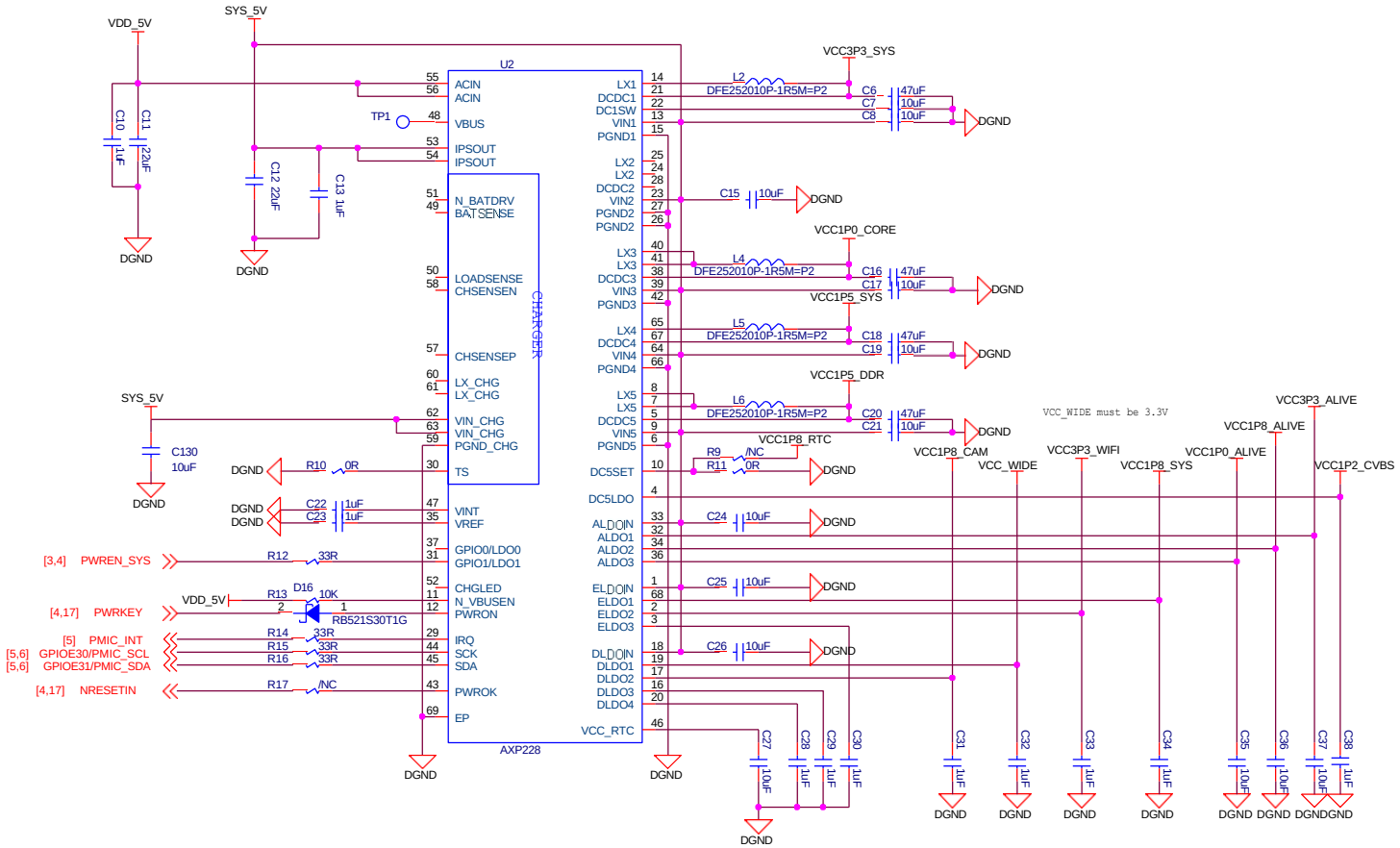
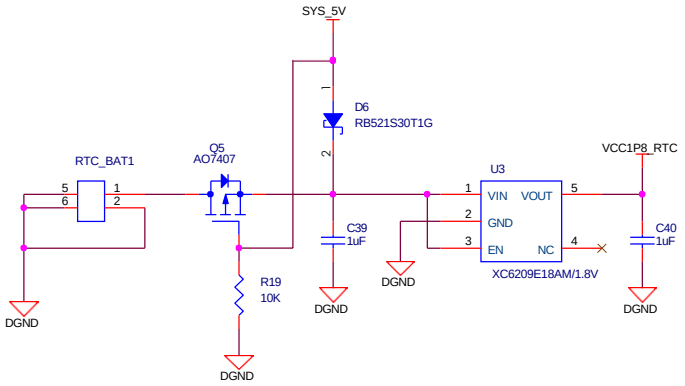
## PMIC



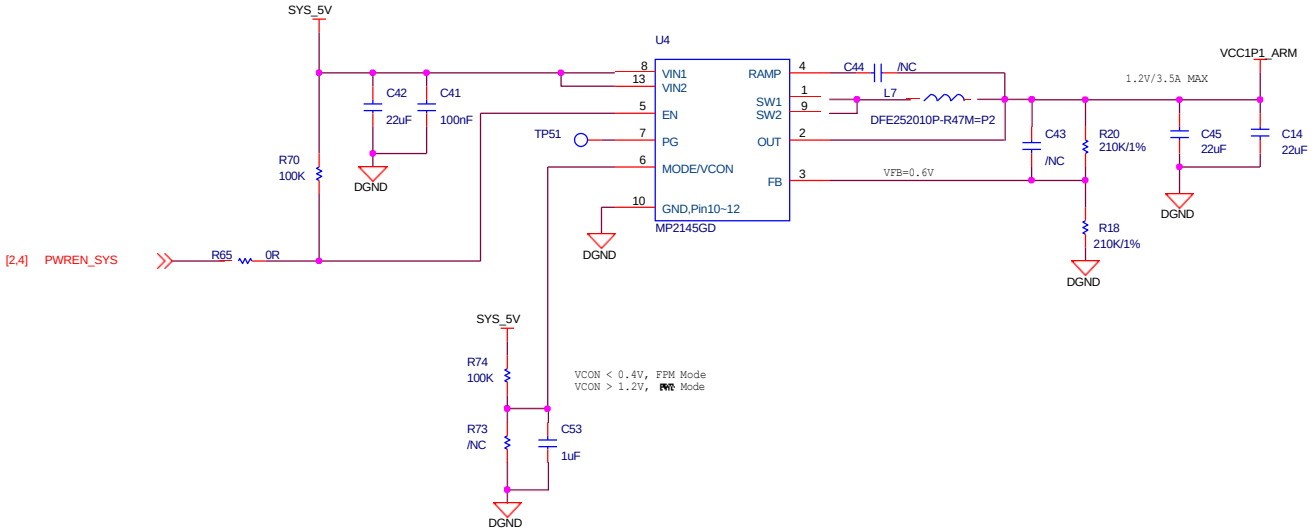

## RTC Power




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 02.PMIC, RTC Power | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 2 of 17 | |

VDD_ARM




## PCB Layout Recommendation

Proper layout of the switching power supplies is very important, and sometimes critical to make it work properly. Especially, for the high switching converter, if the layout is not carefully done, the regulator could show poor line or load regulation, stability issues.

For MP2145, the high speed step-down regulator, the input capacitor should be placed as close as possible to the IC pins. As shown in Figure 7, the 0805 size ceramic capacitor is used, please make sure the two ends of the ceramic capacitor be directly connected to PIN 8 (the Power Input Pin) and PIN 10/11/12 (the Power GND Pin).

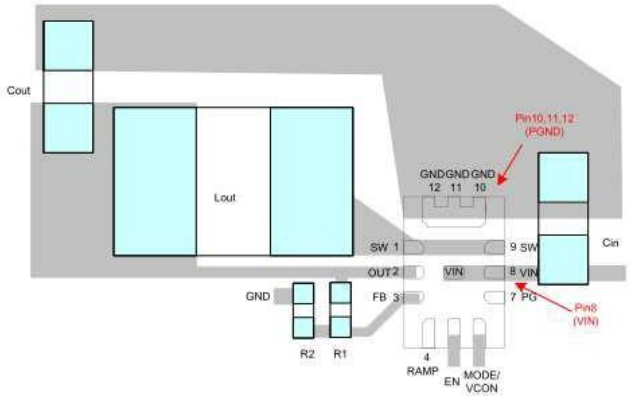
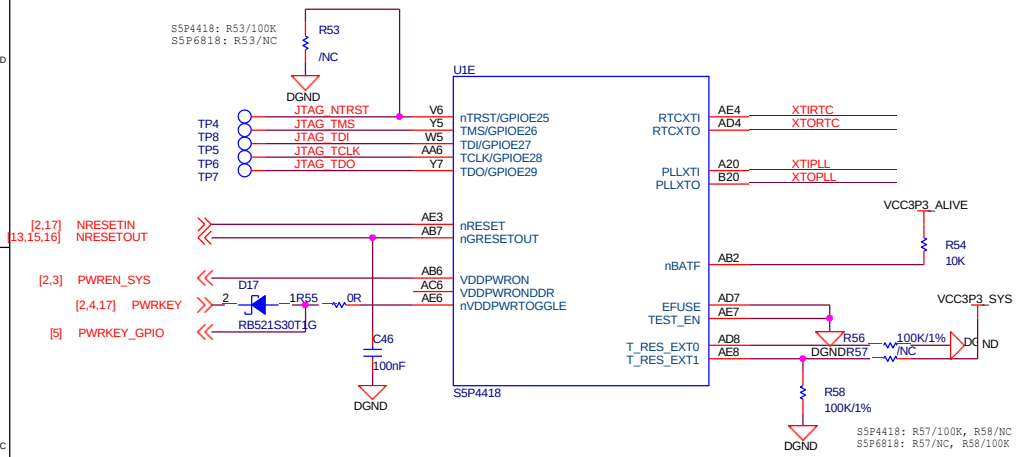


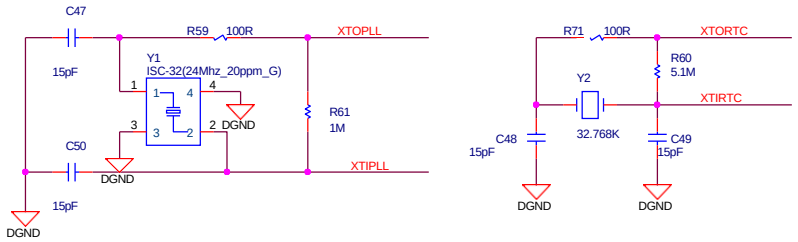

**Figure 7: Two ends of Input decoupling Capacitor close to Pin 8 and Pin 10/11/12**

FRIENDLYARM

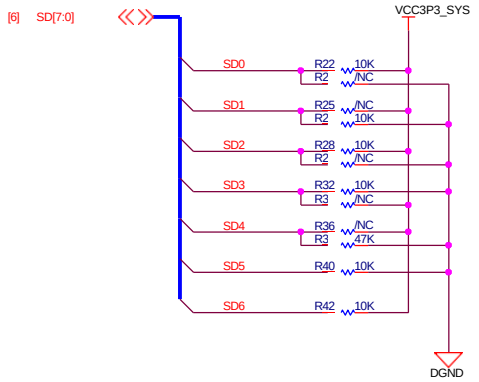
| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 03.VDD_ARM | Rev 1603 |
| Date: Saturday, April 09, 2016 | Sheet 3 of 17 | |

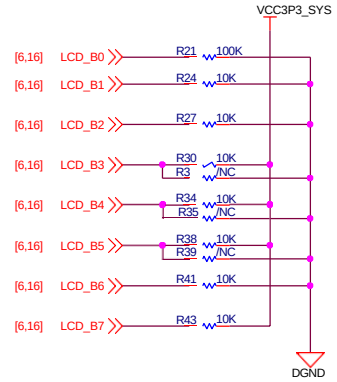
## System Reset, Clocks

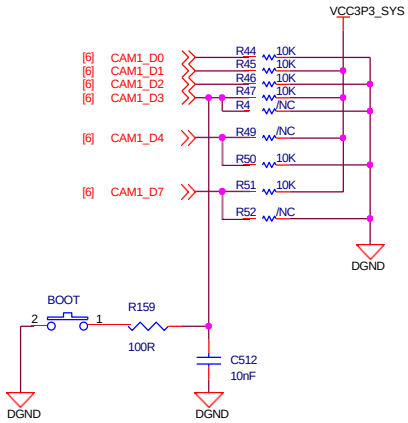



## Boot Mode Config



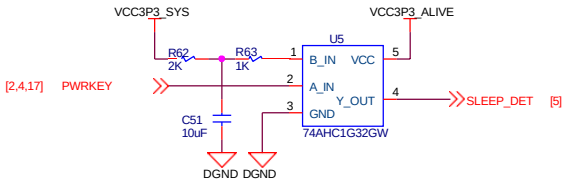

BOOT MODE OPTION

| | eMMC | SPI | USB | NAND |
|---|---|---|---|---|
| SD0 | HIGH | LOW | LOW | HIGH |
| SD1 | LOW | LOW | HIGH | HIGH |
| SD2 | HIGH | HIGH | HIGH | HIGH |
| SD4 | LOW | HIGH | | |
| SD5 | LOW | LOW | | |

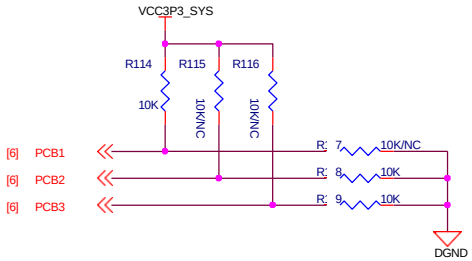
Boot media port select (SPI, eMMC)

| | CH0 | CH1 | CH2 |
|---|---|---|---|
| SD3 | LOW | HIGH | LOW |
| CAM1_D3 | LOW | LOW | HIGH |

## Sleep Detect




## PCB Version

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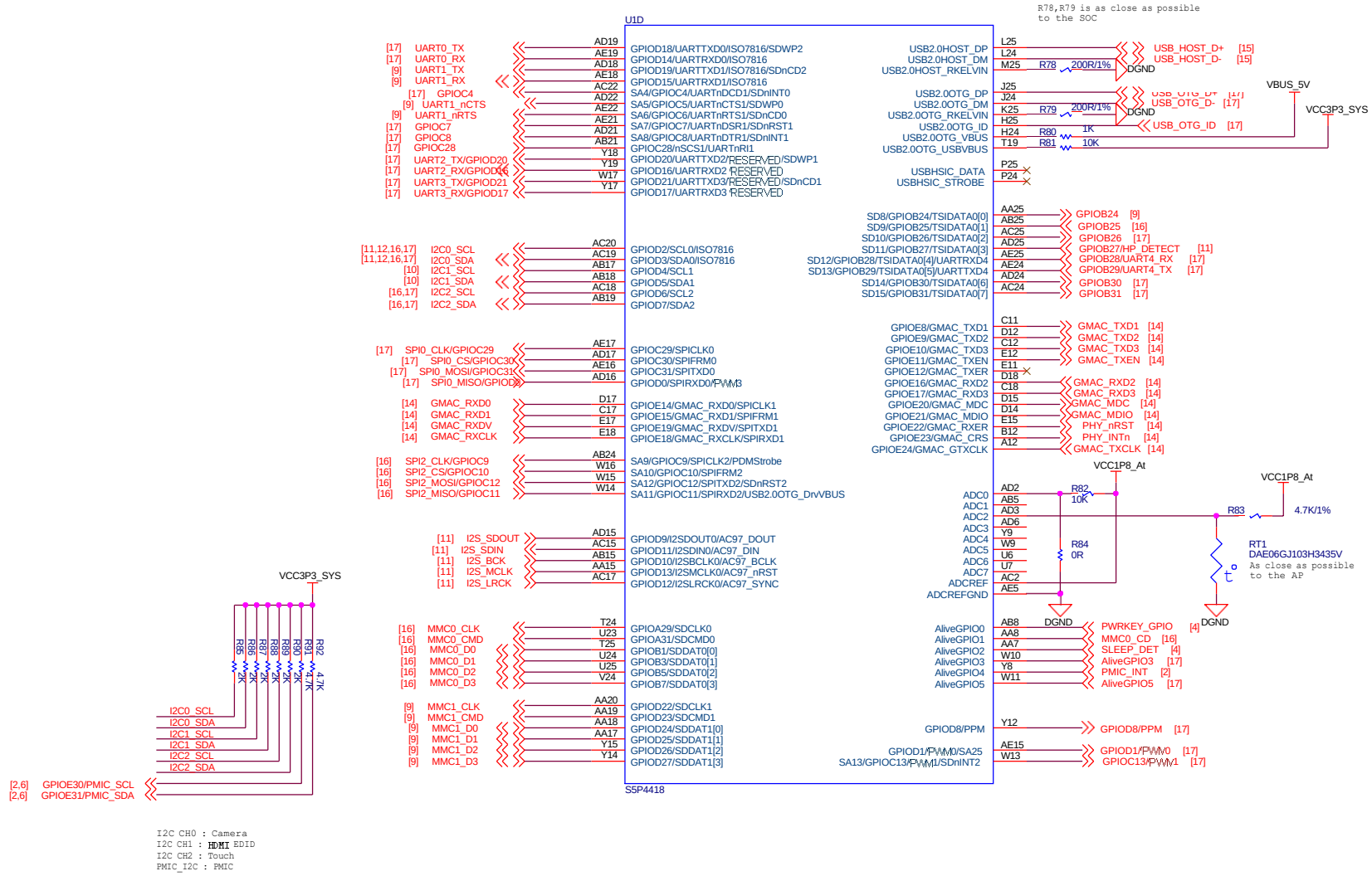
NanoPC-T2/T3

| Size | Document Number | Rev |
|---|---|---|
| A3 | 04.AP System Control | 1603 |

Date: Thursday, March 31, 2016 Sheet 4 of 17

# AP Peripherals

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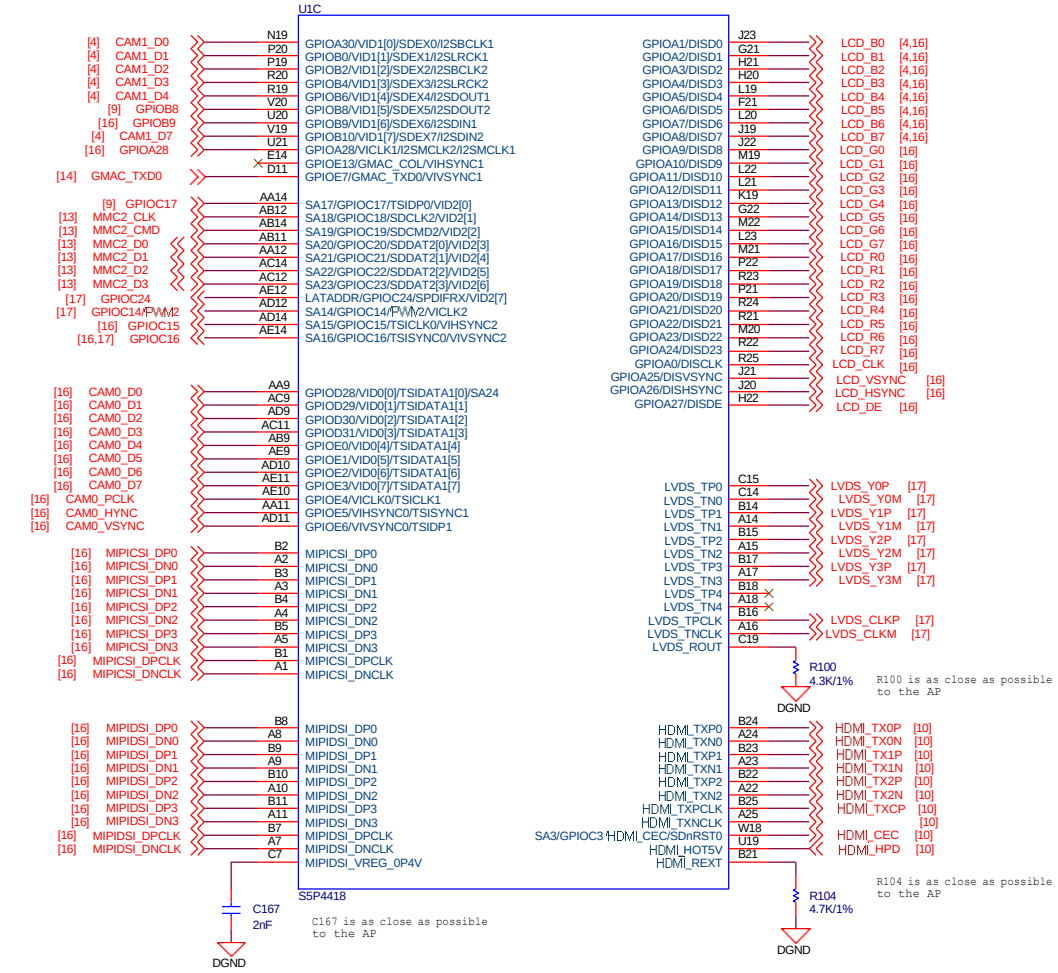
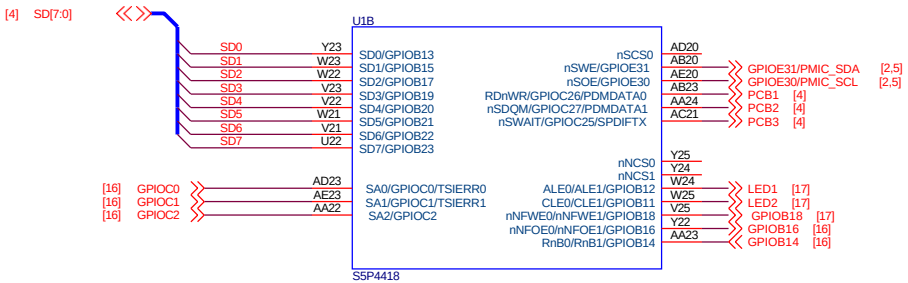
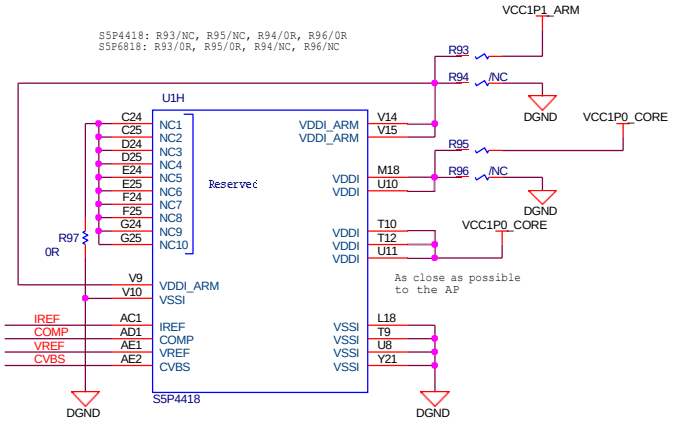
| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 05.AP Peripherals | Rev 1603 |
| Date: Monday, April 25, 2016 | Sheet 5 of 17 | |

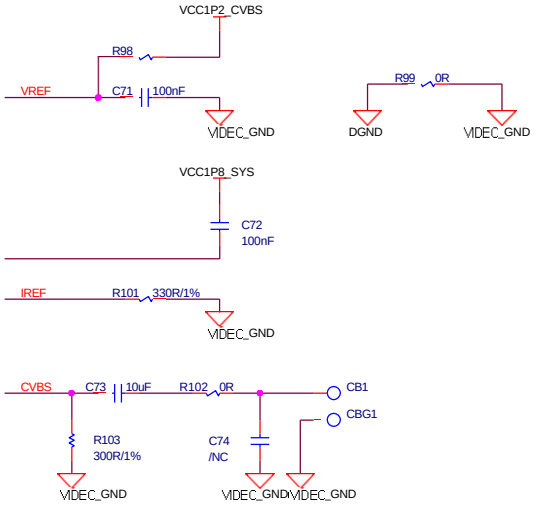
# AP VIP&Display




# Reserved Function

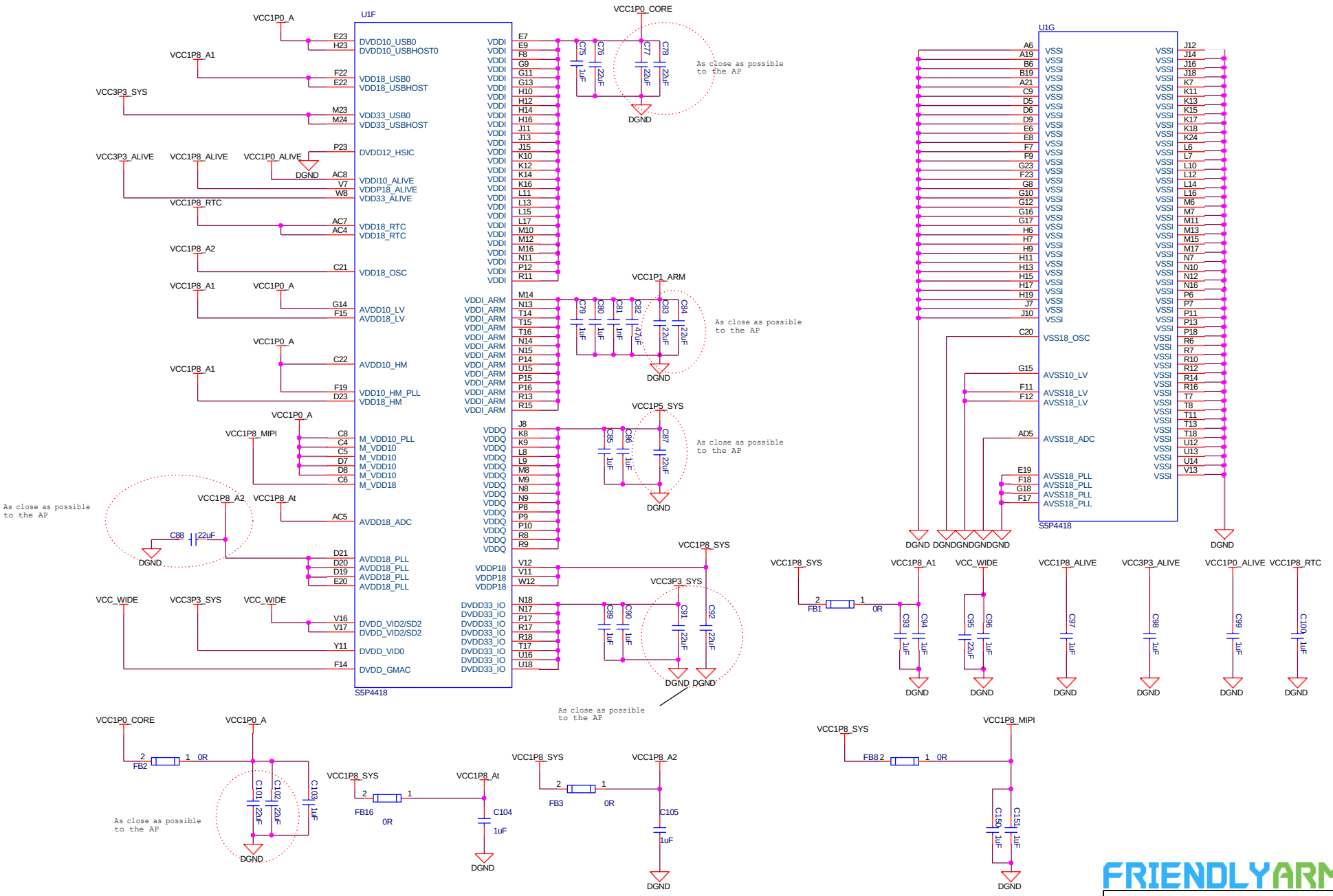



FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 06.AP VIP&Display | Rev 1603 |
| Date: Monday, April 25, 2016 | Sheet 6 of 17 | |

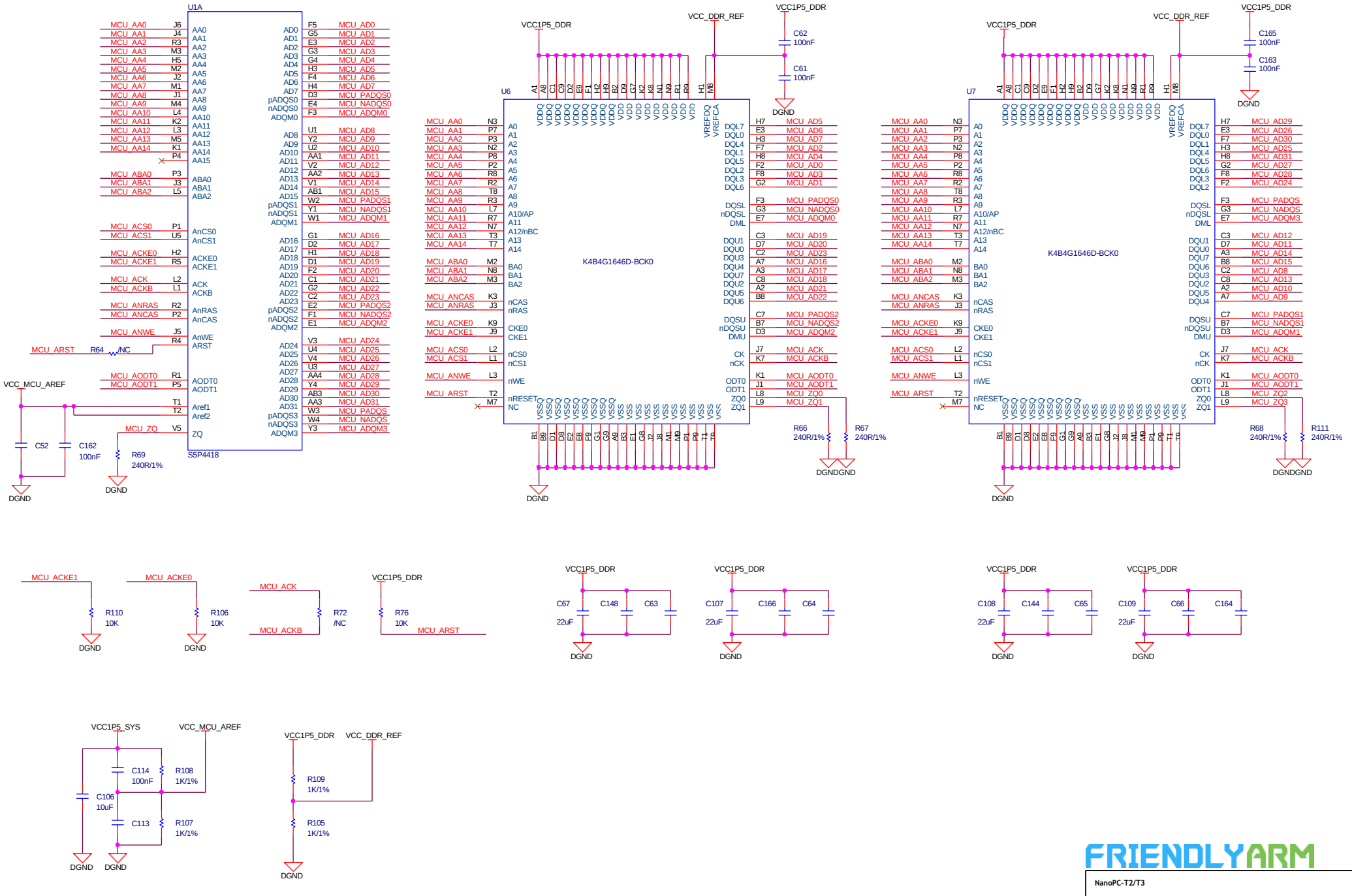
# AP Power




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 07.AP Power | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 7 of 17 | |

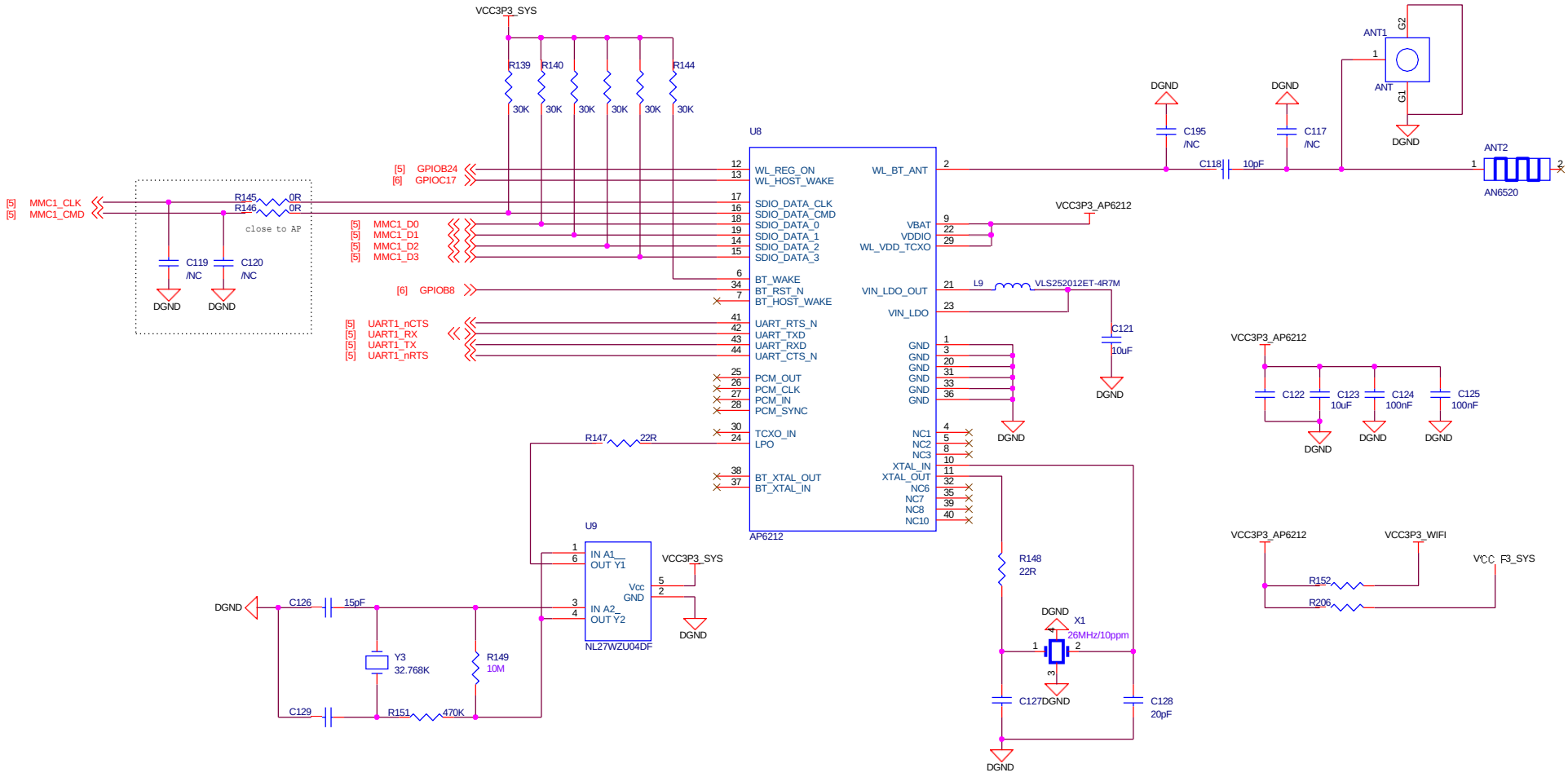
# DDR3




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 08.AP DDR III | Rev 1603 |
| Date: Monday, April 25, 2016 | Sheet 8 of 17 | |

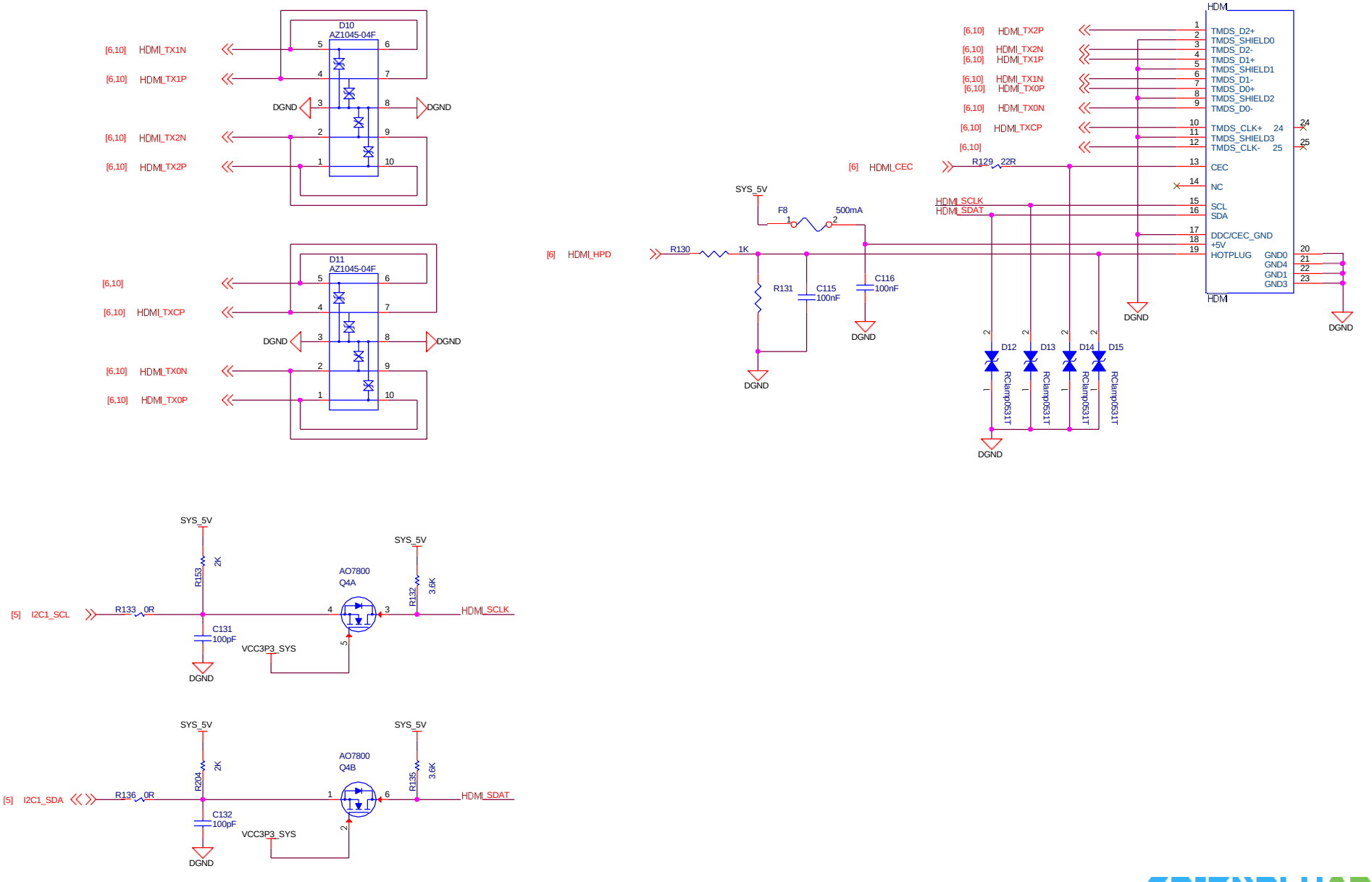
# Wi-Fi/Bluetooth




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 09.Wi-Fi&BT | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 9 of 17 | |

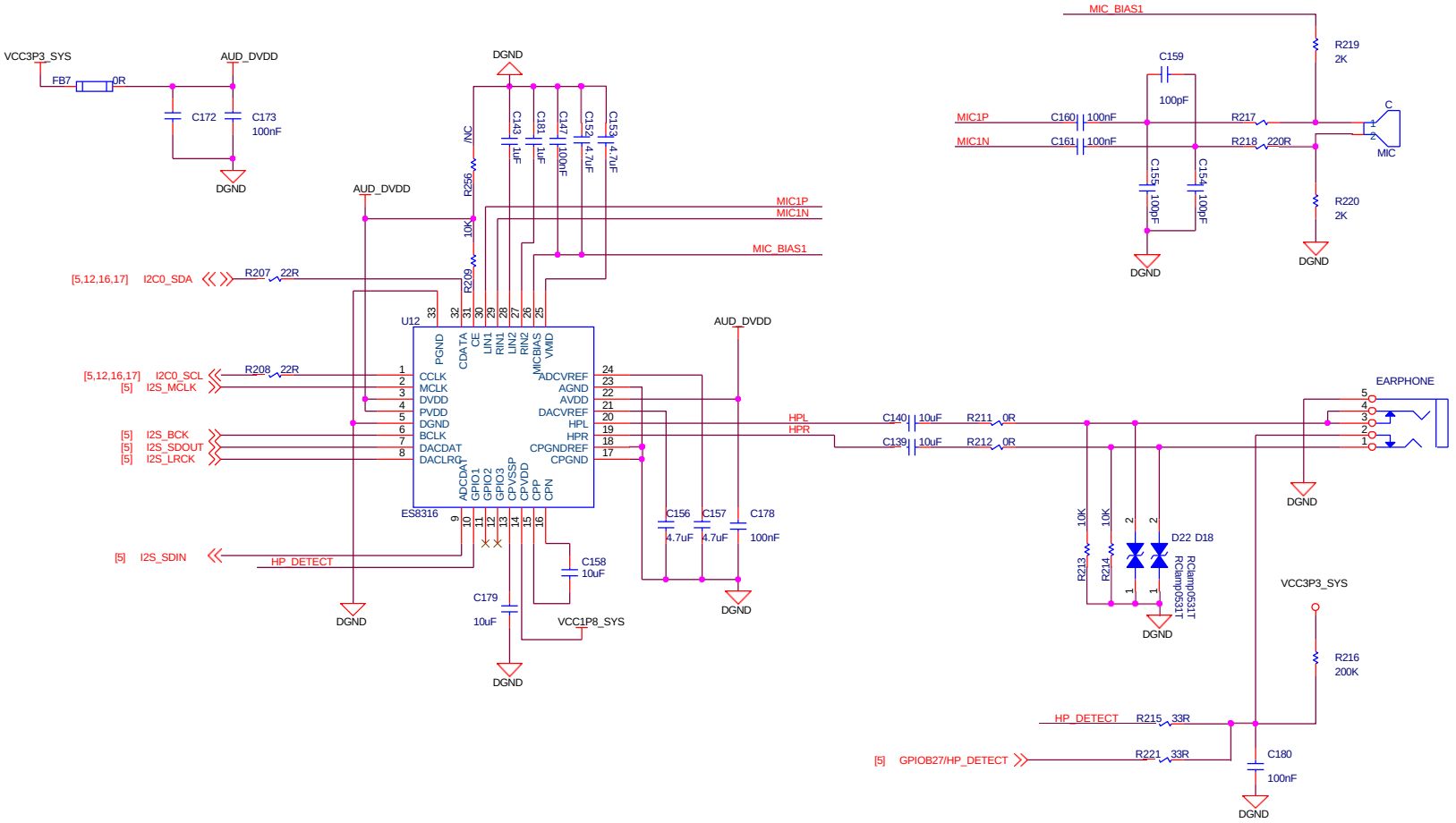
# HDMI




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 10.HDMI | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 10 of 17 | |

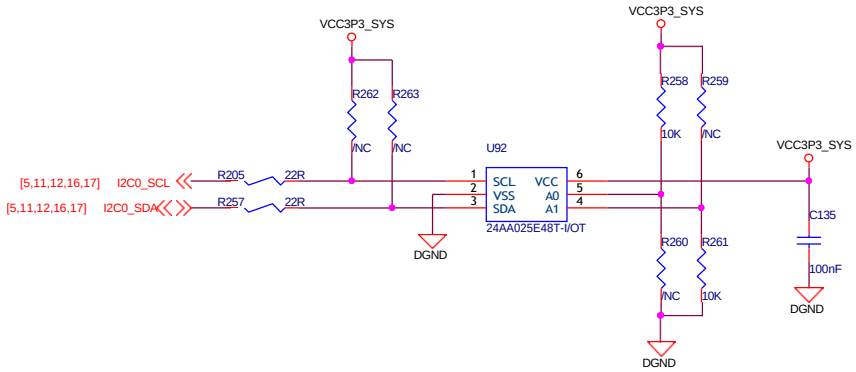
# Audio



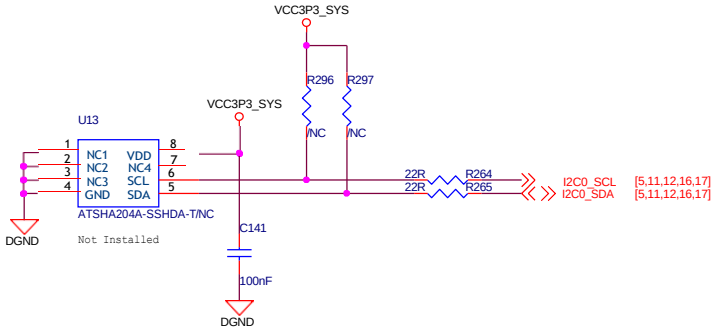

FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 11.Audio | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 11 of 17 | |

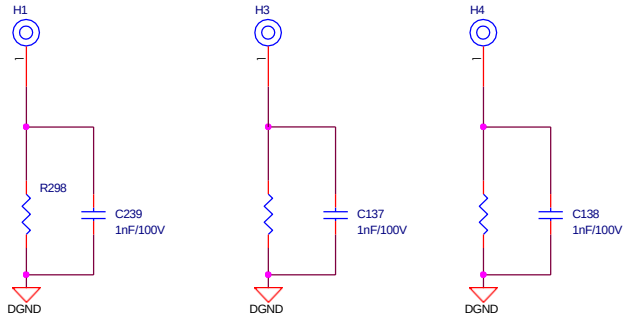
## EEPROM with MAC Address




## CryptoAuthentication



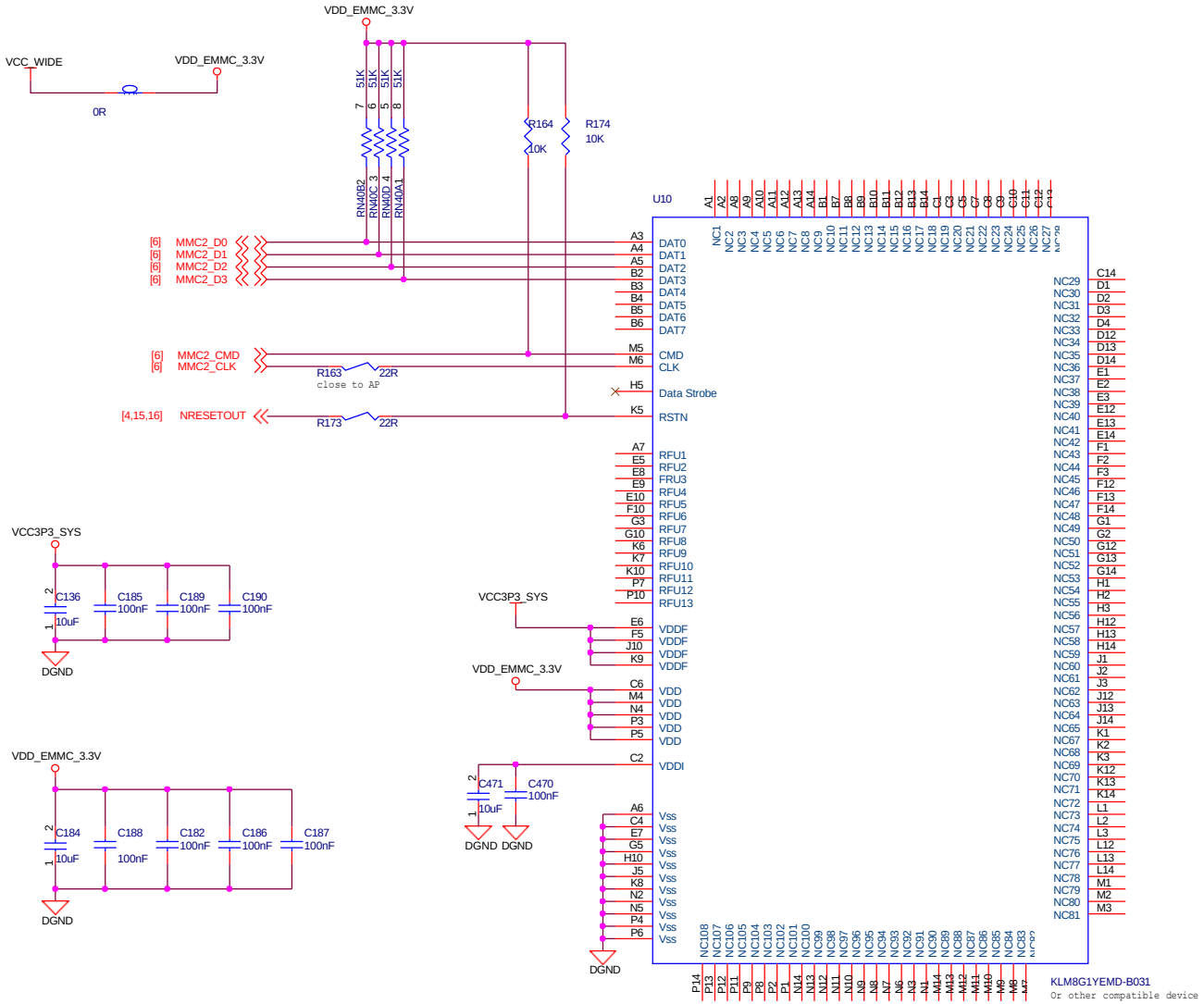

## Mounting Holes




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 12.EEPROM, SHA-256, Holes | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 12 of 17 | |

# eMMC




FRIENDLYARM

NanoPC-T2/T3

| Size | Document Number | Rev |
|---|---|---|
| A3 | 13.eMMC | 1603 |

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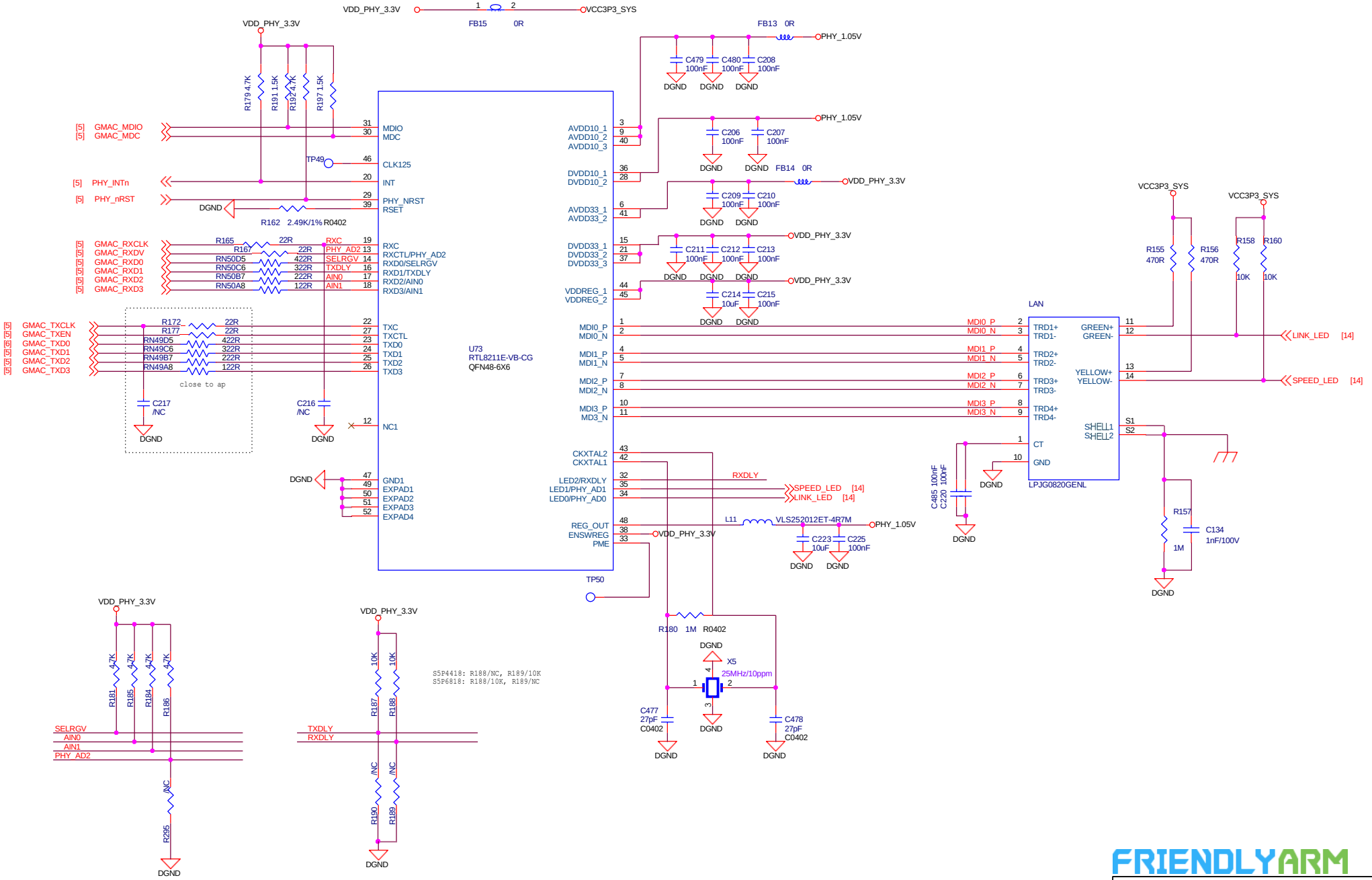
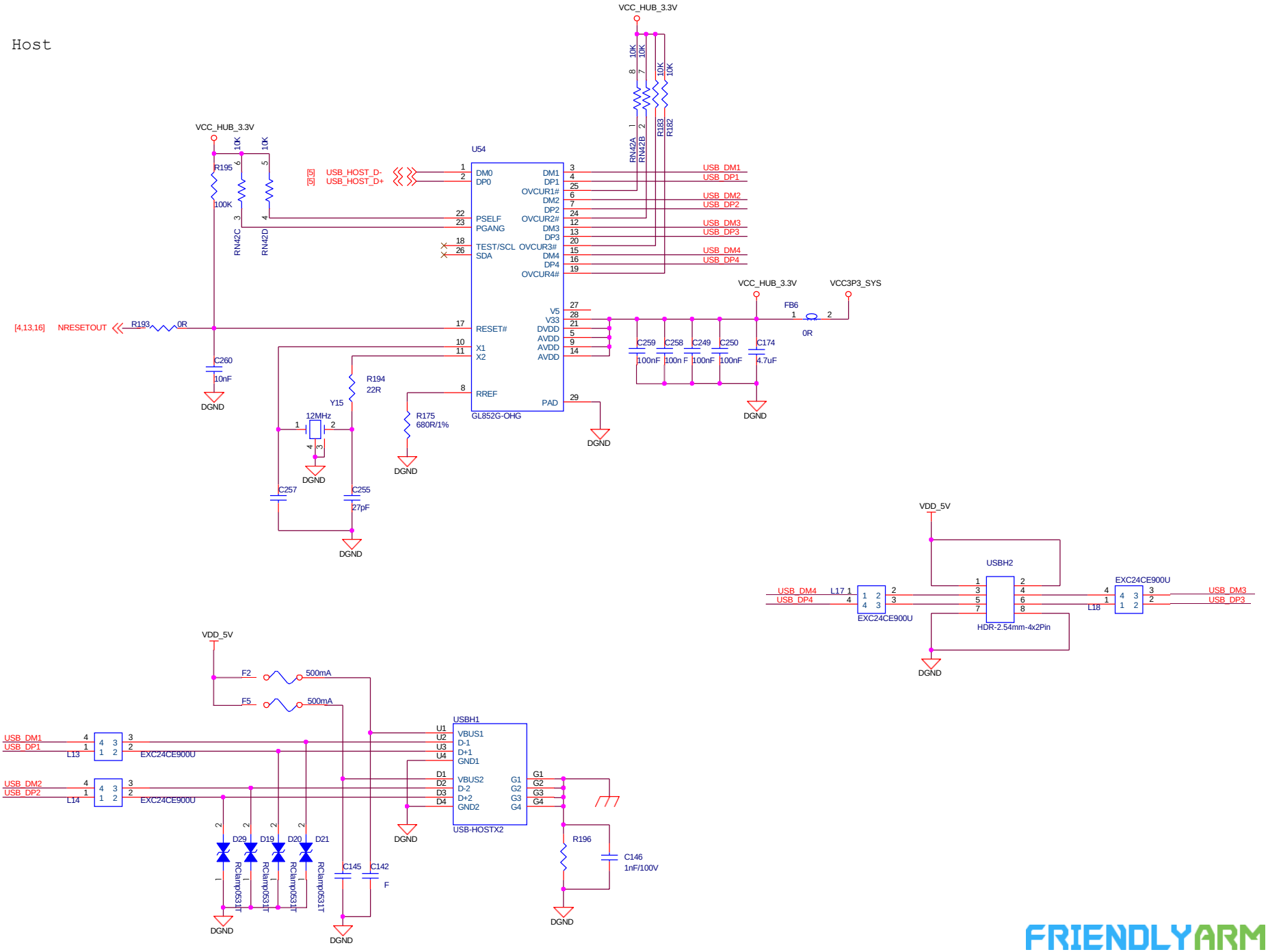
# 10/100/1000M Ethernet




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 14.LAN | Rev 1603 |
| Date: Friday, April 08, 2016 | Sheet 14 of 17 | |

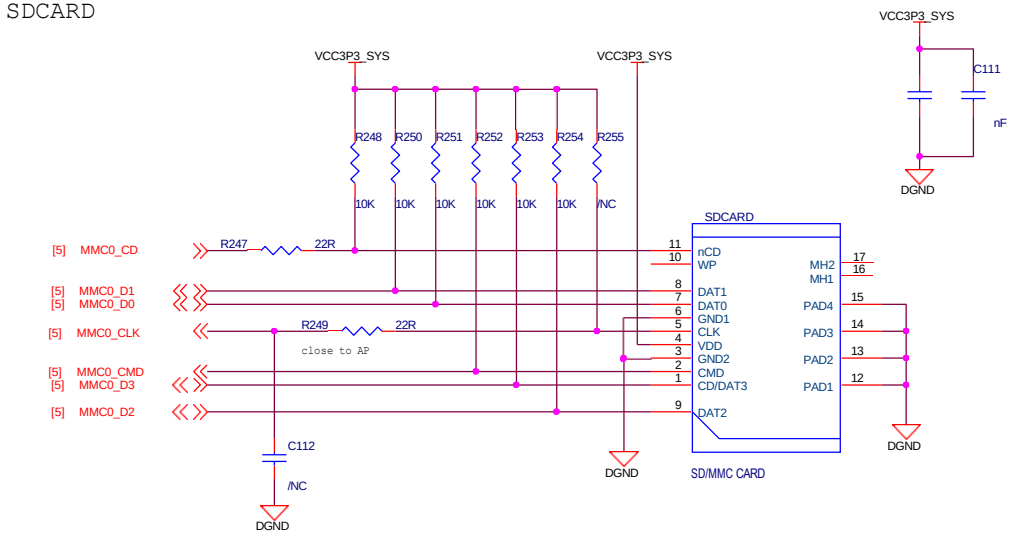
# USB 2.0 Host



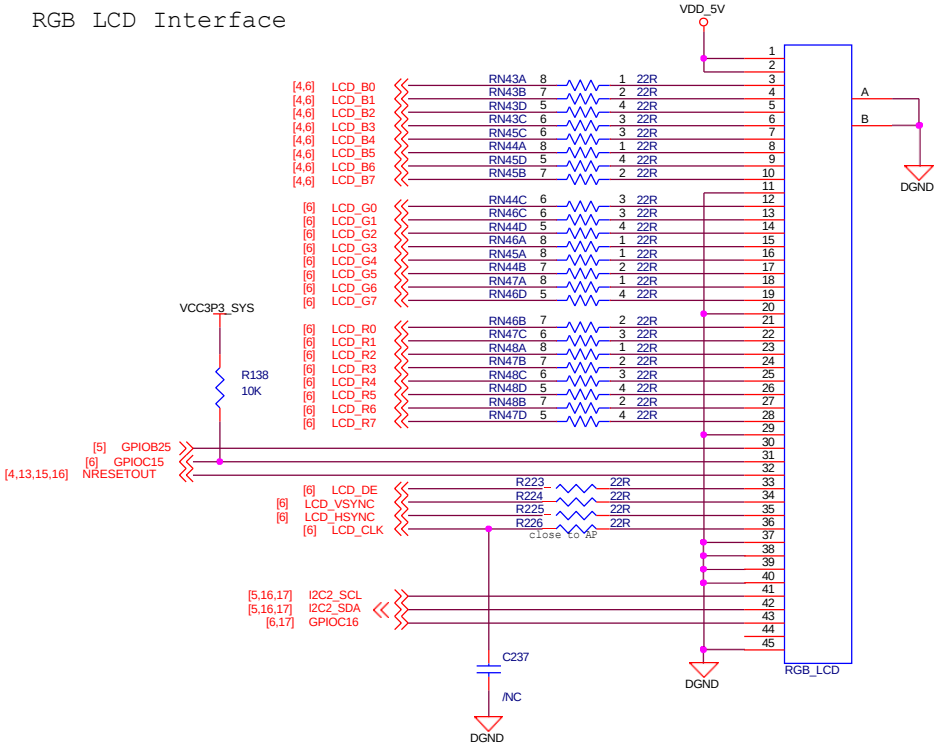

FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size: A3 | Document Number: 15.USB-Host | Rev: 1603 |
| Date: Monday, April 25, 2016 | Sheet 15 of 17 | |

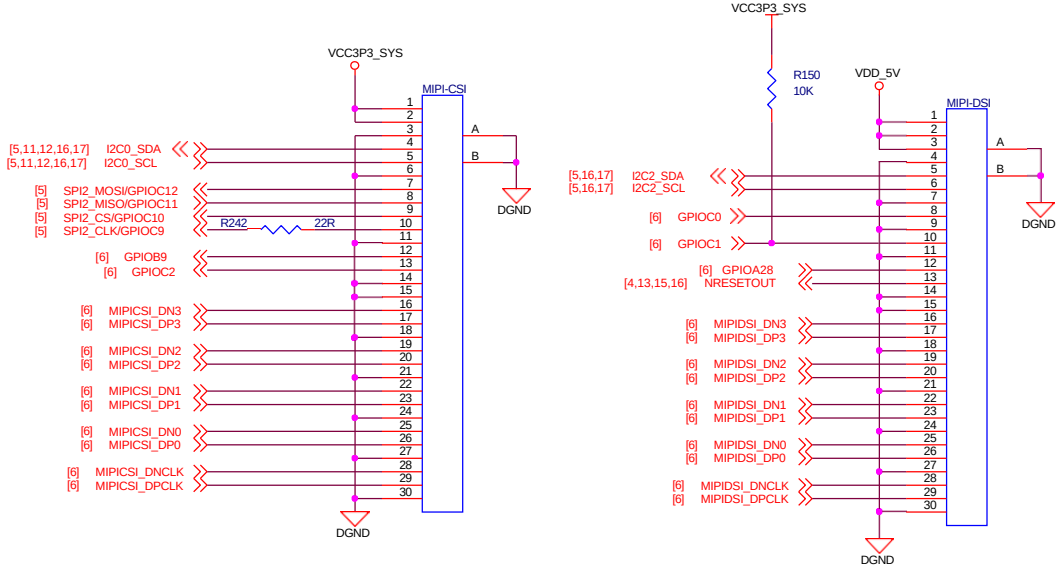
## SDCARD



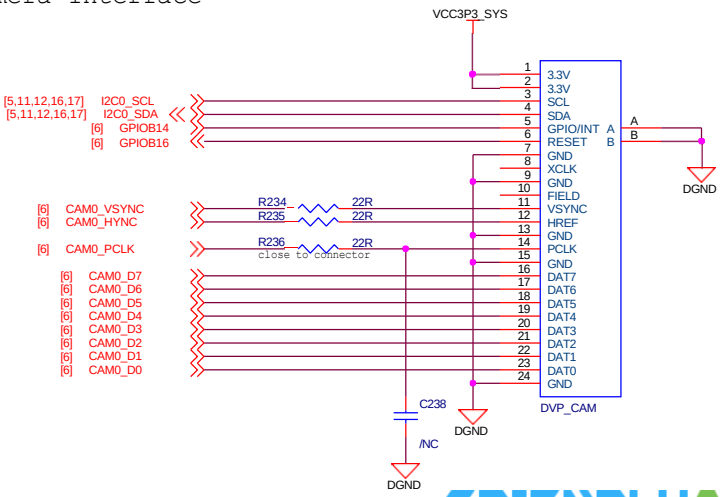

## RGB LCD Interface




## MIPI Interface



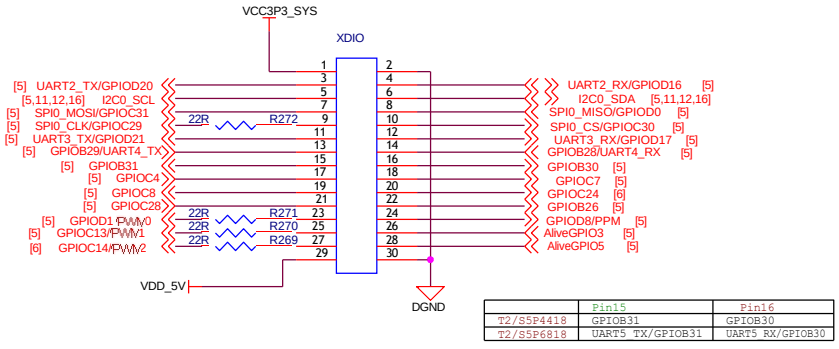

## Camera Interface




FRIENDLYARM

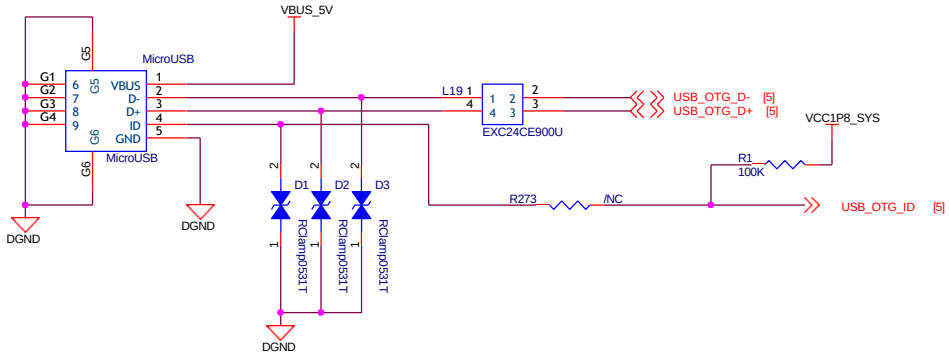
| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 16.MicroSD, **RGB-LCD&Camera** | Rev 1603 |
| Date: Thursday, March 31, 2016 | Sheet 16 of 17 | |

## 2.54mm Header

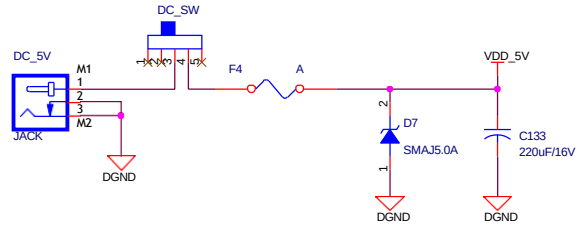



| | Pin15 | Pin16 |
|---|---|---|
| T2/S5P4418 | GPIOB31 | GPIOB30 |
| T2/S5P6818 | UART5_TX/GPIOB31 | UART5_RX/GPIOB30 |

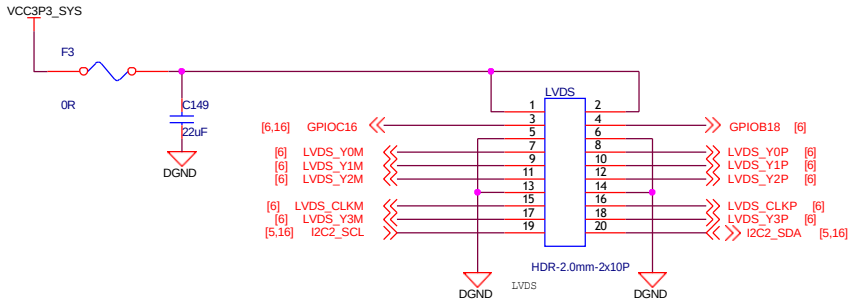
## MicroUSB



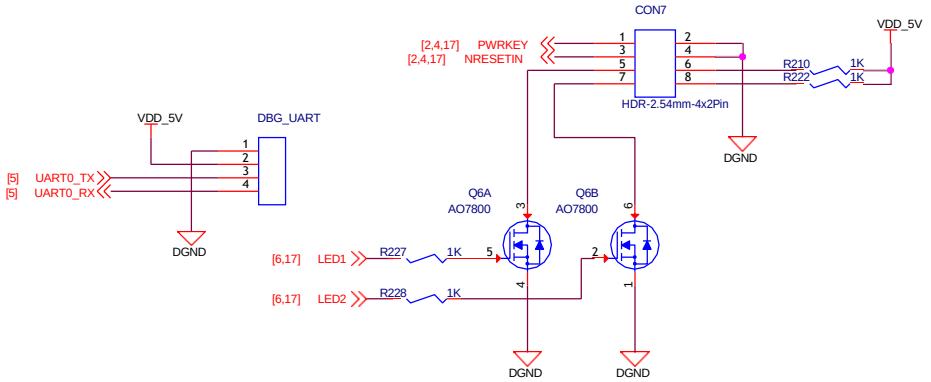

## 5V Power IN



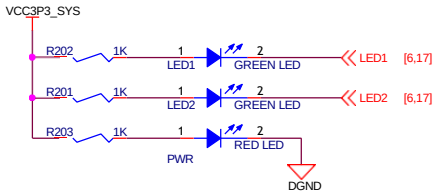

## LVDS



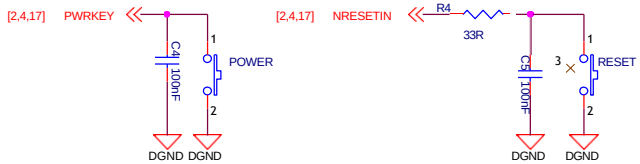

## Debug UART




## LEDs




## Buttons




FRIENDLYARM

| | | |
|---|---|---|
| NanoPC-T2/T3 | | |
| Size A3 | Document Number 17.Header,USB,LEDs,Buttons,LVDS | Rev 1603 |
| Date: Monday, April 25, 2016 | Sheet 17 of 17 | |