

Вход в сервисное меню:

нажать MENU затем 0 0 0 0 Enter

Enter the menu:

1.Version info: Check the version number of the software.

2.VIDEO: Adjust the pictures and color

3.AUDIO: Adjust the voice.

4.TV: Adjust the TV signal.

Preset ch > restore CH : Open the factory frequency.

5.SETUP: Adjust the setup.

Burning mode: Aging Mode

Clean storage: Factory Reset

REALTOP DVB T+C+T2  
MT5310 +MT8295B +CXD2820R  
(64M\*16bit 1333MHz DDR3)

VERSION V1.0

| MT5310 Pin | Pin Symbol | Haier           | Realtop         |
|------------|------------|-----------------|-----------------|
| 246        | GPIO0      | RMII            | RMII            |
| 247        | GPIO1      | RMII            | RMII            |
| 248        | GPIO2      | RMII            | RMII            |
| 250        | GPIO3      | RMII            | RMII            |
| 256        | GPIO4      | RMII            | RMII            |
| 252        | GPIO6      | RMII            | RMII            |
| 254        | GPIO7      | RMII            | RMII            |
| 255        | GPIO8      | RST-RMII        | RST-RMII        |
| 249        | GPIO10     | RMII            | RMII            |
| 251        | GPIO11     | RMII            | RMII            |
| 253        | GPIO12     | RMII            | RMII            |
| 243        | GPIO13     | RMII            | RMII            |
| 2          | GPIO14     | SYS_EEPROM_WP   | LVDS_Power_Ctrl |
| 137        | OPCTRL0    | Amp_mute        | Amp_mute        |
| 138        | OPCTRL1    | BL_ON/OFF       | AIN_CTLB        |
| 132        | OPCTRL2    | LVDS_Power_Ctrl | SYS_EEPROM_WP   |
| 130        | OPCTRL3    | Power_LED       | Power_LED       |
| 131        | OPCTRL4    | AIN_CTL1        | AIN_CTLA        |
| 129        | OPCTRL5    | Earphone_Dect   | DVD_STB         |
| 141        | VGA_SCL    | VGA_DDC         | VGA_DDC         |
| 140        | VGA_SDA    | VGA_DDC         | VGA_DDC         |
| 143        | ADIN0_SRV  | SCART1_FS       | SCART_FS        |
| 144        | ADIN1_SRV  | SCART2_FS       | NC              |
| 145        | ADIN2_SRV  | AIN_CTL0        | PT2328_SW       |
| 146        | ADIN3_SRV  | KEY1            | KEY1            |
| 147        | ADIN4_SRV  | KEY2/PWR        | KEY2/PWR        |
| 123        | HDMI_CEC   | HDMI_CEC        | HDMI_CEC        |
| 126        | HDMI_HPD   | NC              | NC              |

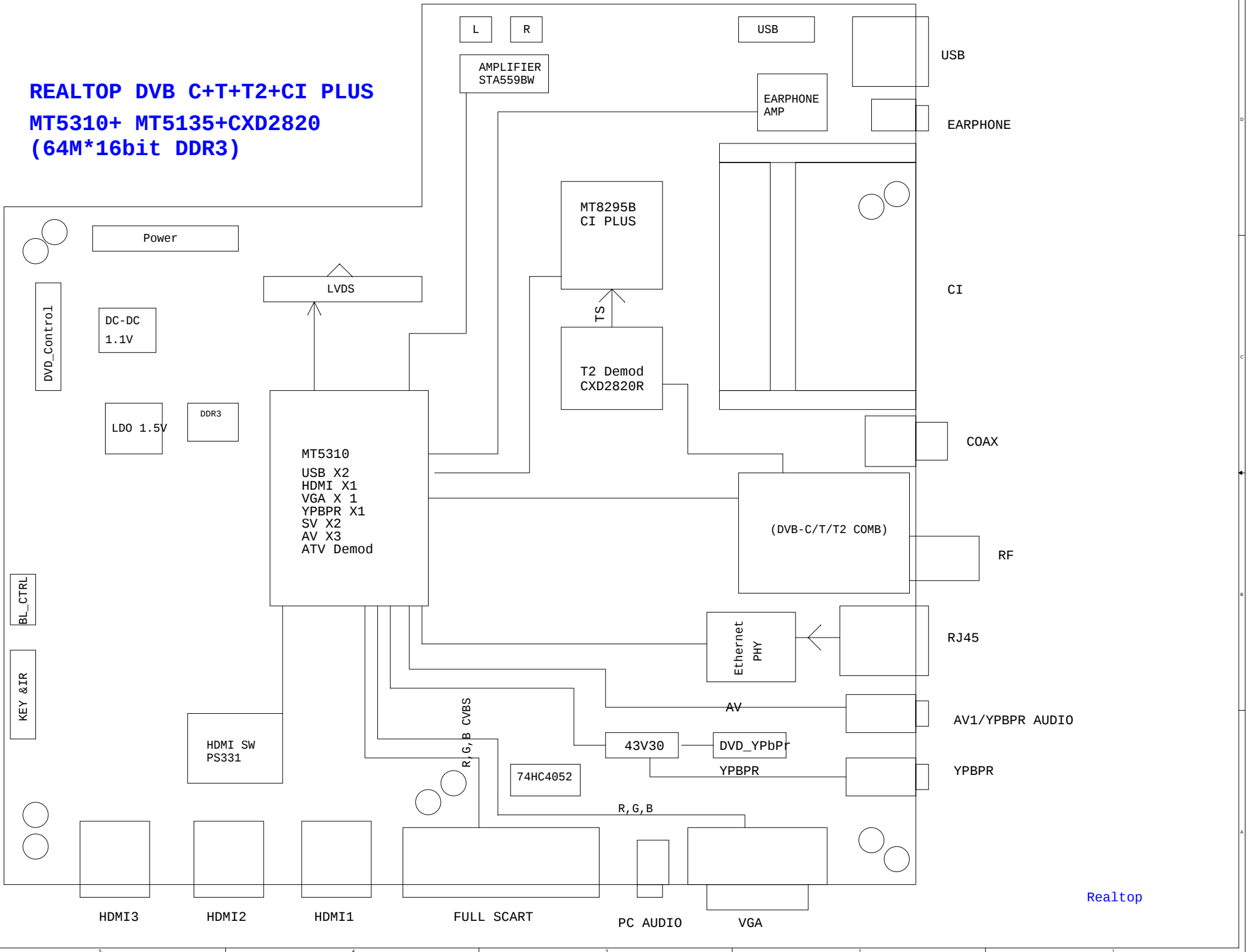
|     |              |                      |                      |
|-----|--------------|----------------------|----------------------|
| 127 | PWR5V        | NC                   | Earphone_Dect        |
| 124 | HDMI_SDA     | HDMI_SDA             | HDMI_SDA             |
| 125 | HDMI_SCL     | HDMI_SCL             | HDMI_SCL             |
| 239 | POCE1        | Nand Flash           | Nand Flash           |
| 238 | PARB         | Nand Flash           | Nand Flash           |
| 242 | POWE         | Nand Flash           | Nand Flash           |
| 241 | PAALE        | Nand Flash           | Nand Flash           |
| 240 | PACLE        | Nand Flash           | Nand Flash           |
| 229 | PDD2         | Nand Flash           | Nand Flash           |
| 230 | PDD3         | Nand Flash           | Nand Flash           |
| 231 | PDD4         | Nand Flash           | Nand Flash           |
| 232 | PDD5         | Nand Flash           | Nand Flash           |
| 233 | PDD6         | Nand Flash           | Nand Flash           |
| 235 | PDD7         | Nand Flash           | Nand Flash           |
| 216 | OSDA2        | SYS_EEPROM_SDA/TUNER | SYS_EEPROM_SDA/TUNER |
| 215 | OSCL2        | SYS_EEPROM_SCL/TUNER | SYS_EEPROM_SCL/TUNER |
| 104 | OPWM0        | DIMMING/PWM_BL       | DIMMING/PWM_BL       |
| 206 | ASPDIF       | SPDIF/OPTICAL        | SPDIF/OPTICAL        |
| 209 | AOMCLK       | Amp/SC2_OUT_IIS      | Amp/SC2_OUT_IIS      |
| 211 | AOLRCK       | Amp/SC3_OUT_IIS      | Amp/SC3_OUT_IIS      |
| 208 | AOBCK        | Amp/SC4_OUT_IIS      | Amp/SC4_OUT_IIS      |
| 210 | AOSDATA0     | Amp/SC5_OUT_IIS      | Amp/SC5_OUT_IIS      |
| 207 | AOSDATA1     | Start mode           | Start mode           |
| 212 | IF_AGC       | IF_AGC_TUNER         | IF_AGC_TUNER         |
| 213 | RF_AGC       | RF_AGC_TUNER         | RF_AGC_TUNER         |
| 217 | DEMOD_TSCLK  | DEMOD_IIS            | DEMOD_IIS            |
| 219 | DEMOD_TSSYNC | DEMOD_IIS            | DEMOD_IIS            |

|     |               |              |              |
|-----|---------------|--------------|--------------|
| 218 | DEMOD_TSVAL   | DEMOD_IIS    | DEMOD_IIS    |
| 220 | DEMOD_TSDATA0 | DEMOD_IIS    | DEMOD_IIS    |
| 214 | DEMOD_RST     | DEMOD_RST    | DEMOD_RST    |
| 223 | SPI_CLK       | DEMOD_SPI_IF | DEMOD_SPI_IF |
| 225 | SPI_CLE       | DEMOD_SPI_IF | DEMOD_SPI_IF |
| 224 | SPI_DATA      | DEMOD_SPI_IF | DEMOD_SPI_IF |
| 226 | CI_INT        | DEMOD_SPI_IF | DEMOD_SPI_IF |
| 99  | JTDO          | DVD          | NC           |
| 100 | JTCK          | DVD          | DVD_DAT      |
| 101 | JTMS          | DVD          | DVD_ON/OFF   |
| 102 | JTDI          | YPBPR        | DVD_IR       |
| 103 | JTRST#        | DVD          | BL_ON/OFF    |

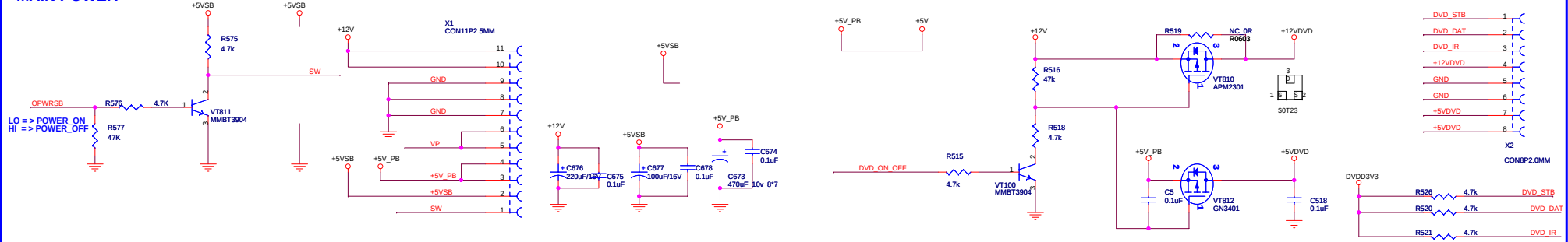
| AIN_CTLB | AIN_CTLA |         |
|----------|----------|---------|
| 1        | 1        | Ext_DVD |
| 1        | 0        | SCART   |
| 0        | 1        | AV      |
| 0        | 0        | VGA     |

|               |        |
|---------------|--------|
| SCART         | YPbPr0 |
| 43V30 & YPbPr | YPbPr1 |
| AV            | CVBS0P |

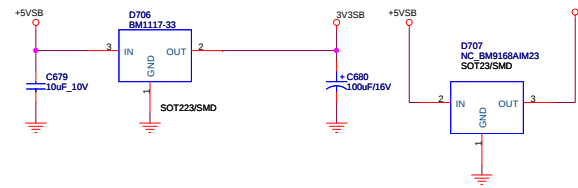
**REALTOP DVB C+T+T2+CI PLUS**  
**MT5310+ MT5135+CXD2820**  
**(64M\*16bit DDR3)**



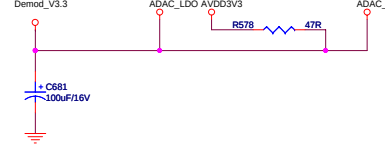
## MAIN POWER



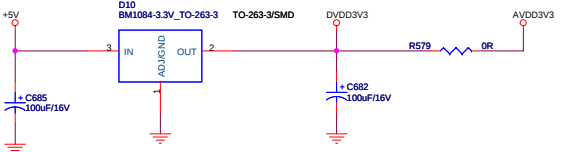
## STANDBY POWER 3V3SB



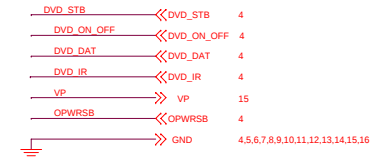
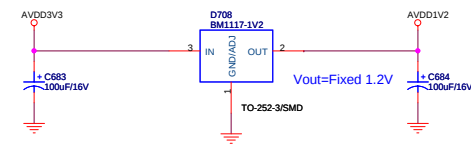
## ANALOG POWER for PWMDC 3.3V



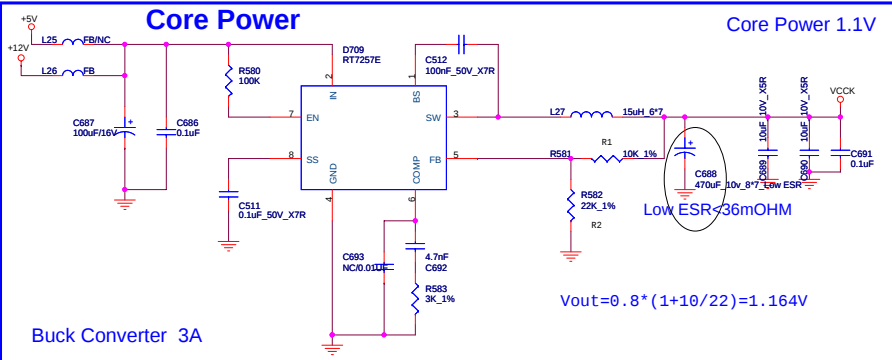
## DIGITAL POWER DVDD3V3



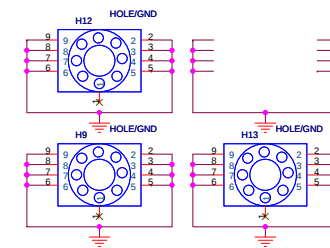
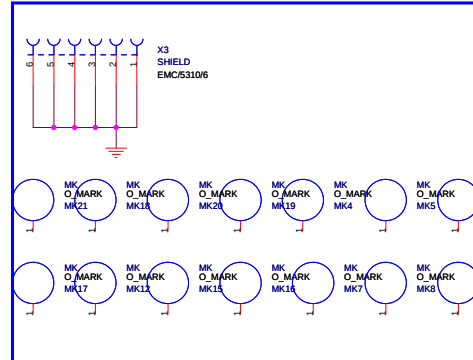
## ANALOG POWER AVDD1V2



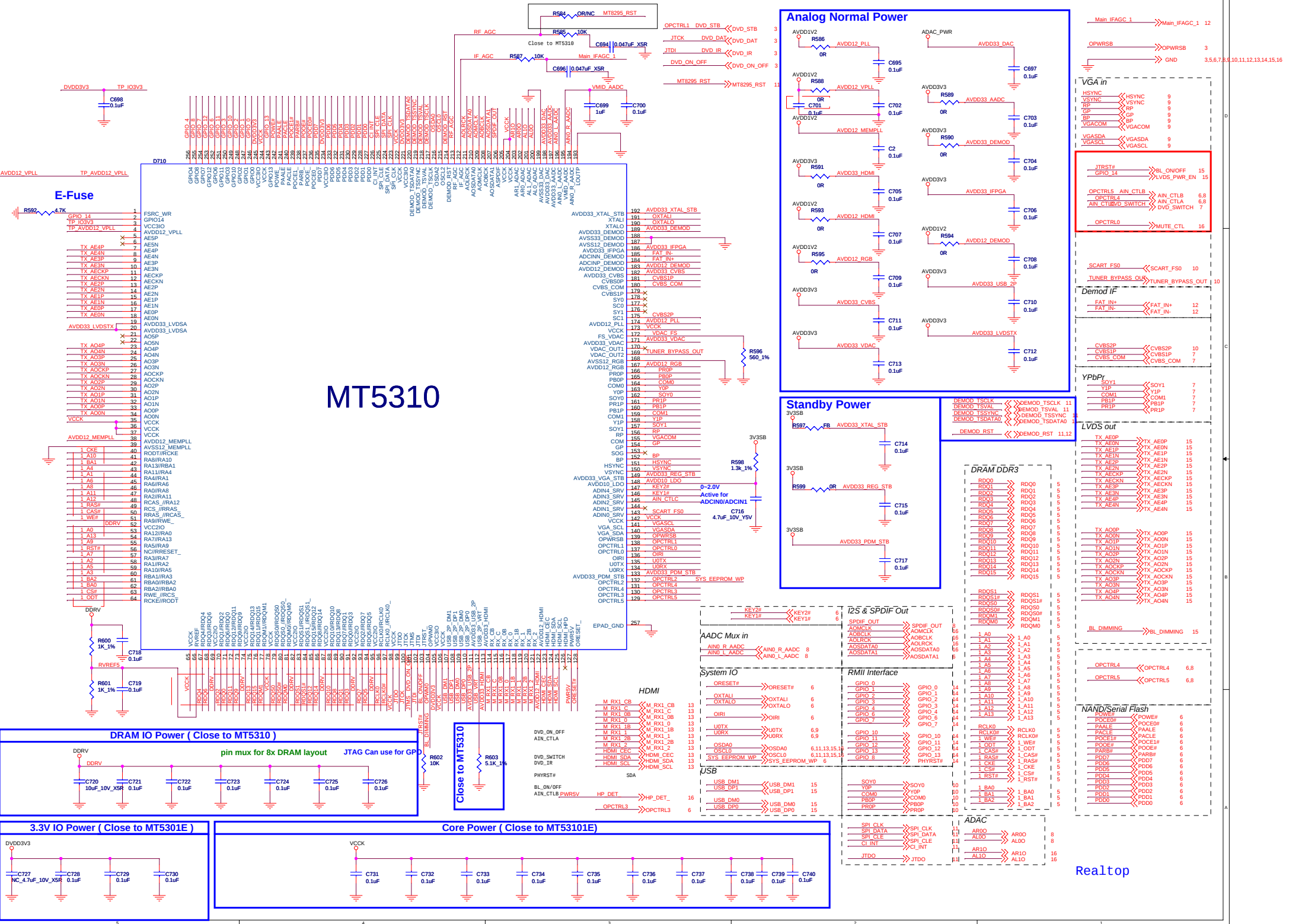
## Core Power



## Core Power 1.1V



Realtop

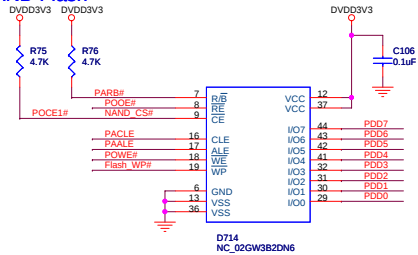


MT5310

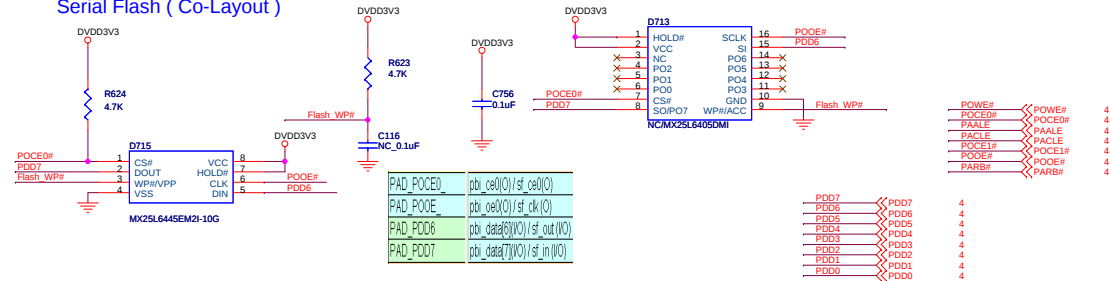
Realtop



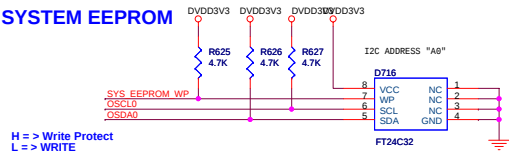
## NAND Flash



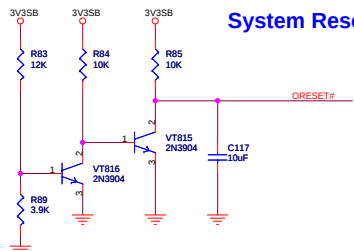
## Serial Flash ( Co-Layout )



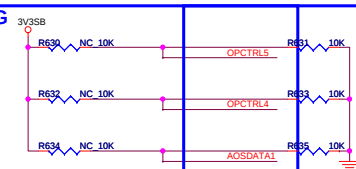
## SYSTEM EEPROM



## System Reset#

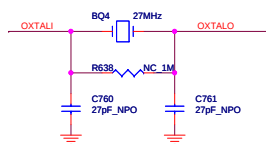


## STRAPPING

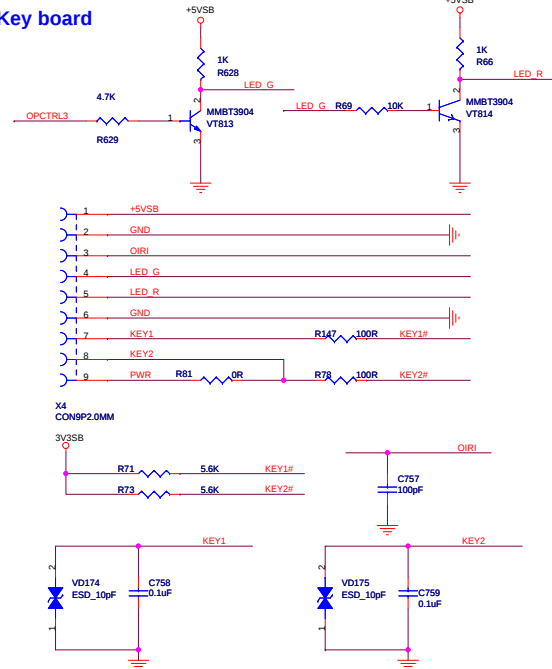


Can reserve to be used for GPO

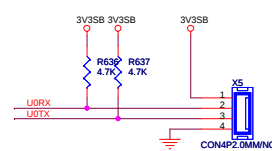
## 27MHz CRYSTAL



## IR&Key board

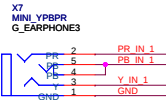
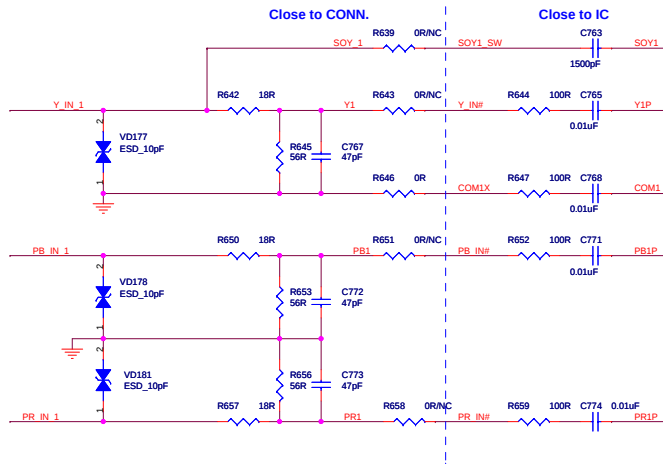


## UART0

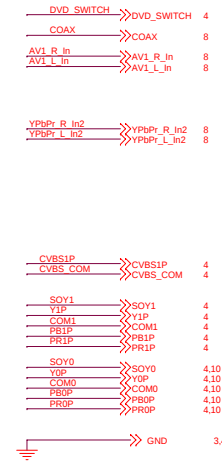
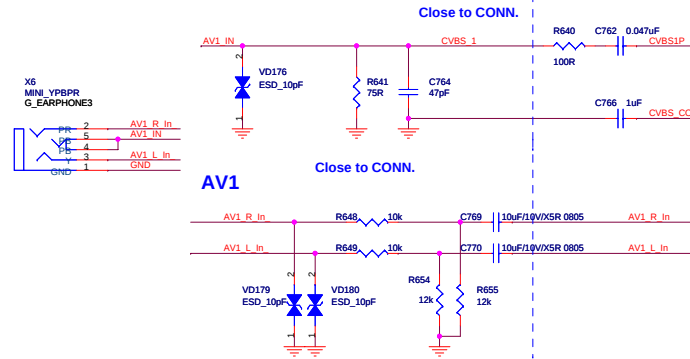


| Strapping                    | OPCTRL5(O) | OPCTRL4(O) | AOSDATA1(O) |
|------------------------------|------------|------------|-------------|
| ICE mode + 27M + serial boot | 0          | 0          | 0           |
| ICE mode + ROM boot + 27M    | 0          | 0          | 1           |
| ICE mode + 54M + serial boot | 0          | 1          | 0           |
| ICE mode + ROM boot + 54M    | 0          | 1          | 1           |
| OLT mode                     | 1          | 0          | 0           |
| scan mode                    | 1          | 0          | 1           |
| cpu model mode               | 1          | 1          | 0           |
| Boundary scan mode           | 1          | 1          | 1           |

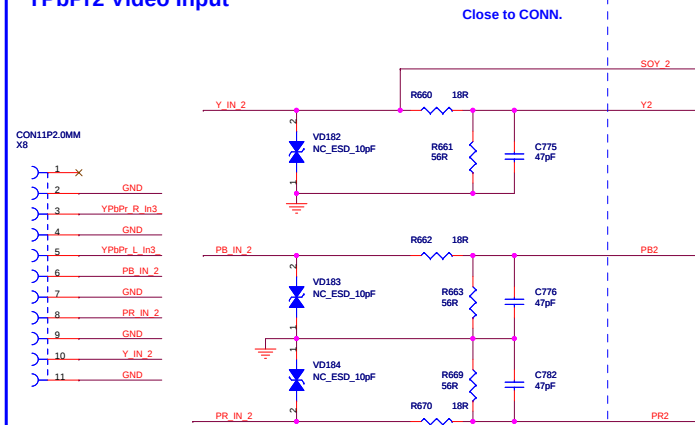
## YPbPr1 Video Input



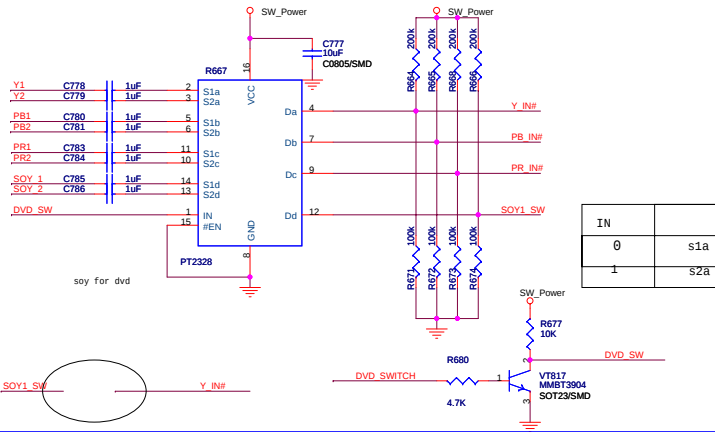
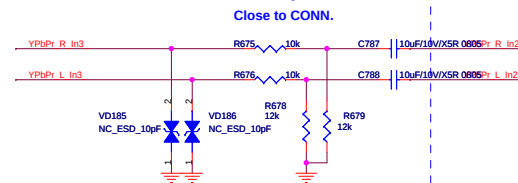
## AV1 Video Input



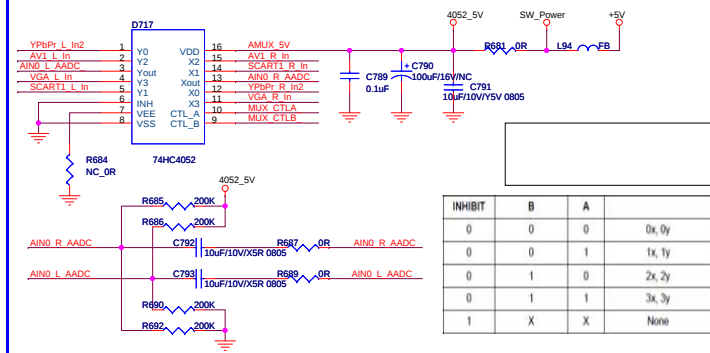
## YPbPr2 Video Input



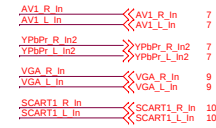
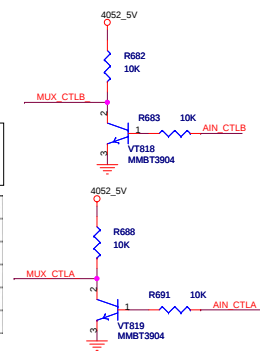
## YPbPr2 Audio Input



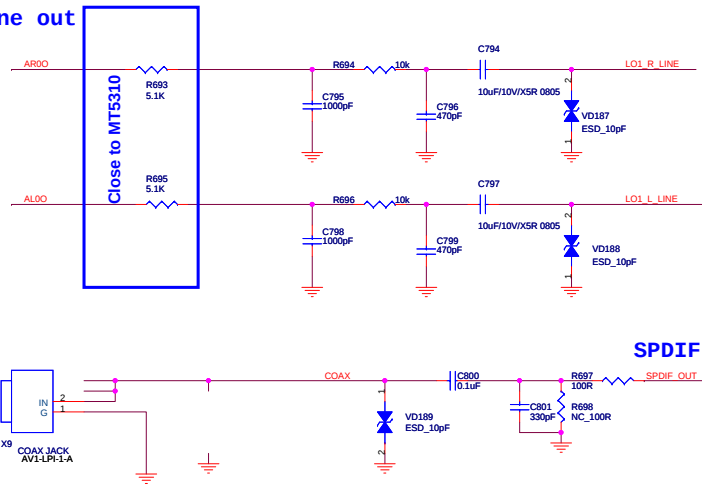
## Audio MUX Input



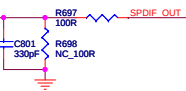
## Audio MUX CTRL



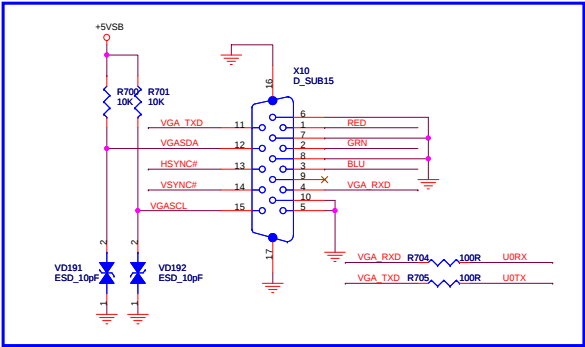
## PWMDAC to Line out



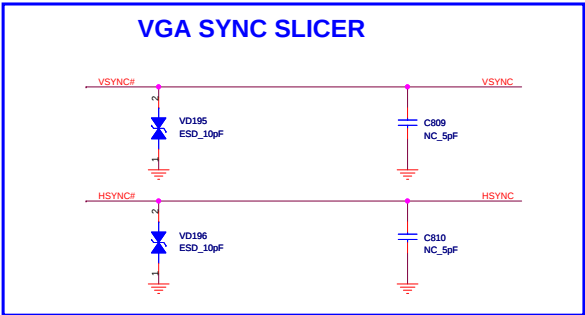
## SPDIF



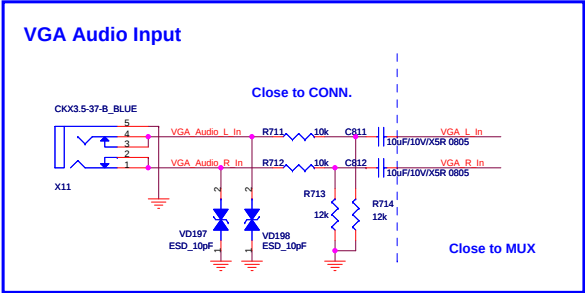
VGA Input



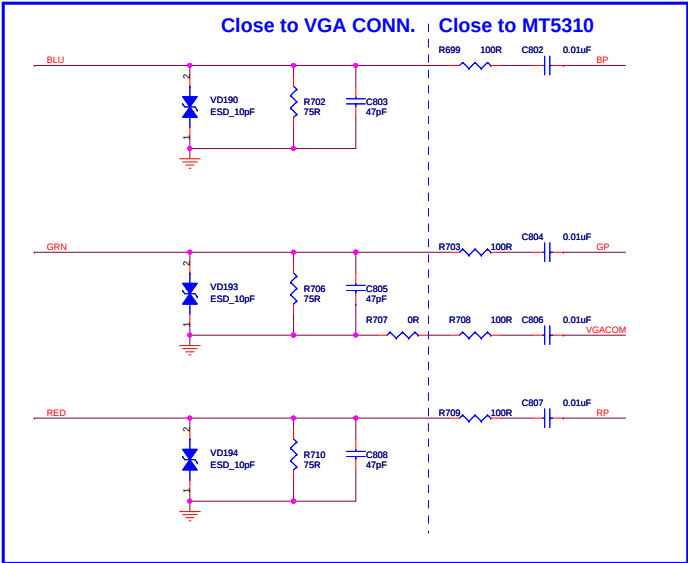
VGA SYNC SLICER



VGA Audio Input



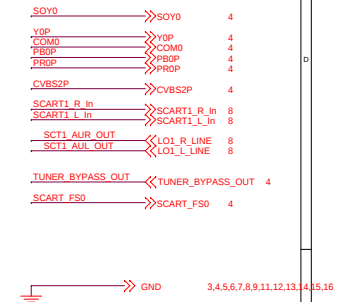
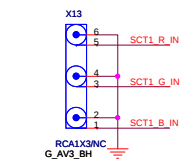
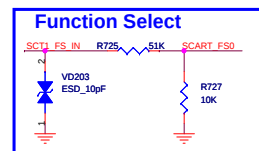
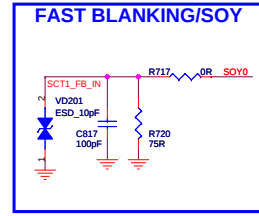
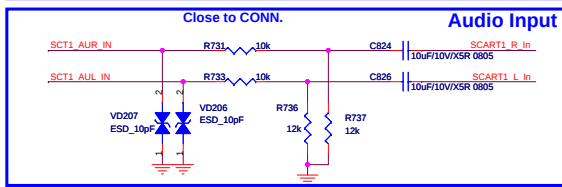
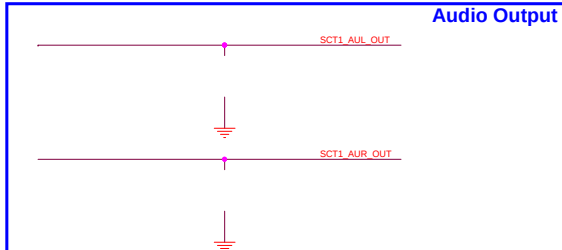
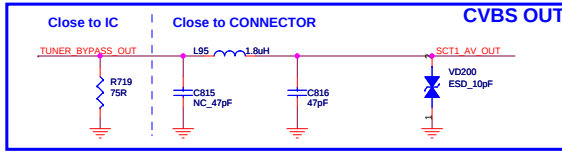
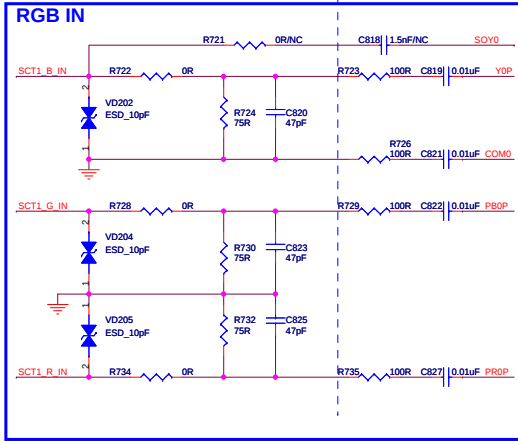
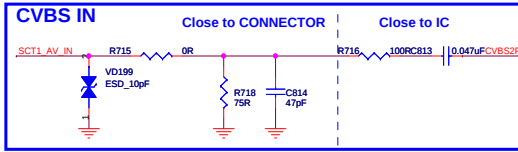
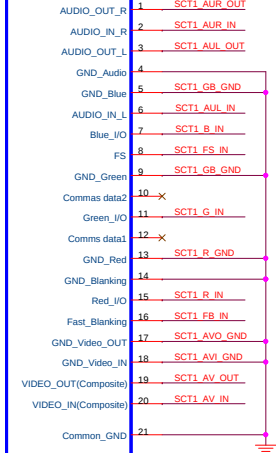
Close to VGA CONN. Close to MT5310

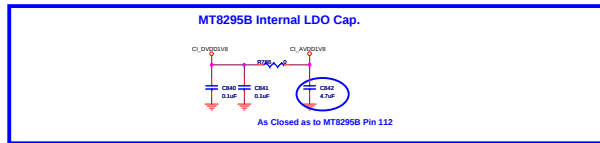


|          |            |                                  |
|----------|------------|----------------------------------|
| U0TX     | <<U0TX     | 4,6                              |
| U0RX     | <<U0RX     | 4,6                              |
| VGA_R_In | <<VGA_R_In | 8                                |
| VGA_L_In | <<VGA_L_In | 8                                |
| HSYNC    | <<HSYNC    | 4                                |
| VSYNC    | <<VSYNC    | 4                                |
| BP       | <<BP       | 4                                |
| GP       | <<GP       | 4                                |
| BP       | <<BP       | 4                                |
| VGACOM   | <<VGACOM   | 4                                |
| VGASDA   | <<VGASDA   | 4                                |
| VGASCL   | <<VGASCL   | 4                                |
| GND      | <<GND      | 3,4,5,6,7,8,10,11,12,13,14,15,16 |

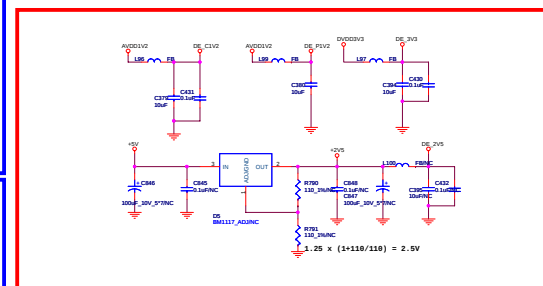
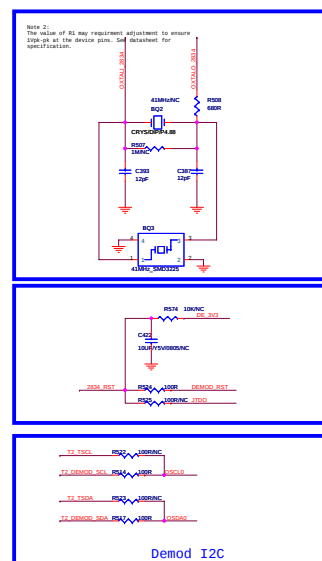
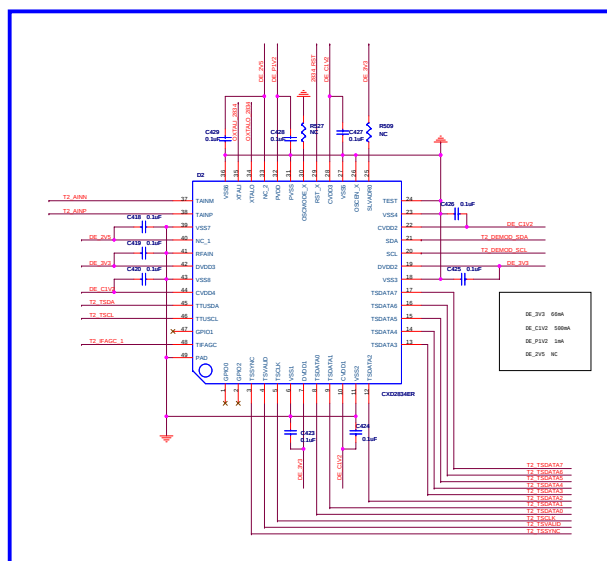
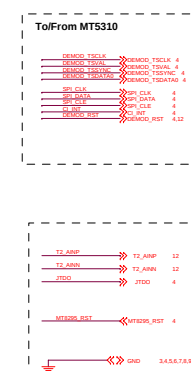
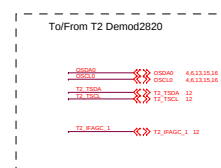
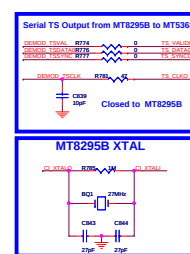
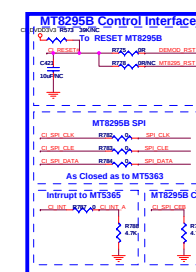
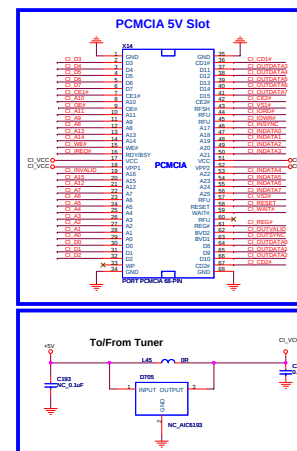
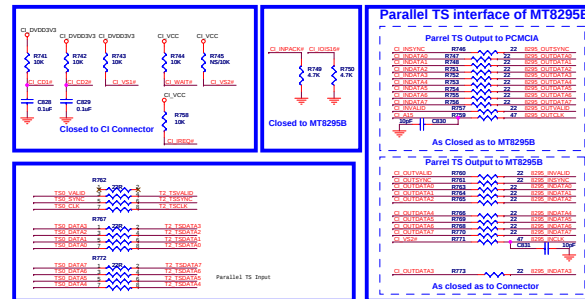
# SCART 1(Full SCART) -- CVBS+SV+RGB+TV OUT

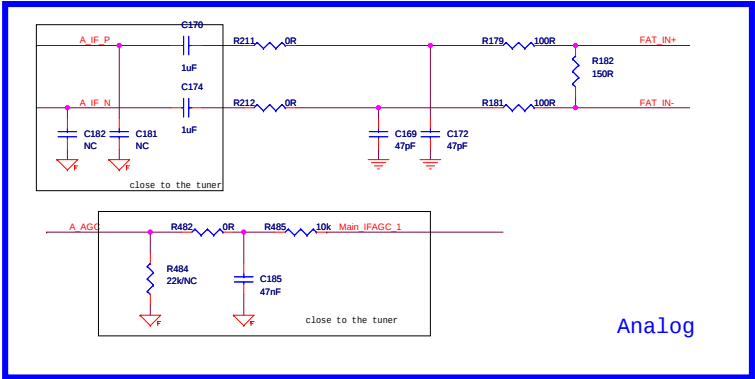
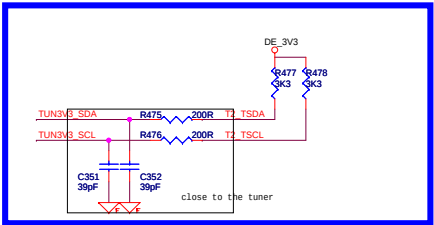
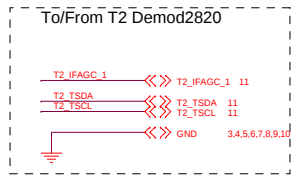
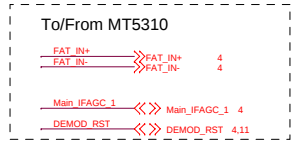
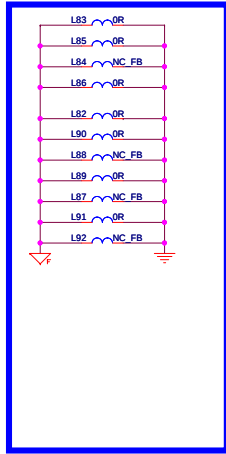
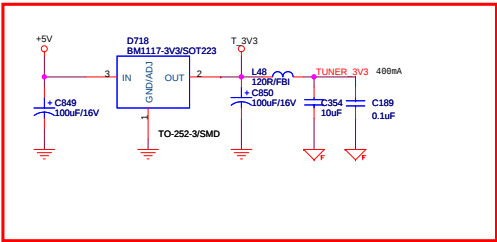
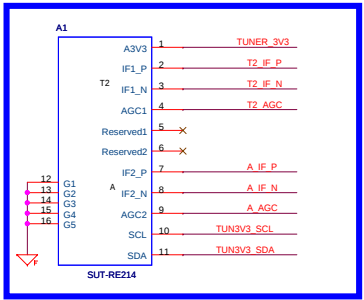
X12  
SCAR\_D21-15



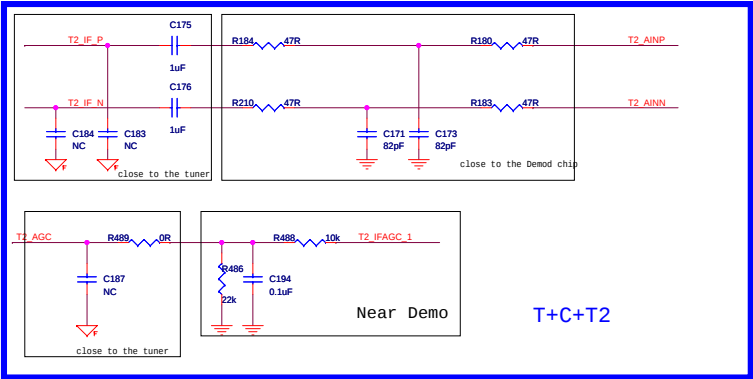


**MT8295B STRAPPING MODE**

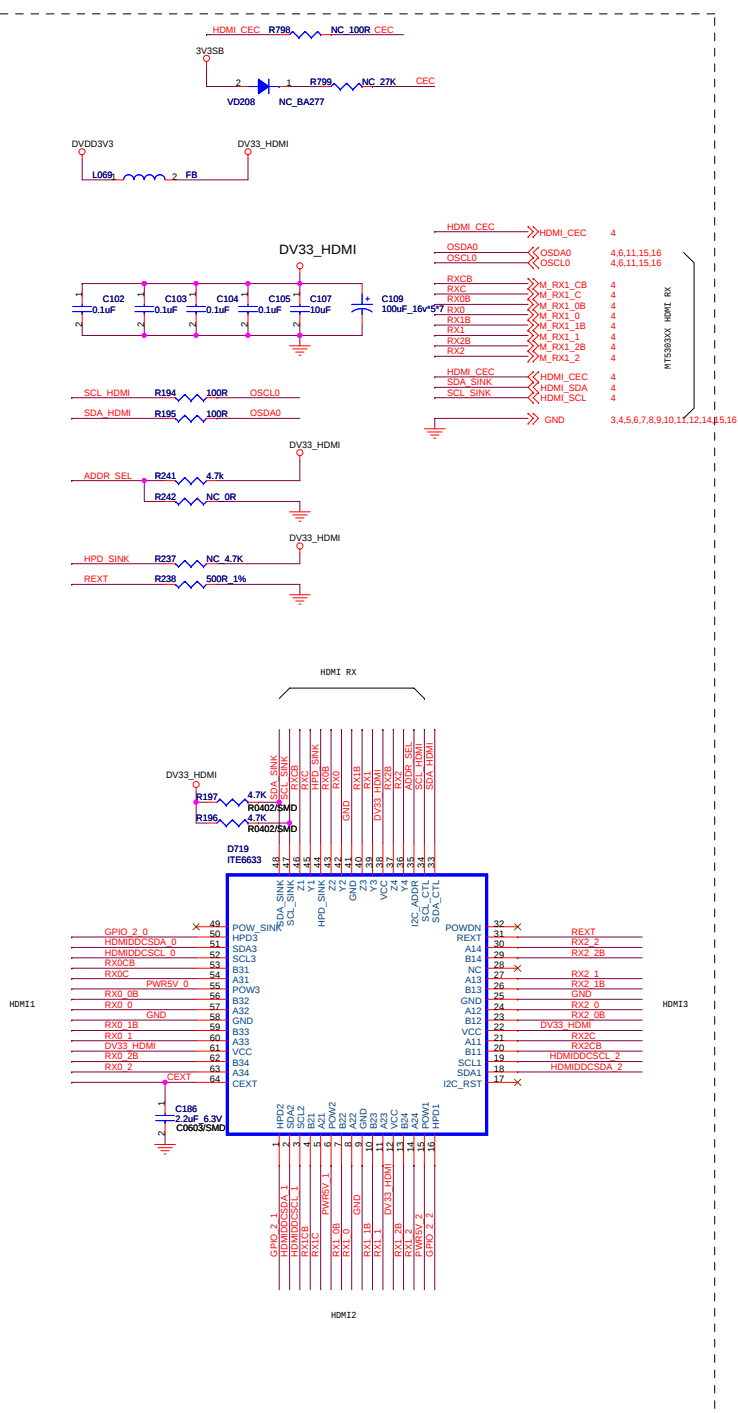
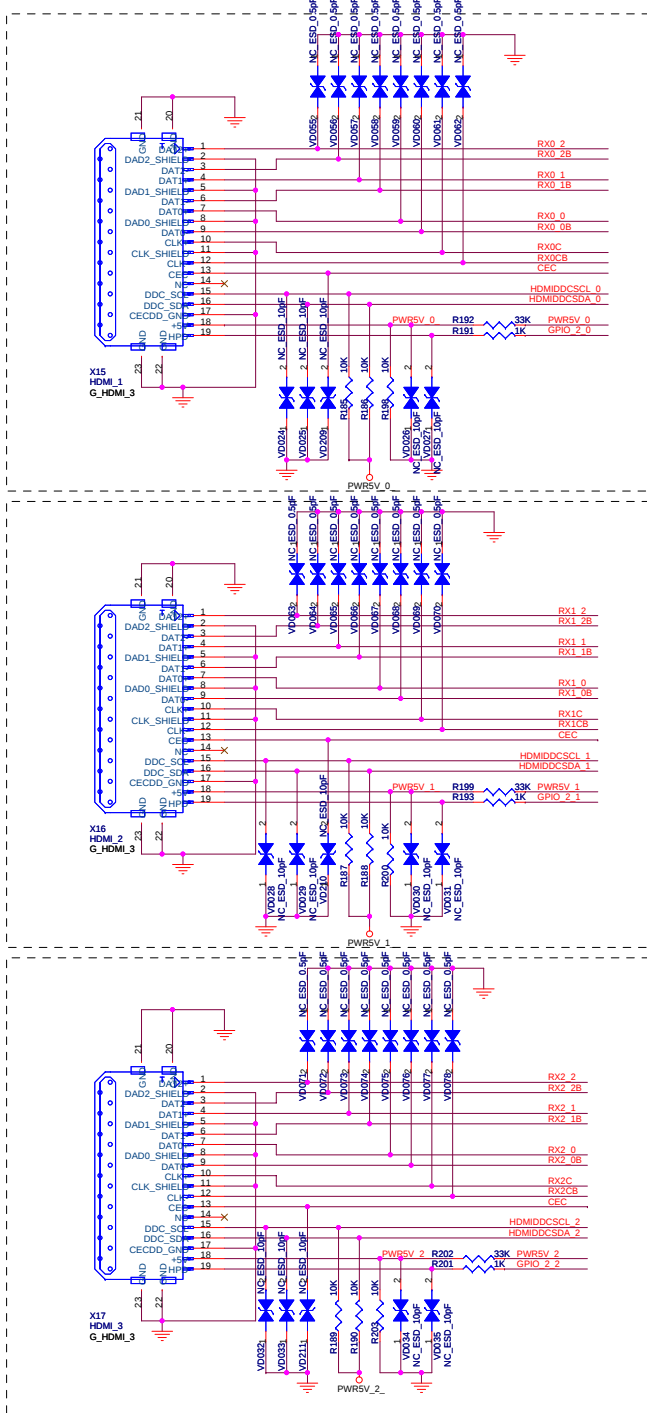




Analogue



T+C+T2



**ETHERNET PHY RMII Mode**

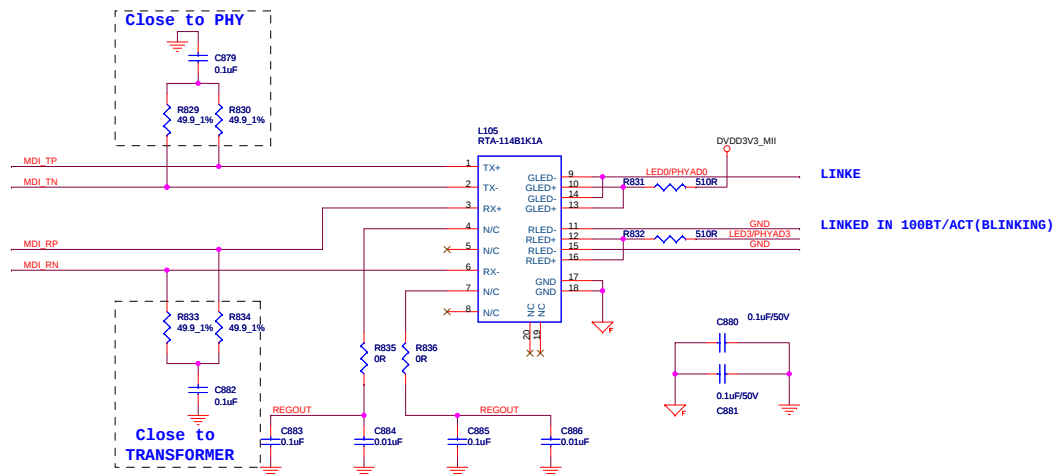
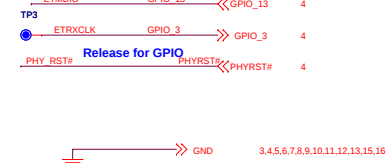
**IP101A**

**COL=1, RMII**  
**COL=0, MII**

**25MHz REF\_CLK from MT5301E**

**SET PHY ADDRESS 0000**

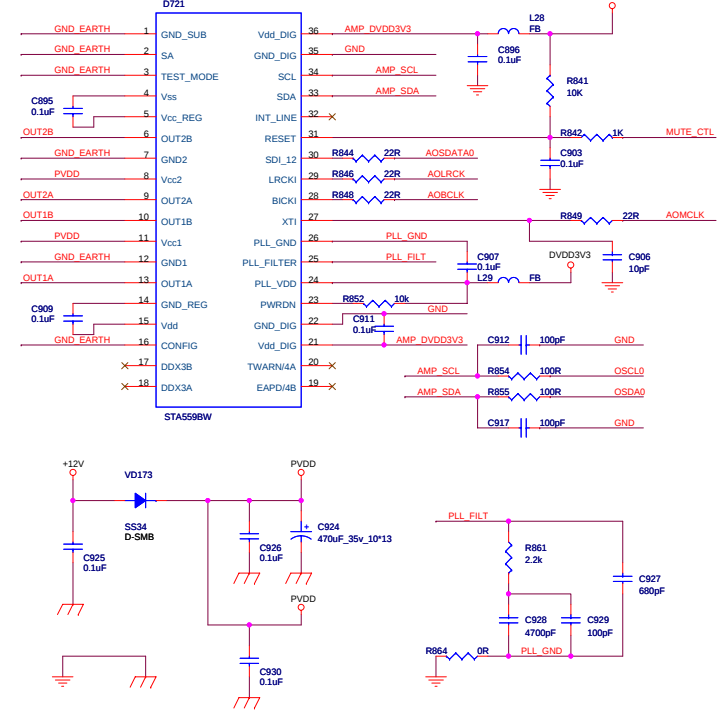
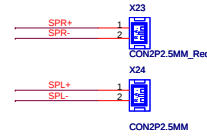
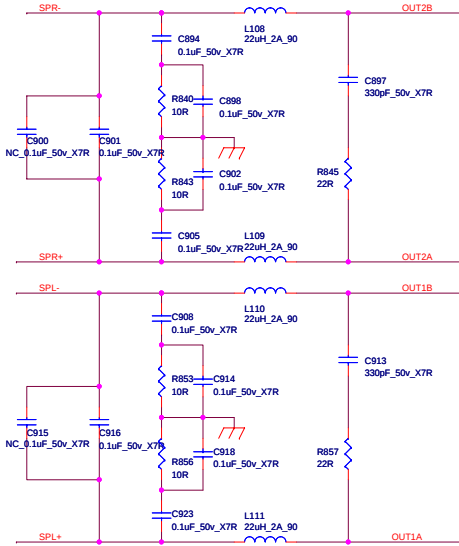
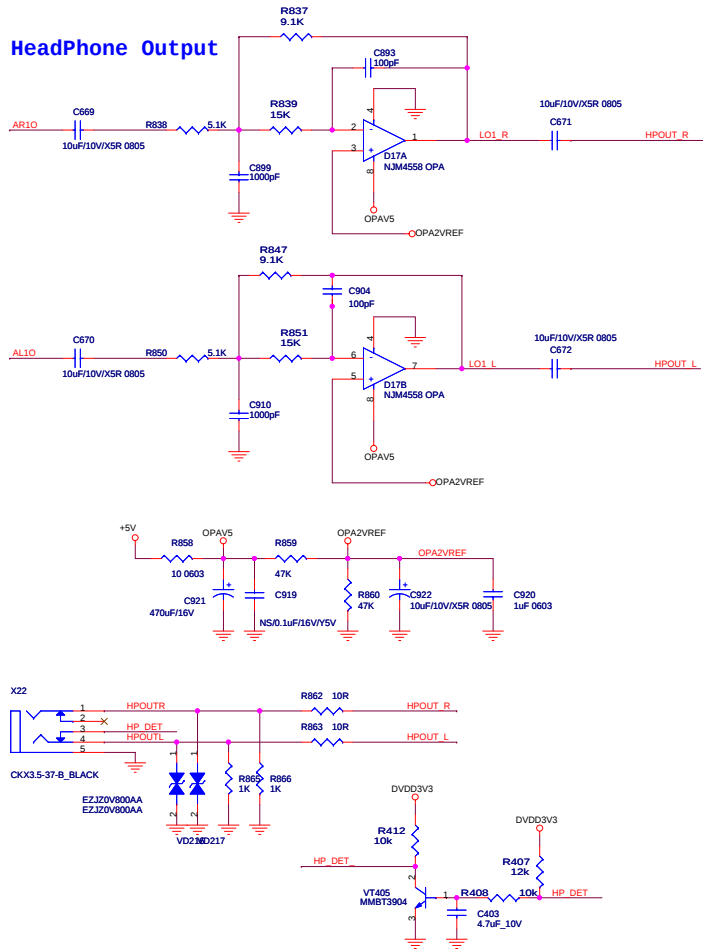
| PHY Address | Register Name |
|-------------|---------------|
| LED0PHYAD0  | etmdc(0)      |
| LED0PHYAD1  | etmmdio       |
| LED0PHYAD2  | etrxclk(0)    |
| LED0PHYAD3  | etrxclk(0)    |
| LED0PHYAD4  | etpclk(0)     |
| LED1PHYAD0  | etrxclk(0)    |
| LED1PHYAD1  | etrxclk(0)    |
| LED1PHYAD2  | etrxclk(0)    |
| LED1PHYAD3  | etrxclk(0)    |
| LED1PHYAD4  | etrxclk(0)    |



Realtop



## HeadPhone Output



|          |          |                                 |
|----------|----------|---------------------------------|
| ALIO     | ALIO     | 4                               |
| ARIO     | ARIO     | 4                               |
| AOMCLK   | AOMCLK   | 4                               |
| AOBCLK   | AOBCLK   | 4                               |
| AOLRCK   | AOLRCK   | 4                               |
| AOSDATA0 | AOSDATA0 | 4                               |
| MUTE_CTL | MUTE_CTL | 4                               |
| OSDA0    | OSDA0    | 4,6,11,13,15                    |
| OSCL0    | OSCL0    | 4,6,11,13,15                    |
| HP_DET   | HP_DET   | 4                               |
| GND      | GND      | 3,4,5,6,7,8,9,10,11,12,13,14,15 |