

ARM9-Module Datasheet

V-0.1

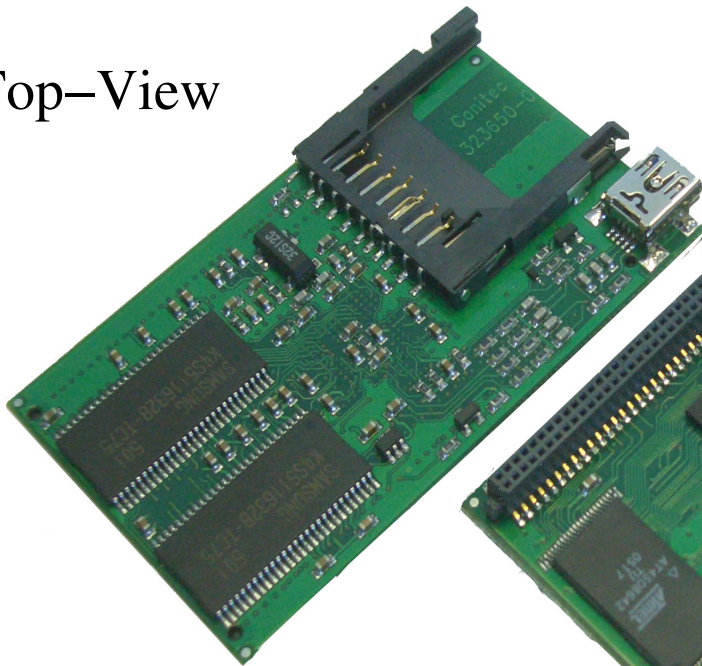
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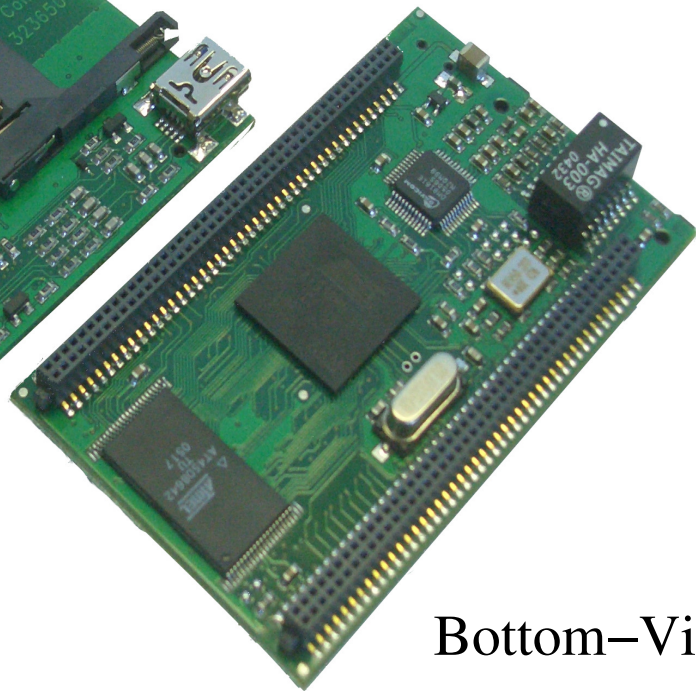
1 Overview

1.1 The MCU-Module

Top-View



Bottom-View



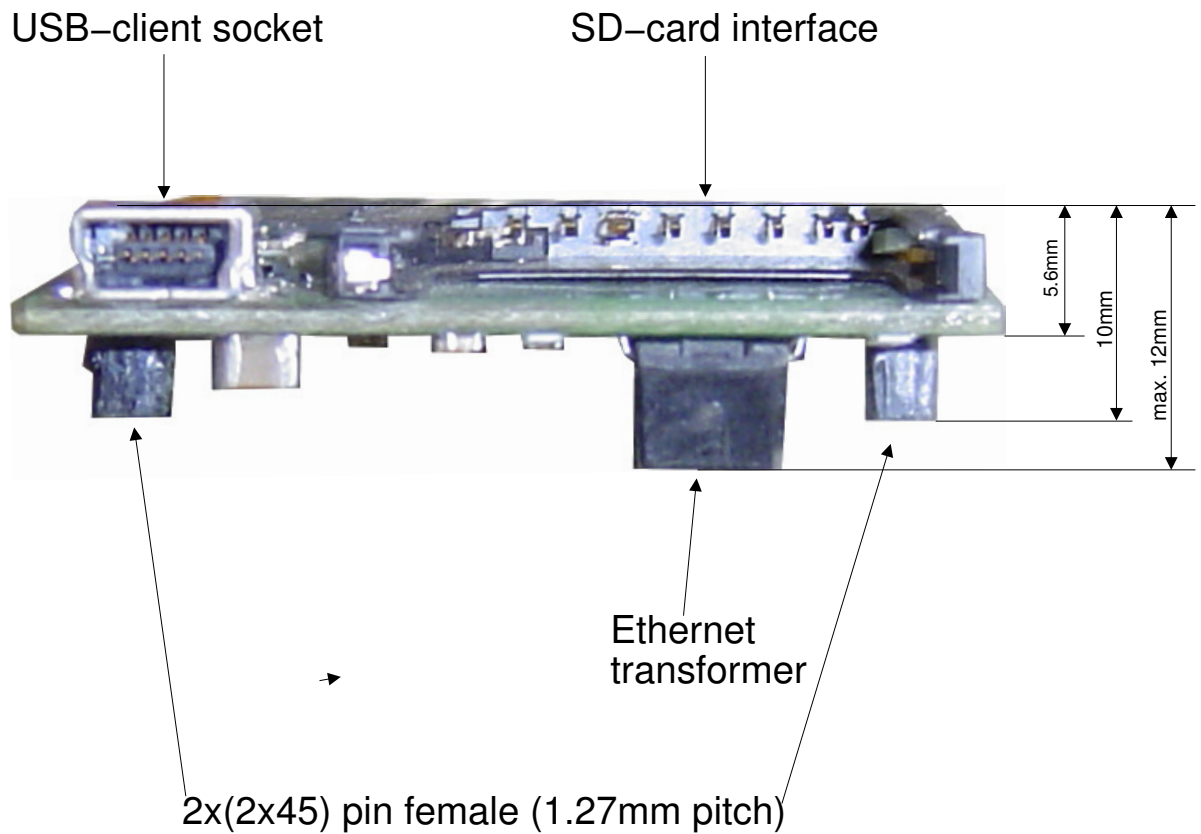
Dimensions:

- Width: 43mm
- Length: 70mm
- Height: 12mm¹
- Weight: 21g

¹If mounted the height will be increased by 0.3mm due to the male-socket on pc-board.

1.2 Front view

This shows the front of the mcu-module.

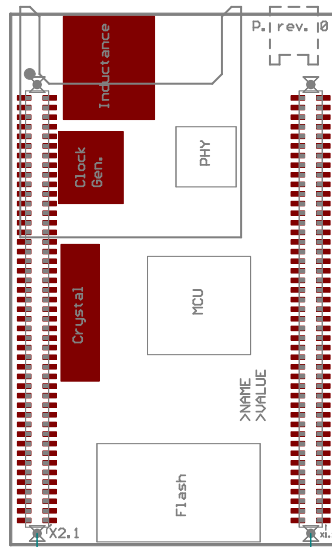


Possible connectors

- **TFC-145-02-L-D-A** (samtec)
- **STL21-55CVGT-090P** (mpe garry)

1.3 Socket pin assignment overview

| | | | | |
|-------------|-----------|--|---------------|---------------|
| ETH-R | ETH-T+ | | +3.3V_2 | +3.3V_1 |
| ETH-R- | ETH-T- | | GND4 | GND3 |
| GND7 | PHY_OP2 | | +1.8V OUT | USB_CLIENT_5V |
| PHY_OP0 | PHY_OP1 | | USB_CLIENT_C+ | USB_CLIENT_C- |
| MCI_MCDA3 | MCI_MCDA2 | | USB_HOST_MA | USB_HOST_MB |
| MCI_MCKK | MCI_MCKDA | | USB_HOST_PA | USB_HOST_PB |
| MCI_MCDA0 | MCI_MCKD | | JTAG_SEL | JTAG_TCK |
| MCI_MCDA1 | GPIO_PB11 | | JTAG_TDO | JTAG_TDI |
| GPIO_PB9 | GPIO_PB12 | | JTAG_TMS | JTAG_NTRST |
| GPIO_PB7 | GPIO_PB6 | | GPIO_PB13 | GPIO_PB17 |
| GPIO_PB8 | GPIO_PB1 | | GPIO_PB21 | GPIO_PB28_FIQ |
| GPIO_PB2 | GPIO_PB0 | | GPIO_PB20 | GPIO_PB29 |
| GPIO_PA22 | GPIO_PA20 | | GPIO_PB18 | GPIO_PB27 |
| GPIO_PA23 | GPIO_PA24 | | GPIO_PB23 | GPIO_PB26 |
| GPIO_PA19 | GPIO_PA17 | | GPIO_PB14 | GPIO_PB25 |
| GPIO_PA18 | GPIO_PA26 | | GPIO_PB19 | GPIO_PB24 |
| GPIO_PA21 | GPIO_PA25 | | GPIO_PB22 | GPIO_PB16 |
| GPIO_PA5 | GPIO_PA6 | | GPIO_PD8 | GPIO_PB15 |
| GPIO_PD1 | GPIO_PD4 | | GPIO_PD10 | GPIO_PD13 |
| GPIO_PD5 | GPIO_PD0 | | GPIO_PD14 | GPIO_PD15 |
| GPIO_PD3 | GPIO_PD2 | | GPIO_PD16 | GPIO_PD7 |
| GPIO_PC15 | GPIO_PC5 | | GPIO_PD18 | GPIO_PD17 |
| GND6 | GPIO_PC3 | | GPIO_PD27 | GPIO_PD23 |
| GPIO_PC0 | GPIO_PC2 | | GPIO_PD22 | GPIO_PD25 |
| GPIO_PC1 | SPI_CS2 | | GPIO_PD21 | GPIO_PD24 |
| SPI_CS1 | SPI_CS3 | | DBGU_RXD | GPIO_PD26 |
| SPI_CS0_DF* | SPI_SCK | | DBGU_TXD | GND2 |
| SPI_MOSI | SPI_MISO | | NCS2 | NRESET |
| NCS6 | NCS5 | | NWE | NRD |
| NCS7 | NCS4 | | NCS3 | NCS0 |
| DATA31 | DATA16 | | DATA0 | DATA15 |
| DATA30 | DATA17 | | DATA1 | DATA14 |
| DATA29 | DATA18 | | DATA2 | DATA13 |
| DATA28 | DATA19 | | DATA3 | DATA12 |
| DATA27 | DATA20 | | DATA4 | DATA11 |
| DATA26 | DATA21 | | DATA5 | DATA10 |
| DATA25 | DATA22 | | DATA6 | DATA9 |
| DATA24 | DATA23 | | DATA7 | DATA8 |
| ADDR12 | ADDR1 | | ADDR18 | ADDR19 |
| ADDR11 | ADDR0 | | ADDR15 | ADDR23 |
| ADDR8 | ADDR10 | | ADDR14 | ADDR24* |
| ADDR7 | ADDR9 | | ADDR13 | ADDR20 |
| ADDR4 | ADDR2 | | ADDR17 | ADDR25* |
| ADDR6 | ADDR3 | | ADDR16 | ADDR22 |
| GND5 | ADDR5 | | GND1 | ADDR21 |



Schematics

2.1 MCU-Module

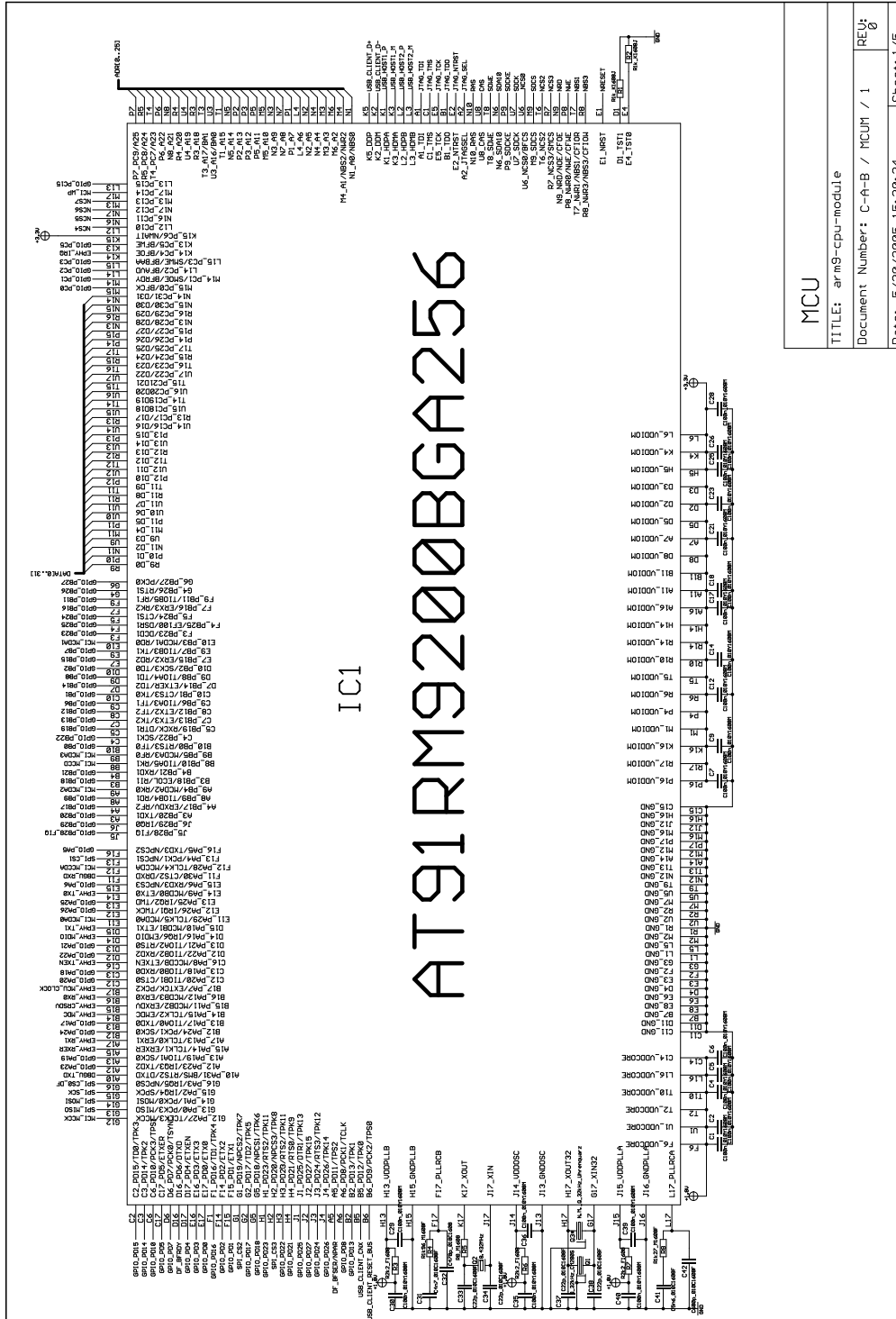


Figure 1: MCU

2.2 SDRAM and FLASH

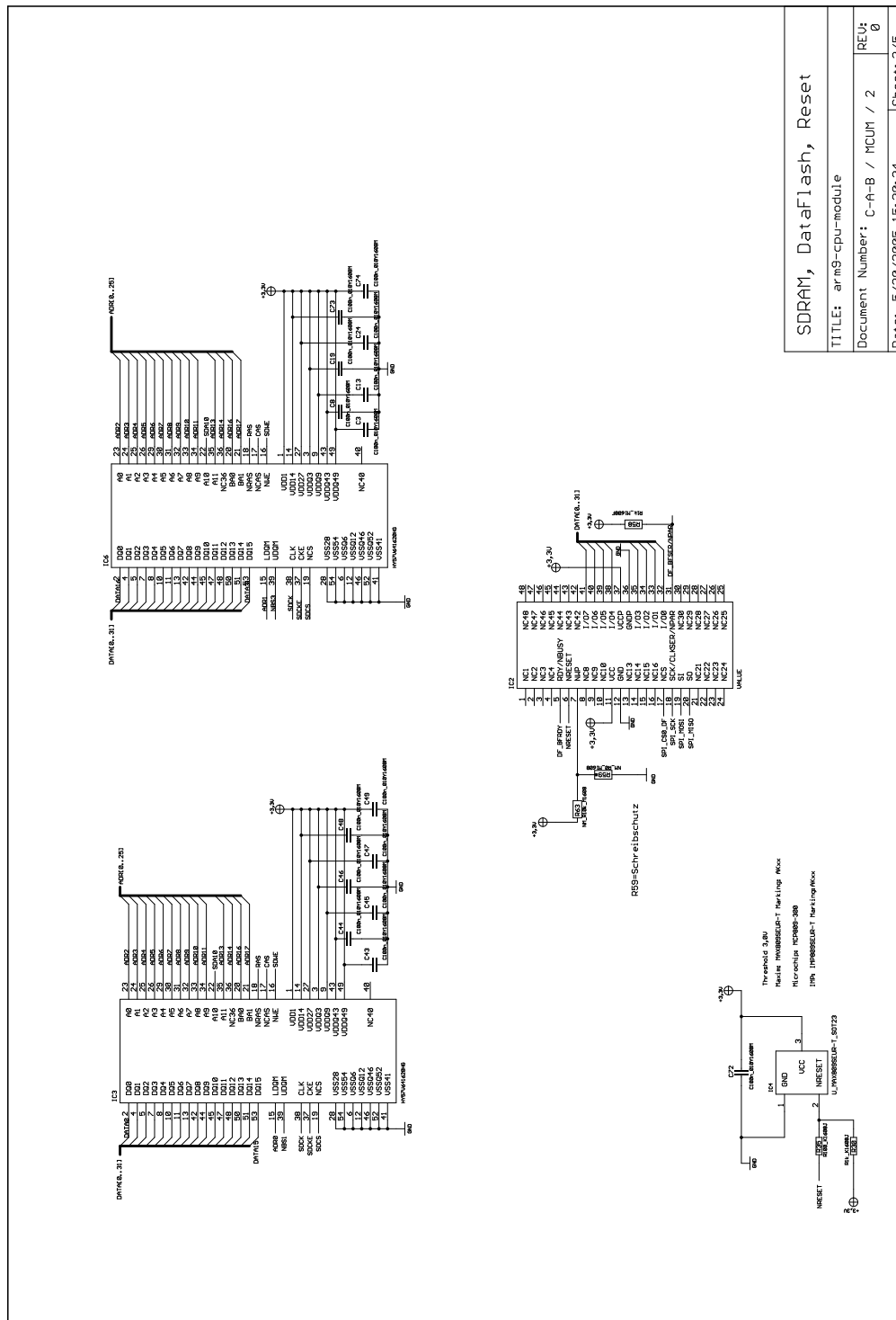


Figure 2: SDRAM and FLASH

2.3 Ethernet

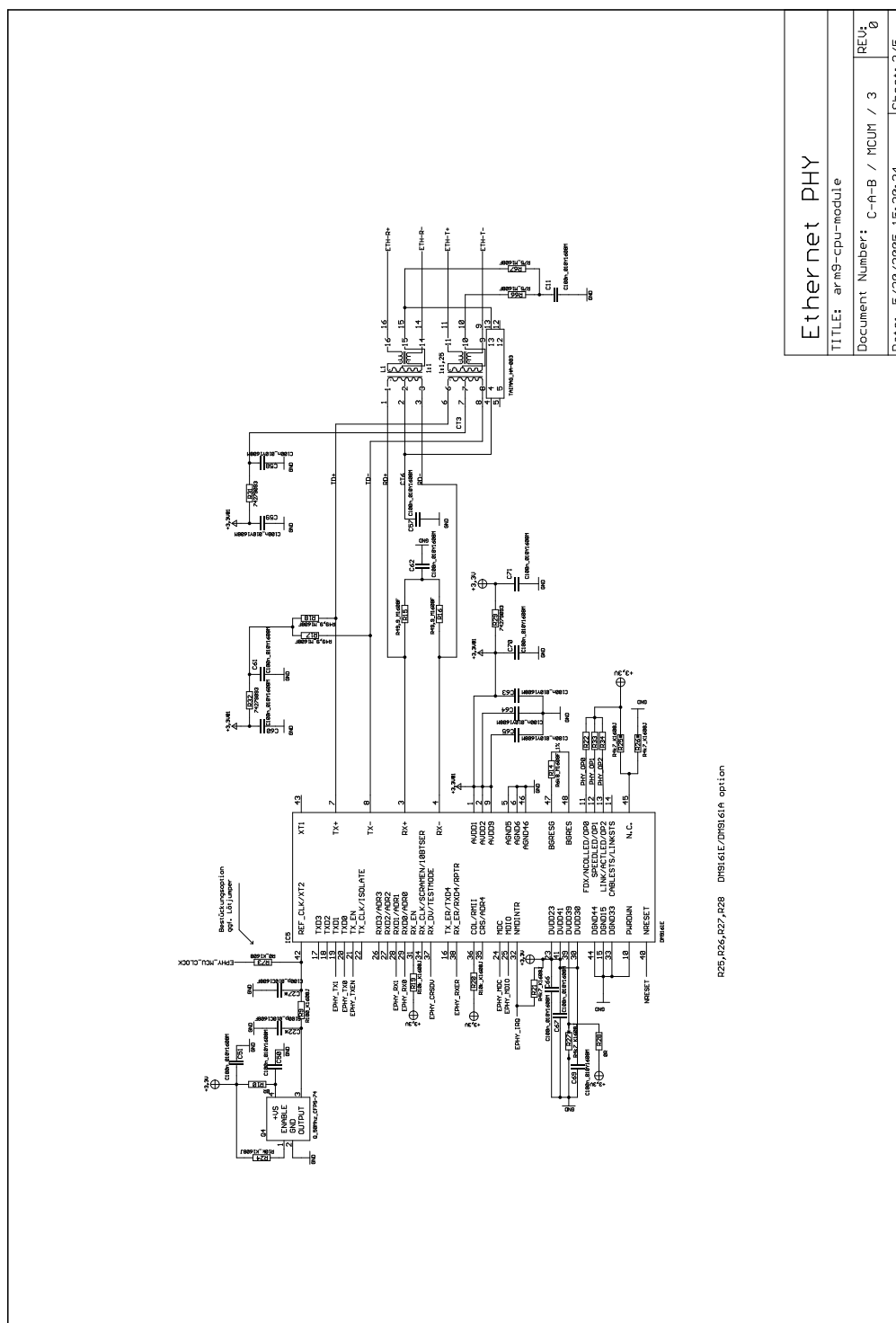


Figure 3: Ethernet

2.4 SD-Card

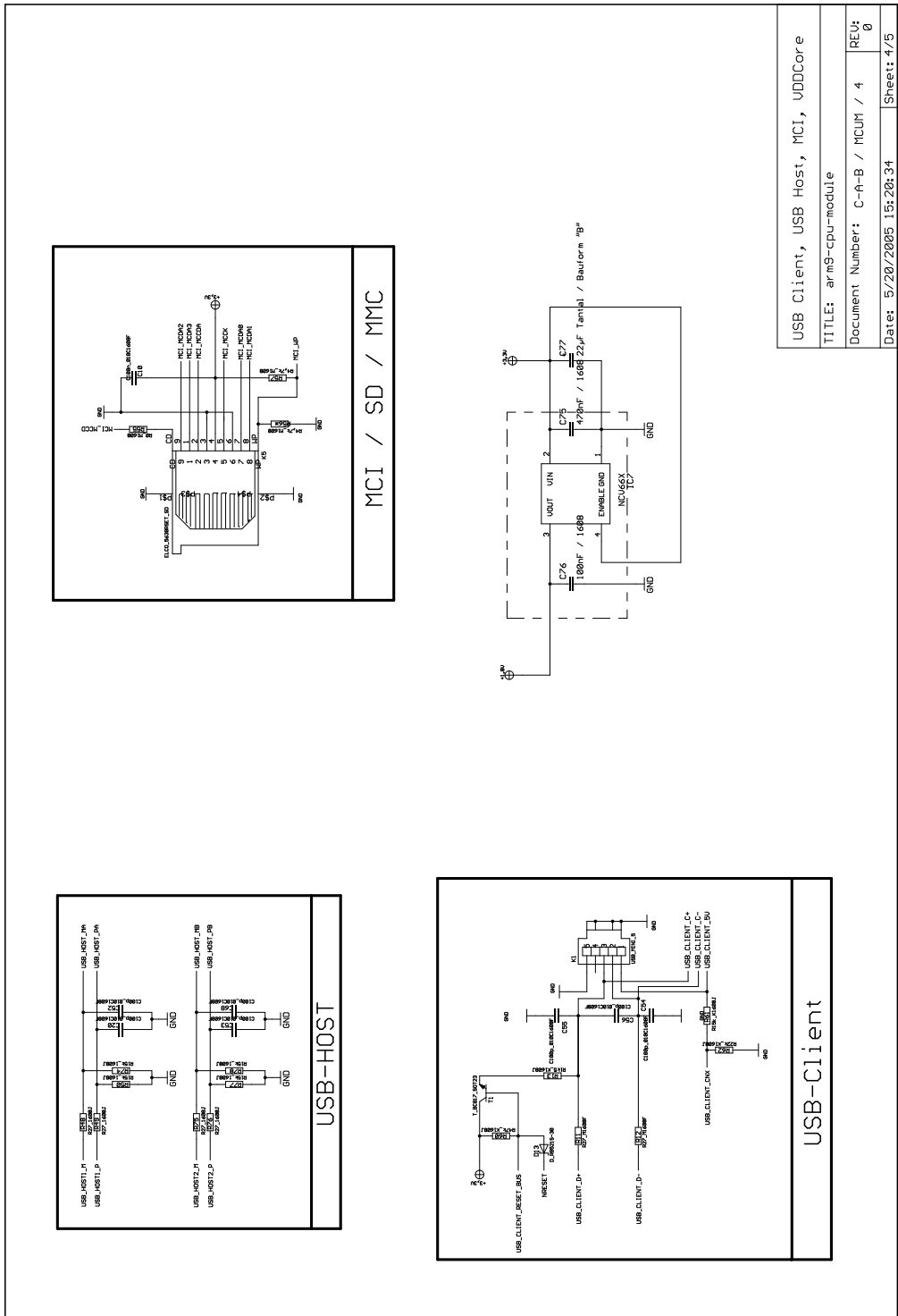


Figure 4: SD-Card Interface and USB Host / Client

2.5 Connectors

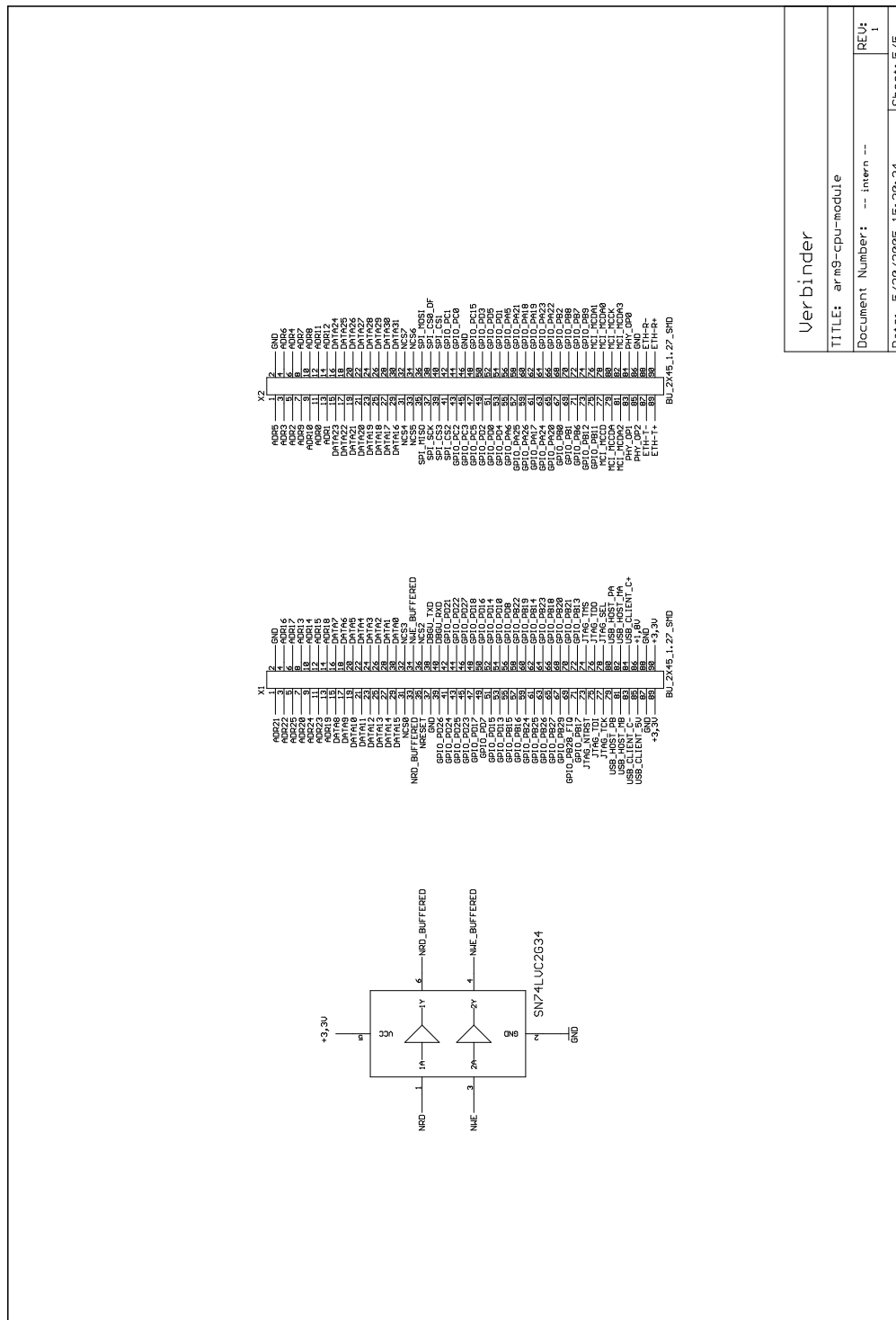


Figure 5: Connectors

3 Datasheet history

V0.1

Initial preliminary release.

V0.1a

Only document formating changes.

V0.1b

- Better „Socket pin assignment view”.
- Recommendation of connector types.