

TK71-Baseboard Basic description

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1 Introduction

The TK71 Baseboard integrates the main interfaces provided by the TK71 module as well as a second Gigabit Ethernet Port.

Dimensions 100 x 122 mm

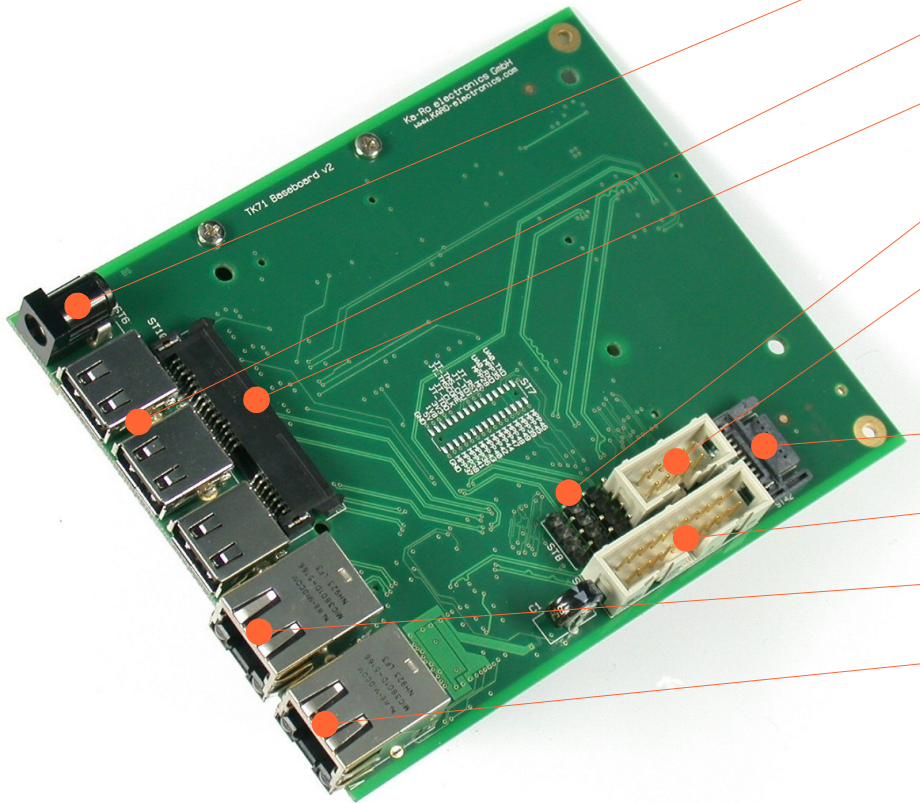
Power Supply 5V DC

Interfaces 3 X USB 2.0 (Standard connector type A)
3 x USB 2.0 (Pin header)
2x Gigabit-Ethernet
SATA
RS232
JTAG

Slots Mini-PCI-Express
SD card
2.5" SATA Harddisk



2 Connector location



5V DC Power supply input

USB port 1,3,7

2.5" SATA

USB port 0,2,6

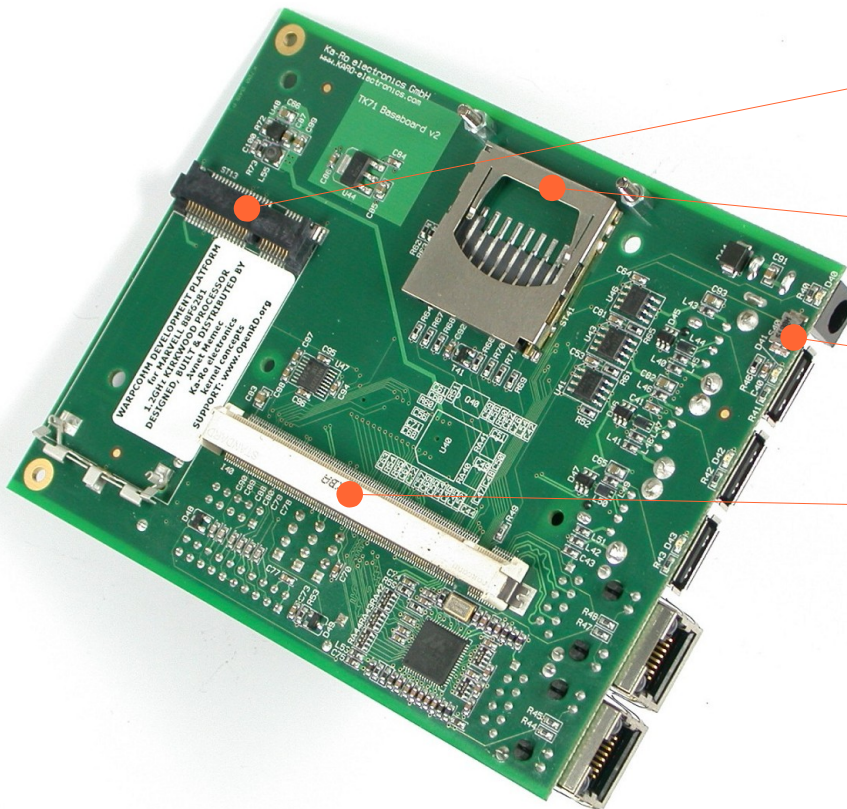
RS232 UART0

SATA

JTAG

Gb Ethernet Port 0

Gb Ethernet Port 1



PCIe slot

SD-Card

Reset button

Qseven Slot

3 Package contents

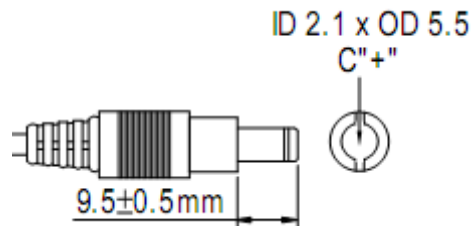
- TK71 Baseboard
- TK71 processor module
- Cord power supply
- RS232 adaptor

4 Basic connections

4.1 Power Supply

Cord power supply specification

- Input voltage range: AC 90~264V, 50/60Hz
- AC current: 0.31A/115VAC 0.16A/230VAC
- Output voltage: 5V DC
- Output rated current: 2.0A
- Connector type:



P11	
P/N	OUTPUT
CENTER	+

4.2 Serial port cable 10pin IDC socket to DB-9 female



10 pin IDC socket	connected to	DB-9 female
1	-	1
2	-	6
3	-	2
4	-	7
5	-	3
6	-	8
7	-	4
8	-	9
9	-	5
10	not connected	

4.3 Terminal connection

Use the supplied serial port cable DB-9 female to 10 pin IDC socket to connect the **UART0** RS232 port to a communication port of your host PC, e. g. COM1. You need a terminal program like Windows Hyperterminal or Unix based minicom or cu, running on your host PC. The default communication parameters used are 115kBaud, 8 data bits, no parity-, one stop bit (115200 8N1), hardware handshake disabled.

The TK71 startup message should look like this:

```
U-Boot 2009.08-dirty (Okt 01 2009 - 16:21:48)
TK71

SoC:   Kirkwood 88F6281_A0
DRAM:  256 MB
NAND:  128 MiB

In:     serial
Out:    serial
Err:    serial
Net:    egiga0
88E1118 Initializing on egiga0
88E1118 Initialized on egiga0

Welcome to TK71

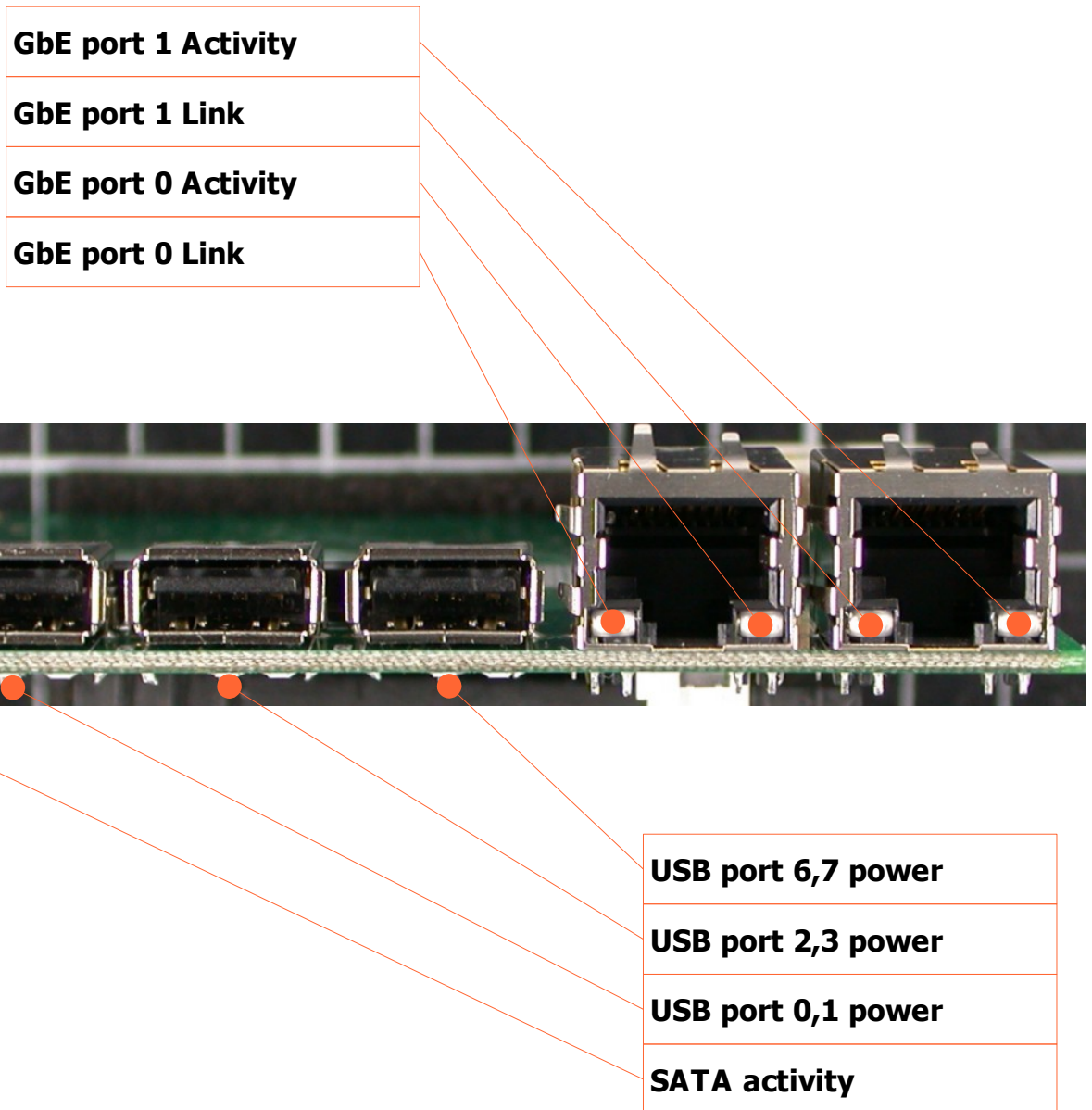
Hit any key to stop autoboot:  0
TK71>>
```

Also refer to the U-Boot documentation:

<http://www.denx.de/wiki/U-Boot/WebHome>

5 LEDs

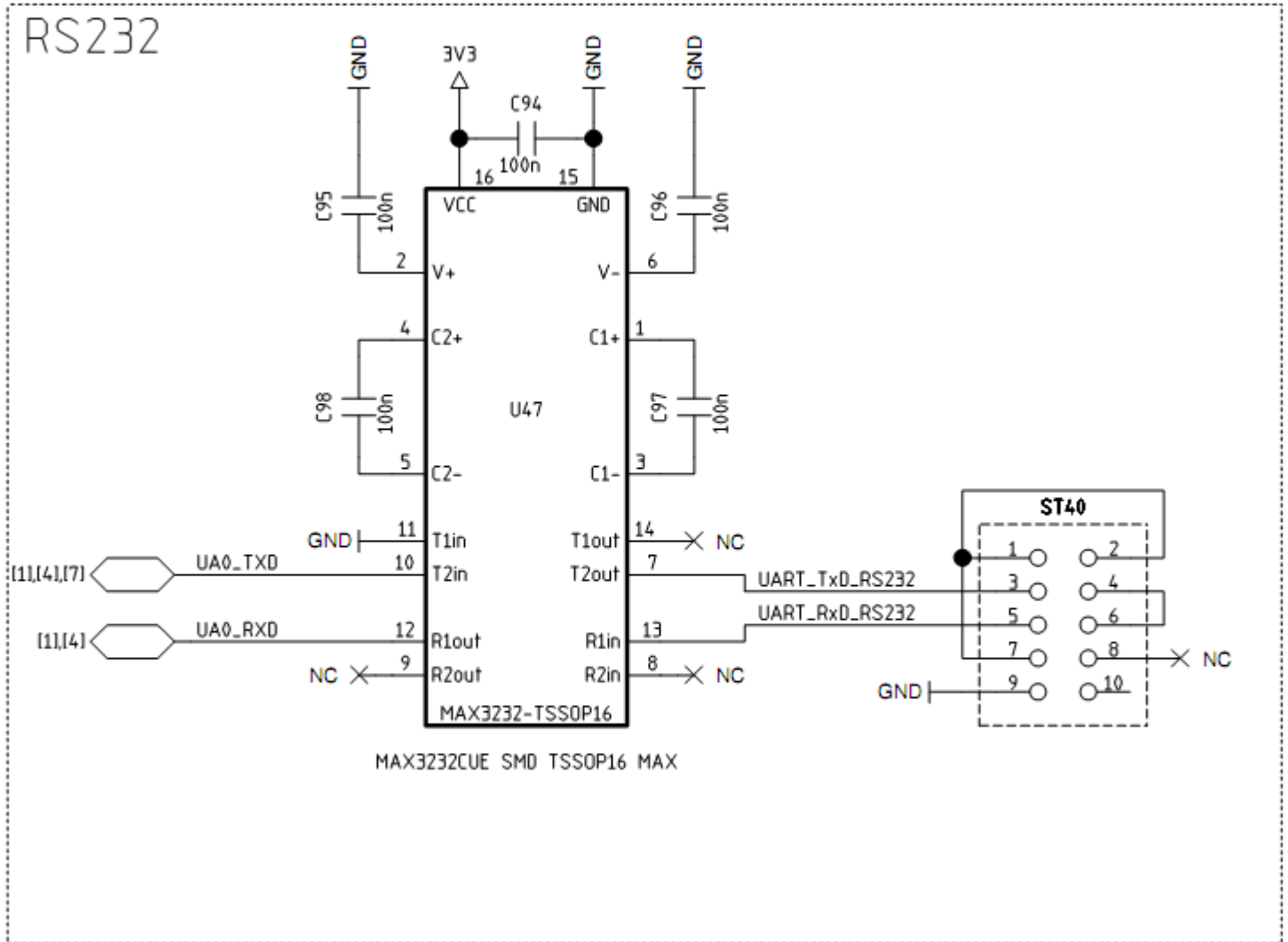
The USB power LEDs will always be on unless a USB port is turned off due to overload. The status of these LEDs will not change while the reset button is pressed.



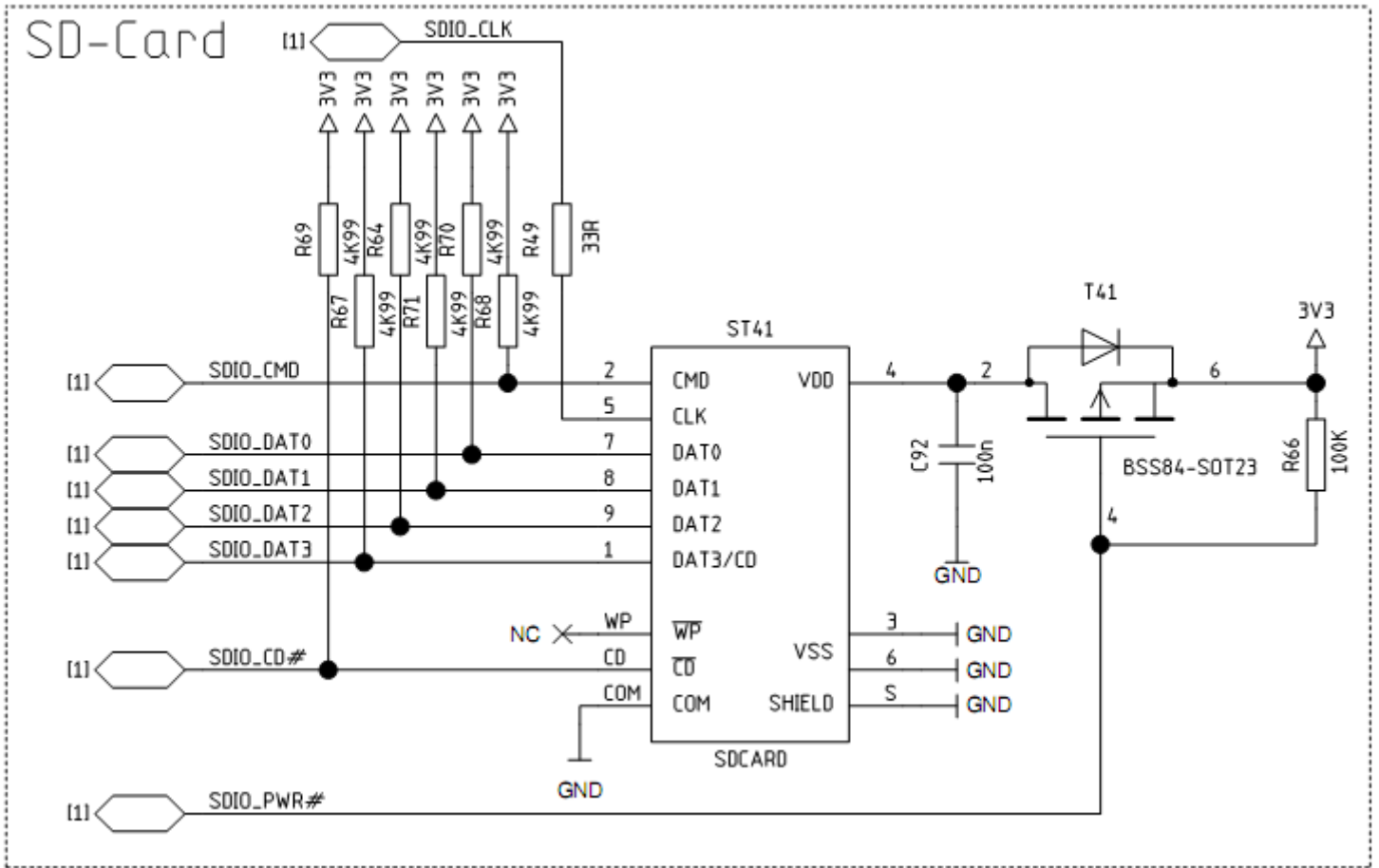
6 Schematics

Refer to TK71 datasheet for details on the QSeven connector pinout

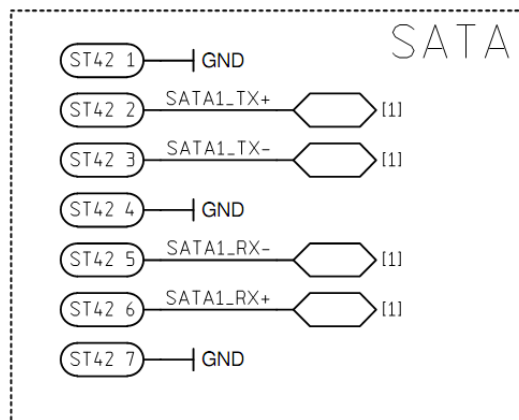
6.1 RS232



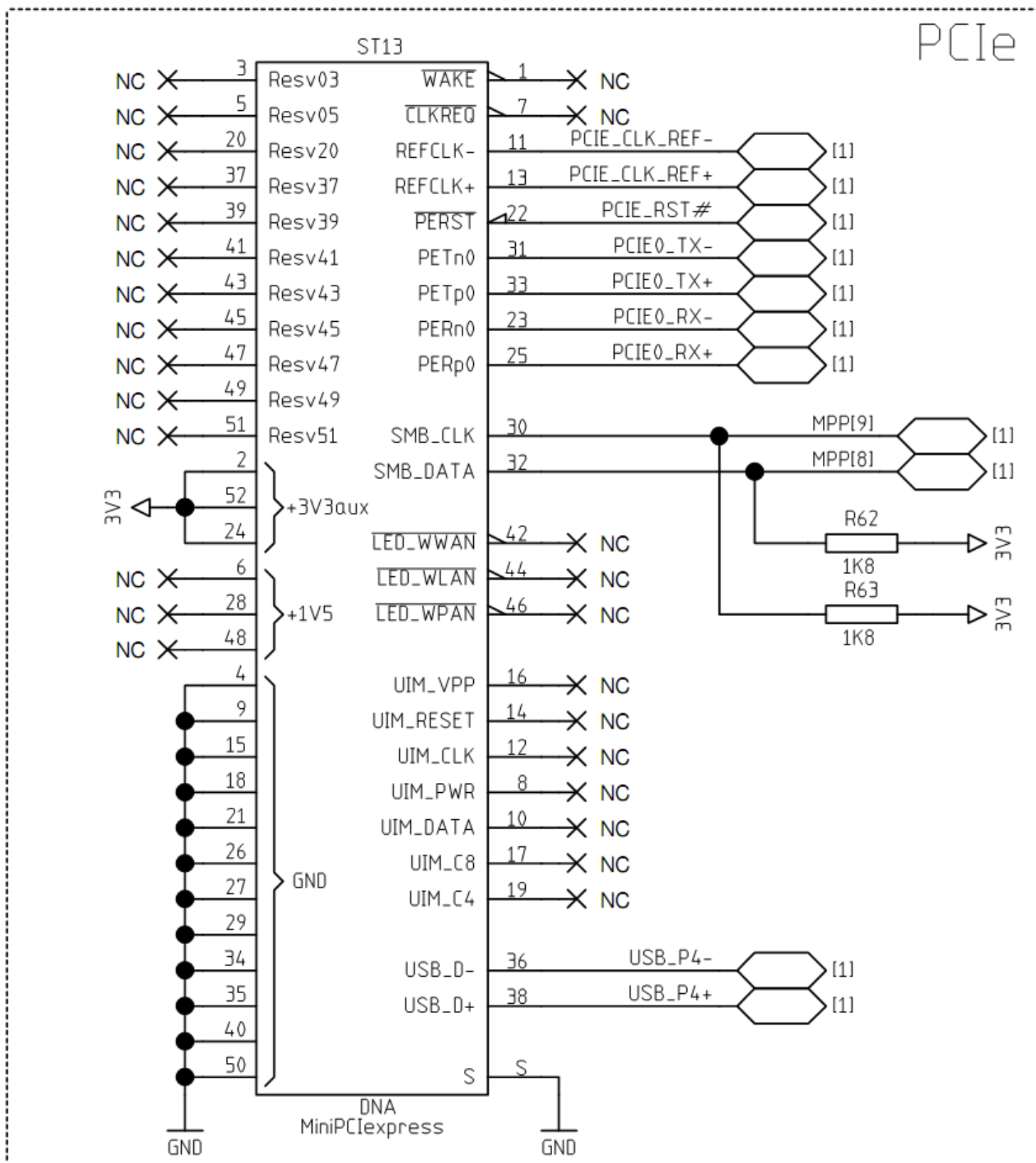
6.2 SD-Card



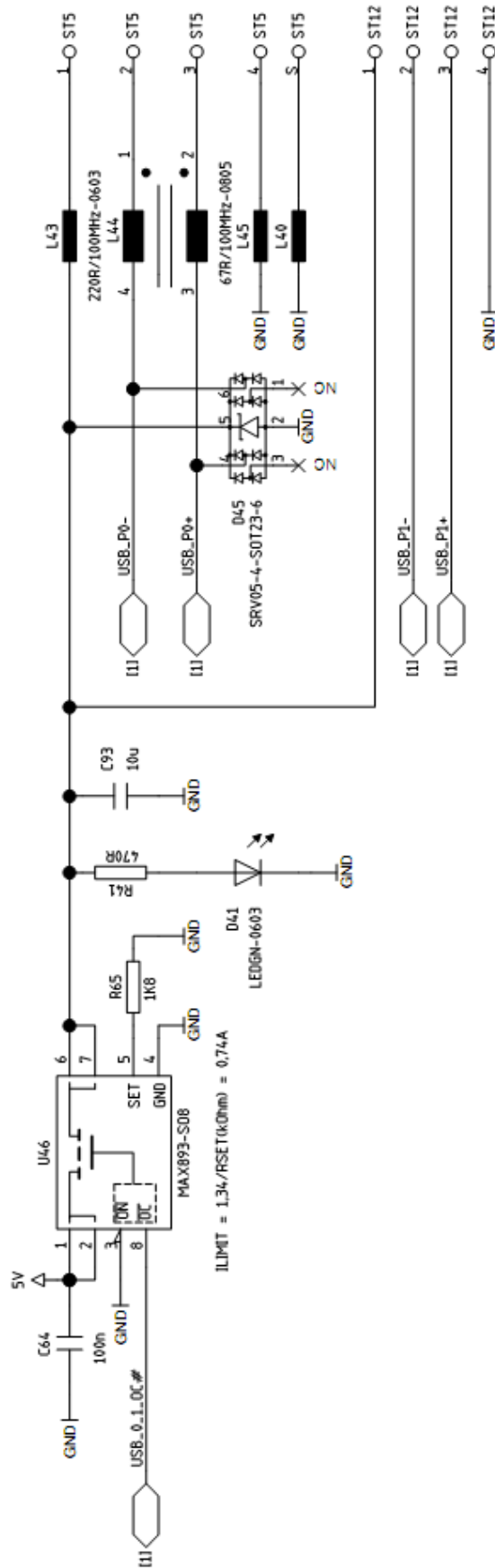
6.3 SATA



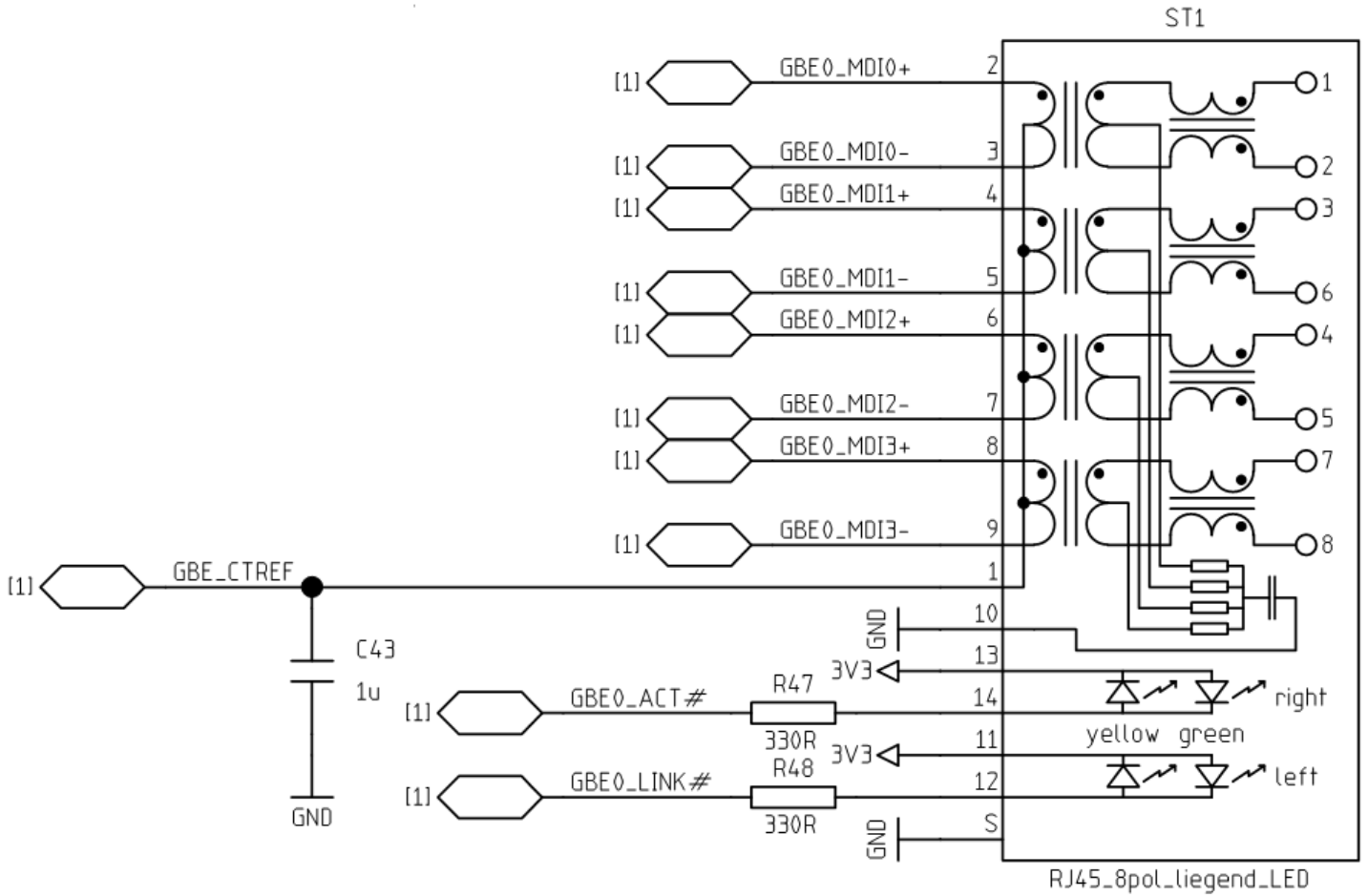
6.4 PCIe slot



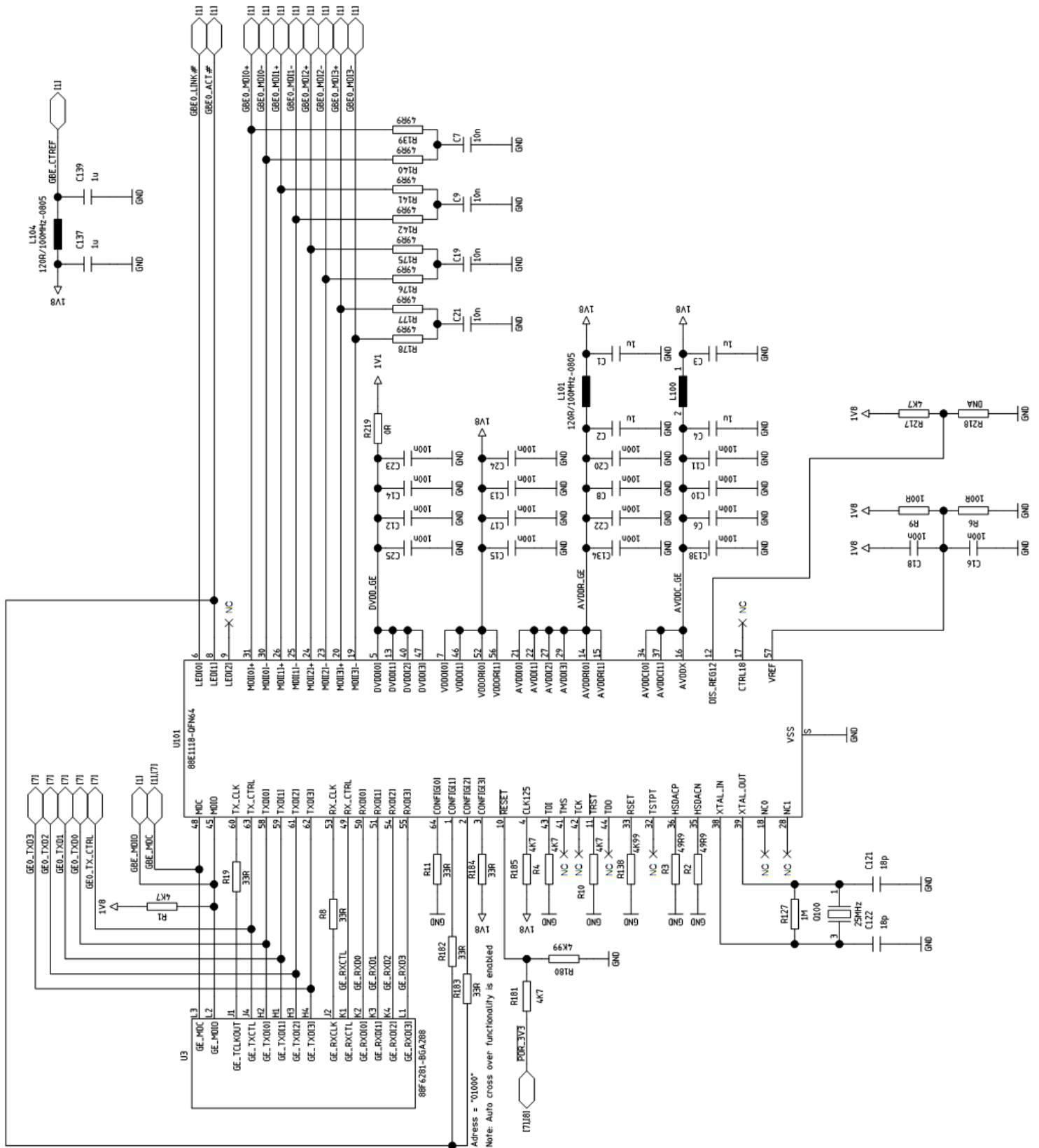
6.5 USB



6.6 Ethernet port 0



6.7 Ethernet port 1



7 Document revision history

Revision	Changes
2010-01-15	Initial release
2010-01-18	New chap. "Basic connections" and "LEDs"
2010-02-24	New version v2 with pictures