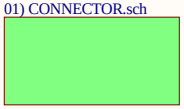
TigerBoard(QT210) Schematics

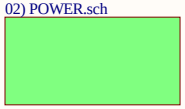
Revision	Data	Description
V1	2011.11.01	Design by ARMZONE
V2	2012.03.29	Design by ARMZONE
V4	2013.04.15	Design by ARMZONE

Table of Contents

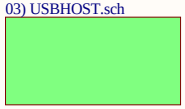
01) CONNECTOR.sch
01) CONNECTOR.sch



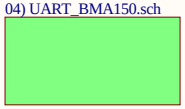
02) POWER.sch
02) POWER.sch



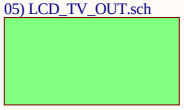
03) USBHOST.sch
03) USBHOST.sch



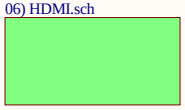
04) UART_BMA150.sch
04) UART_BMA150.sch



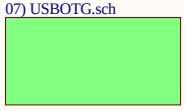
05) LCD_TV_OUT.sch
05) LCD_TV_OUT.sch



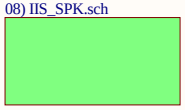
06) HDMI.sch
06) HDMI.sch



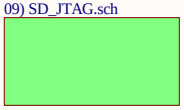
07) USBOTG.sch
07) USBOTG.sch



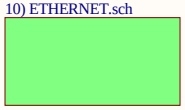
08) IIS_SPK.sch
08) IIS_SPK.sch



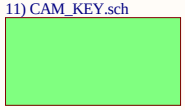
09) SD_JTAG.sch
09) SD_JTAG.sch



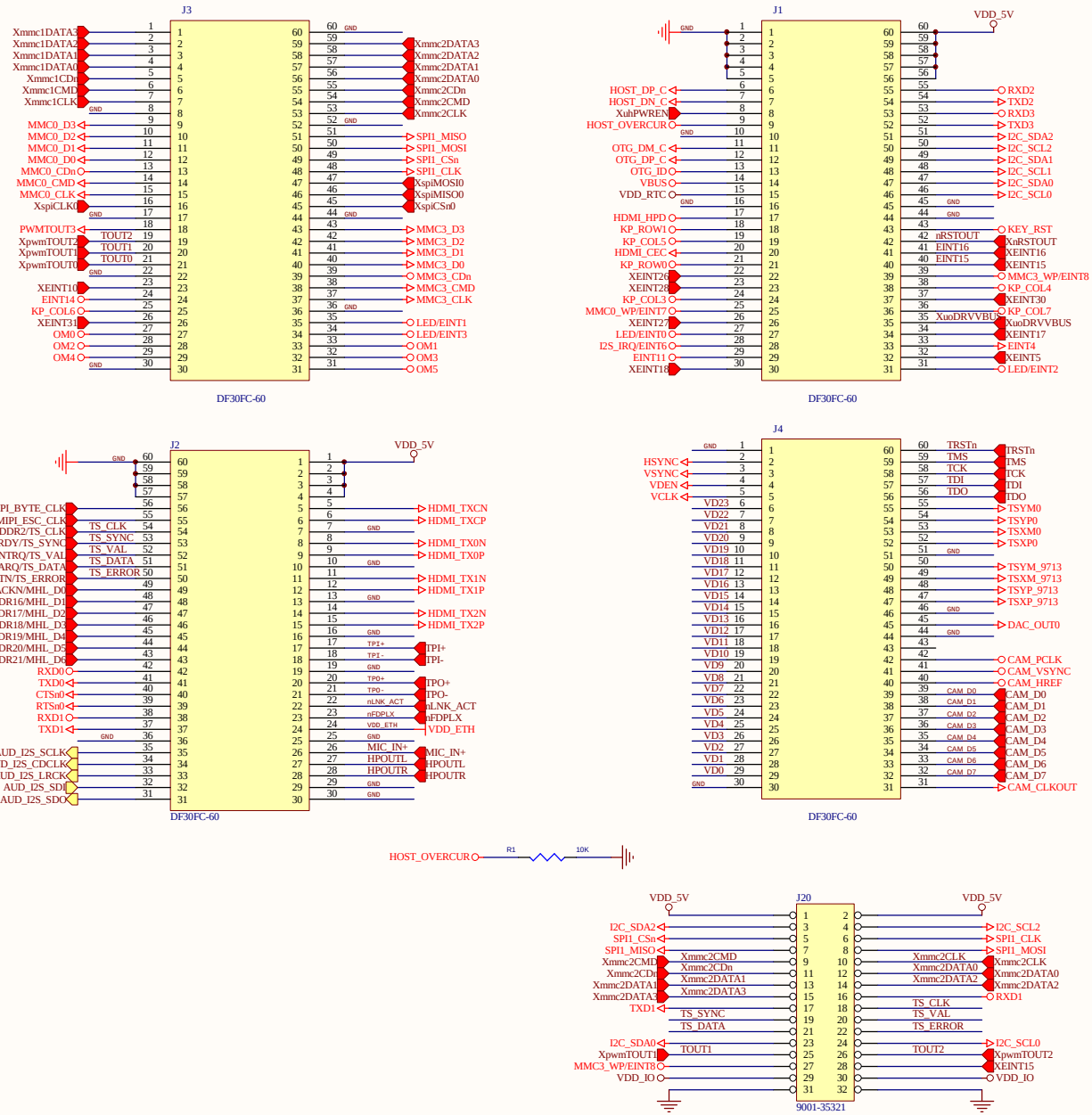
10) ETHERNET.sch
10) ETHERNET.sch

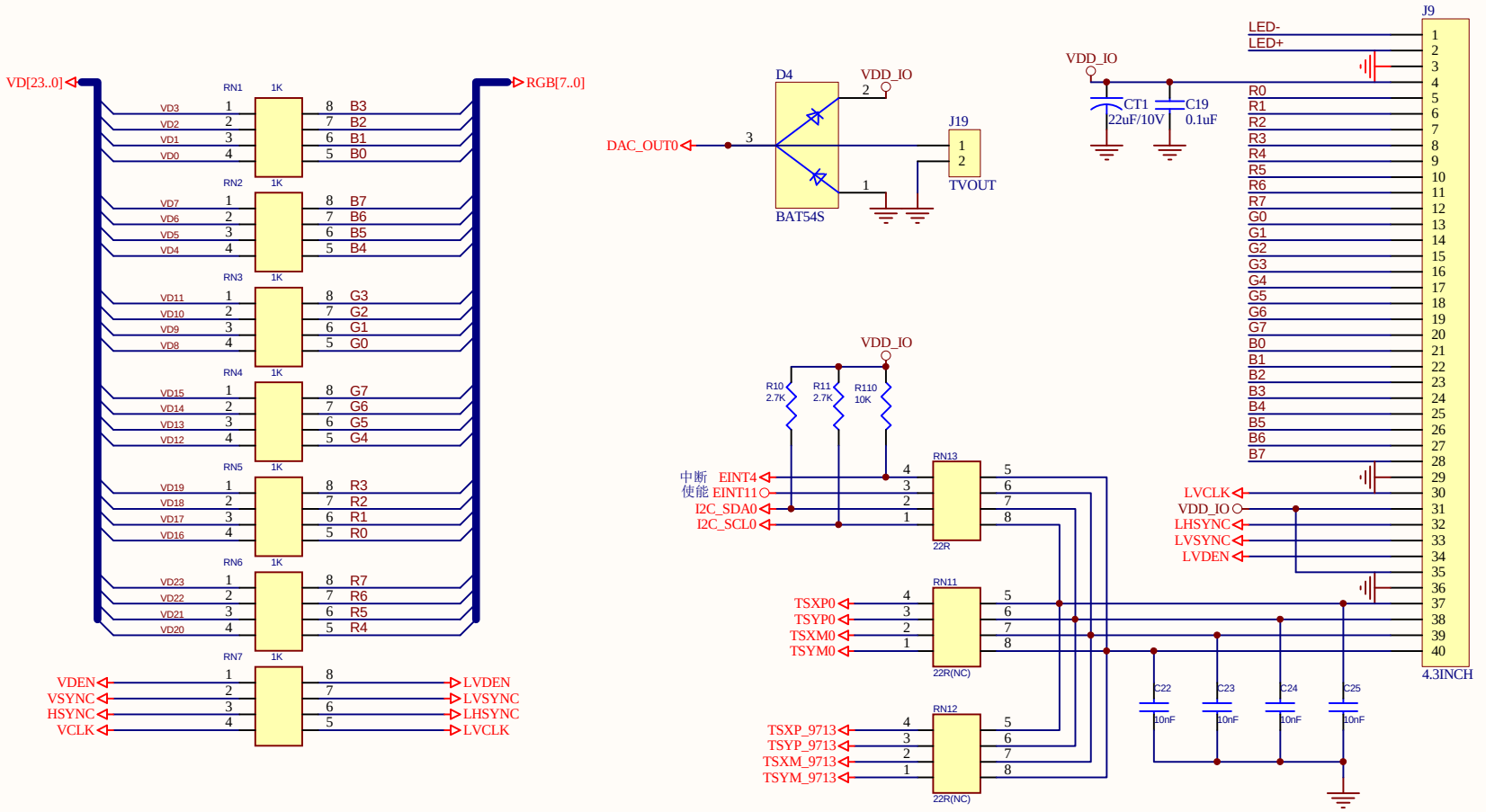


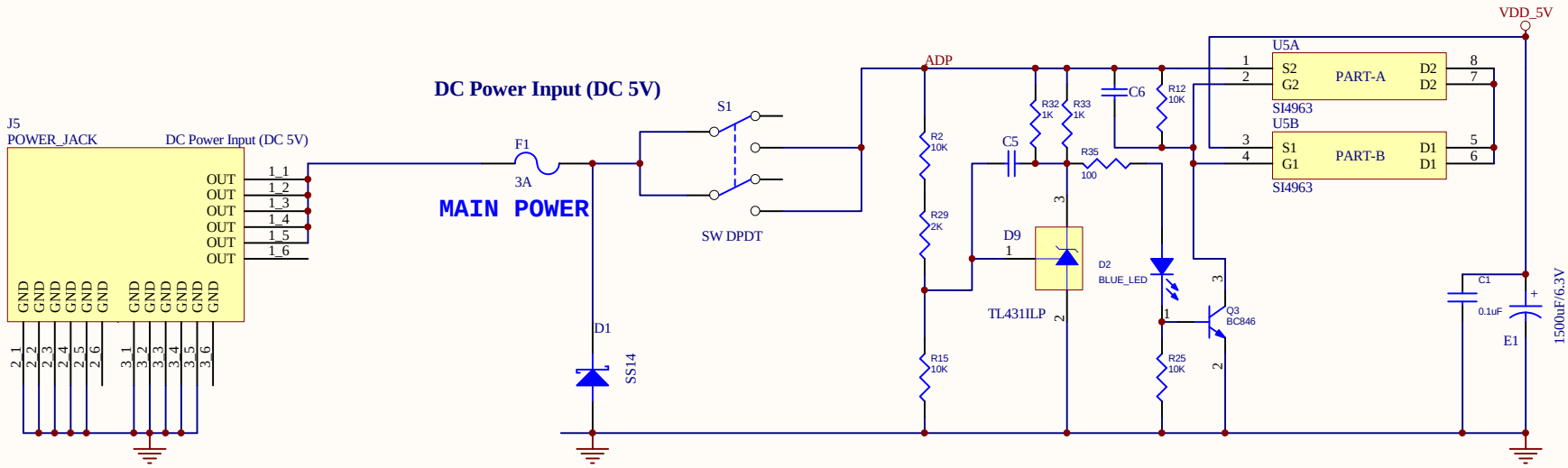
12) CAM_KEY.sch
11) CAM_KEY.sch

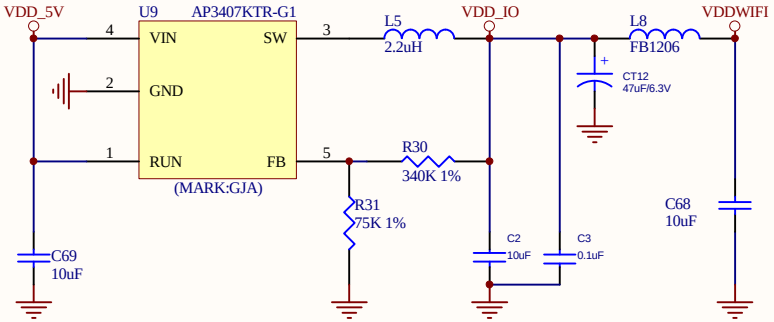


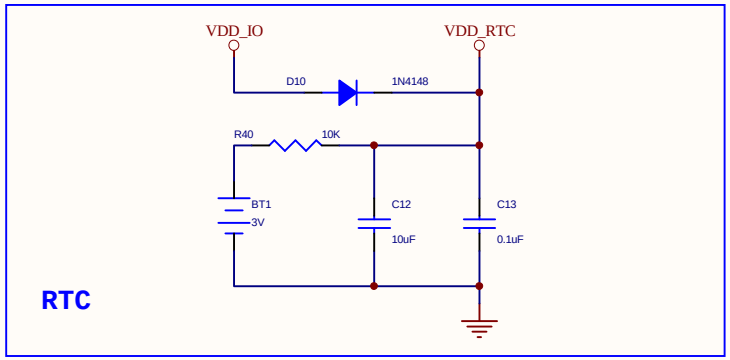
12) GPIO.sch
12) GPIO.sch

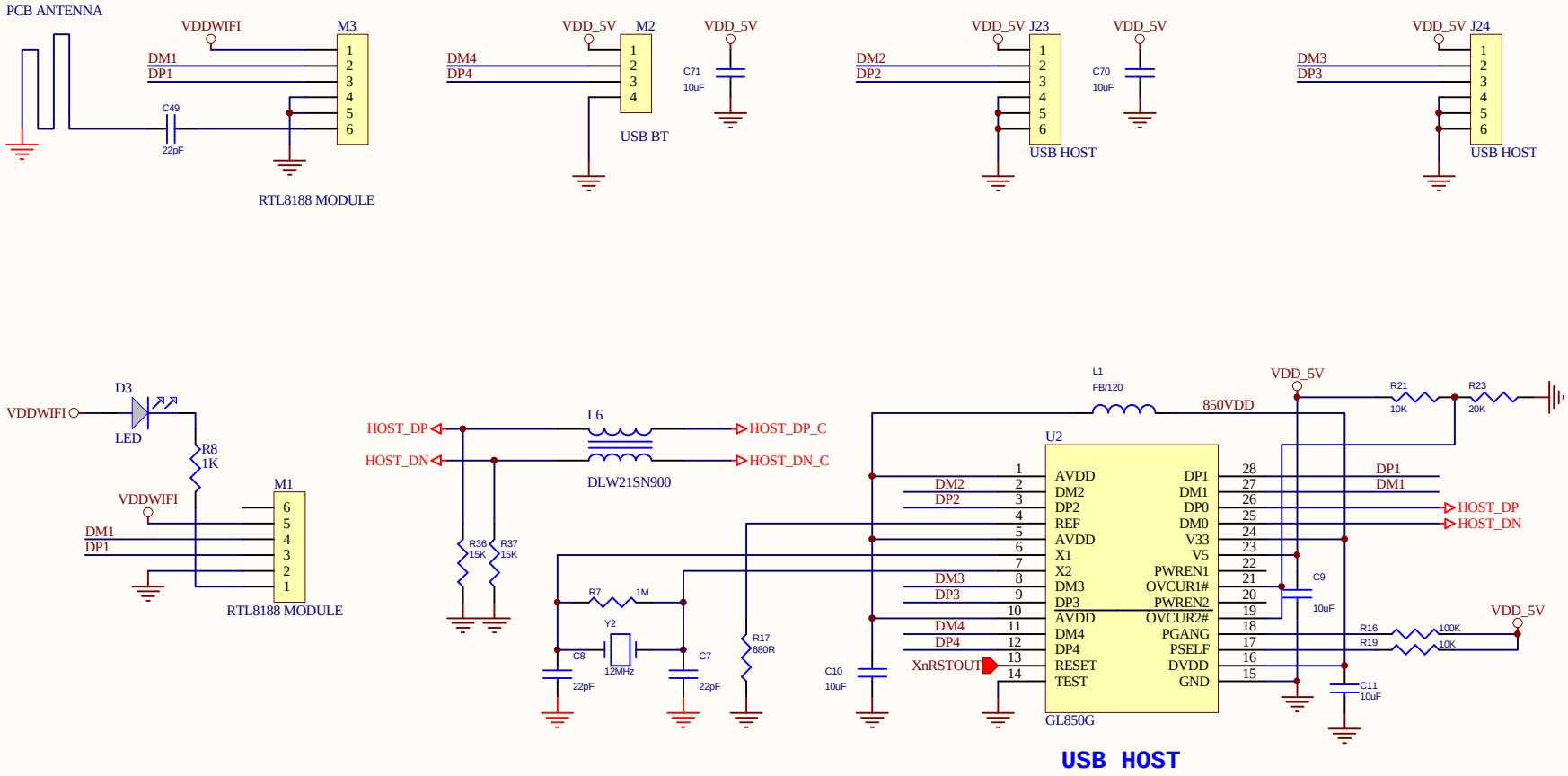

J3
Xmmc1DATA3
Xmmc1DATA2
Xmmc1DATA1
Xmmc1DATA0
Xmmc1CDn
Xmmc1CMD
Xmmc1CLK
MMC0_D3
MMC0_D2
MMC0_D1
MMC0_D0
MMC0_CDn
MMC0_CMD
MMC0_CLK
XspiCLK0
PWMTOUT3
XpwmTOUT2
XpwmTOUT1
XpwmTOUT0
XEINT16
EINT14
KP_COL6
XEINT31
OM0
OM2
OM4
TOUT2
TOUT1
TOUT0
Xmmc2DATA3
Xmmc2DATA2
Xmmc2DATA1
Xmmc2DATA0
Xmmc2CDn
Xmmc2CMD
Xmmc2CLK
SPI1_MISO
SPI1_MOSI
SPI1_CSn
SPI1_CLK
XspiMOSI0
XspiMISO0
XspiCSn0
MMC3_D3
MMC3_D2
MMC3_D1
MMC3_D0
MMC3_CDn
MMC3_CMD
MMC3_CLK
LED/EINT1
LED/EINT3
OM1
OM3
OM5
DF30FC-60
J1
VDD_5V
HOST_DP_C
HOST_DN_C
XuhPWREN
HOST_OVERCUR
OTG_DM_C
OTG_DP_C
OTG_ID
VBUS
VDD_RTC
HDMI_HPD
KP_ROW1
KP_COL5
HDMI_CEC
KP_ROW0
XEINT26
XEINT28
KP_COL3
MMC0_WP/EINT7
XEINT27
LED/EINT0
I2S_IRQ/EINT6
EINT11
XEINT18
RXD2
TXD2
RXD3
TXD3
I2C_SDA2
I2C_SCL2
I2C_SDA1
I2C_SCL1
I2C_SDA0
I2C_SCL0
KEY_RST
nRSTOUT
XnRSTOUT
EINT16
XEINT16
EINT15
XEINT15
MMC3_WP/EINT8
KP_COL4
XEINT30
KP_COL7
XuoDRVVBUS
XEINT17
EINT4
XEINT5
LED/EINT2
DF30FC-60
J2
VDD_5V
XmsmADDR0/CAM_B_D0/CF_ADDR0/MIPI_BYTE_CLK
XmsmADDR1/CAM_B_D1/CF_ADDR1/MIPI_ESC_CLK
XmsmADDR2/CAM_B_D2/CF_ADDR2/TS_CLK
XmsmADDR3/CAM_B_D3/CF_IORDY/TS_SYNC
XmsmADDR4/CAM_B_D4/CF_INTRQ/TS_VAL
XmsmADDR5/CAM_B_D5/CF_DMARQ/TS_DATA
XmsmADDR6/CAM_B_D6/CF_DRESETN/TS_ERROR
XmsmADDR7/CAM_B_D7/CF_DMACKN/MHL_D0
XmsmADDR8/CAM_B_PCLK/SROM_ADDR16/MHL_D1
XmsmADDR9/CAM_B_VSYNC/SROM_ADDR17/MHL_D2
XmsmADDR10/CAM_B_HREF/SROM_ADDR18/MHL_D3
XmsmADDR11/CAM_B_FIELD/SROM_ADDR19/MHL_D4
XmsmADDR12/CAM_B_CLKOUT/SROM_ADDR20/MHL_D5
XmsmADDR13/KP_COL0/SROM_ADDR21/MHL_D6
RXD0
TXD0
CTSn0
RTSn0
RXD1
TXD1
AUD_I2S_SCLK
AUD_I2S_CDCLK
AUD_I2S_LRCK
AUD_I2S_SDI
AUD_I2S_SDO
TS_CLK
TS_SYNC
TS_VAL
TS_DATA
TS_ERROR
HDMI_TXCN
HDMI_TXCP
HDMI_TX0N
HDMI_TX0P
HDMI_TX1N
HDMI_TX1P
HDMI_TX2N
HDMI_TX2P
TPI+
TPI-
TPO+
TPO-
nLNK_ACT
nFDPLX
VDD_ETH
MIC_IN+
HPOUTL
HPOUTR
DF30FC-60
J4
HSYNC
VSYNC
VDEN
VCLK
VD23
VD22
VD21
VD20
VD19
VD18
VD17
VD16
VD15
VD14
VD13
VD12
VD11
VD10
VD9
VD8
VD7
VD6
VD5
VD4
VD3
VD2
VD1
VD0
TRSTn
TMS
TCK
TDI
TDO
TSYM0
TSYP0
TSXM0
TSXP0
TSYM_9713
TSXM_9713
TSYP_9713
TSXP_9713
DAC_OUT0
CAM_PCLK
CAM_VSYNC
CAM_HREF
CAM_D0
CAM_D1
CAM_D2
CAM_D3
CAM_D4
CAM_D5
CAM_D6
CAM_D7
CAM_CLKOUT
DF30FC-60
HOST_OVERCUR
R1
10K
J20
VDD_5V
I2C_SDA2
SPI1_CSn
SPI1_MISO
Xmmc2CMD
Xmmc2CDn
Xmmc2DATA1
Xmmc2DATA3
TXD1
TS_SYNC
TS_DATA
I2C_SDA0
TOUT1
MMC3_WP/EINT8
VDD_IO
I2C_SCL2
SPI1_CLK
SPI1_MOSI
Xmmc2CLK
Xmmc2DATA0
Xmmc2DATA2
RXD1
TS_CLK
TS_VAL
TS_ERROR
I2C_SCL0
TOUT2
XpwmTOUT3
XEINT15
9001-35321

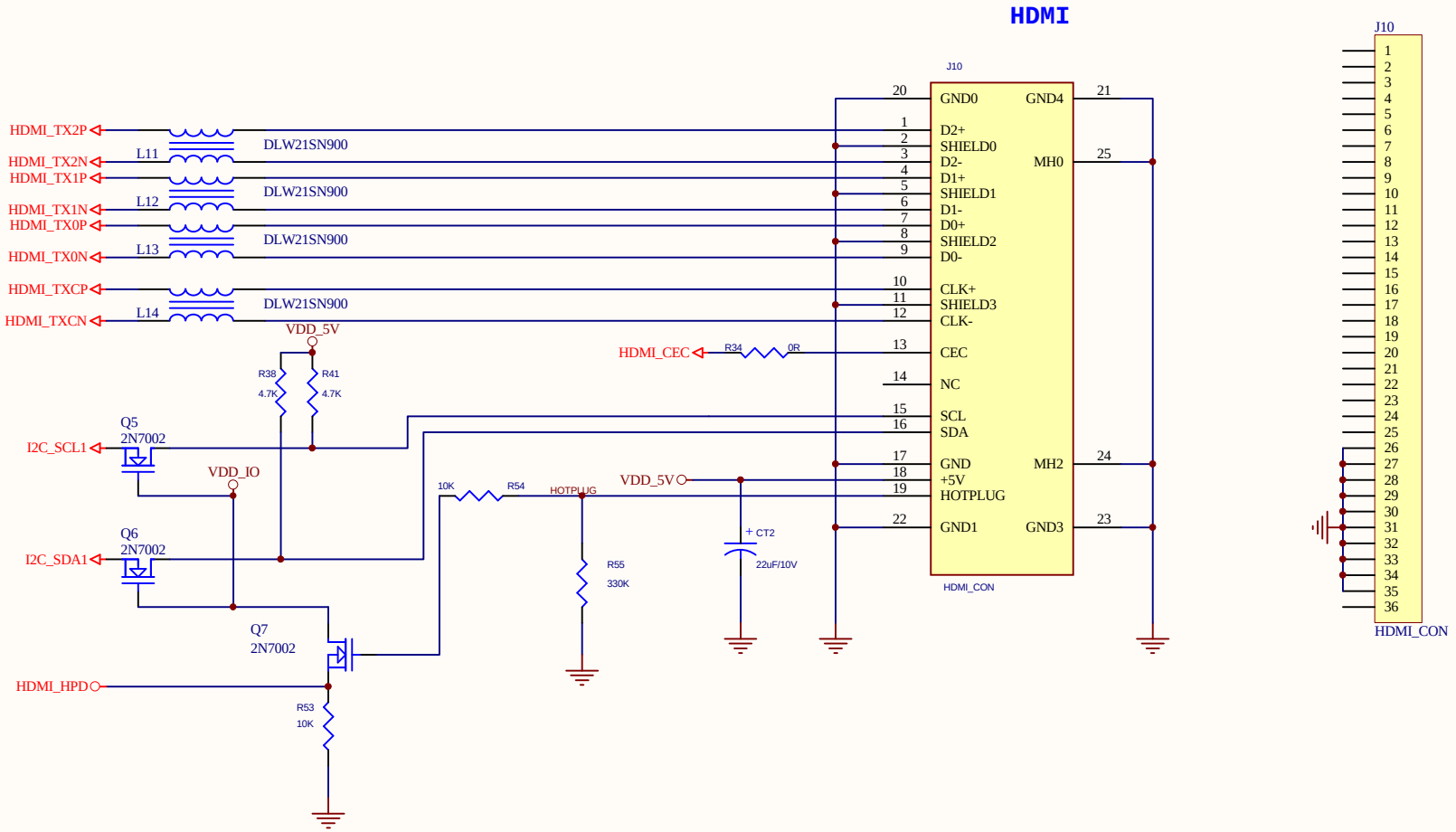

VD[23..0]
RGB[7..0]
RN1
RN2
RN3
RN4
RN5
RN6
RN7
1K
VD3 VD2 VD1 VD0
B3 B2 B1 B0
VD7 VD6 VD5 VD4
B7 B6 B5 B4
VD11 VD10 VD9 VD8
G3 G2 G1 G0
VD15 VD14 VD13 VD12
G7 G6 G5 G4
VD19 VD18 VD17 VD16
R3 R2 R1 R0
VD23 VD22 VD21 VD20
R7 R6 R5 R4
VDEN VSYNC HSYNC VCLK
LVDEN LVSYNC LHSYNC LVCLK
D4
BAT54S
VDD_IO
DAC_OUT0
J19
TVOUT
CT1
22uF/10V
C19
0.1uF
J9
LED-
LED+
R0 R1 R2 R3 R4 R5 R6 R7
G0 G1 G2 G3 G4 G5 G6 G7
B0 B1 B2 B3 B4 B5 B6 B7
4.3INCH
R10
2.7K
R11
2.7K
R110
10K
中断 EINT4
使能 EINT11
I2C_SDA0
I2C_SCL0
RN13
22R
LVCLK
LHSYNC
LVSYNC
LVDEN
TSXP0
TSYP0
TSXM0
TSYM0
RN11
22R(NC)
TSXP_9713
TSYP_9713
TSXM_9713
TSYM_9713
RN12
C22
C23
C24
C25
10nF

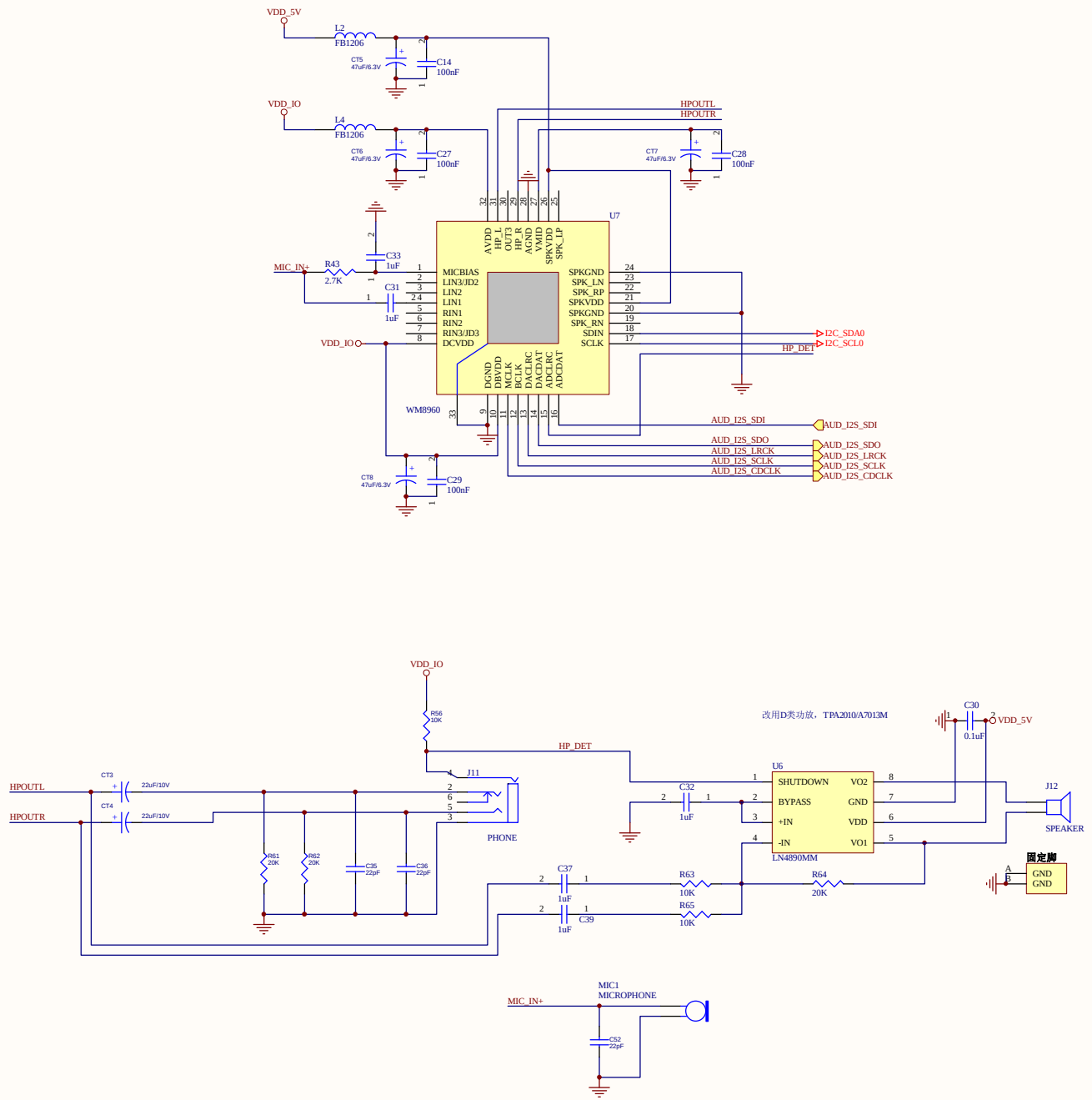

DC Power Input (DC 5V)
J5
POWER_JACK
DC Power Input (DC 5V)
OUT
GND
F1
3A
MAIN POWER
S1
SW DPDT
D1
SS14
ADP
R2
10K
R29
2K
R15
10K
C5
R32
1K
R33
1K
R35
100
D9
TL431ILP
C6
R12
10K
D2
BLUE_LED
Q3
BC846
R25
10K
VDD_5V
U5A
SI4963
PART-A
U5B
PART-B
C1
0.1uF
E1
1500uF/6.3V

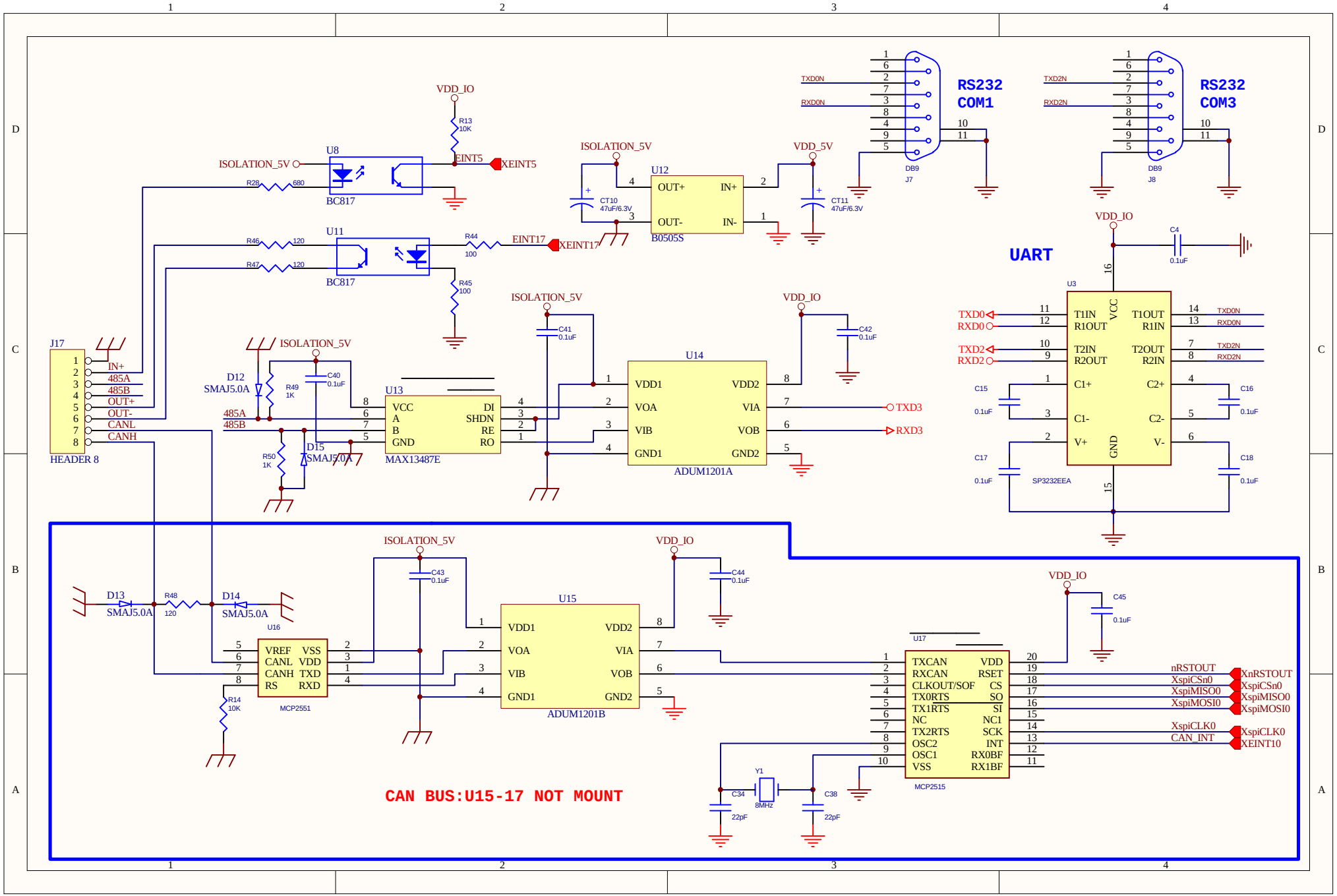

VDD_5V
U9
AP3407KTR-G1
VIN
SW
GND
RUN
FB
(MARK:GJA)
L5
2.2uH
VDD_IO
L8
FB1206
VDDWIFI
CT12
47uF/6.3V
R30
340K 1%
R31
75K 1%
C69
10uF
C2
10uF
C3
0.1uF
C68
10uF

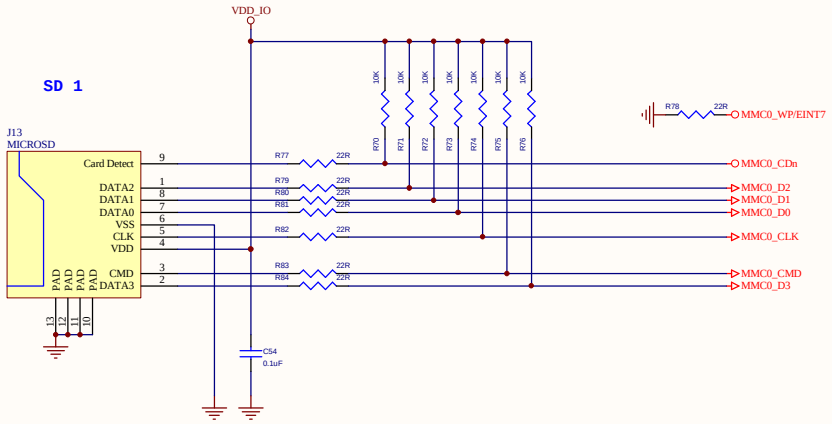

VDD_IO
VDD_RTC
D10
1N4148
R40
10K
BT1
3V
C12
10uF
C13
0.1uF
RTC

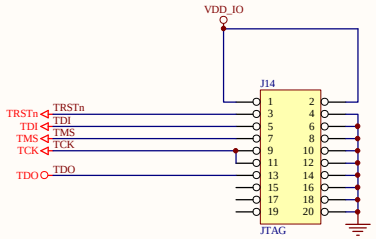

PCB ANTENNA
VDDWIFI
M3
DM1
DP1
C49
22pF
RTL8188 MODULE
VDD_5V
M2
DM4
DP4
C71
10uF
USB BT
VDD_5V J23
DM2
DP2
C70
10uF
USB HOST
VDD_5V J24
DM3
DP3
USB HOST
D3
LED
R8
1K
M1
RTL8188 MODULE
HOST_DP
HOST_DN
L6
DLW21SN900
HOST_DP_C
HOST_DN_C
R36
15K
R37
15K
R7
1M
Y2
12MHz
C8
22pF
C7
22pF
R17
680R
C10
10uF
L1
FB/120
850VDD
U2
AVDD
DM2
DP2
REF
AVDD
X1
X2
DM3
DP3
AVDD
DM4
DP4
RESET
TEST
DP1
DM1
DP0
DM0
V33
V5
PWREN1
OVCUR1#
PWREN2
OVCUR2#
PGANG
PSELF
DVDD
GND
XnRSTOUT
GL850G
R21
10K
R23
20K
C9
10uF
R16
100K
R19
10K
C11
10uF
USB HOST


HDMI
HDMI_TX2P
HDMI_TX2N
HDMI_TX1P
HDMI_TX1N
HDMI_TX0P
HDMI_TX0N
HDMI_TXCP
HDMI_TXCN
L11
L12
L13
L14
DLW21SN900
DLW21SN900
DLW21SN900
DLW21SN900
VDD_5V
R38
4.7K
R41
4.7K
Q5
2N7002
I2C_SCL1
VDD_IO
Q6
2N7002
I2C_SDA1
Q7
2N7002
HDMI_HPD
R53
10K
HDMI_CEC
R34
0R
10K
R54
HOTPLUG
VDD_5V
R55
330K
CT2
22uF/10V
J10
20 GND0
1 D2+
2 SHIELD0
3 D2-
4 D1+
5 SHIELD1
6 D1-
7 D0+
8 SHIELD2
9 D0-
10 CLK+
11 SHIELD3
12 CLK-
13 CEC
14 NC
15 SCL
16 SDA
17 GND
18 +5V
19 HOTPLUG
22 GND1
GND4 21
MH0 25
MH2 24
GND3 23
HDMI_CON
J10
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
HDMI_CON

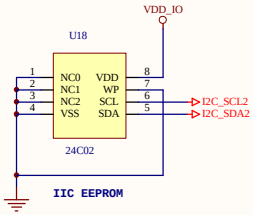

VDD_5V
L2
FB1206
CT5
47uF/6.3V
C14
100nF
VDD_IO
L4
FB1206
CT6
47uF/6.3V
C27
100nF
HPOUTL
HPOUTR
CT7
47uF/6.3V
C28
100nF
U7
AVDD
HP_L
OUT3
HP_R
AGND
VMID
SPKVDD
SPK_LP
MICBIAS
LIN3/JD2
LIN2
LIN1
RIN1
RIN2
RIN3/JD3
DCVDD
SPKGND
SPK_LN
SPK_RP
SPKVDD
SPKGND
SPK_RN
SDIN
SCLK
DGND
DBVDD
MCLK
BCLK
DACLRC
DACDAT
ADCLRC
ADCDAT
WM8960
C33
1uF
MIC_IN+
R43
2.7K
C31
1uF
VDD_IO
I2C_SDA0
I2C_SCL0
HP_DET
AUD_I2S_SDI
AUD_I2S_SDO
AUD_I2S_LRCK
AUD_I2S_SCLK
AUD_I2S_CDCLK
CT8
47uF/6.3V
C29
100nF
VDD_IO
R56
10K
HP_DET
J11
PHONE
HPOUTL
HPOUTR
CT3
CT4
22uF/10V
R61
20K
R62
20K
C35
22pF
C36
22pF
C37
1uF
C39
1uF
R63
10K
R65
10K
R64
20K
改用D类功放，TPA2010/A7013M
C30
0.1uF
VDD_5V
U6
SHUTDOWN
BYPASS
+IN
-IN
VO2
GND
VDD
VO1
LN4890MM
C32
1uF
J12
SPEAKER
固定脚
GND
GND
MIC1
MICROPHONE
MIC_IN+
C52
22pF


RS232
COM1
RS232
COM3
UART
VDD_IO
ISOLATION_5V
VDD_5V
U8
BC817
U11
BC817
U12
B0505S
U13
MAX13487E
U14
ADUM1201A
U15
ADUM1201B
U16
MCP2551
U17
MCP2515
U3
SP3232EEA
J17
HEADER 8
D12
SMAJ5.0A
D13
SMAJ5.0A
D14
SMAJ5.0A
D15
SMAJ5.0A
TXD3
RXD3
TXD0
RXD0
TXD2
RXD2
TXD0N
RXD0N
TXD2N
RXD2N
nRSTOUT
XspiCSn0
XspiMISO0
XspiMOSI0
XspiCLK0
CAN_INT
XnRSTOUT
XspiCSn0
XspiMISO0
XspiMOSI0
XspiCLK0
XEINT10
EINT5
XEINT5
EINT17
XEINT17
CAN BUS:U15-17 NOT MOUNT

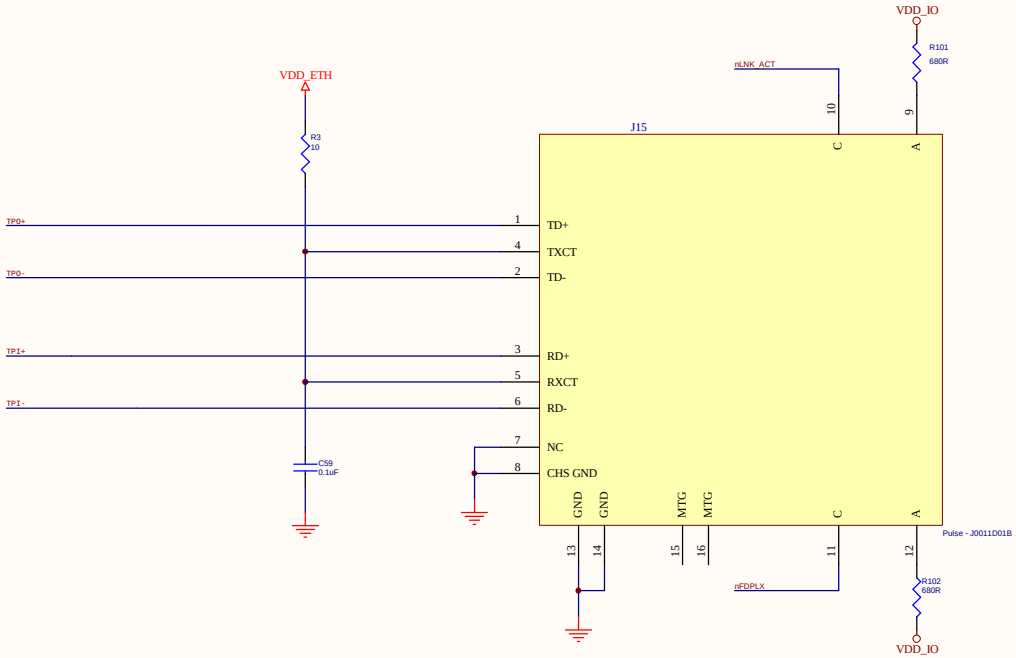


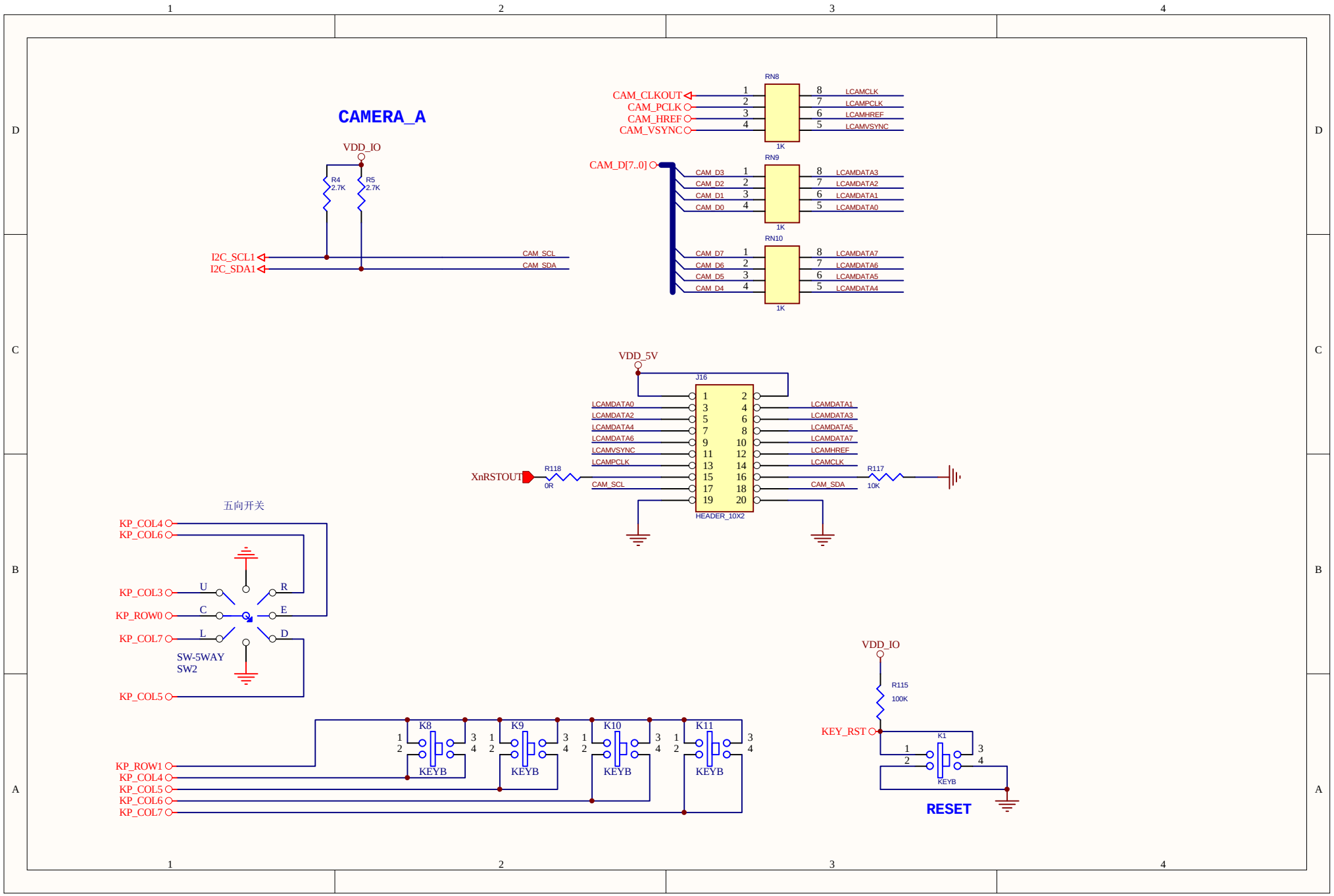


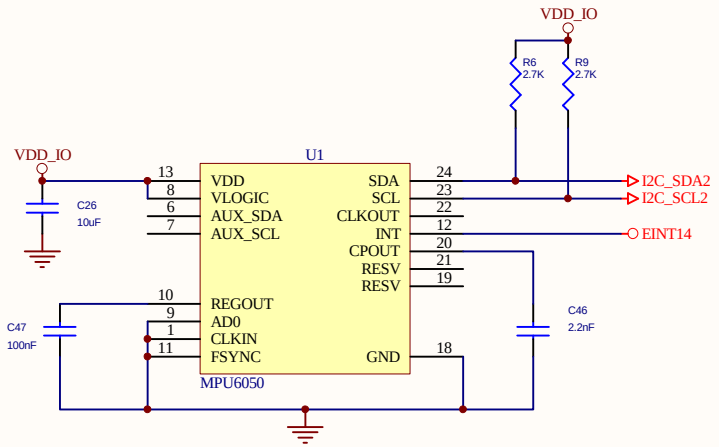
JTAG

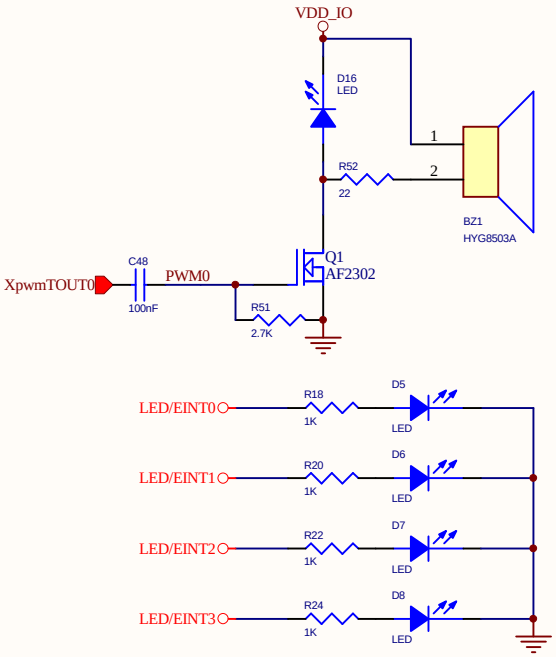


IIC EEPROM

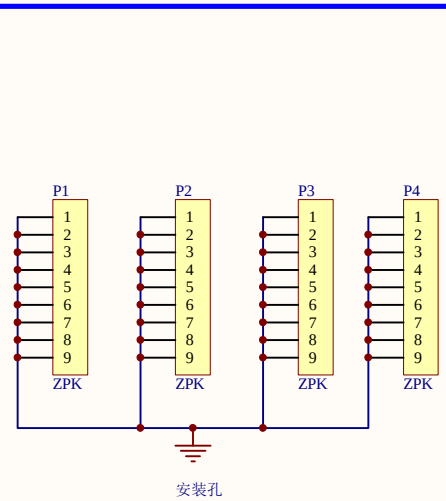

VDD_IO
R101
680R
nLNK_ACT
VDD_ETH
R3
10
J15
10
C
9
A
TPO+
1
TD+
4
TXCT
TPO-
2
TD-
TPI+
3
RD+
5
RXCT
TPI-
6
RD-
7
NC
8
CHS GND
C59
0.1uF
GND
GND
MTG
MTG
C
A
Pulse - J0011D01B
13
14
15
16
11
12
nFDPLX
R102
680R
VDD_IO

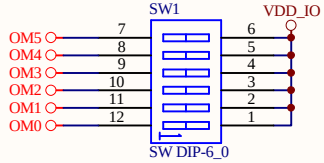

CAMERA_A
VDD_IO
R4
2.7K
R5
2.7K
I2C_SCL1
I2C_SDA1
CAM_SCL
CAM_SDA
RN8
CAM_CLKOUT
CAM_PCLK
CAM_HREF
CAM_VSYNC
LCAMCLK
LCAMPCLK
LCAMHREF
LCAMVSYNC
1K
CAM_D[7..0]
RN9
CAM_D3
CAM_D2
CAM_D1
CAM_D0
LCAMDATA3
LCAMDATA2
LCAMDATA1
LCAMDATA0
RN10
CAM_D7
CAM_D6
CAM_D5
CAM_D4
LCAMDATA7
LCAMDATA6
LCAMDATA5
LCAMDATA4
VDD_5V
J16
LCAMDATA0
LCAMDATA1
LCAMDATA2
LCAMDATA3
LCAMDATA4
LCAMDATA5
LCAMDATA6
LCAMDATA7
LCAMVSYNC
LCAMHREF
LCAMPCLK
LCAMCLK
XnRSTOUT
R118
0R
R117
10K
HEADER_10X2
五向开关
KP_COL4
KP_COL6
KP_COL3
KP_ROW0
KP_COL7
KP_COL5
U
R
C
E
L
D
SW-5WAY
SW2
K8
K9
K10
K11
KEYB
KP_ROW1
KP_COL4
KP_COL5
KP_COL6
KP_COL7
VDD_IO
R115
100K
KEY_RST
K1
KEYB
RESET



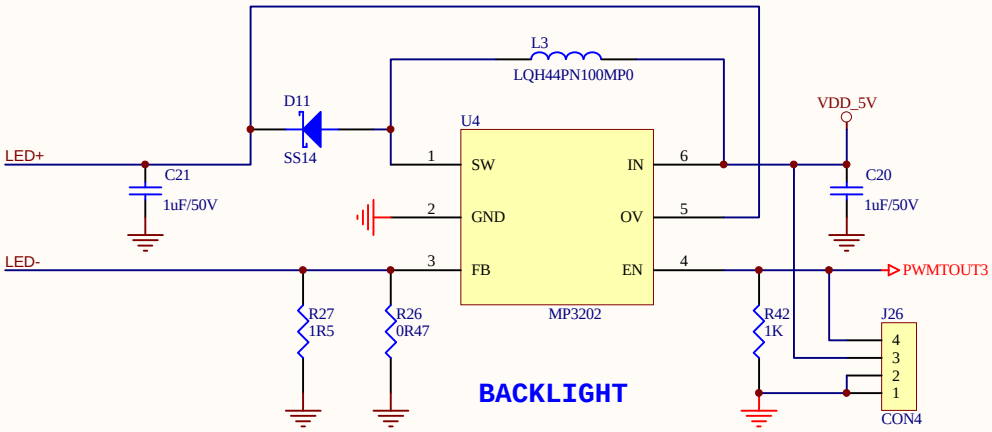


USER LED

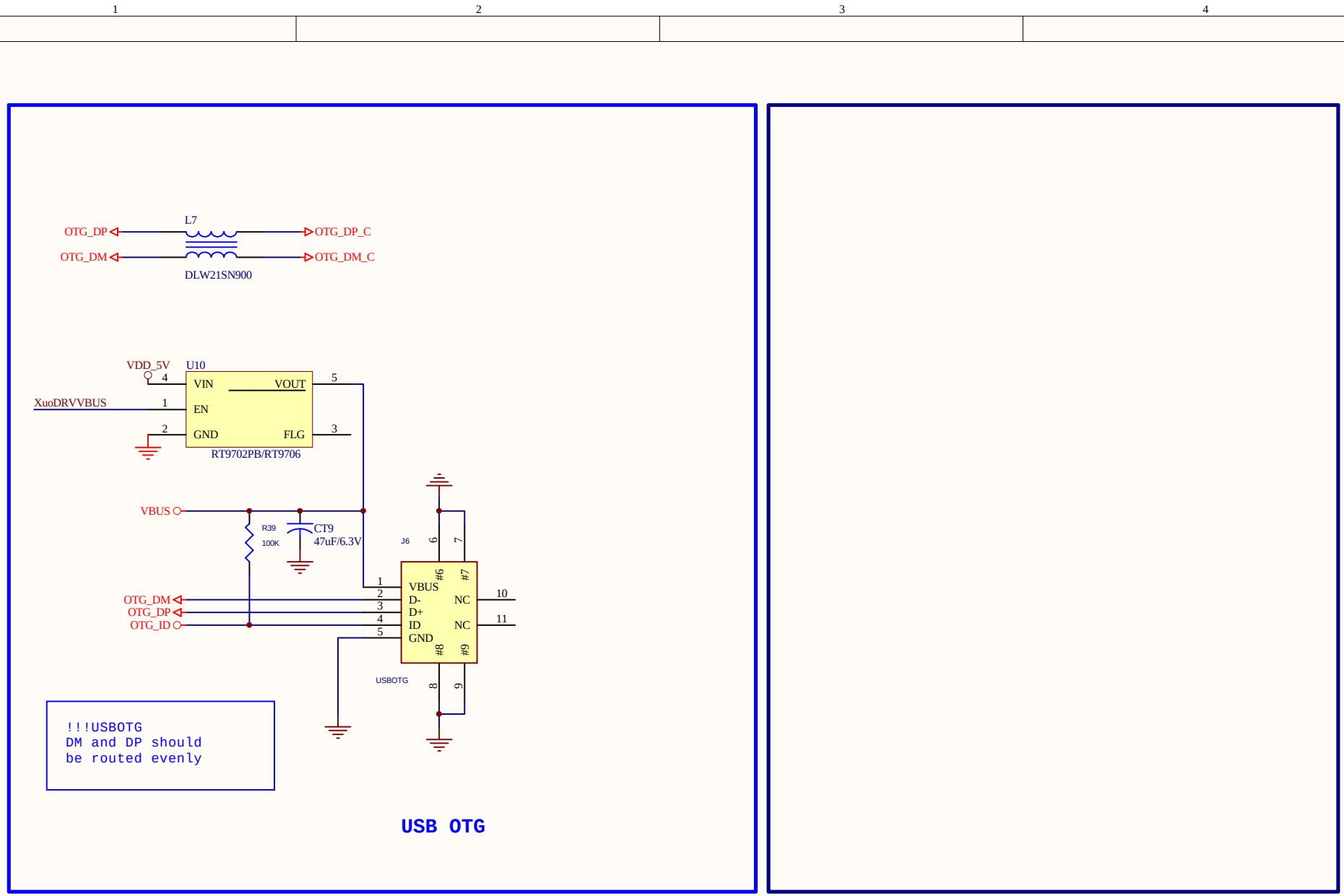




BOOTSET



BACKLIGHT


L7
OTG_DP
OTG_DM
OTG_DP_C
OTG_DM_C
DLW21SN900
VDD_5V
U10
VIN
VOUT
XuoDRVVBUS
EN
GND
FLG
RT9702PB/RT9706
VBUS
R39
100K
CT9
47uF/6.3V
J6
VBUS
D-
D+
ID
GND
NC
NC
OTG_DM
OTG_DP
OTG_ID
USBOTG
!!!USBOTG
DM and DP should
be routed evenly
USB OTG