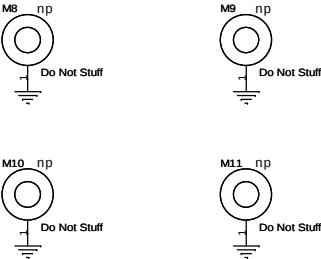
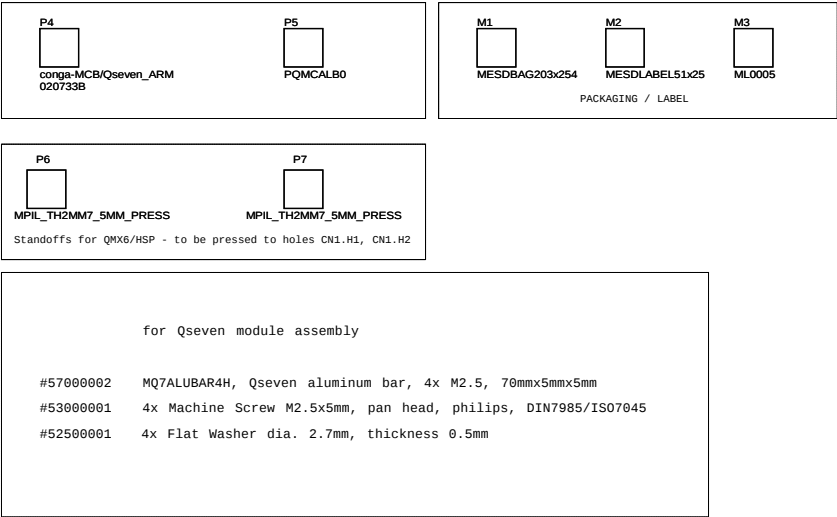


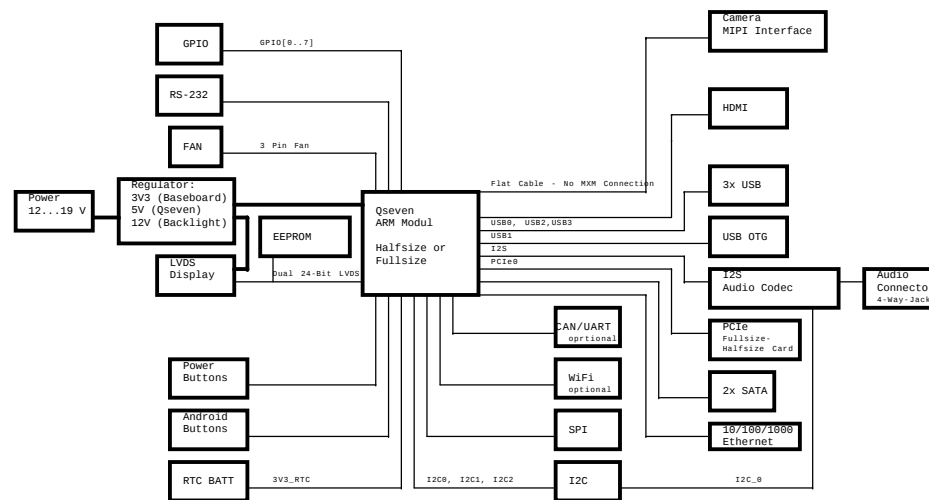
# Qseven Mini Carrier for ARM

Rev. B.0

## Content

|         |                            |
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| Page 2  | Blockdiagramm              |
| Page 3  | Qseven connector / SPI     |
| Page 4  | FAN / BTN-LED HDR / CAN    |
| Page 5  | miniCARD / GBE             |
| Page 6  | SATA / SD CARD             |
| Page 7  | USB                        |
| Page 8  | HDMI                       |
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| Page 12 | PSU +3V3, +5V              |
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V1

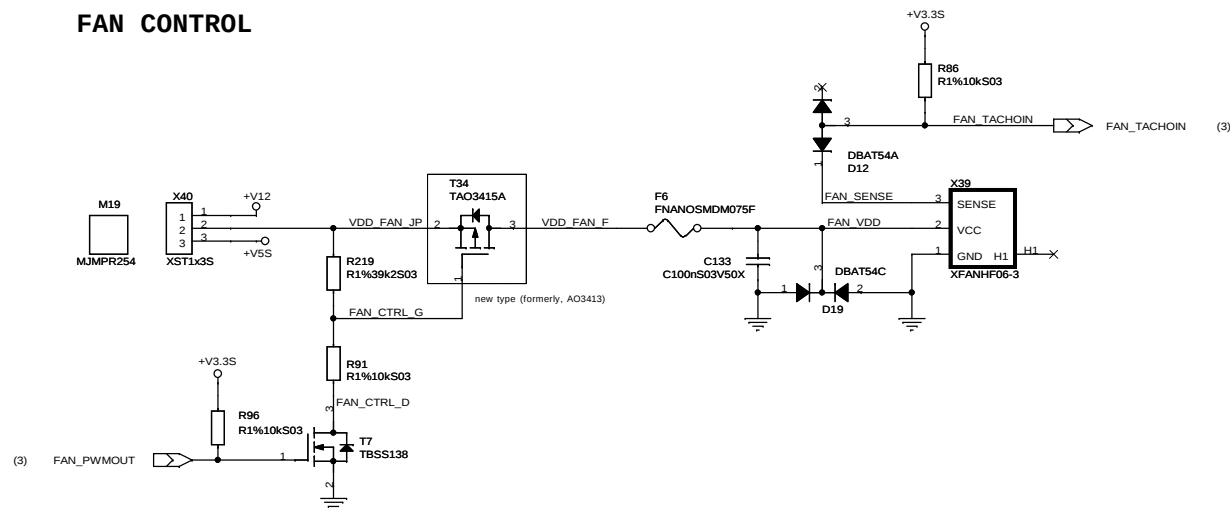
Congatec AG  
 Auwesenstrasse 5  
 D-94469 Deggendorf  
 Germany



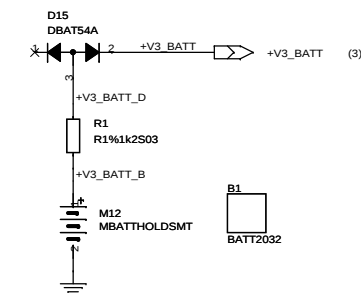
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|---------------|---------------------------|---------|---------|
| Blockdiagramm |                           |         |         |
| Size          | Document Number           | Created | Rev     |
| A3            | QWCASB0                   | KST     | B.0     |
| Date:         | Tuesday, January 21, 2014 | Sheet   | 2 of 14 |



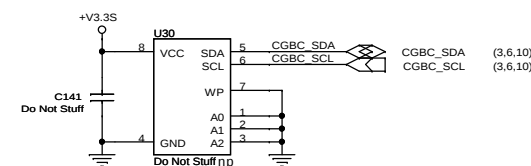
## FAN CONTROL



## RTC/CMOS BATTERY

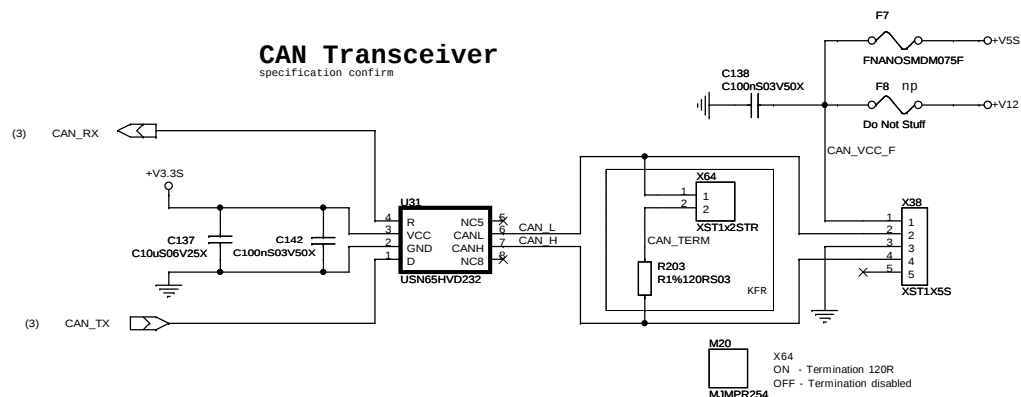


## ON Board EEPROM



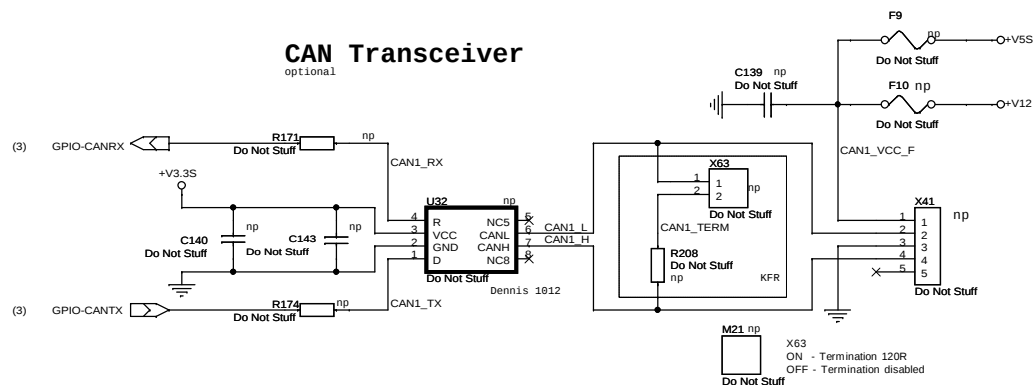
## CAN Transceiver

specification confirm



## CAN Transceiver

optional



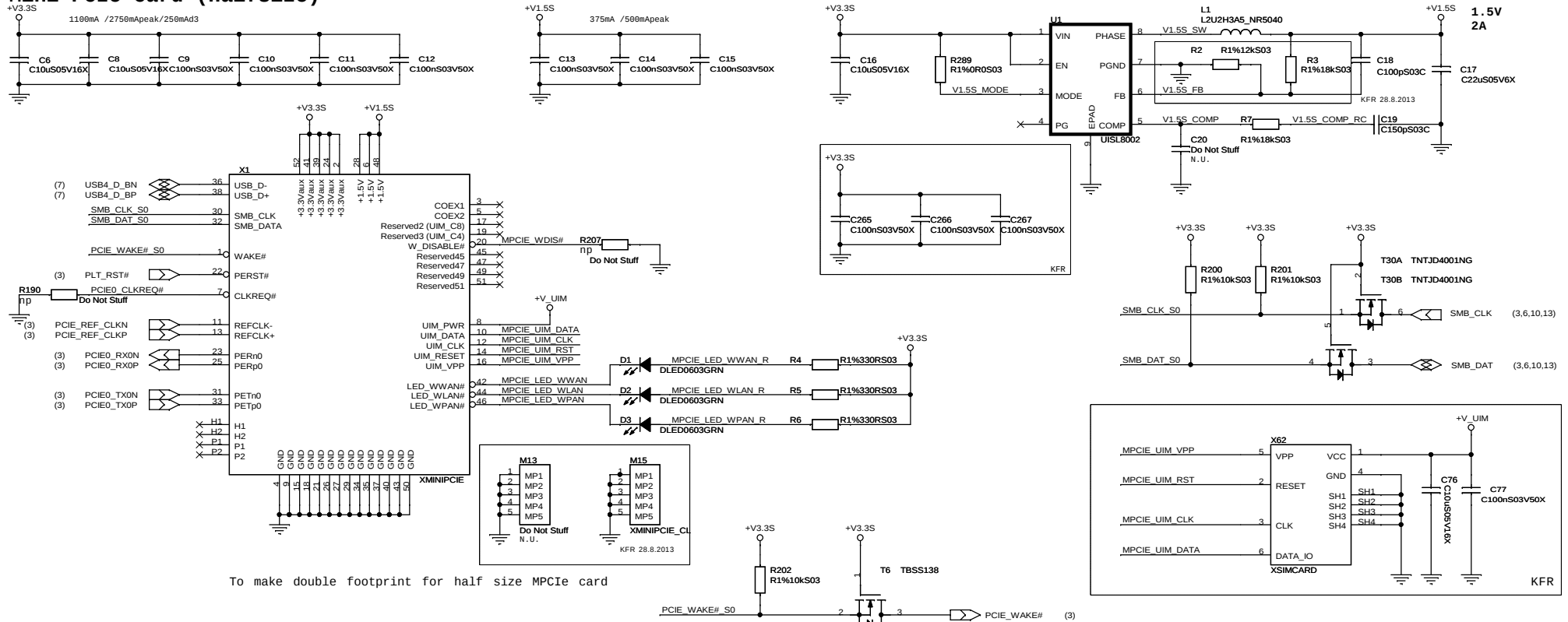
V1

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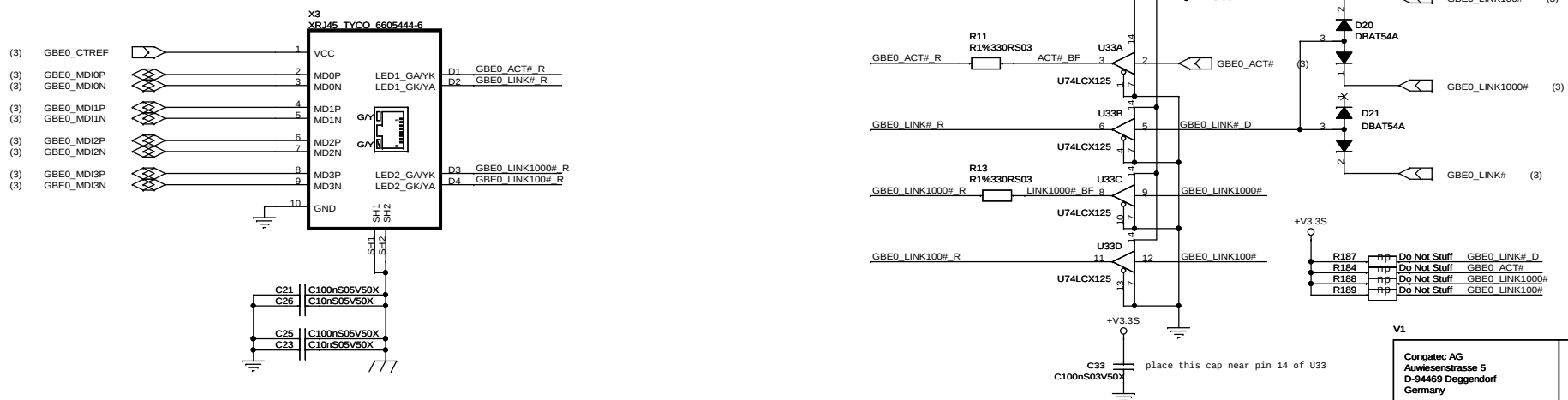


|                                          |                            |                |            |
|------------------------------------------|----------------------------|----------------|------------|
| Title<br>FAN Control / BTN-LED HDR / CAN |                            |                |            |
| Size<br>A3                               | Document Number<br>QWCASB0 | Created<br>KST | Rev<br>B.0 |
| Date:<br>Thursday, January 23, 2014      | Sheet<br>4                 | of<br>14       |            |

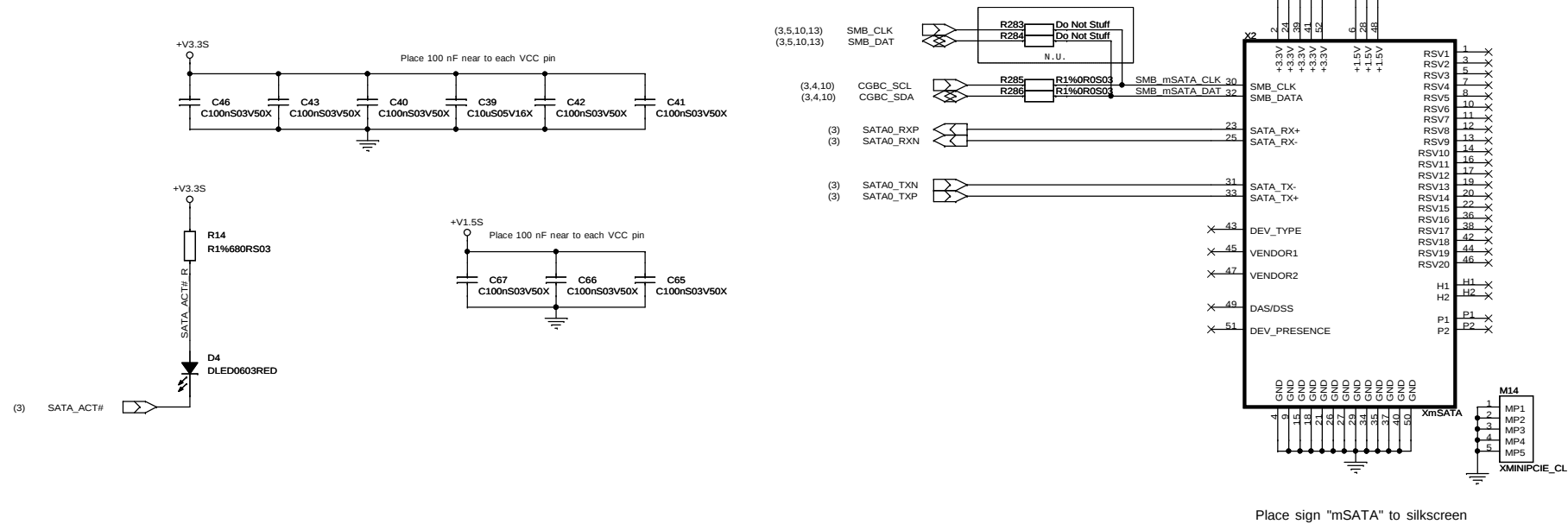
## Mini PCIe Card (Halfsize)



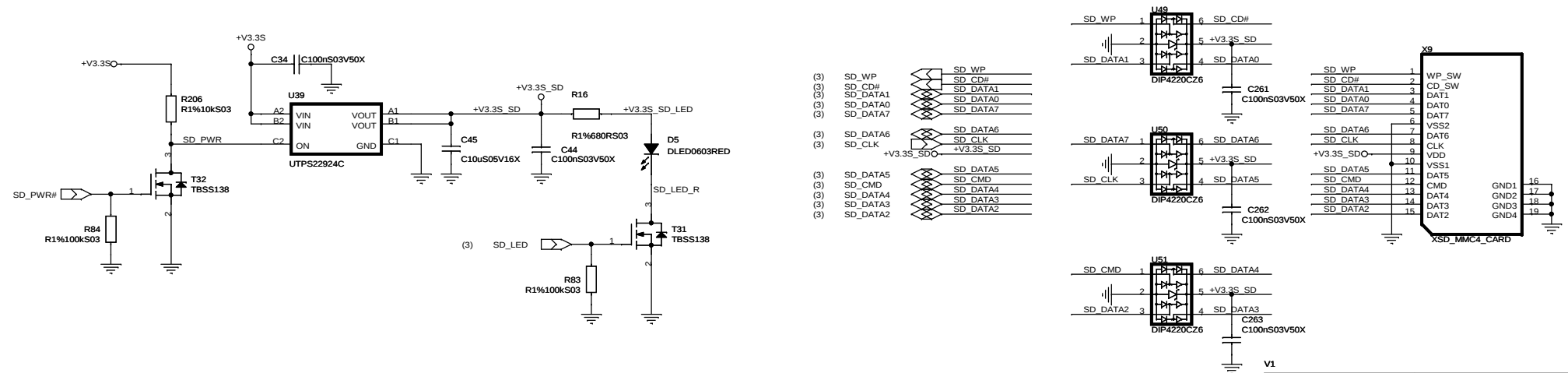
## Gigabit Ethernet (GBE)

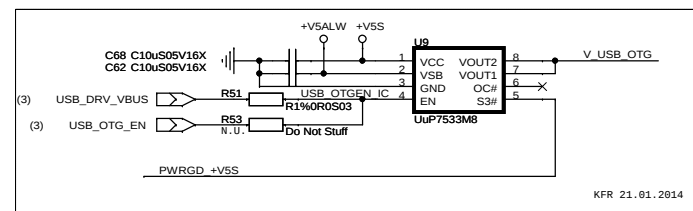
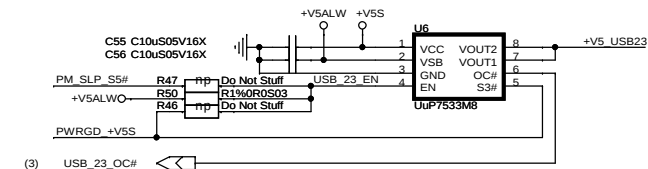
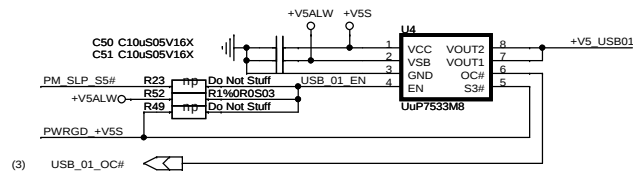


## mSATA

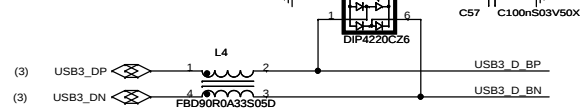
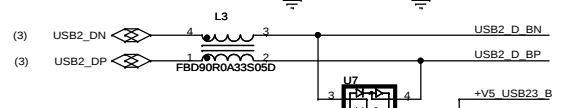
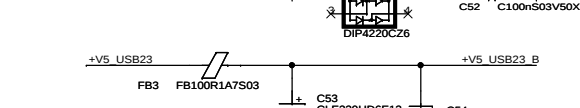
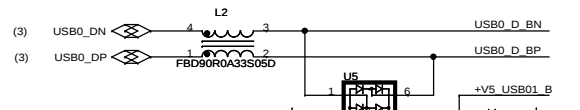
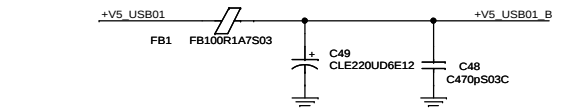
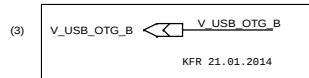


## SD Card

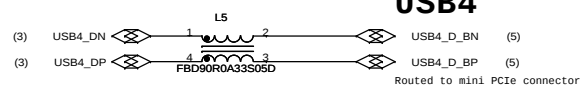




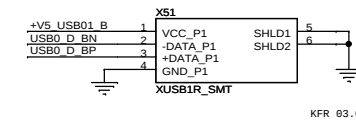
(3,13) PM\_SLP\_S5# <=> PM\_SLP\_S5#  
 (3,12) PWRGD\_+V5S <=> PWRGD\_+V5S



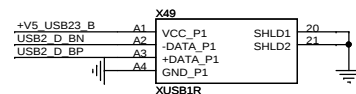
## USB4



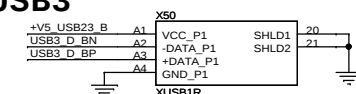
## USB0



## USB2



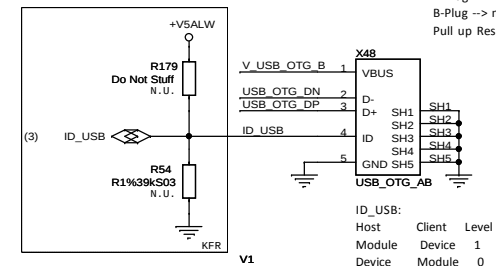
## USB3



## USB1 ON THE GO

Routed on USB1 of Qseven Specification

Specification for USB ID:  
 A-Plug --> less than 10 Ohm pulldown  
 B-Plug --> more than 100 Kohm pulldown  
 Pull up Resistor needed

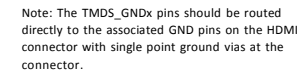


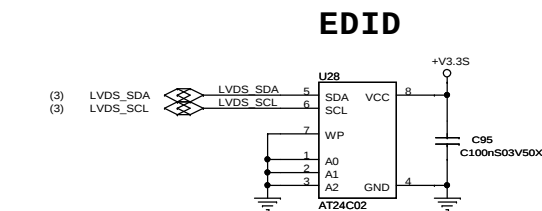
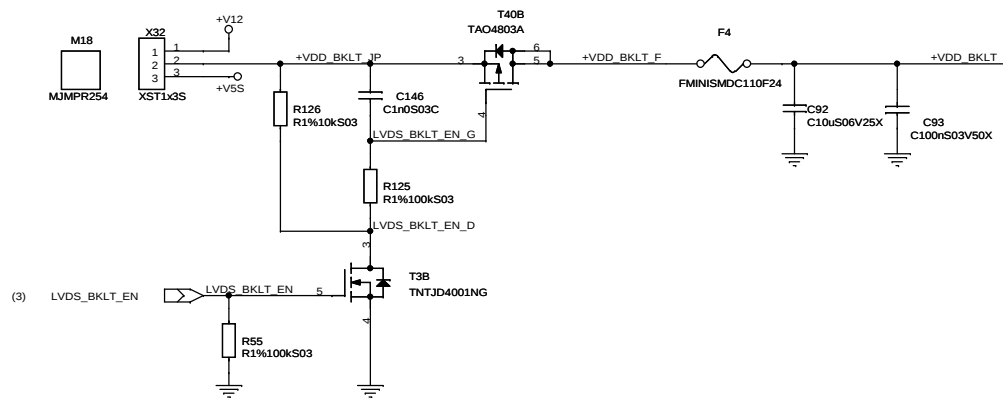
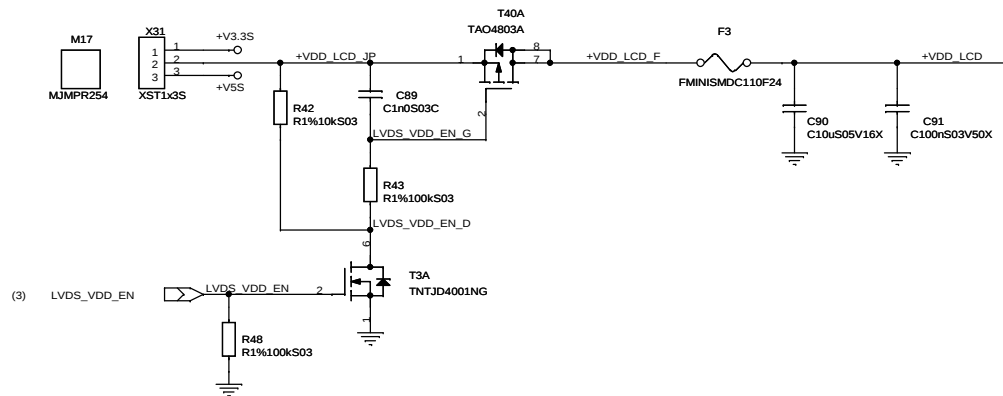
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 Germany



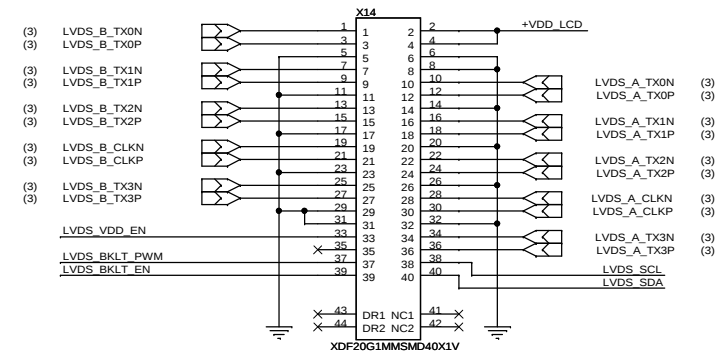
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|-------|------------------------------|---------|---------|
| USB   |                              |         |         |
| Size  | Document Number              | Created | Rev     |
| A3    | QMCASB0                      | KST     | B.0     |
| Date: | Wednesday, February 05, 2014 | Sheet   | 7 of 14 |

## HDMI

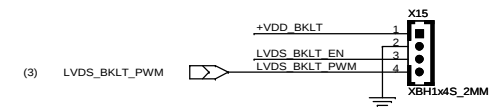




## LCD LVDS



## BACKLIGHT



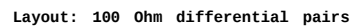
V1

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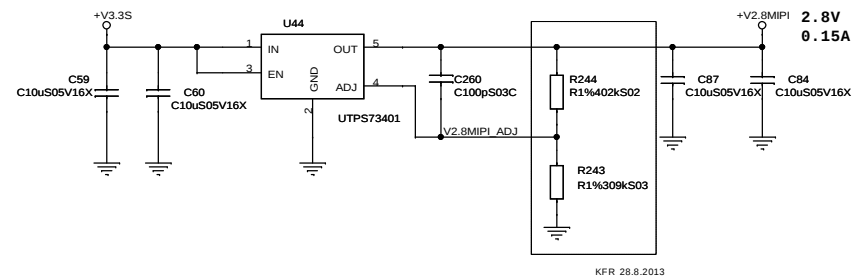
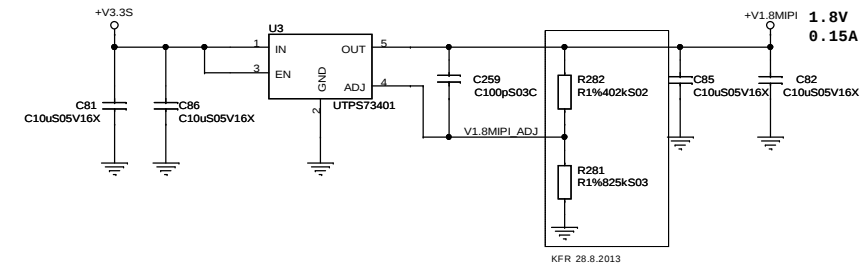
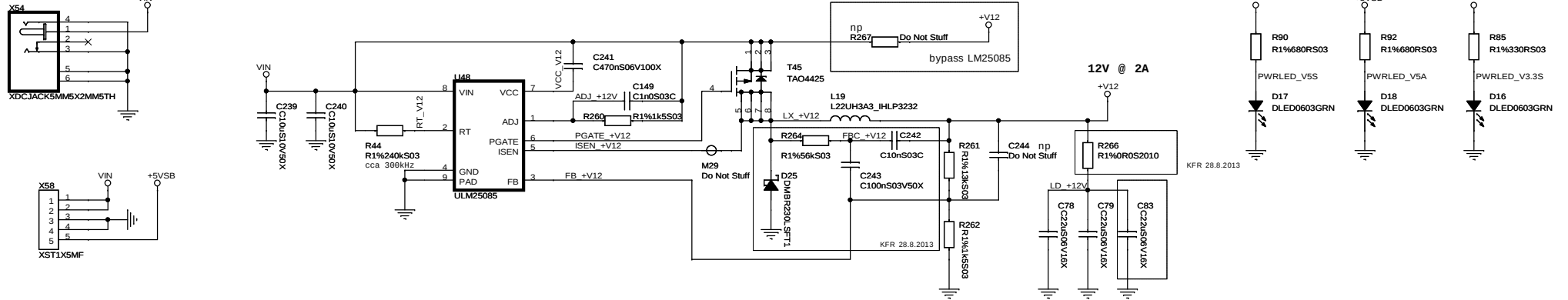
|                                    |                            |                |            |
|------------------------------------|----------------------------|----------------|------------|
| Title<br>LCD LVDS                  |                            |                |            |
| Size<br>A3                         | Document Number<br>QMCASB0 | Created<br>KST | Rev<br>B.0 |
| Date:<br>Monday, February 03, 2014 | Sheet<br>9                 | of<br>14       |            |



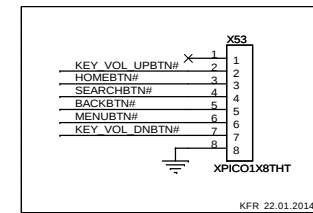
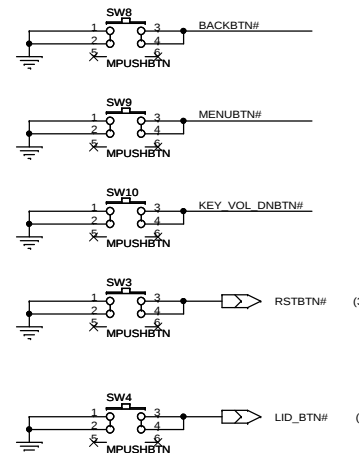
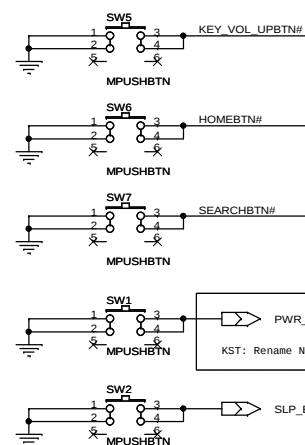
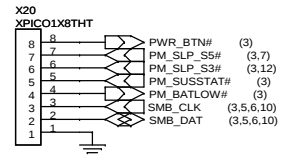




## POWER INPUT: 12 V - 19 V



## POWER CONTROL



V1

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Germany



| Title                 |                           |         |          |
|-----------------------|---------------------------|---------|----------|
| DC-IN, POWER, Buttons |                           |         |          |
| Size                  | Document Number           | Created | Rev      |
| A3                    | QMCASB0                   | KST     | B.0      |
| Date:                 | Friday, February 07, 2014 | Sheet   | 13 of 14 |

Revision History

|          |            |     |    |                                                                                                                                                                                            |
|----------|------------|-----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rev. X.0 | 09/24/2012 | KST | 0  | design created                                                                                                                                                                             |
|          |            |     |    |                                                                                                                                                                                            |
| Rev. A.0 | 01/15/2013 | KFR | 3  | R226 removed, power net +V5A changed to +5VALW, added note to add footprint for uQseven , removed U38, X55<br>TMDS_CEC connected directly to CN1A.124; X57, X59, X60 - changed to SMD type |
|          | 01/15/2013 | KFR | 4  | Added X63, X63 (CAN termination enable), net naming corrected (CAN1_VCC_F), T34 changed to AO3415A                                                                                         |
|          | 01/15/2013 | KFR | 5  | Added X62 (SIM card holder), added sign to make footprint for half size miniPCle card, U1 and its circuitry changed to ISL8002                                                             |
|          | 02/15/2013 | KFR | 6  | X2 - symbol updated for mSATA, added assembly option for SMB (R283, R284)                                                                                                                  |
|          | 01/15/2013 | KFR | 7  | USB OTG circuitry changed, U2 removed, net +V1.5mSATA changed merged with +V1.5S                                                                                                           |
|          | 02/04/2013 | KFR | 9  | X34 changed to 41500434, added inverter (T51)                                                                                                                                              |
|          | 02/15/2013 | KFR | 10 | U23 changed to TPS73401, adedd assembly option for CGBCG I2C (R173, R176)                                                                                                                  |
|          | 01/15/2013 | KFR | 11 | Page content changed to MIPI camera interface (X4 added)                                                                                                                                   |
|          | 01/21/2013 | KFR | 12 | Page content changed, PSU for 3.3V and 5V added (U41)                                                                                                                                      |
|          | 01/22/2013 | KFR | 13 | New page, added PSU for 12V (U48), auxiliary PSU (U3, U44), X54 changed to 41500436, X20.2-3 connected to SMB                                                                              |
|          | 01/24/2013 | KFR | 14 | New page (Revision history)                                                                                                                                                                |
|          |            |     |    |                                                                                                                                                                                            |
| Rev. A.1 | 08/22/2013 | KFR | 5  | M15 assembled, M13 N.U.                                                                                                                                                                    |
|          | 08/25/2013 | KFR | 5  | R2 changed to R1%12kS03, R3 changed to R1%18kS03                                                                                                                                           |
|          | 08/25/2013 | KFR | 8  | R287 used, T51 used, R288 N.U.                                                                                                                                                             |
|          | 08/25/2013 | KFR | 13 | R266 changed to R1%0R0S2010, R264 used (R1%56kS03), C243 used (C100S03V50X), C242 used (C10nS03C)                                                                                          |
|          | 08/25/2013 | KFR | 13 | R282 and R244 cahnged to R1%402kS03, R281 changed to R1%825kS03, R243 changed to R1%309kS03                                                                                                |
|          |            |     |    |                                                                                                                                                                                            |
| Rev. B.0 | 01/23/2014 | KFR | 3  | Added Pull Down to CN1B.204 (MFG_NC4) R296<br>Added R56, R57<br>Added jumper X67 to enable PD for BOOT_ALT# signal                                                                         |
|          | 01/23/2015 | KFR | 3  |                                                                                                                                                                                            |
|          | 01/23/2016 | KFR | 3  | X60 changed to 41500292                                                                                                                                                                    |
|          | 01/23/2017 | KFR | 7  | USB OTG circuitry changed;removed T37,R233,R232,R177,R61;<br>added signal USB_DRV_VBUS to enable power for USB OTG;<br>signal V_USB_OTG_B connected to CN1A.91, R179 ->N.U.                |
|          | 01/23/2018 | KFR | 8  | added T52, R297-R304 to have passive level shifter for HDMI                                                                                                                                |
|          | 01/23/2019 | KFR | 13 | X53 changed to 41500357                                                                                                                                                                    |