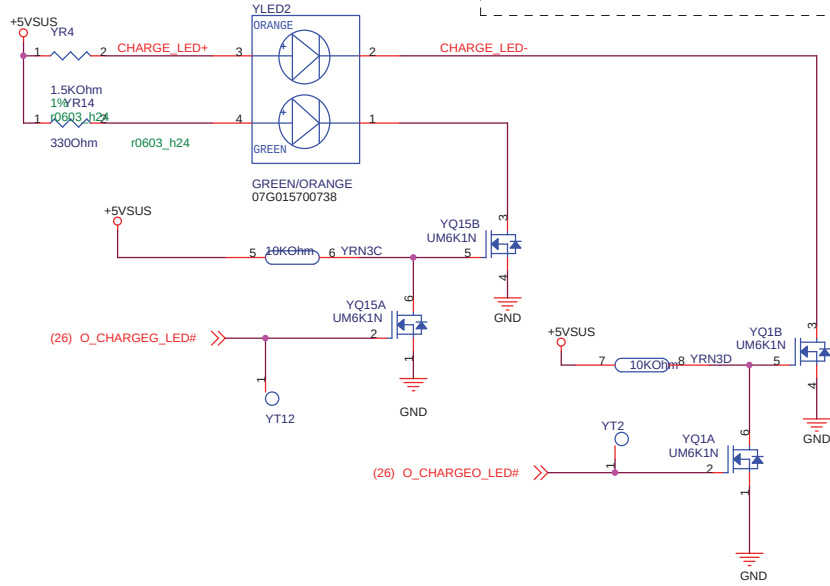
For CHARGE LED

For POWER LED

For FLASH LED

For WLAN LED

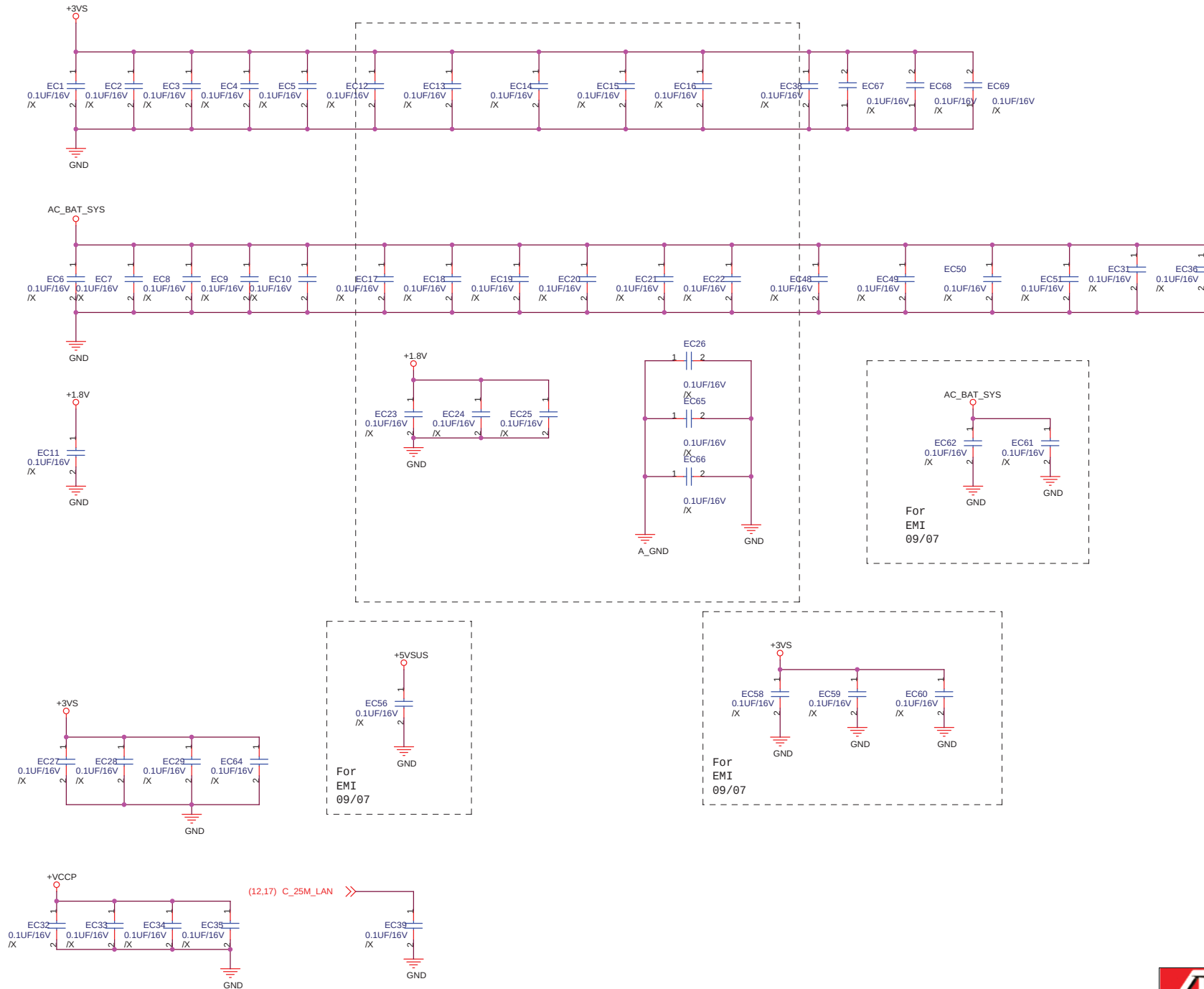
YR3 use 4.7K 0Hm 10G213472003030



<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

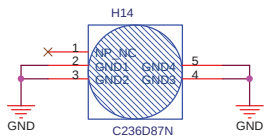
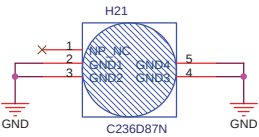
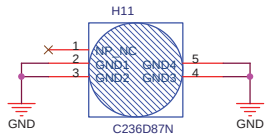
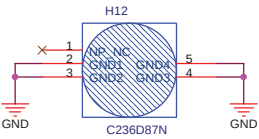
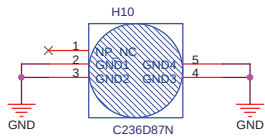
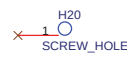
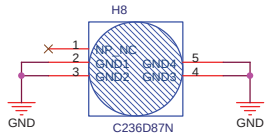
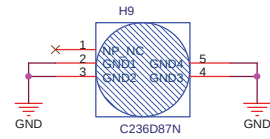
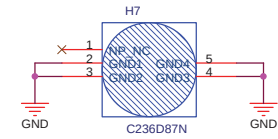
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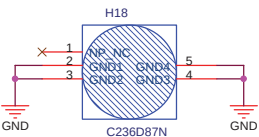
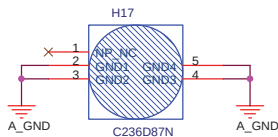
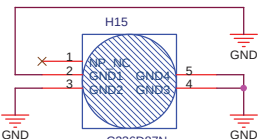
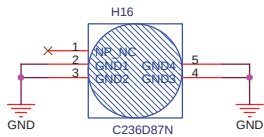
<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>



Due to 900PV cut a piece of PCB for bluetooth, so we has removed the H13.

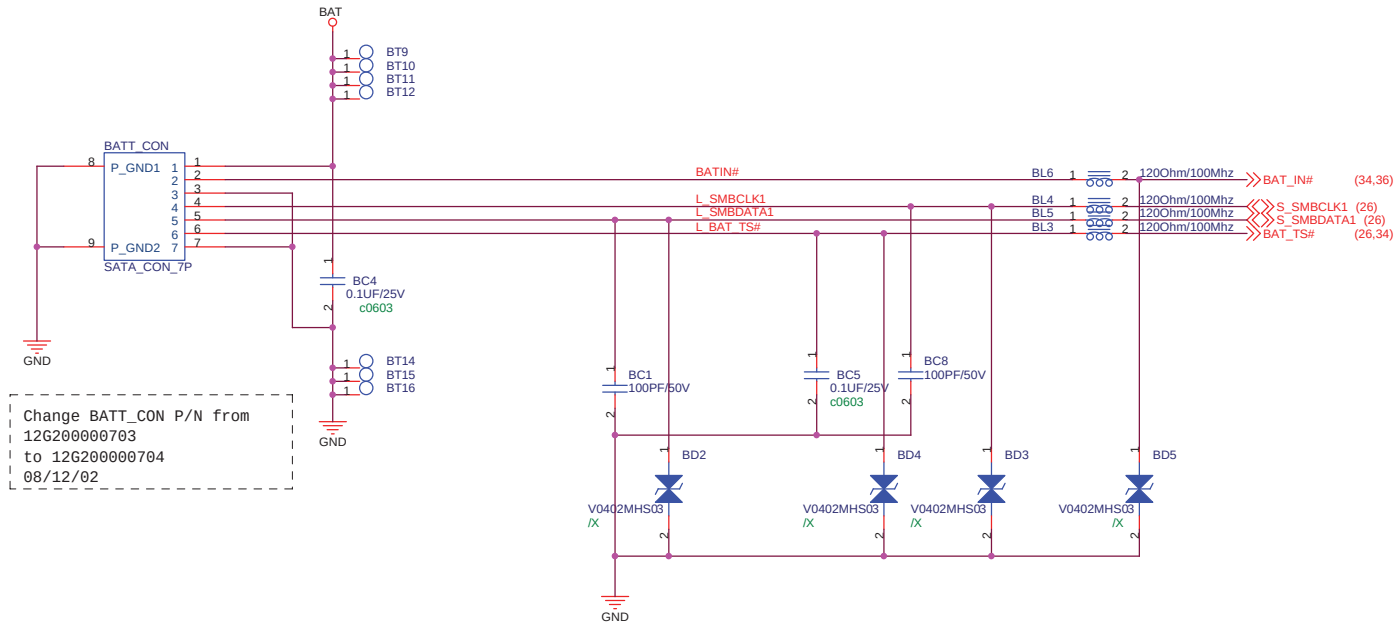
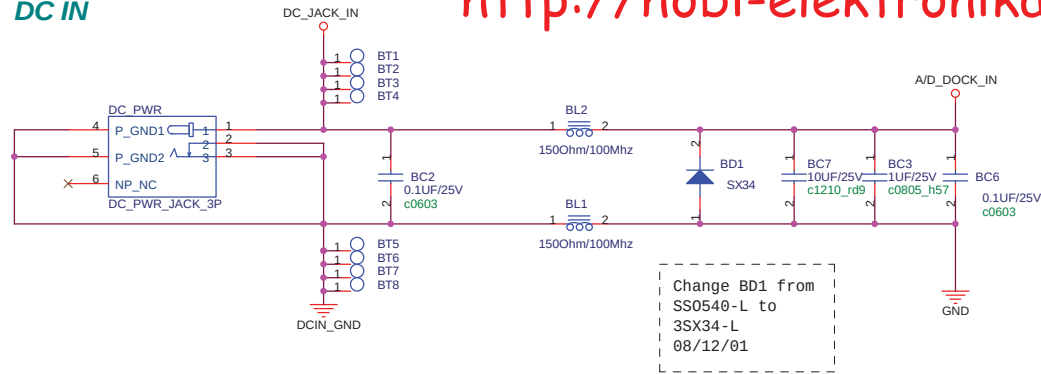


<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

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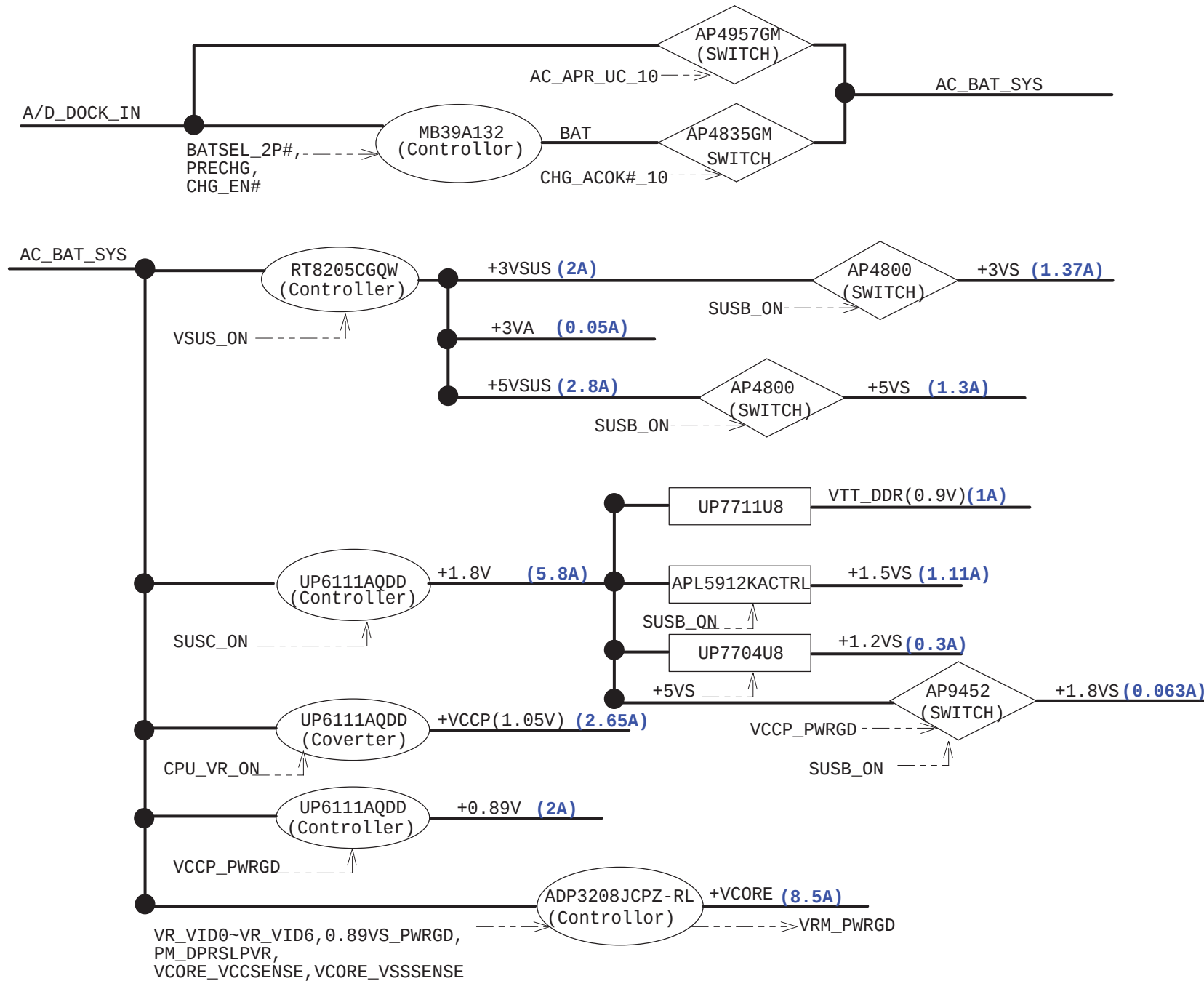
DC IN



<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

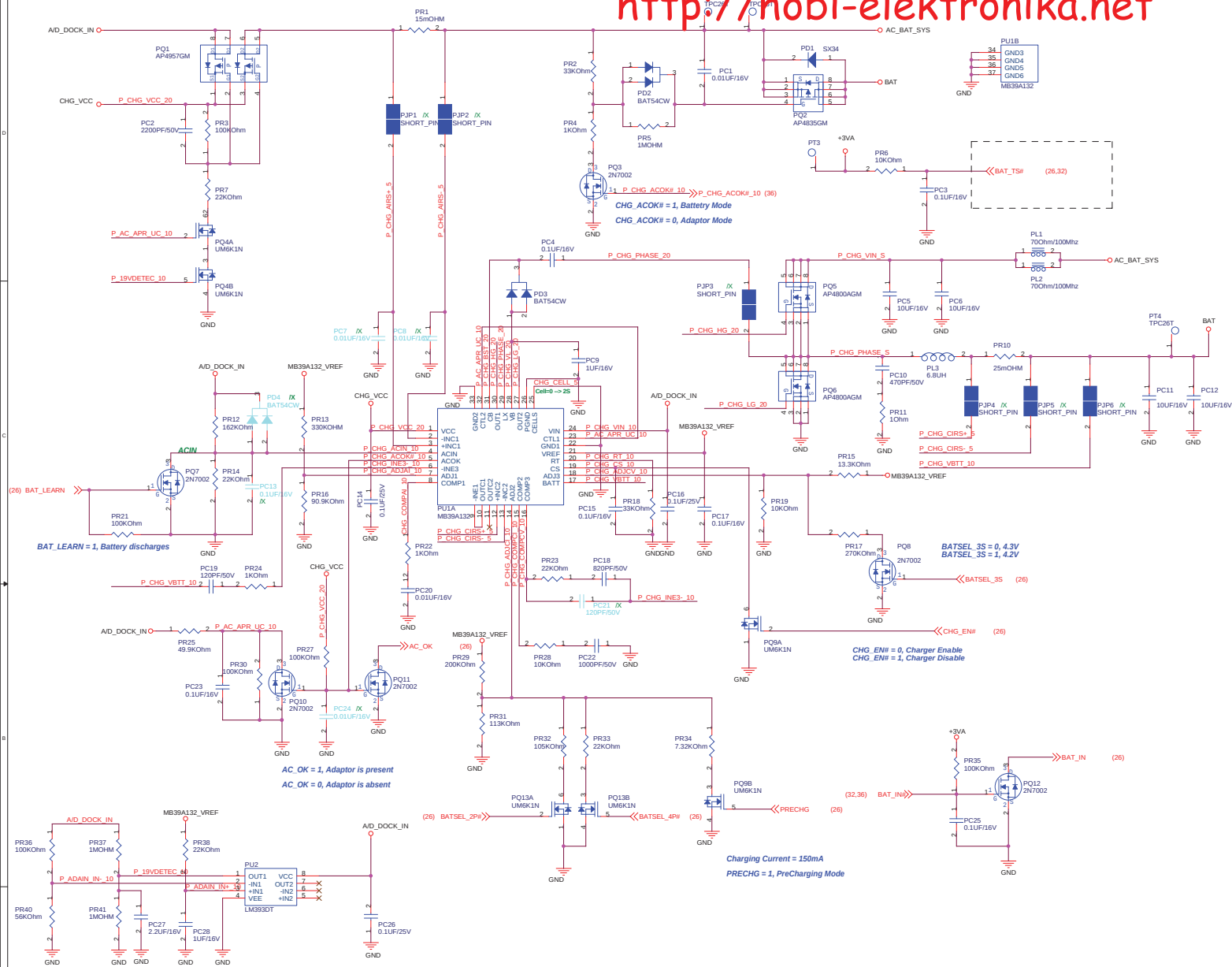
<http://hobi-elektronika.net>



<http://hobi-elektronika.net>

<http://hobi-elektronika.net>

<http://hobi-elektronika.net>



Battery Charging Voltage :

Vadj3 > 4.1V ==> Vbat = 4.2V /cell
2.2V > Vadj3 > 1.1V ==> Vbat = 2 * Vadj3 /cell

Battery Charging Current :

4.4V > Vadj2 >= 0V ==>
Ichg = (Vadj2 - 0.075) / (25 * Rs)

Input Adaptor Max. Current Limit :

Ilimit_current = (Vadj1 - 0.075) / (25 * Rs)

Pre-Charging Mode :

Precharging current = 146mA
Vadj2 = 166mV

Adaptor Max. Current :

PR13=330KOHM; PR16=90.9KOHM==>
Ilimit = 2.679A

ACIN Threshold = 1.25V

Adaptor > 10.45V, System Powered by Adaptor

Adaptor < 10.45V, System Powered by Battery

Prevent Input from 19V :

Adaptor > 13.92V, PQ4B Turn-off

Adaptor < 13.92V, PQ4B Turn-on

Battery Cell Selection :

CELLS:VREF,4-Cell;

CELLS:OPEN,3-Cell;

CELLS:GND,2-Cell;

VREF = 5.0V

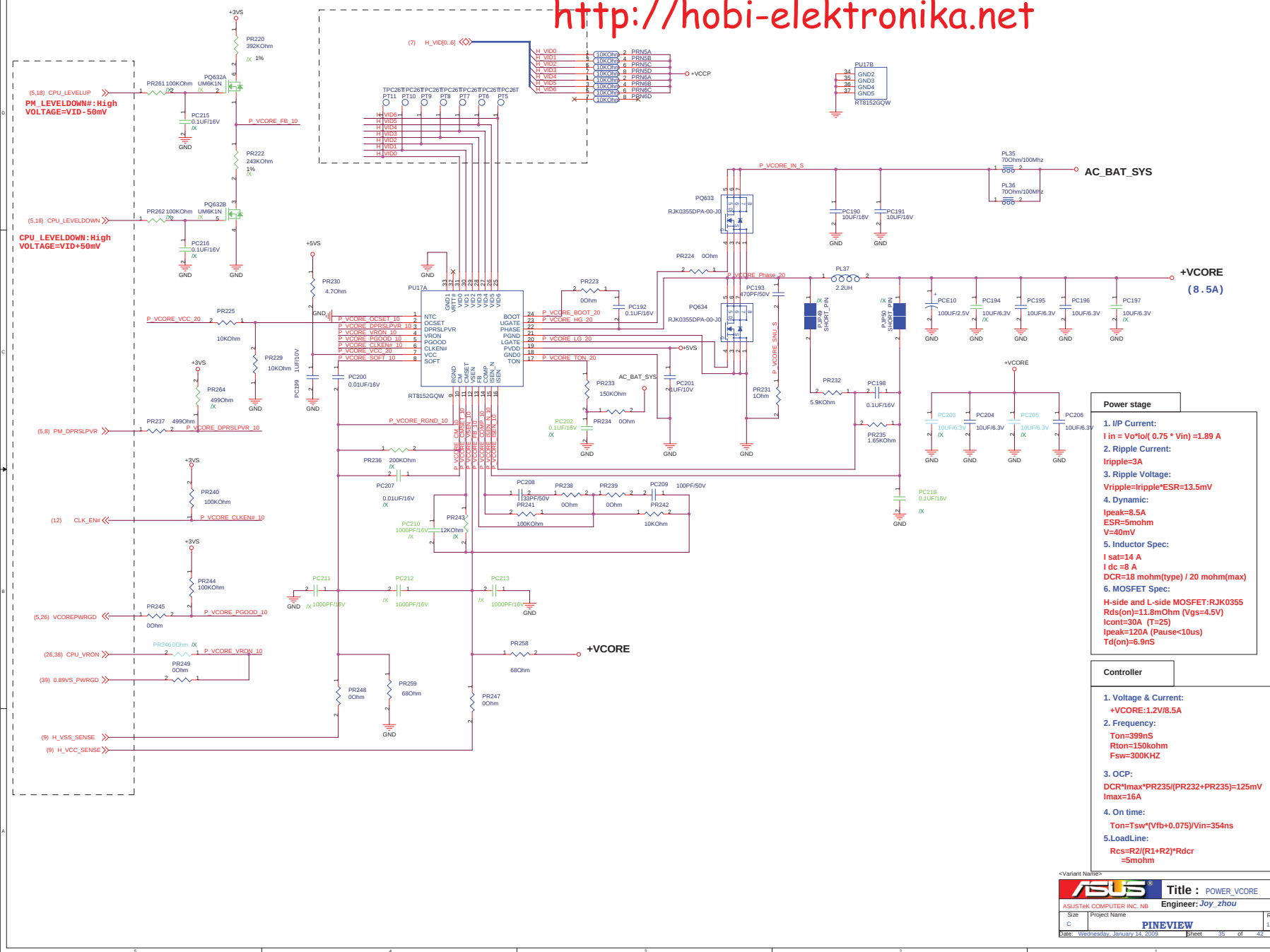
fosc(KHz) = 17000 / RT
(KOhm)
= 515KHz

Soft start:

ts(s) = 0.23 * CS (uF)
= 23mS

Charging Current :

4P#	2P#	Icharge
1	0	0.56A
0	1	1.6A
0	0	2.8A



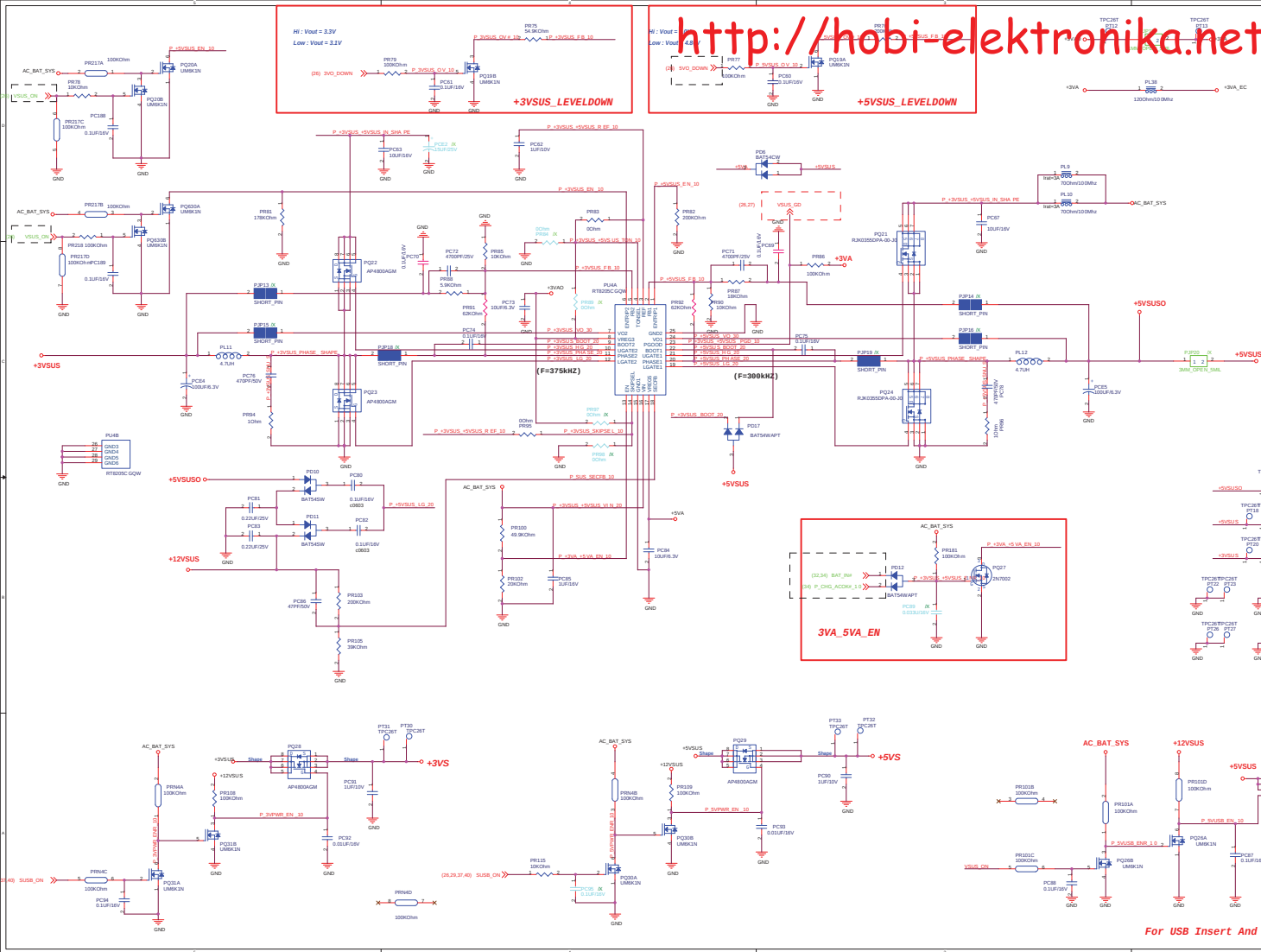
<Variant Name>

ASUS Title : POWER_VCORE

ASUSTek COMPUTER INC. NB Engineer: Jay_zhou

Size Project Name PINEVIEW Rev 1.0

Date: Wednesday, January 14, 2009 Sheet 35 of 42



Power stage +3VSUS I/P Current: $I_{in} = V_o \cdot I_o / (0.75 \cdot V_{in}) = 1.47A$ Ripple Current: $I_{rip} = 0.99A$ $I_{spec} = 2.5A \times 1 \text{ pcs}$ Dynamic: $I_{peak} = 2A$ $ESR / 1 \text{ pcs} = 25 \text{ mohm}$ $\Delta V = 50mV$ Inductor Spec: $I_{sat} = 10 A$ $I_{dc} = 5.5 A$ $DCR = 37 \text{ mohm}$ MOSFET Spec: H-side MOSFET: AP4800AGM $R_{ds(ON)} = 21 \text{ mohm}$ ($V_{gs} = 4.5 V$) $I_{cont} = 9.6 A$ ($T = 25^\circ C$) $I_{peak} = 40 A$ (Pause < us) L-side MOSFET: RAP4800AGM $R_{ds(ON)} = 21 \text{ mohm}$ ($V_{gs} = 4.5 V$) $I_{cont} = 9.6 A$ ($T = 25^\circ C$) $I_{peak} = 40 A$ (Pause < us)	Power stage +5VSUS I/P Current: $I_{in} = V_o \cdot I_o / (0.75 \cdot V_{in}) = 2.33A$ Ripple Current: $I_{rip} = 1.04A$ $I_{spec} = 2.5A \times 1 \text{ pcs}$ Dynamic: $I_{peak} = 2.8A$ $ESR / 1 \text{ pcs} = 25 \text{ mohm}$ $\Delta V = 70mV$ Inductor Spec: $I_{sat} = 10 A$ $I_{dc} = 5.5 A$ $DCR = 37 \text{ mohm}$ MOSFET Spec: H-side MOSFET: RJK0355DPA-00-J0 WPAK $R_{ds(ON)} = 11.8 \text{ mohm}$ ($V_{gs} = 4.5 V$) $I_{cont} = 30 A$ ($T = 25^\circ C$) $I_{peak} = 120 A$ (Pause < 10 us) L-side MOSFET: RJK0355DPA-00-J0 WPAK $R_{ds(ON)} = 11.8 \text{ mohm}$ ($V_{gs} = 4.5 V$) $I_{cont} = 30 A$ ($T = 25^\circ C$) $I_{peak} = 120 A$ (Pause < 10 us)
Controller +3VSUS Voltage & Current: $+3VSUS = 3.3V @ 2A$ Frequency: $f_{osc} = 375KHz$ OCP: Set PR81=178Kohm $I_{ocp} = 8.5A$ POR: $V_{on} = 2.5V$ UVP: $V_{uvp} = 70\% V_{out}$ OVP: $V_{ovp} = 115\% V_{out}$ Enable Voltage: $V_{rising} = 1V$ $V_{falling} = 0.4 V$ Soft start time: $T_{ss} = 2ms$ Phase selection: /X Inrush Current: $C_{total} = 100 \mu F$ $I_{inrush} = 0.165 A$	Controller +5VSUS Voltage & Current: $+5VSUS = 5V @ 2.8A$ Frequency: $f_{osc} = 300KHz$ OCP: Set PR82=200Kohm $I_{ocp} = 16.9A$ POR: $V_{on} = 4.35-4.5 V$ $V_{off} = 3.9-4.25 V$ UVP: $V_{uvp} = 70\% V_{out}$ OVP: $V_{ovp} = 115\% V_{out}$ Enable Voltage: $V_{rising} = 1V$ $V_{falling} = 0.4 V$ Soft start time: $T_{ss} = 2ms$ Phase selection: /X Inrush Current: $C_{total} = 100 \mu F$ $I_{inrush} = 0.25 A$

For USB Insert And Remove Protection

Power stage

1. I/P Current:

$$I_{in} = V_o \cdot I_o / (0.8 \cdot V_{in}) = 2.175A$$

2. Ripple Current:

$$I_{rip} = 2.65A$$

$$I_{spec} = 2.5A \times 2 \text{ pcs}$$

3. Dynamic:

$$I_{peak} = 5.8A$$

$$ESR / 1 \text{ pcs} = 18 \text{ mohm}$$

$$\Delta V = 104.4mV$$

4. Inductor Spec:

$$I_{sat} = 14A$$

$$I_{dc} = 8A$$

$$DCR = 18 \text{ mohm}$$

5. MOSFET Spec:

H-side MOSFET: RJK0355DPA-00-J0 WPAK

$$R_{ds(ON)} = 11.8 \text{ mohm} \quad (V_{gs} = 4.5V)$$

$$I_{cont} = 30A \quad (T = 25^\circ C)$$

$$I_{peak} = 120A \quad (\text{Pause} < 10 \mu s)$$

L-side MOSFET: RJK0355DPA-00-J0 WPAK

$$R_{ds(ON)} = 11.8 \text{ mohm} \quad (V_{gs} = 4.5V)$$

$$I_{cont} = 30A \quad (T = 25^\circ C)$$

$$I_{peak} = 120A \quad (\text{Pause} < 10 \mu s)$$

Controller

1. Voltage & Current:

$$+1.8V @ 5.8A$$

2. Frequency:

$$PR183 = 1.3M \text{ ohm}$$

$$F_{osc} = 191KHz$$

3. OCP:

$$PR184 = 10K \text{ ohm} \rightarrow 16.7A$$

4. POR:

$$V_{ccrth} = 3.7 \sim 4.1V$$

$$V_{ccchys} = 0.2V$$

5. UVP:

$$V_{out} * 70\%$$

6. OVP:

$$V_{out} * 115\%$$

7. Enable Voltage:

$$V = 2.9V$$

8. Soft start time:

$$T_{ss} = 1.2 \text{ ms}$$

9. Phase selection:

$$IX$$

10. Inrush Current:

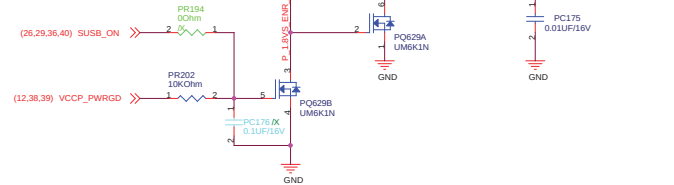
$$C_{total} = 100 \mu F$$

$$I_{inrush} = 0.15A$$

(5.8A)

		+1.8V
H	H	1.8V
L	H	1.7V
H	L	NO CARE
L	L	1.65V

+1.8V DOWN	+1.8V UP	+1.8V UP#	Voltage	Status
L	L	H	1.650V	Power Saving
H	L	H	1.795V	Normal
H	H	L	1.927V	Performance
L	H	L	1.782V	N/A



+VTTDDR(0.5A)

1.5VS @ 1.1 A

1. Dropout Voltage:

$$\Delta V = 0.3V \quad (I_o = 2A)$$

2. Current Limit:

$$I_{limit} = 4A$$

3. Continue Current:

$$I_{cont} = 3A$$

4. Power Dissipation:

$$R_{thjc} = 52^\circ C/W$$

$$P_d = 1.9W$$

5. EN Voltage:

$$V_{en} = 1.4V$$

$$V_{sd} = 0.8V$$

6. Supply Voltage:

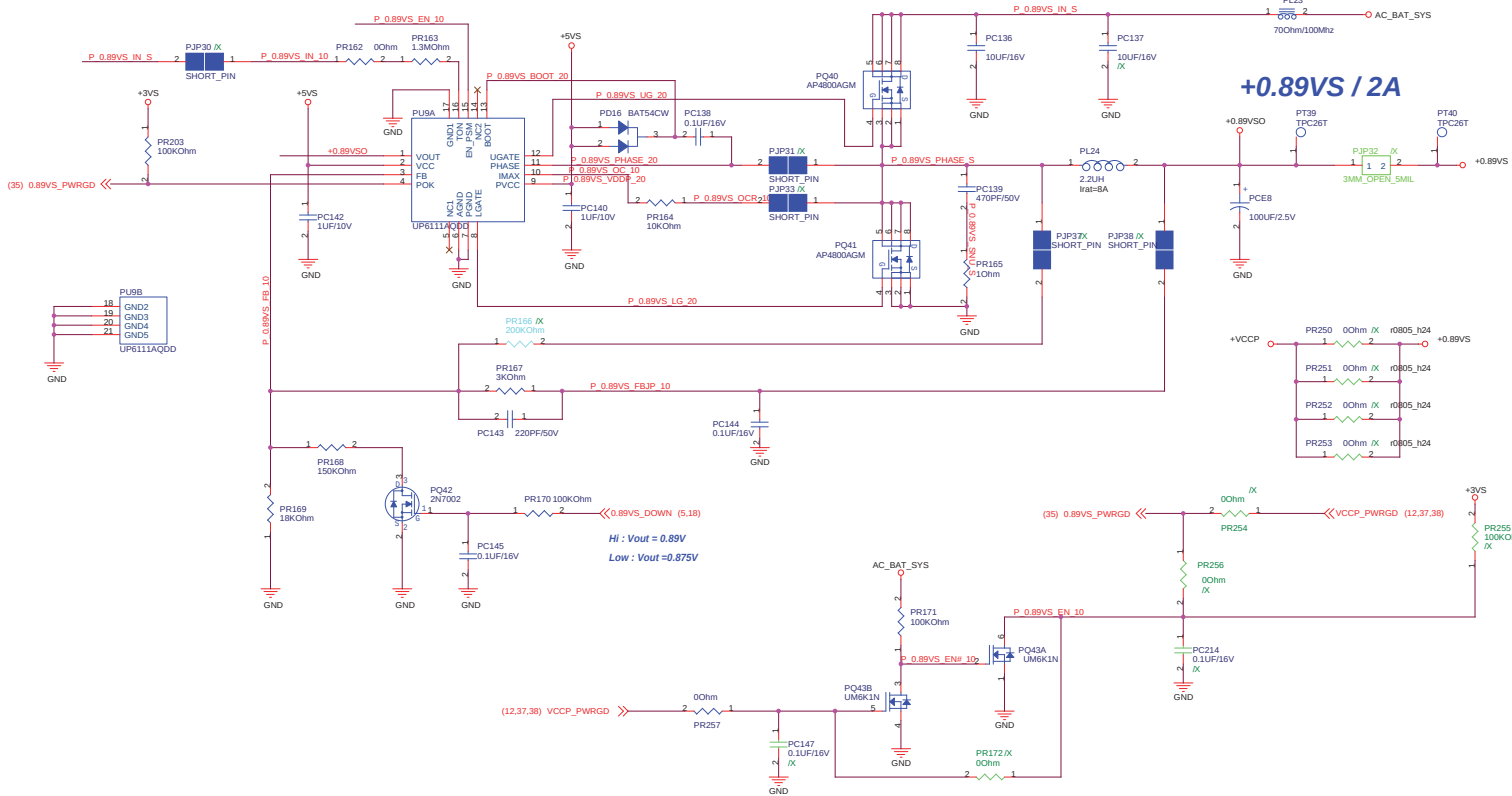
$$V_{cc} = 5V$$

7. Inrush current:

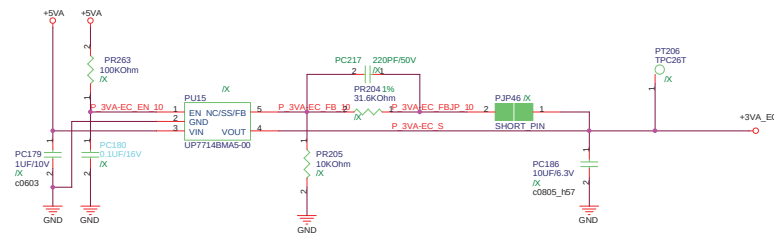
$$T_{ss} = 5 \text{ ms}$$

$$C_{total} = 10 \mu F$$

$$I_{inrush} = 3 \text{ mA}$$



+3VA_AEC / 100mA



+3VA_AEC / 100mA

- | | |
|--|--|
| 1. Dropout Voltage:
$\Delta V = 0.21V$ ($I_o = 0.3A$) | 5. EN Voltage:
$V_{en} = 2V$
$V_{sd} = 0.4V$ |
| 2.OCP:
$I_{ocp} = 480mA$ | 6. Power OK Voltage:
$V_{pokh} = 92\% \cdot V_{out}$
$V_{pokhys} = 8\%$ |
| 3. Short Circuit Current Limit:
$I_{sc} = 320mA$ | 7. Inrush current:
$T_{ss} = 400\mu s$
$C_{total} = 10\mu F$
$I_{inrush} = 82.5mA$ |
| 4. Power Dissipation:
$R_{thjc} = 250^\circ C/W$
$P_d = 0.4W$ | 8. FB Voltage:
$V_{FB} = 0.8V$ |

Power stage

1. I/P Current:

$$I_{in} = V_o \cdot I_o / (0.75 \cdot V_{in}) = 0.4A$$

2. Ripple Current:

$$I_{rip} = 0.52A$$

$$I_{spec} = 2.5A \times 1 \text{ pcs}$$

3. Dynamic:

$$I_{peak} = 2A$$

$$ESR = 18 \text{ mohm}$$

$$\Delta V = 36mV$$

4. Inductor Spec:

$$I_{sat} = 14A$$

$$I_{dc} = 8A$$

$$DCR = 18 \text{ mohm}$$

5. MOSFET Spec:

H-side MOSFET: AP4800AGM

$$R_{ds(ON)} = 21 \text{ mohm} \quad (V_{gs} = 4.5V)$$

$$I_{cont} = 9.6A \quad (T = 25^\circ C)$$

$$I_{peak} = 40A \quad (\text{Pause} < u s)$$

L-side MOSFET: RAP4800AGM

$$R_{ds(ON)} = 21 \text{ mohm} \quad (V_{gs} = 4.5V)$$

$$I_{cont} = 9.6A \quad (T = 25^\circ C)$$

$$I_{peak} = 40A \quad (\text{Pause} < u s)$$

Controller

1. Voltage & Current:

$$+0.89VS @ 2A$$

2. Frequency:

$$f_{osc} = 251KHz$$

3. OCP:

$$\text{Set } PR164 = 10Kohm$$

$$I_{ocp} = 9.5A$$

4. POR:

$$\text{POR Hysteresis} = 0.2V$$

$$V_{on} = 3.9V$$

5. UVP:

$$V_{uvp} = 70\% V_{out}$$

6. OVP:

$$V_{ovp} = 115\% V_{out}$$

7. Enable Voltage:

$$V = 2.9V$$

8. Soft start time:

$$T_{ss} = 1.2ms$$

9. Phase selection:

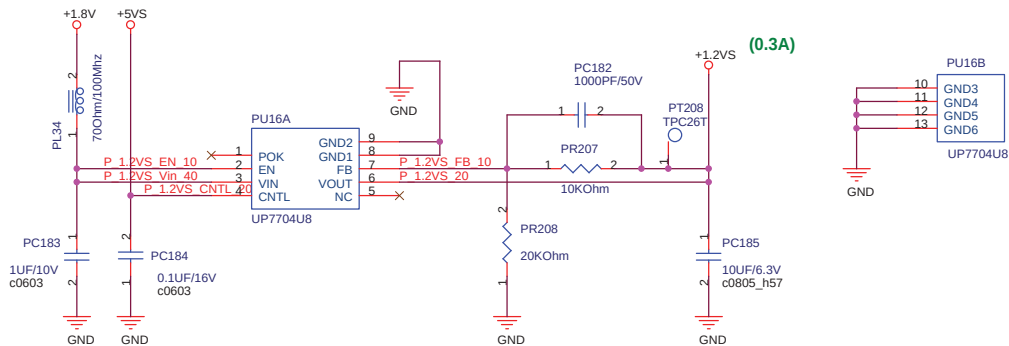
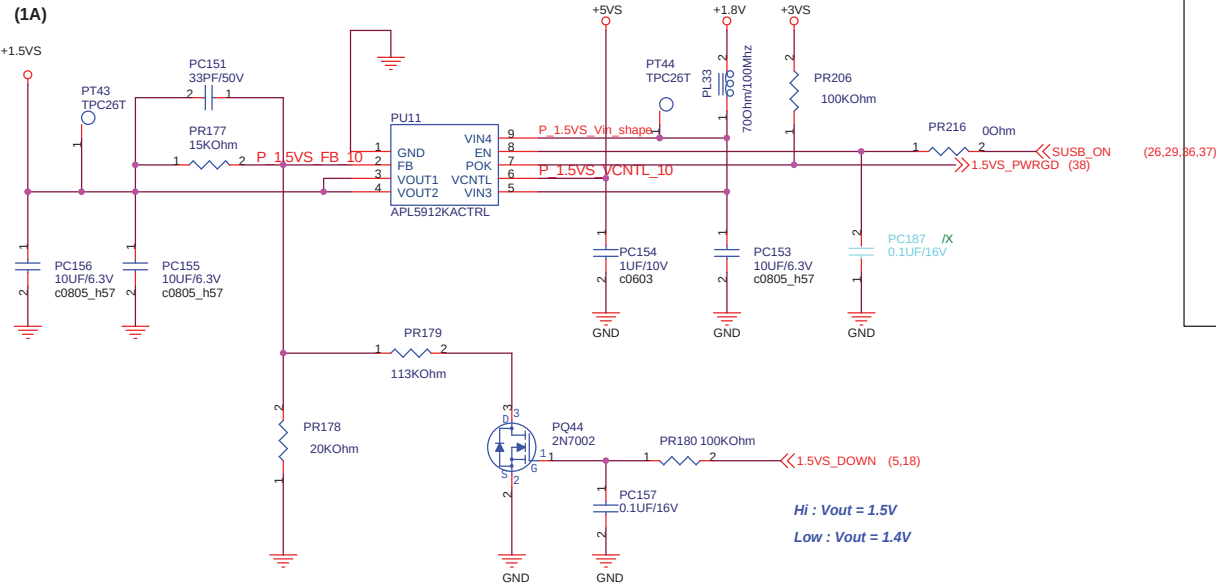
$$IX$$

10. Inrush Current:

$$C_{total} = 100 \mu F$$

$$I_{inrush} = 0.074A$$

<Variant Name>



<Variant Name>

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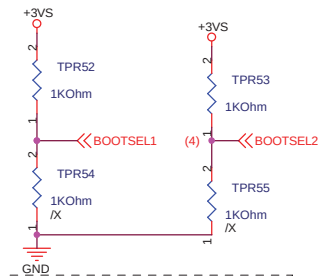
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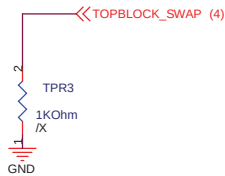
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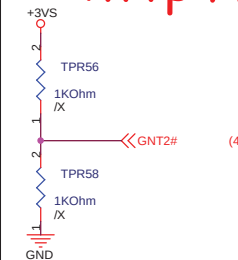
<http://hobi-elektronika.net>



STRAP1#/GPIO48 STRAP2#/GPIO17
Routing
0 1: Flash Cycles Routed to SPI
1 0: Flash Cycles Routed to PCI
1 1: Flash Cycles Routed to LPC



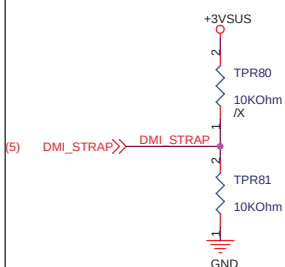
For strapping as
Top-block Swap
override.



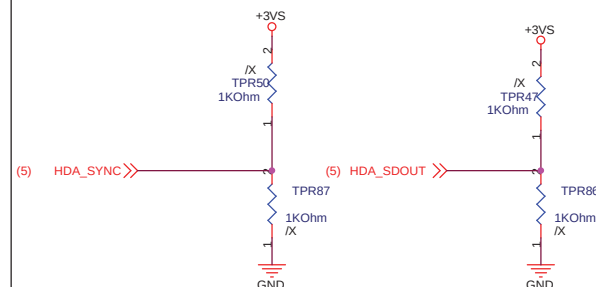
Reserved, has a
weak internal
pull-up, can't
be pulled low



SPKR: For no reboot function.
Has internal pull-down.
If sample high, it indicates that
the system is strapped to "no
reboot" mode.
(TPT will disable the TCO Timer
system reboot feature).



DMI strap.
1=DMI interface is strapped to
operate in DC coupled mode.
0=DMI interface is strapped to
operate in AC coupled mode.



Check EDS of TPT Section 10.1.30
for details.
HDA_SYNC(PCIE port
config bit 0):
Has weak internal
pull-down.

HDA_SDOUT(PCIE port config bit 1):
Has weak internal pull-down, if not
pulled
low at rising edge of PWROK, sets
bit 1 of RPC.PC.

From 1225.1900 change 3GC1 to 47u, modify screw to
13G021050010.

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