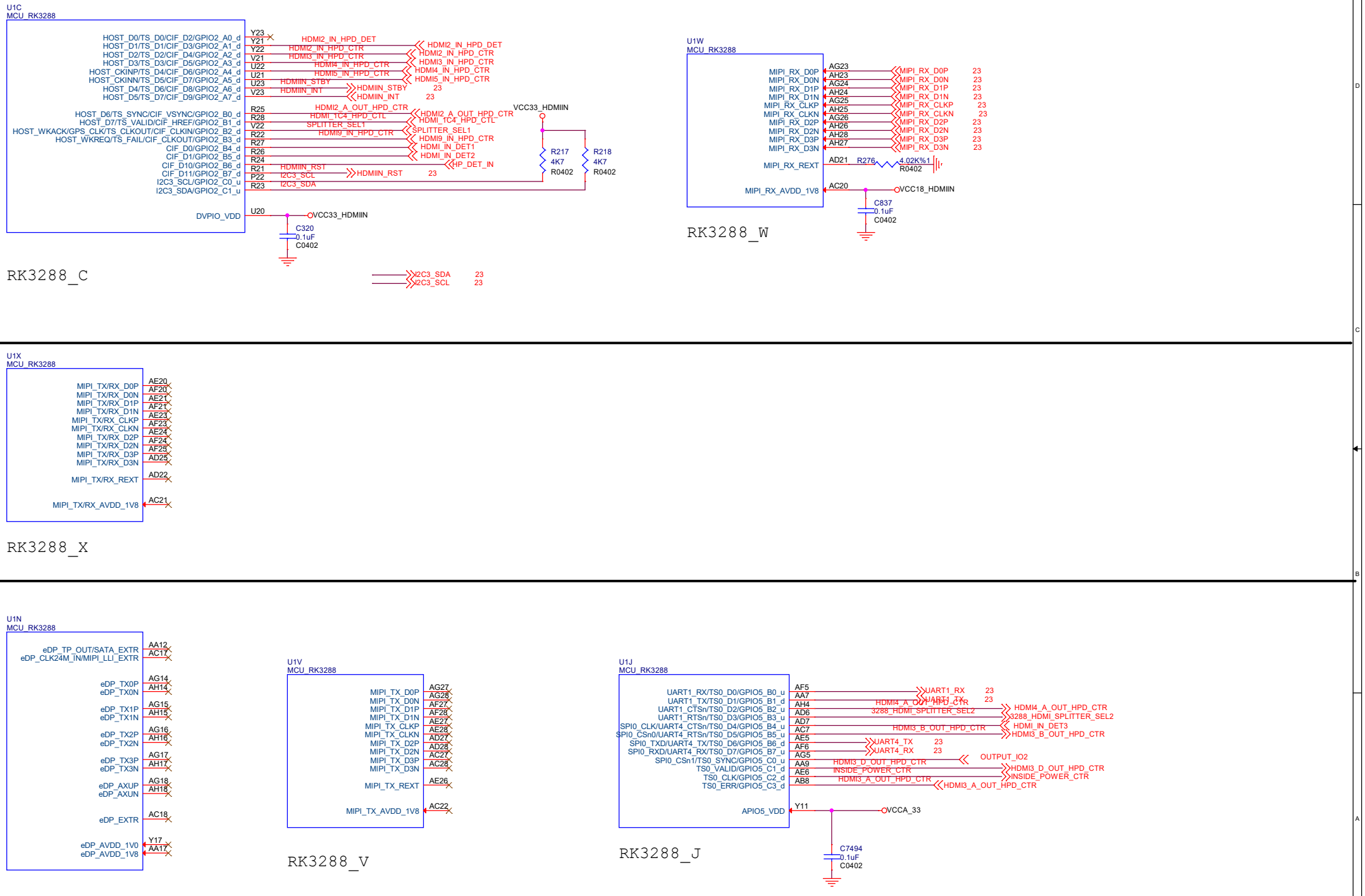
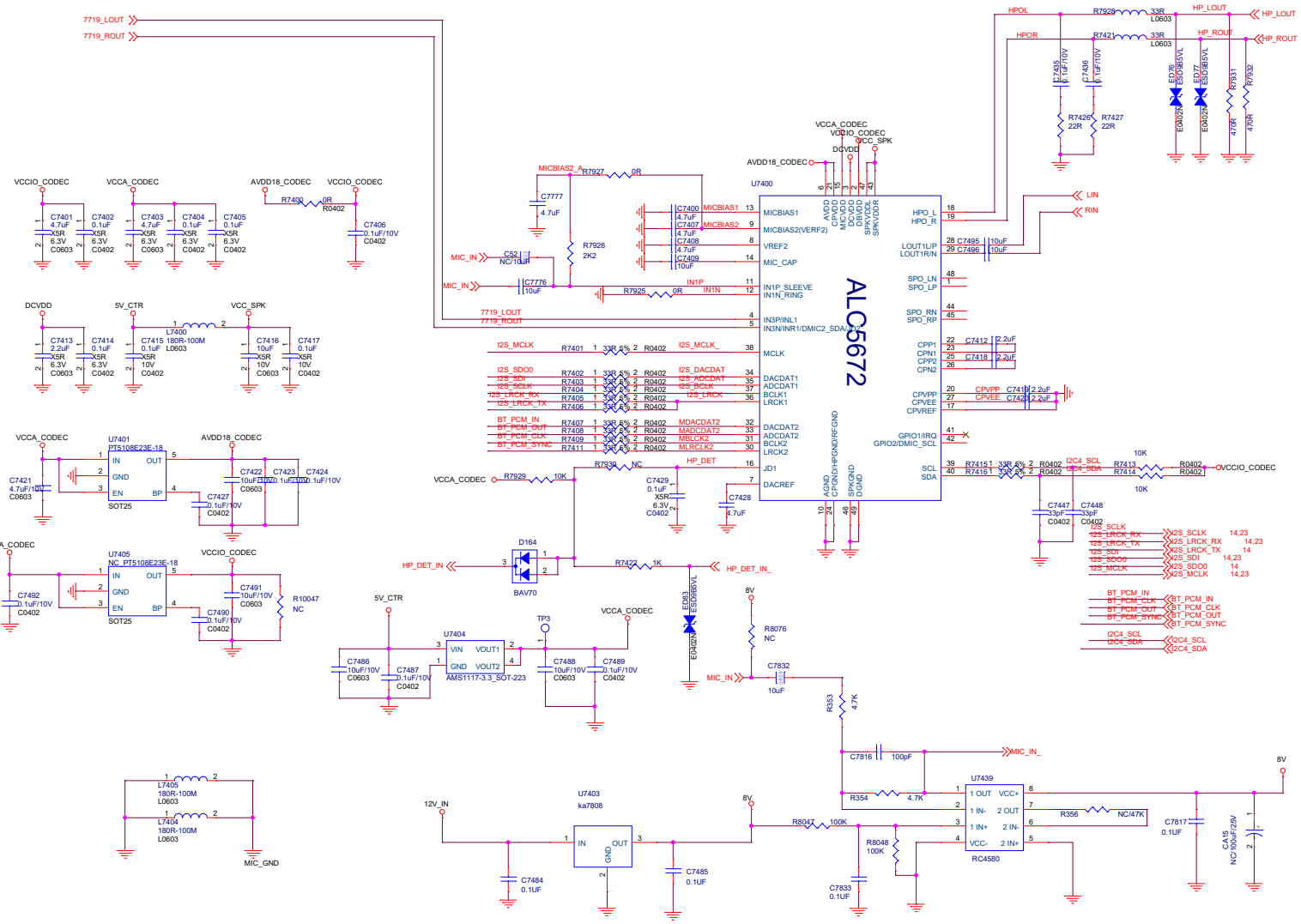
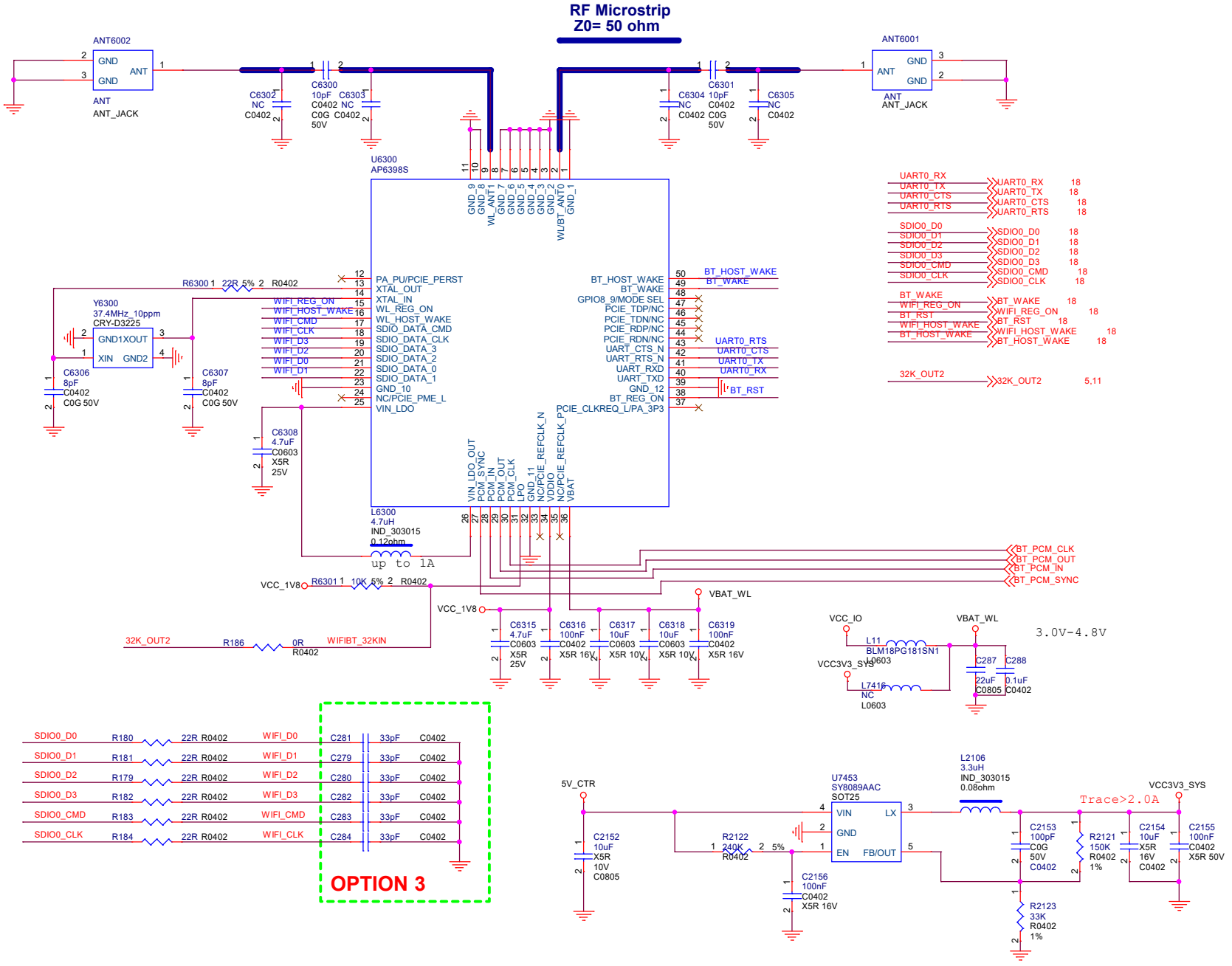

U1C
MCU_RK3288
HOST_D0/TS_D0/CIF_D2/GPIO2_A0_d
HOST_D1/TS_D1/CIF_D3/GPIO2_A1_d
HOST_D2/TS_D2/CIF_D4/GPIO2_A2_d
HOST_D3/TS_D3/CIF_D5/GPIO2_A3_d
HOST_CKINP/TS_D4/CIF_D6/GPIO2_A4_d
HOST_CKINN/TS_D5/CIF_D7/GPIO2_A5_d
HOST_D4/TS_D6/CIF_D8/GPIO2_A6_d
HOST_D5/TS_D7/CIF_D9/GPIO2_A7_d
HOST_D6/TS_SYNC/CIF_VSYNC/GPIO2_B0_d
HOST_D7/TS_VALID/CIF_HREF/GPIO2_B1_d
HOST_WKACK/GPS_CLK/TS_CLKOUT/CIF_CLKIN/GPIO2_B2_d
HOST_WKREQ/TS_FAIL/CIF_CLKOUT/GPIO2_B3_d
CIF_D0/GPIO2_B4_d
CIF_D1/GPIO2_B5_d
CIF_D10/GPIO2_B6_d
CIF_D11/GPIO2_B7_d
I2C3_SCL/GPIO2_C0_u
I2C3_SDA/GPIO2_C1_u
DVPIO_VDD
HDMI2_IN_HPD_DET
HDMI2_IN_HPD_CTR
HDMI3_IN_HPD_CTR
HDMI4_IN_HPD_CTR
HDMI5_IN_HPD_CTR
HDMIIN_STBY
HDMIIN_INT
HDMI2_A_OUT_HPD_CTR
HDMI_TC4_HPD_CTL
SPLITTER_SEL1
HDMI9_IN_HPD_CTR
HDMI_IN_DET1
HDMI_IN_DET2
HP_DET_IN
HDMIIN_RST
I2C3_SCL
I2C3_SDA
VCC33_HDMIIN
R217
4K7
R0402
R218
4K7
R0402
C320
0.1uF
C0402
RK3288_C
U1W
MCU_RK3288
MIPI_RX_D0P
MIPI_RX_D0N
MIPI_RX_D1P
MIPI_RX_D1N
MIPI_RX_CLKP
MIPI_RX_CLKN
MIPI_RX_D2P
MIPI_RX_D2N
MIPI_RX_D3P
MIPI_RX_D3N
MIPI_RX_REXT
MIPI_RX_AVDD_1V8
R276
4.02K%1
R0402
VCC18_HDMIIN
C837
0.1uF
C0402
RK3288_W
U1X
MCU_RK3288
MIPI_TX/RX_D0P
MIPI_TX/RX_D0N
MIPI_TX/RX_D1P
MIPI_TX/RX_D1N
MIPI_TX/RX_CLKP
MIPI_TX/RX_CLKN
MIPI_TX/RX_D2P
MIPI_TX/RX_D2N
MIPI_TX/RX_D3P
MIPI_TX/RX_D3N
MIPI_TX/RX_REXT
MIPI_TX/RX_AVDD_1V8
RK3288_X
U1N
MCU_RK3288
eDP_TP_OUT/SATA_EXTR
eDP_CLK24M_IN/MIPI_LLI_EXTR
eDP_TX0P
eDP_TX0N
eDP_TX1P
eDP_TX1N
eDP_TX2P
eDP_TX2N
eDP_TX3P
eDP_TX3N
eDP_AXUP
eDP_AXUN
eDP_EXTR
eDP_AVDD_1V0
eDP_AVDD_1V8
RK3288_N
U1V
MCU_RK3288
MIPI_TX_D0P
MIPI_TX_D0N
MIPI_TX_D1P
MIPI_TX_D1N
MIPI_TX_CLKP
MIPI_TX_CLKN
MIPI_TX_D2P
MIPI_TX_D2N
MIPI_TX_D3P
MIPI_TX_D3N
MIPI_TX_REXT
MIPI_TX_AVDD_1V8
RK3288_V
U1J
MCU_RK3288
UART1_RX/TS0_D0/GPIO5_B0_u
UART1_TX/TS0_D1/GPIO5_B1_d
UART1_CTSn/TS0_D2/GPIO5_B2_u
UART1_RTSn/TS0_D3/GPIO5_B3_u
SPI0_CLK/UART4_CTSn/TS0_D4/GPIO5_B4_u
SPI0_CSn0/UART4_RTSn/TS0_D5/GPIO5_B5_u
SPI0_TXD/UART4_TX/TS0_D6/GPIO5_B6_d
SPI0_RXD/UART4_RX/TS0_D7/GPIO5_B7_u
SPI0_CSn1/TS0_SYNC/GPIO5_C0_u
TS0_VALID/GPIO5_C1_d
TS0_CLK/GPIO5_C2_d
TS0_ERR/GPIO5_C3_d
APIO5_VDD
UART1_RX
UART1_TX
HDMI4_A_OUT_HPD_CTR
3288_HDMI_SPLITTER_SEL2
HDMI3_B_OUT_HPD_CTR
UART4_TX
UART4_RX
OUTPUT_IO2
HDMI3_D_OUT_HPD_CTR
INSIDE_POWER_CTR
HDMI3_A_OUT_HPD_CTR
VCCA_33
C7494
0.1uF
C0402
RK3288_J

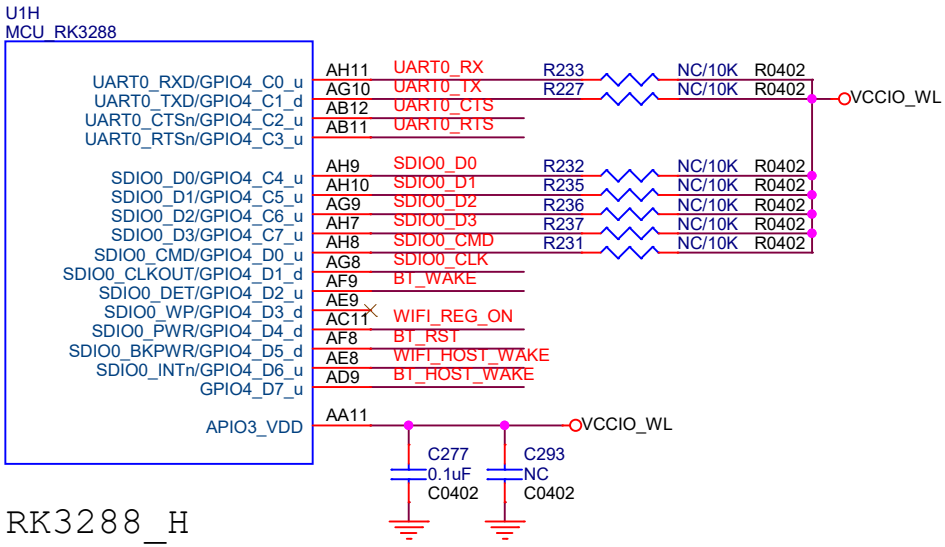
CODEC


7719_LOUT
7719_ROUT
VCCIO_CODEC
VCCA_CODEC
AVDD18_CODEC
DCVDD
5V_CTR
VCC_SPK
U7400
ALC5672
MICBIAS1
MICBIAS2(VERF2)
VREF2
MIC_CAP
IN1P_SLEEVE
IN1N_RING
IN3P/INL1
IN3N/INR1/DMIC2_SDA/IN2
MCLK
DACDAT1
ADCDAT1
BCLK1
LRCK1
DACDAT2
ADCDAT2
BCLK2
LRCK2
JD1
DACREF
HPO_L
HPO_R
LOUT1L/P
LOUT1R/N
SPO_LN
SPO_LP
SPO_RN
SPO_RP
CPP1
CPN1
CPP2
CPN2
CPVPP
CPVEE
CPVREF
GPIO1/IRQ
GPIO2/DMIC_SCL
SCL
SDA
HPOL
HPOR
HP_LOUT
HP_ROUT
LIN
RIN
I2S_MCLK
I2S_SDO0
I2S_SDI
I2S_SCLK
I2S_LRCK_RX
I2S_LRCK_TX
BT_PCM_IN
BT_PCM_OUT
BT_PCM_CLK
BT_PCM_SYNC
I2C4_SCL
I2C4_SDA
HP_DET
HP_DET_IN
MIC_IN
MIC_IN_
MICBIAS2_A
MICBIAS1
MICBIAS2
IN1P
IN1N
U7401
PT5108E23E-18
SOT25
U7405
NC_PT5108E23E-18
U7404
AMS1117-3.3_SOT-223
D164
BAV70
ED93
ESD98B5VL
ED76
ESD3B5VL
ED77
ESD3B5VL
EG402N
U7403
ka7808
U7439
RC4580
L7400
180R-100M
L7404
L7405
MIC_GND
12V_IN
8V

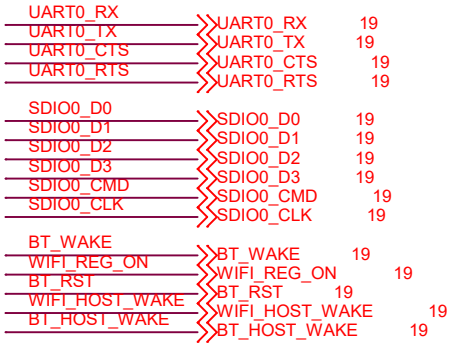
SDIO WIFI/BT MODULE-MIMO

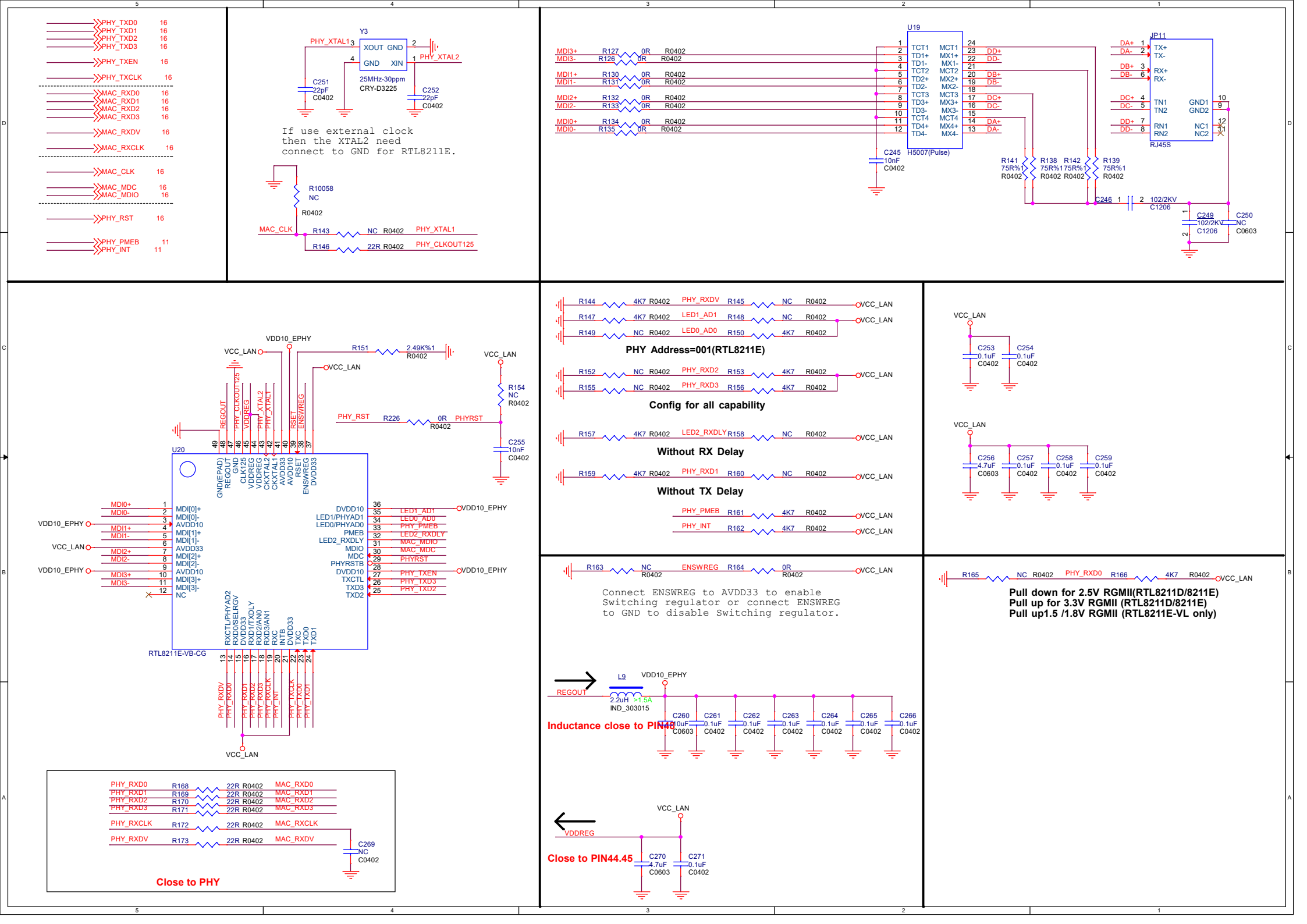
Note:VBAT voltage range is 3.0V~4.8V,
and peak-current is at least 400mA.



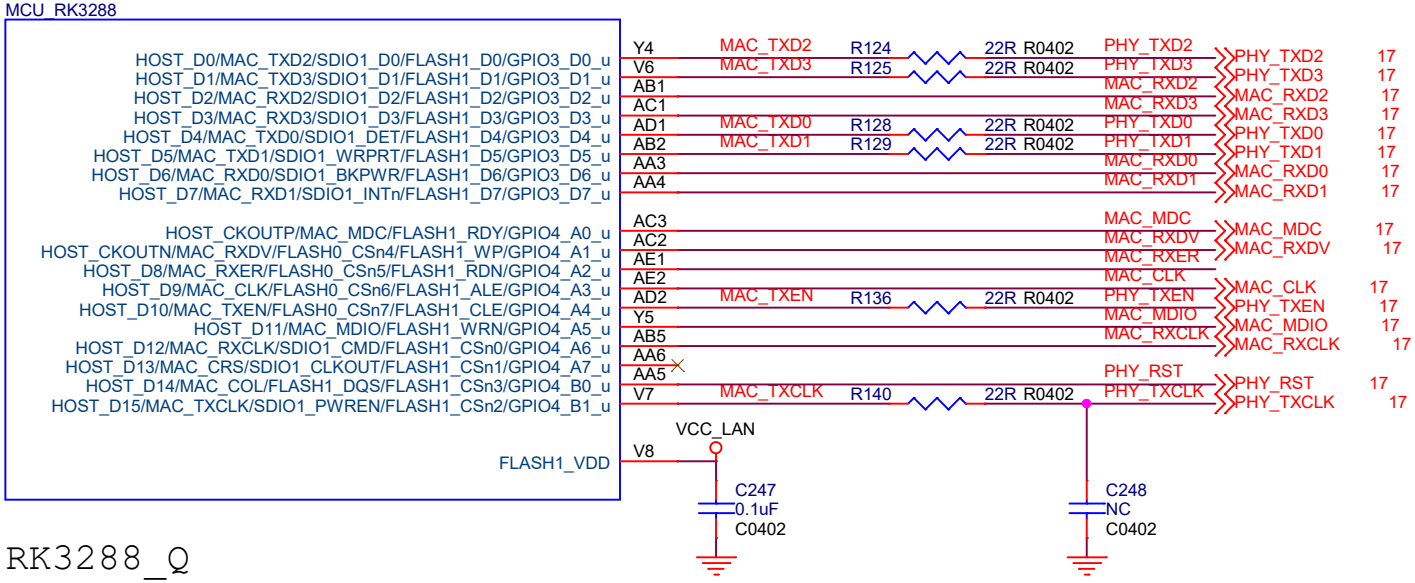

U1H
MCU_RK3288
UART0_RXD/GPIO4_C0_u
UART0_TXD/GPIO4_C1_d
UART0_CTSn/GPIO4_C2_u
UART0_RTSn/GPIO4_C3_u
SDIO0_D0/GPIO4_C4_u
SDIO0_D1/GPIO4_C5_u
SDIO0_D2/GPIO4_C6_u
SDIO0_D3/GPIO4_C7_u
SDIO0_CMD/GPIO4_D0_u
SDIO0_CLKOUT/GPIO4_D1_d
SDIO0_DET/GPIO4_D2_u
SDIO0_WP/GPIO4_D3_d
SDIO0_PWR/GPIO4_D4_d
SDIO0_BKPWR/GPIO4_D5_d
SDIO0_INTn/GPIO4_D6_u
GPIO4_D7_u
APIO3_VDD
AH11 UART0_RX
AG10 UART0_TX
AB12 UART0_CTS
AB11 UART0_RTS
AH9 SDIO0_D0
AH10 SDIO0_D1
AG9 SDIO0_D2
AH7 SDIO0_D3
AH8 SDIO0_CMD
AG8 SDIO0_CLK
AF9 BT_WAKE
AE9
AC11 WIFI_REG_ON
AF8 BT_RST
AE8 WIFI_HOST_WAKE
AD9 BT_HOST_WAKE
AA11
R233 NC/10K R0402
R227 NC/10K R0402
R232 NC/10K R0402
R235 NC/10K R0402
R236 NC/10K R0402
R237 NC/10K R0402
R231 NC/10K R0402
VCCIO_WL
VCCIO_WL
C277 0.1uF C0402
C293 NC C0402

RK3288_H

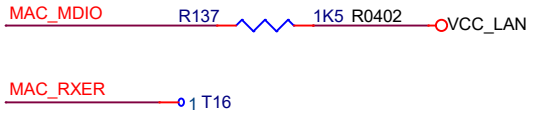

UART0_RX
UART0_TX
UART0_CTS
UART0_RTS
SDIO0_D0
SDIO0_D1
SDIO0_D2
SDIO0_D3
SDIO0_CMD
SDIO0_CLK
BT_WAKE
WIFI_REG_ON
BT_RST
WIFI_HOST_WAKE
BT_HOST_WAKE
UART0_RX 19
UART0_TX 19
UART0_CTS 19
UART0_RTS 19
SDIO0_D0 19
SDIO0_D1 19
SDIO0_D2 19
SDIO0_D3 19
SDIO0_CMD 19
SDIO0_CLK 19
BT_WAKE 19
WIFI_REG_ON 19
BT_RST 19
WIFI_HOST_WAKE 19
BT_HOST_WAKE 19

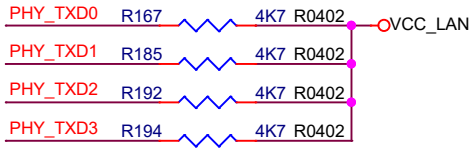

PHY_TXD0 16
PHY_TXD1 16
PHY_TXD2 16
PHY_TXD3 16
PHY_TXEN 16
PHY_TXCLK 16
MAC_RXD0 16
MAC_RXD1 16
MAC_RXD2 16
MAC_RXD3 16
MAC_RXDV 16
MAC_RXCLK 16
MAC_CLK 16
MAC_MDC 16
MAC_MDIO 16
PHY_RST 16
PHY_PMEB 11
PHY_INT 11
Y3
XOUT GND
GND XIN
25MHz-30ppm
CRY-D3225
PHY_XTAL1
PHY_XTAL2
C251 22pF C0402
C252 22pF C0402
If use external clock
then the XTAL2 need
connect to GND for RTL8211E.
R10058 NC R0402
MAC_CLK
R143 NC R0402 PHY_XTAL1
R146 22R R0402 PHY_CLKOUT125
U19
MDI3+ R127 0R R0402
MDI3- R126 0R R0402
MDI1+ R130 0R R0402
MDI1- R131 0R R0402
MDI2+ R132 0R R0402
MDI2- R133 0R R0402
MDI0+ R134 0R R0402
MDI0- R135 0R R0402
TCT1 TD1+ TD1- TCT2 TD2+ TD2- TCT3 TD3+ TD3- TCT4 TD4-
MCT1 MX1+ MX1- MCT2 MX2+ MX2- MCT3 MX3+ MX3- MCT4 MX4-
DD+ DD- DB+ DB- DC+ DC- DA+ DA-
C245 10nF C0402
H5007(Pulse)
R141 75R%1 R0402
R138 75R%1 R0402
R142 75R%1 R0402
R139 75R%1 R0402
JP11
TX+ TX- RX+ RX-
TN1 TN2 RN1 RN2
GND1 GND2 NC1 NC2
RJ45S
C246 102/2KV C1206
C249 102/2KV C1206
C250 NC C0603
VDD10_EPHY
VCC_LAN
R151 2.49K%1 R0402
R154 NC R0402
PHY_RST R226 0R PHYRST
C255 10nF C0402
U20
REGOUT PHY_CLKOUT125 VDDREG PHY_XTAL2 PHY_XTAL1 RSET ENSWREG
GND(EPAD) REGOUT GND CLK125 VDDREG VDDREG CKXTAL2 CKXTAL1 AVDD33 AVDD10 RSET ENSWREG DVDD33
MDI[0]+ MDI[0]- AVDD10 MDI[1]+ MDI[1]- AVDD33 MDI[2]+ MDI[2]- AVDD10 MDI[3]+ MDI[3]- NC
DVDD10 LED1/PHYAD1 LED0/PHYAD0 PMEB LED2_RXDLY MDIO MDC PHYRSTB DVDD10 TXCTL TXD3 TXD2
LED1_AD1 LED0_AD0 PHY_PMEB LED2_RXDLY MAC_MDIO MAC_MDC PHYRST PHY_TXEN PHY_TXD3 PHY_TXD2
RXCTL/PHYAD2 RXD0/SELRGV DVDD33 RXD1/TXDLY RXD2/AN0 RXD3/AN1 RXC INTB DVDD33 TXC TXD0 TXD1
RTL8211E-VB-CG
PHY_RXDV PHY_RXD0 PHY_RXD1 PHY_RXD2 PHY_RXD3 PHY_RXCLK PHY_INT PHY_TXCLK PHY_TXD0 PHY_TXD1
R168 22R R0402 MAC_RXD0
R169 22R R0402 MAC_RXD1
R170 22R R0402 MAC_RXD2
R171 22R R0402 MAC_RXD3
R172 22R R0402 MAC_RXCLK
R173 22R R0402 MAC_RXDV
C269 NC C0402
Close to PHY
R144 4K7 R0402 PHY_RXDV R145 NC R0402 VCC_LAN
R147 4K7 R0402 LED1_AD1 R148 NC R0402 VCC_LAN
R149 NC R0402 LED0_AD0 R150 4K7 R0402
PHY Address=001(RTL8211E)
R152 NC R0402 PHY_RXD2 R153 4K7 R0402 VCC_LAN
R155 NC R0402 PHY_RXD3 R156 4K7 R0402
Config for all capability
R157 4K7 R0402 LED2_RXDLY R158 NC R0402 VCC_LAN
Without RX Delay
R159 4K7 R0402 PHY_RXD1 R160 NC R0402 VCC_LAN
Without TX Delay
PHY_PMEB R161 4K7 R0402 VCC_LAN
PHY_INT R162 4K7 R0402 VCC_LAN
C253 0.1uF C0402
C254 0.1uF C0402
C256 4.7uF C0603
C257 0.1uF C0402
C258 0.1uF C0402
C259 0.1uF C0402
R163 NC R0402 ENSWREG R164 0R R0402 VCC_LAN
Connect ENSWREG to AVDD33 to enable
Switching regulator or connect ENSWREG
to GND to disable Switching regulator.
L9 2.2uH >1.5A IND_303015
REGOUT
Inductance close to PIN48
C260 10uF C0603
C261 0.1uF C0402
C262 0.1uF C0402
C263 0.1uF C0402
C264 0.1uF C0402
C265 0.1uF C0402
C266 0.1uF C0402
VDDREG
Close to PIN44.45
C270 4.7uF C0603
C271 0.1uF C0402
R165 NC R0402 PHY_RXD0 R166 4K7 R0402 VCC_LAN
Pull down for 2.5V RGMII(RTL8211D/8211E)
Pull up for 3.3V RGMII (RTL8211D/8211E)
Pull up1.5 /1.8V RGMII (RTL8211E-VL only)

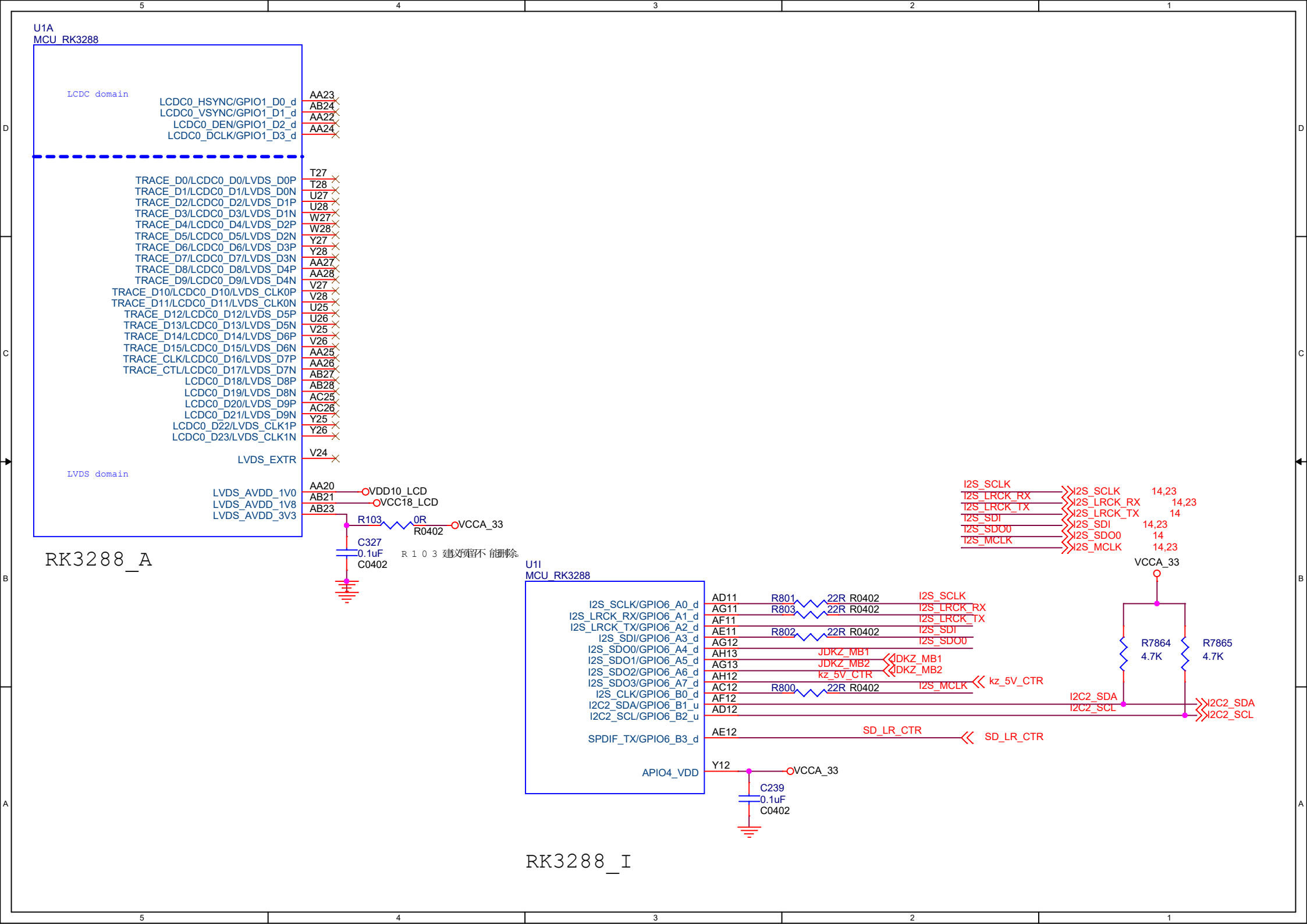
U1Q
MCU_RK3288



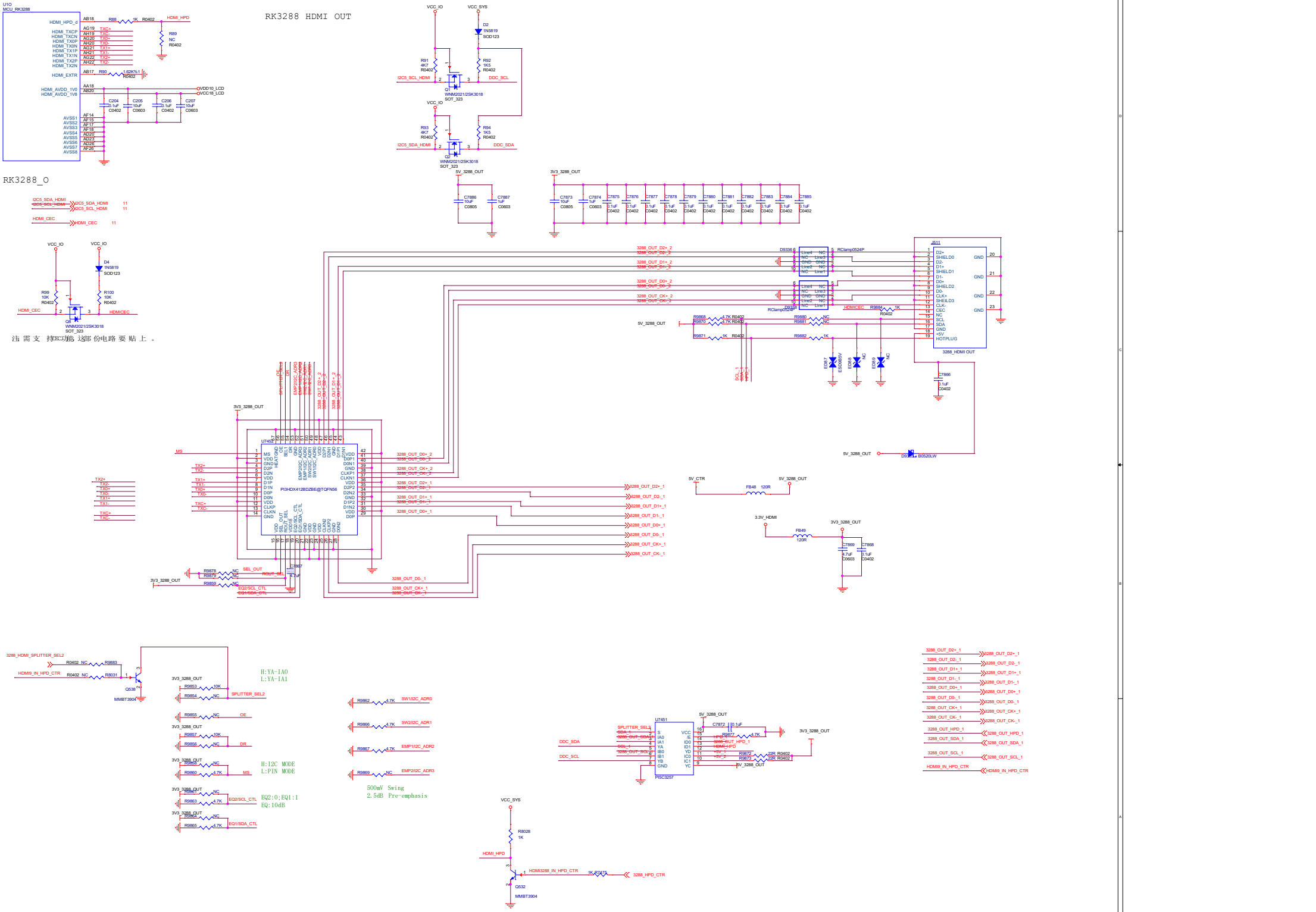
RK3288_Q



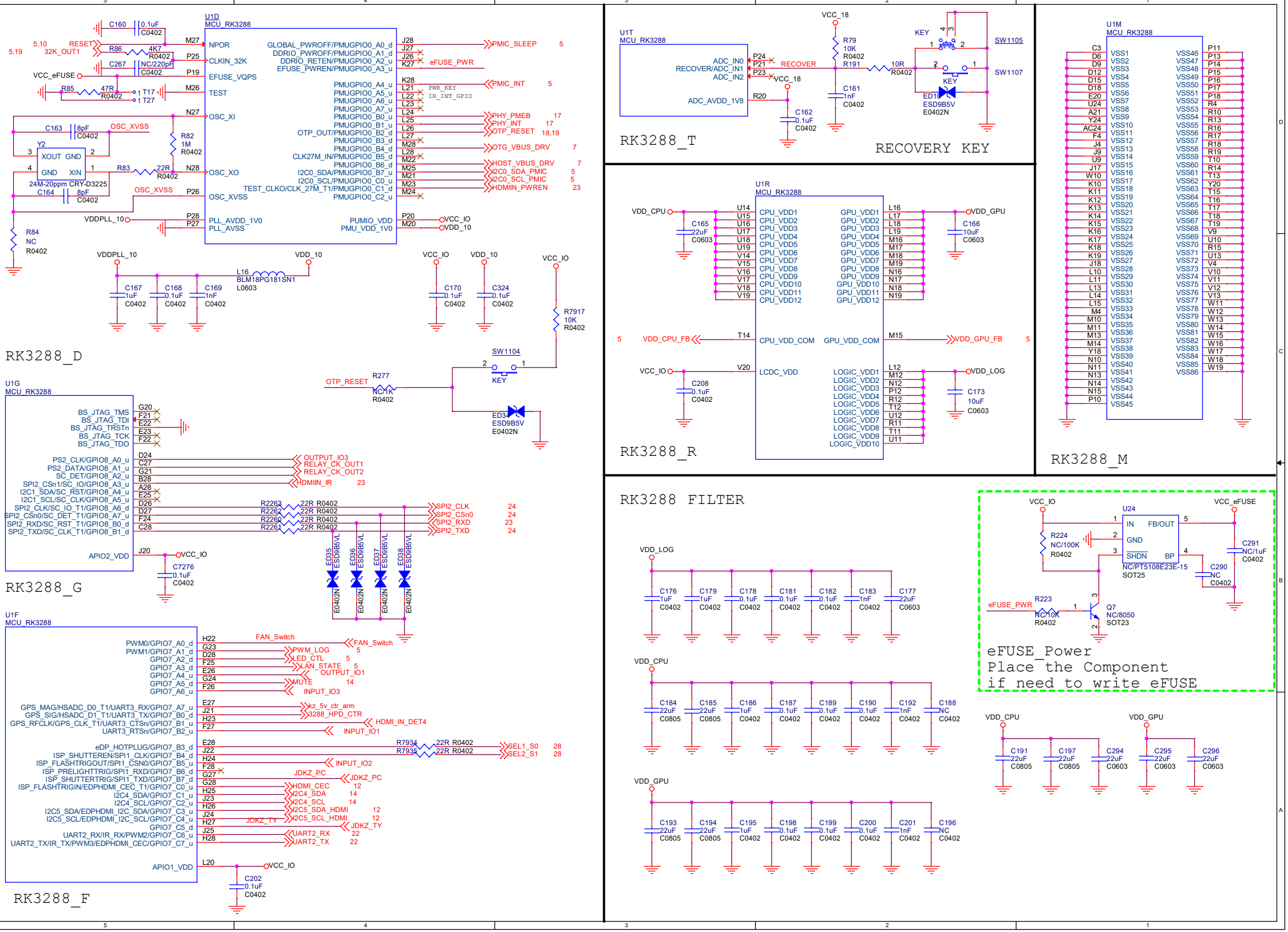


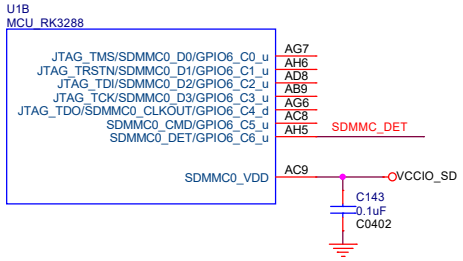

U1A
MCU_RK3288
LCDC domain
LCDC0_HSYNC/GPIO1_D0_d
LCDC0_VSYNC/GPIO1_D1_d
LCDC0_DEN/GPIO1_D2_d
LCDC0_DCLK/GPIO1_D3_d
AA23
AB24
AA22
AA24
TRACE_D0/LCDC0_D0/LVDS_D0P
TRACE_D1/LCDC0_D1/LVDS_D0N
TRACE_D2/LCDC0_D2/LVDS_D1P
TRACE_D3/LCDC0_D3/LVDS_D1N
TRACE_D4/LCDC0_D4/LVDS_D2P
TRACE_D5/LCDC0_D5/LVDS_D2N
TRACE_D6/LCDC0_D6/LVDS_D3P
TRACE_D7/LCDC0_D7/LVDS_D3N
TRACE_D8/LCDC0_D8/LVDS_D4P
TRACE_D9/LCDC0_D9/LVDS_D4N
TRACE_D10/LCDC0_D10/LVDS_CLK0P
TRACE_D11/LCDC0_D11/LVDS_CLK0N
TRACE_D12/LCDC0_D12/LVDS_D5P
TRACE_D13/LCDC0_D13/LVDS_D5N
TRACE_D14/LCDC0_D14/LVDS_D6P
TRACE_D15/LCDC0_D15/LVDS_D6N
TRACE_CLK/LCDC0_D16/LVDS_D7P
TRACE_CTL/LCDC0_D17/LVDS_D7N
LCDC0_D18/LVDS_D8P
LCDC0_D19/LVDS_D8N
LCDC0_D20/LVDS_D9P
LCDC0_D21/LVDS_D9N
LCDC0_D22/LVDS_CLK1P
LCDC0_D23/LVDS_CLK1N
T27
T28
U27
U28
W27
W28
Y27
Y28
AA27
AA28
V27
V28
U25
U26
V25
V26
AA25
AA26
AB27
AB28
AC25
AC26
Y25
Y26
LVDS_EXTR
V24
LVDS domain
LVDS_AVDD_1V0
LVDS_AVDD_1V8
LVDS_AVDD_3V3
AA20
AB21
AB23
VDD10_LCD
VCC18_LCD
R103
0R
R0402
VCCA_33
C327
0.1uF
C0402
R103 建议预留不能删除
RK3288_A
I2S_SCLK
I2S_LRCK_RX
I2S_LRCK_TX
I2S_SDI
I2S_SDO0
I2S_MCLK
I2S_SCLK 14,23
I2S_LRCK_RX 14,23
I2S_LRCK_TX 14
I2S_SDI 14,23
I2S_SDO0 14
I2S_MCLK 14,23
VCCA_33
U1I
MCU_RK3288
I2S_SCLK/GPIO6_A0_d
I2S_LRCK_RX/GPIO6_A1_d
I2S_LRCK_TX/GPIO6_A2_d
I2S_SDI/GPIO6_A3_d
I2S_SDO0/GPIO6_A4_d
I2S_SDO1/GPIO6_A5_d
I2S_SDO2/GPIO6_A6_d
I2S_SDO3/GPIO6_A7_d
I2S_CLK/GPIO6_B0_d
I2C2_SDA/GPIO6_B1_u
I2C2_SCL/GPIO6_B2_u
SPDIF_TX/GPIO6_B3_d
APIO4_VDD
AD11
AG11
AF11
AE11
AG12
AH13
AG13
AH12
AC12
AF12
AD12
AE12
Y12
R801
R803
R802
R800
22R R0402
JDKZ_MB1
JDKZ_MB2
kz_5V_CTR
SD_LR_CTR
R7864
4.7K
R7865
4.7K
I2C2_SDA
I2C2_SCL
C239
0.1uF
C0402
RK3288_I

RK3288 HDMI OUT

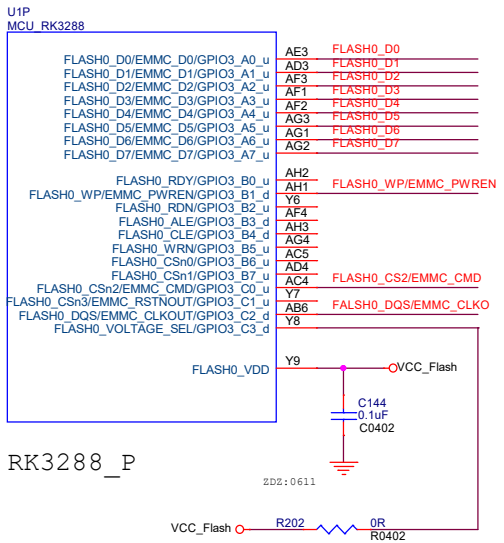


RK3288_O


RK3288_D
RK3288_T
RECOVERY KEY
RK3288_R
RK3288_M
RK3288_G
RK3288_F
RK3288 FILTER
eFUSE_Power
Place the Component
if need to write eFUSE

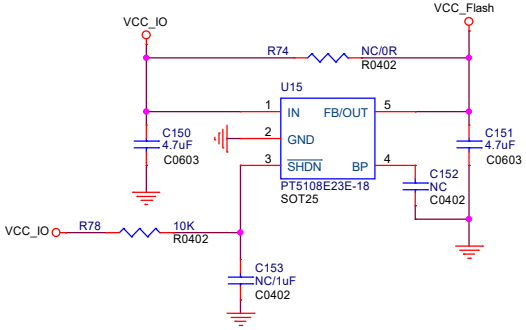


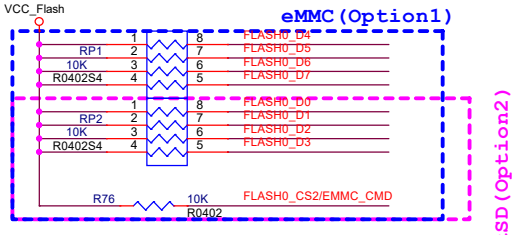
RK3288_B

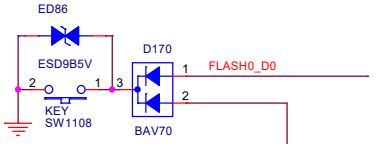


RK3288_P

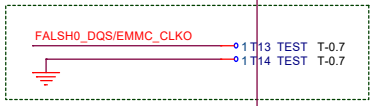
Flash Power 接.8V:1.8V IO
憑: 3. 3VI O





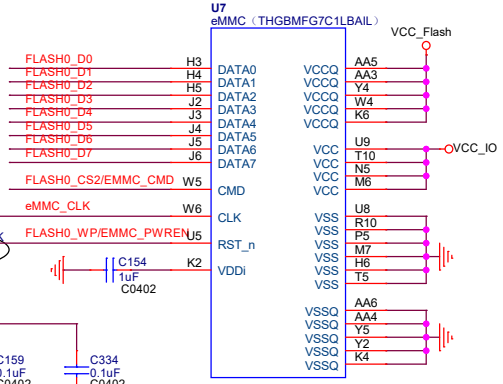


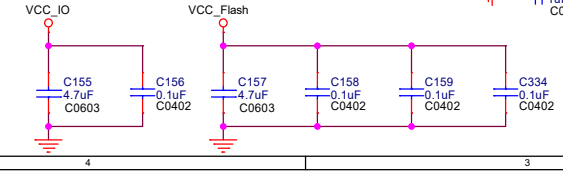
Note:
Reserve a PAD.



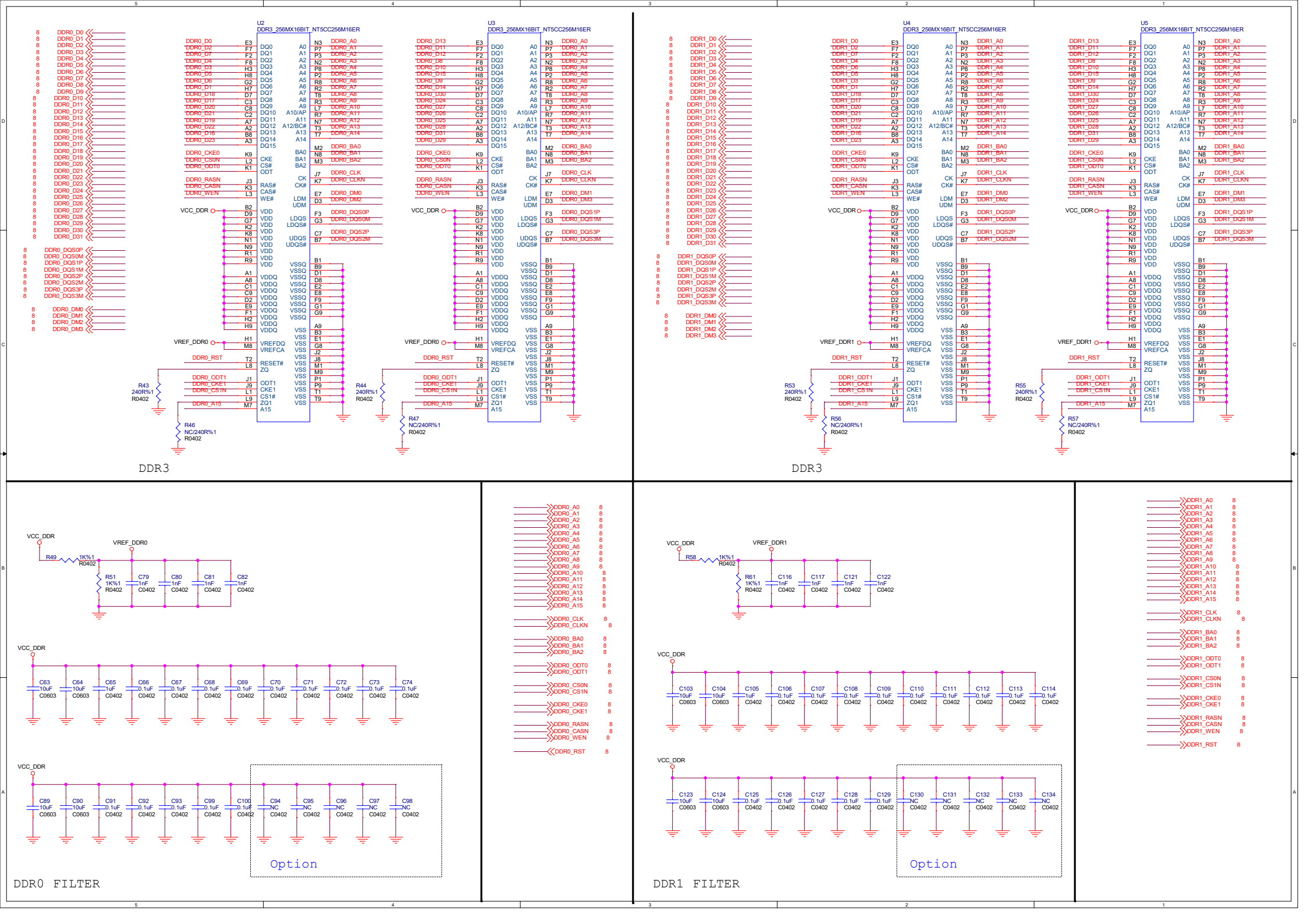
eMMC(default)

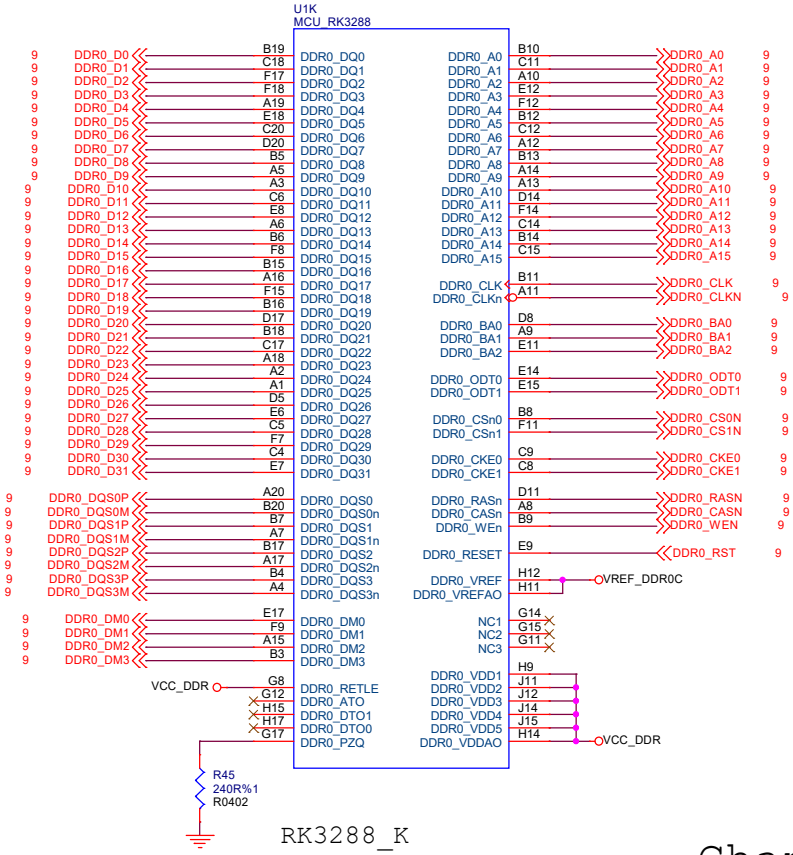
Pull-up select





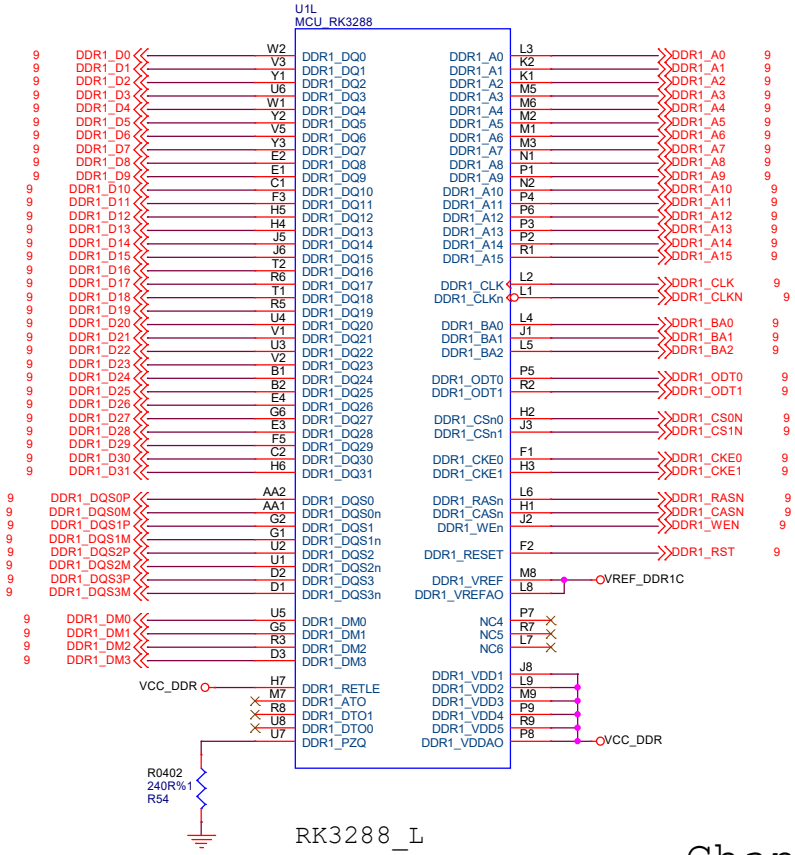
	Flash IO voltage		
eMMC (Default)	1.8V (VCCQ<150mA)	R74:DNP U15:DNP R532:0R	Default
	1.8V (VCCQ>150mA)	R74:DNP U15:PT5108E23E-18(500mA) R532:DNP	请确认所使用的eMMC颗的VCCQ峰值电流。
	3.3V	R74:0R U15:DNP R532:DNP	
Nand Flash	1.8V (VCCQ<150mA)	R74:DNP U15:DNP R532:0R	
	1.8V (VCCQ>150mA)	R74:DNP U15:PT5108E23E-18(500mA) R532:DNP	请确认所使用的Nand颗的VCCQ峰值电流。
	3.3V	R74:0R U15:DNP R532:DNP	


U2
DDR3_256MX16BIT_NT5CC256M16ER
U3
DDR3_256MX16BIT_NT5CC256M16ER
U4
DDR3_256MX16BIT_NT5CC256M16ER
U5
DDR3_256MX16BIT_NT5CC256M16ER
DDR3
DDR3
DDR0 FILTER
DDR1 FILTER
Option
Option



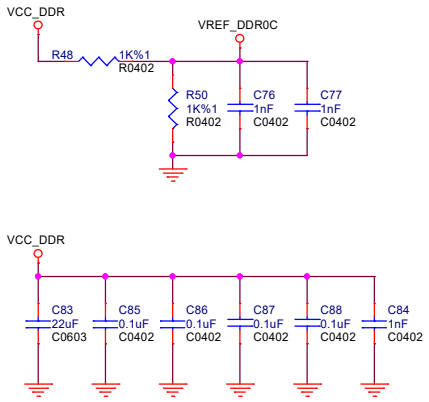
RK3288_K

Channel 0

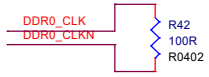


RK3288_L

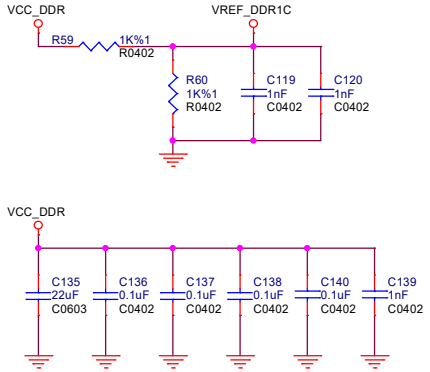
Channel 1



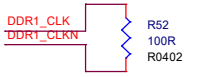
DDR0 FILTER



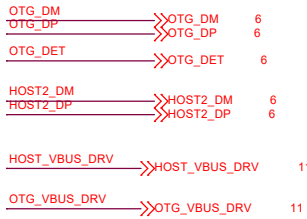
Note:
These termination resistors must be placed
in the middle of trace, and the termination resistor of CLK must be placed in thebifurcation point.

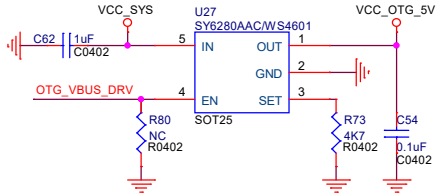


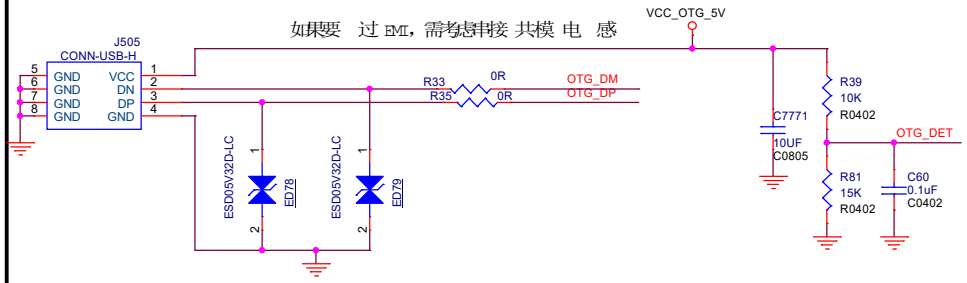
DDR1 FILTER



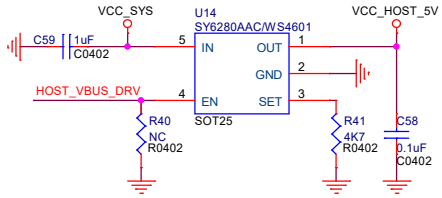
Note:
These termination resistors must be placed
in the middle of trace, and the termination resistor of CLK must be placed in thebifurcation point.

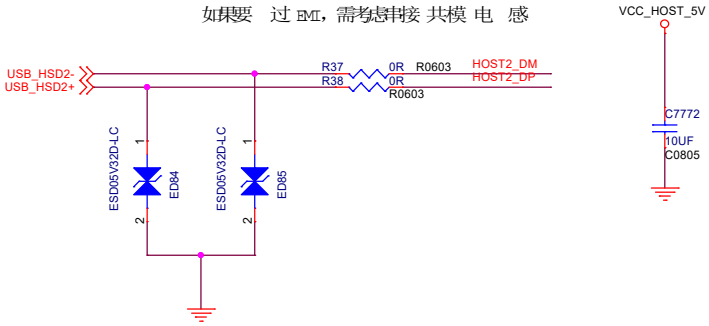


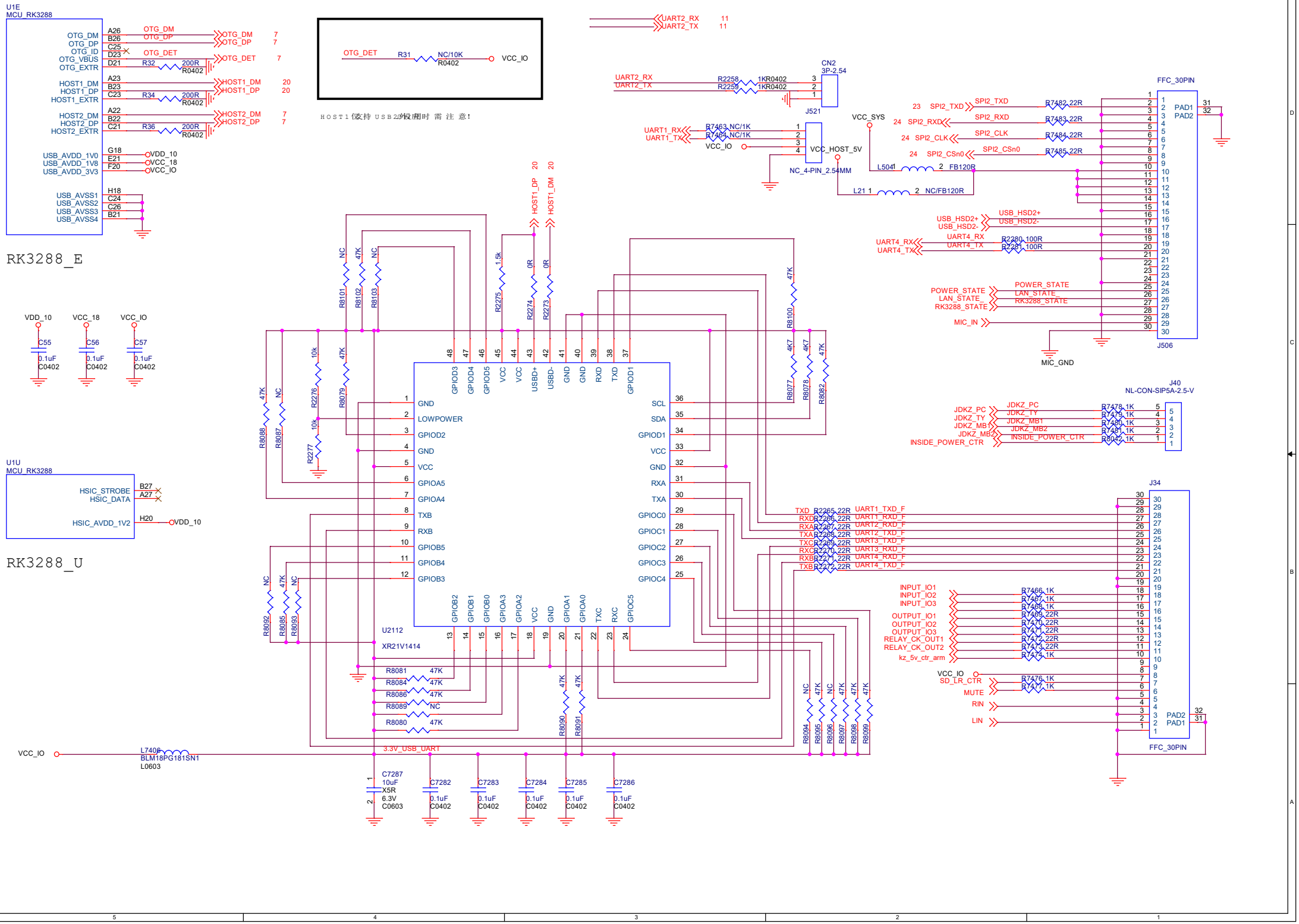


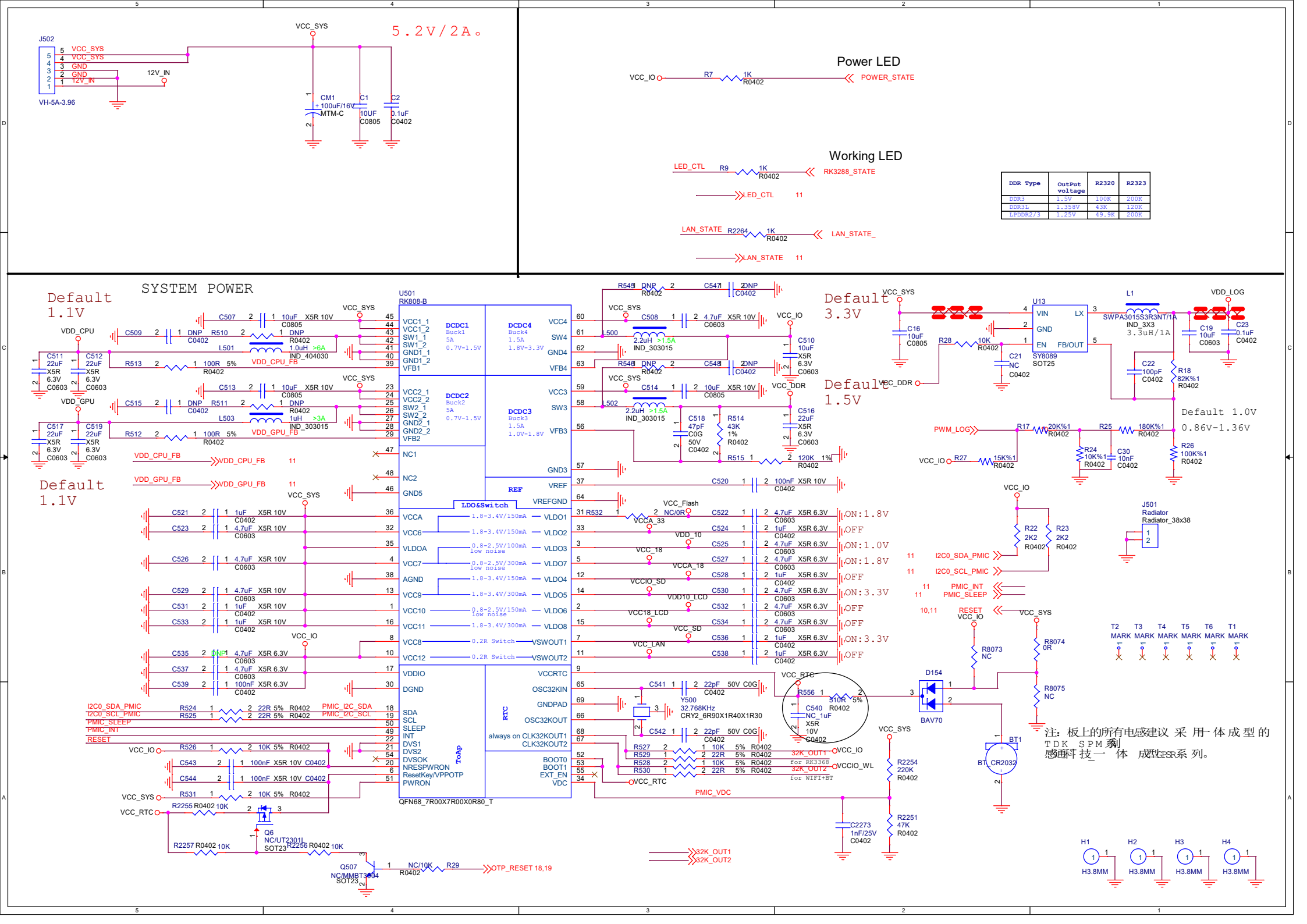


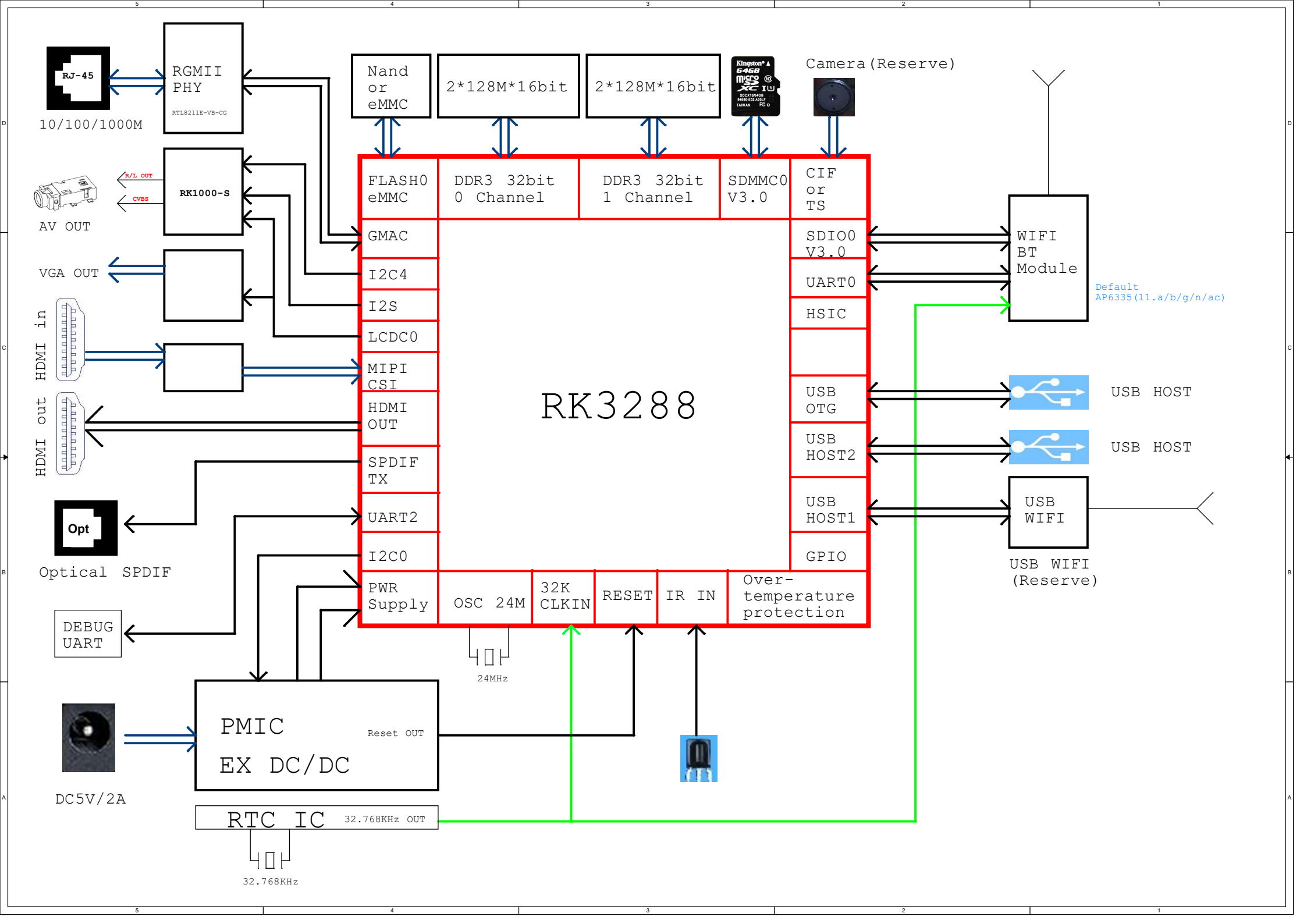
注：默 认 HOST接口（烧写 固 件用 这 个 接 口）
如果要 当 OTG电路 需更改。



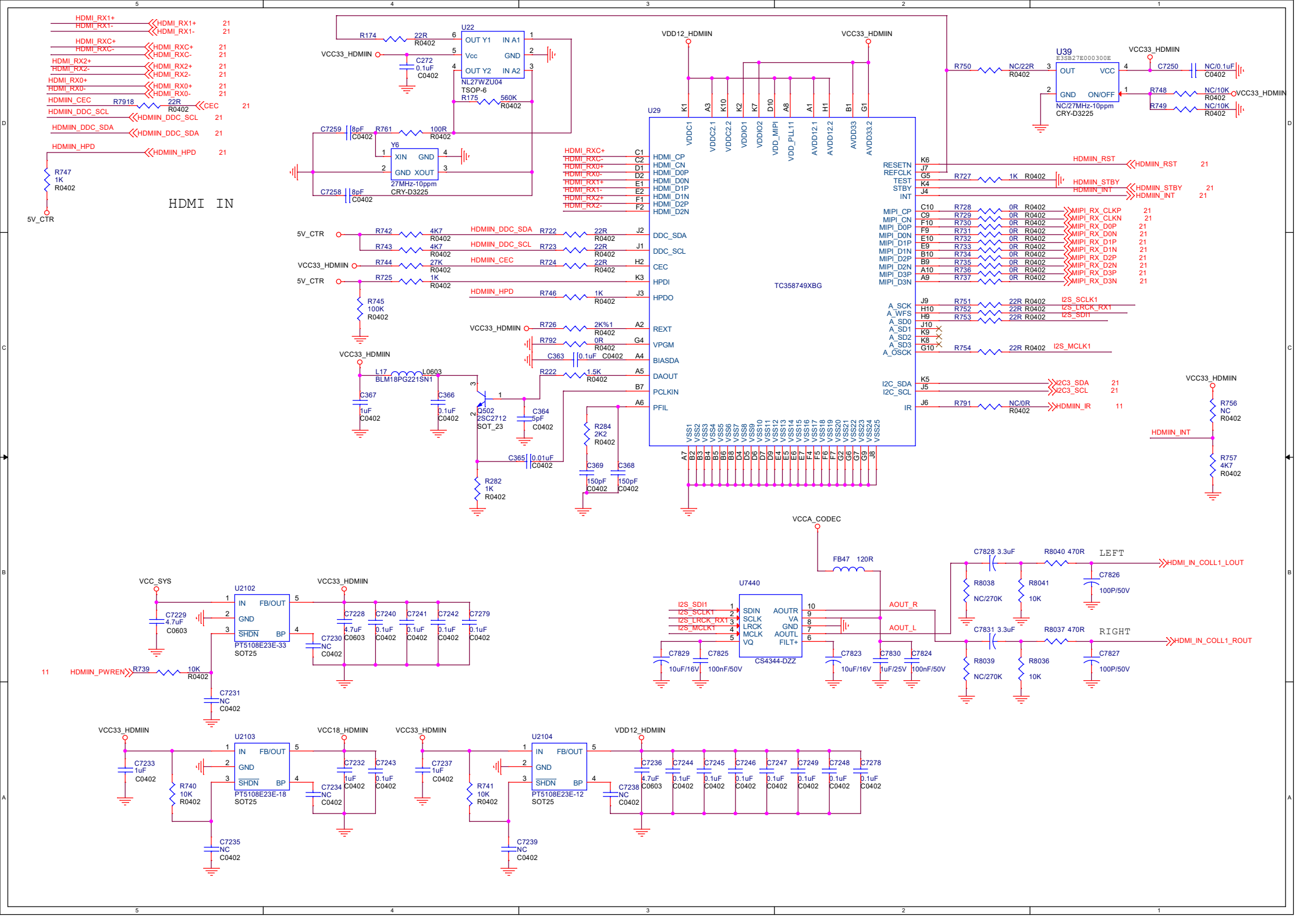



U1E
MCU_RK3288
OTG_DM
OTG_DP
OTG_ID
OTG_VBUS
OTG_EXTR
HOST1_DM
HOST1_DP
HOST1_EXTR
HOST2_DM
HOST2_DP
HOST2_EXTR
USB_AVDD_1V0
USB_AVDD_1V8
USB_AVDD_3V3
USB_AVSS1
USB_AVSS2
USB_AVSS3
USB_AVSS4
RK3288_E
OTG_DET
R31
NC/10K
R0402
VCC_IO
HOST1仅支持USB2.0设备时需注意!
UART2_RX
UART2_TX
CN2
3P-2.54
J521
R2258 1KR0402
R2259 1KR0402
UART1_RX
UART1_TX
R7463 NC/1K
R7464 NC/1K
VCC_HOST_5V
NC_4-PIN_2.54MM
VCC_SYS
L5041 2 FB120R
L21 1 2 NC/FB120R
FFC_30PIN
J506
PAD1
PAD2
SPI2_TXD
SPI2_RXD
SPI2_CLK
SPI2_CSn0
R7482 22R
R7483 22R
R7484 22R
R7485 22R
USB_HSD2+
USB_HSD2-
UART4_RX
UART4_TX
R2280 100R
R2281 100R
POWER_STATE
LAN_STATE_
RK3288_STATE
MIC_IN
MIC_GND
J40
NL-CON-SIP5A-2.5-V
JDKZ_PC
JDKZ_TY
JDKZ_MB1
JDKZ_MB2
INSIDE_POWER_CTR
R7478 1K
R7479 1K
R7480 1K
R7481 1K
R8042 1K
VDD_10
VCC_18
VCC_IO
C55 0.1uF C0402
C56 0.1uF C0402
C57 0.1uF C0402
U1U
MCU_RK3288
HSIC_STROBE
HSIC_DATA
HSIC_AVDD_1V2
RK3288_U
U2112
XR21V1414
GND
LOWPOWER
GPIOD2
GPIOA5
GPIOA4
TXB
RXB
GPIOB5
GPIOB4
GPIOB3
GPIOD3
GPIOD4
GPIOD5
VCC
USBD+
USBD-
RXD
TXD
GPIOD1
SCL
SDA
GPIOC0
GPIOC1
GPIOC2
GPIOC3
GPIOC4
GPIOB2
GPIOB1
GPIOB0
GPIOA3
GPIOA2
GPIOA1
GPIOA0
TXC
RXC
GPIOC5
R8101 NC
R8102 47K
R8103 NC
R2275 1.5k
R2274 0R
R2273 0R
R8100 47K
R8077 4K7
R8078 4K7
R8082 47K
R8088 47K
R8087 NC
R2276 10k
R2277 10k
R8079 47K
R8092 NC
R8085 47K
R8093 NC
R8081 47K
R8084 47K
R8086 47K
R8089 NC
R8080 47K
R8090 47K
R8091 47K
R8094 NC
R8095 47K
R8096 NC
R8097 47K
R8098 47K
R8099 47K
TXD R2265 22R UART1_TXD_F
RXD R2266 22R UART1_RXD_F
RXA R2267 22R UART2_RXD_F
TXA R2268 22R UART2_TXD_F
TXC R2269 22R UART3_TXD_F
RXC R2270 22R UART3_RXD_F
RXB R2271 22R UART4_RXD_F
TXB R2272 22R UART4_TXD_F
J34
FFC_30PIN
INPUT_IO1
INPUT_IO2
INPUT_IO3
OUTPUT_IO1
OUTPUT_IO2
OUTPUT_IO3
RELAY_CK_OUT1
RELAY_CK_OUT2
kz_5v_ctr_arm
SD_LR_CTR
MUTE
RIN
LIN
R7466 1K
R7467 1K
R7468 1K
R7469 22R
R7470 22R
R7471 22R
R7472 22R
R7473 22R
R7474 1K
R7476 1K
R7477 1K
VCC_IO
L7406
BLM18PG181SN1
L0603
3.3V_USB_UART
C7287 10uF X5R 6.3V C0603
C7282 0.1uF C0402
C7283 0.1uF C0402
C7284 0.1uF C0402
C7285 0.1uF C0402
C7286 0.1uF C0402

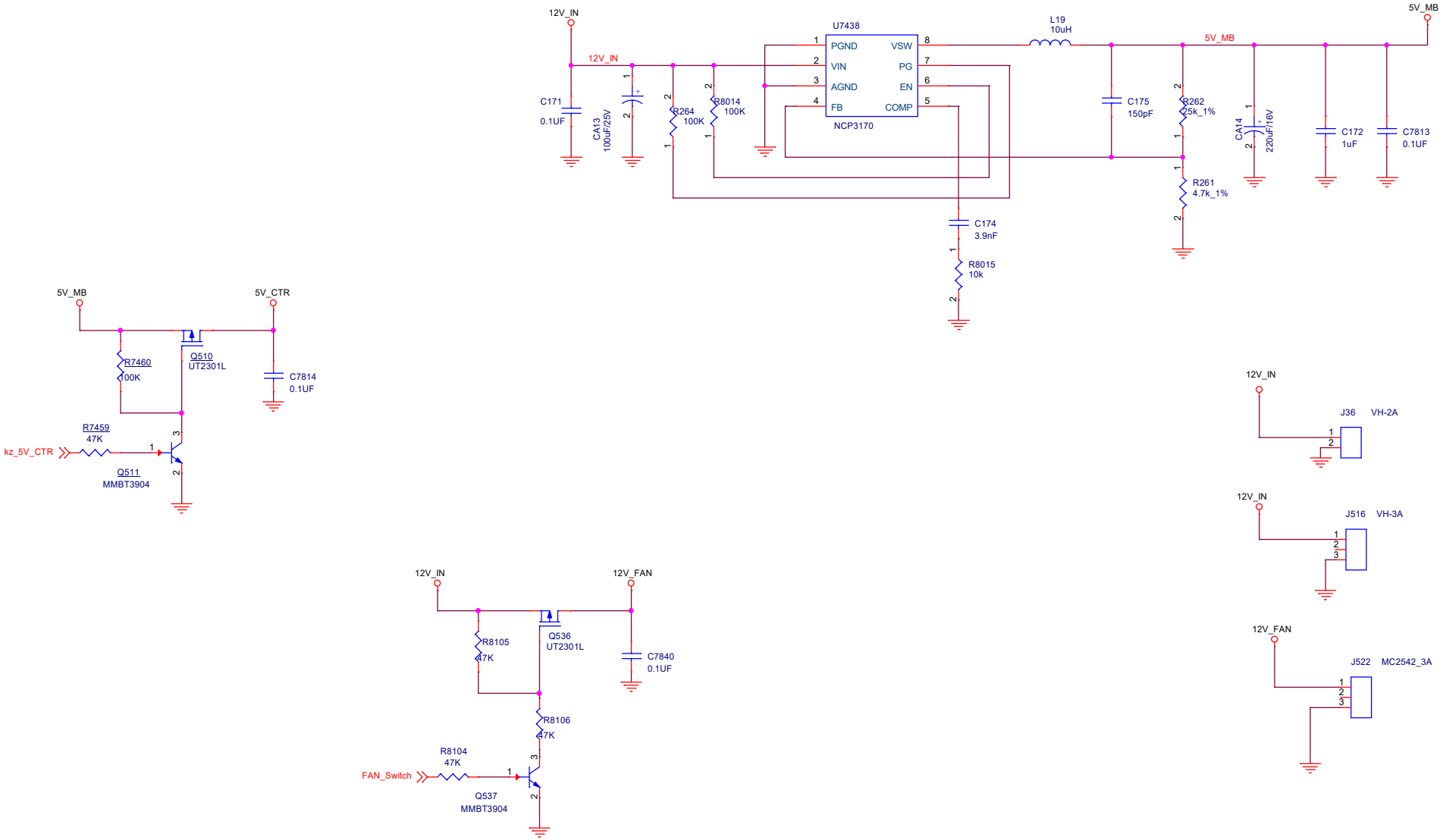

J502
VH-5A-3.96
VCC_SYS
5.2V/2A。
12V_IN
CM1
100uF/16V
MTM-C
C1
10UF
C0805
C2
0.1uF
C0402
Power LED
VCC_IO
R7
1K
R0402
POWER_STATE
Working LED
LED_CTL
R9
RK3288_STATE
LED_CTL 11
LAN_STATE
R2264
LAN_STATE_
LAN_STATE 11
DDR Type | OutPut voltage | R2320 | R2323
DDR3 | 1.5V | 100K | 200K
DDR3L | 1.358V | 43K | 120K
LPDDR2/3 | 1.25V | 49.9K | 200K
SYSTEM POWER
Default 1.1V
U501
RK808-B
DCDC1 Buck1 5A 0.7V-1.5V
DCDC2 Buck2 5A 0.7V-1.5V
DCDC3 Buck3 1.5A 1.0V-1.8V
DCDC4 Buck4 1.5A 1.8V-3.3V
LDO&Switch
REF
RTC
QFN68_7R00X7R00X0R80_T
VDD_CPU
VDD_GPU
VDD_CPU_FB
VDD_GPU_FB
Default 1.1V
VCC_SYS
VCC_IO
VCC_RTC
VCC_Flash
VCC_DDR
Default 3.3V
Default 1.5V
Default 1.0V
0.86V-1.36V
ON:1.8V
OFF
ON:1.0V
ON:3.3V
I2C0_SDA_PMIC
I2C0_SCL_PMIC
PMIC_SLEEP
PMIC_INT
RESET
PMIC_I2C_SDA
PMIC_I2C_SCL
PMIC_VDC
32K_OUT1
32K_OUT2
OTP_RESET 18,19
BAV70
CR2032
Radiator_38x38
H3.8MM
注：板上的所有电感建议 采 用一 体 成 型 的 TDK SPM系列
感通科 技一 体 成型PSR系 列。


RJ-45
10/100/1000M
RGMII PHY
RTL8211E-VB-CG
Nand or eMMC
2*128M*16bit
2*128M*16bit
Camera(Reserve)
AV OUT
R/L OUT
CVBS
RK1000-S
VGA OUT
HDMI in
HDMI out
Opt
Optical SPDIF
DEBUG UART
DC5V/2A
PMIC
EX DC/DC
Reset OUT
RTC IC
32.768KHz OUT
32.768KHz
24MHz
FLASH0 eMMC
DDR3 32bit 0 Channel
DDR3 32bit 1 Channel
SDMMC0 V3.0
CIF or TS
GMAC
I2C4
I2S
LCDC0
MIPI CSI
HDMI OUT
SPDIF TX
UART2
I2C0
PWR Supply
OSC 24M
32K CLKIN
RESET
IR IN
Over-temperature protection
SDIO0 V3.0
UART0
HSIC
USB OTG
USB HOST2
USB HOST1
GPIO
RK3288
WIFI BT Module
Default AP6335(11.a/b/g/n/ac)
USB HOST
USB HOST
USB WIFI
USB WIFI (Reserve)

Version	Date	Author	Change Note	Approved
V1	20200702	JZX	First edictor	


HDMI IN
HDMI_RX1+
HDMI_RX1-
HDMI_RXC+
HDMI_RXC-
HDMI_RX2+
HDMI_RX2-
HDMI_RX0+
HDMI_RX0-
HDMIIN_CEC
HDMIIN_DDC_SCL
HDMIIN_DDC_SDA
HDMIIN_HPD
R7918 22R R0402
R747 1K R0402
5V_CTR
U22
NL27WZU04
TSOP-6
R174 22R R0402
R175 560K R0402
C272 0.1uF C0402
Y6
27MHz-10ppm
CRY-D3225
C7259 8pF C0402
C7258 8pF C0402
R761 100R R0402
U29
TC358749XBG
HDMI_CP
HDMI_CN
HDMI_D0P
HDMI_D0N
HDMI_D1P
HDMI_D1N
HDMI_D2P
HDMI_D2N
DDC_SDA
DDC_SCL
CEC
HPDI
HPDO
REXT
VPGM
BIASDA
DAOUT
PCLKIN
PFIL
R742 4K7 R0402
R743 4K7 R0402
R744 27K R0402
R725 1K R0402
R745 100K R0402
R722 22R R0402
R723 22R R0402
R724 22R R0402
R746 1K R0402
R726 2K%1 R0402
R792 0R R0402
C363 0.1uF C0402
R222 1.5K R0402
L17 BLM18PG221SN1 L0603
C367 1uF C0402
C366 0.1uF C0402
Q502 2SC2712 SOT_23
C364 5pF C0402
C365 0.01uF C0402
R282 1K R0402
R284 2K2 R0402
C369 150pF C0402
C368 150pF C0402
VDD12_HDMIIN
VCC33_HDMIIN
U39
E3SB27E000300E
NC/27MHz-10ppm
CRY-D3225
R750 NC/22R R0402
C7250 NC/0.1uF C0402
R748 NC/10K R0402
R749 NC/10K R0402
RESETN
REFCLK
TEST
STBY
INT
R727 1K R0402
HDMIIN_RST
HDMIIN_STBY
HDMIIN_INT
MIPI_CP
MIPI_CN
MIPI_D0P
MIPI_D0N
MIPI_D1P
MIPI_D1N
MIPI_D2P
MIPI_D2N
MIPI_D3P
MIPI_D3N
MIPI_RX_CLKP
MIPI_RX_CLKN
MIPI_RX_D0P
MIPI_RX_D0N
MIPI_RX_D1P
MIPI_RX_D1N
MIPI_RX_D2P
MIPI_RX_D2N
MIPI_RX_D3P
MIPI_RX_D3N
A_SCK
A_WFS
A_SD0
A_SD1
A_SD2
A_SD3
A_OSCK
I2S_SCLK1
I2S_LRCK_RX1
I2S_SDI1
I2S_MCLK1
I2C_SDA
I2C_SCL
IR
R791 NC/0R R0402
HDMIIN_IR
R756 NC R0402
R757 4K7 R0402
VCCA_CODEC
FB47 120R
U7440
CS4344-DZZ
AOUTR
AOUTL
AOUT_R
AOUT_L
C7828 3.3uF
C7831 3.3uF
R8040 470R
R8037 470R
R8038 NC/270K
R8041 10K
R8039 NC/270K
R8036 10K
C7826 100P/50V
C7827 100P/50V
LEFT
RIGHT
HDMI_IN_COLL1_LOUT
HDMI_IN_COLL1_ROUT
VCC_SYS
U2102
PT5108E23E-33
SOT25
C7229 4.7uF C0603
C7230 NC C0402
C7228 4.7uF C0603
C7240 0.1uF C0402
C7241 0.1uF C0402
C7242 0.1uF C0402
C7279 0.1uF C0402
R739 10K R0402
HDMIIN_PWREN
C7231 NC C0402
U2103
PT5108E23E-18
SOT25
VCC18_HDMIIN
C7233 1uF C0402
R740 10K R0402
C7234 NC C0402
C7232 1uF C0402
C7243 0.1uF C0402
C7235 NC C0402
U2104
PT5108E23E-12
SOT25
C7237 1uF C0402
R741 10K R0402
C7238 NC C0402
C7236 4.7uF C0603
C7244 0.1uF C0402
C7245 0.1uF C0402
C7246 0.1uF C0402
C7247 0.1uF C0402
C7249 0.1uF C0402
C7248 0.1uF C0402
C7278 0.1uF C0402
C7239 NC C0402

Power Supply



Content Indexing

6 LAYERS PCB STACK

TOP(Signal1)		Cu,thickness:0.7mil,Plating to 1oz
	FR4,thickness:3.8mil,Dielectric Constant:4.3	
GND1		Cu,thickness:1.5mil, 1oz
	FR4,thickness:8mil,Dielectric Constant:4.3	
POWER		Cu,thickness:1.5mil, 1oz
FR4,thickness:adjust thickness according to the thickness of board ,Dielectric Constant:4.3		
Signal2		Cu,thickness:1.5mil, 1oz
	FR4,thickness:8mil,Dielectric Constant:4.3	
GND2		Cu,thickness:1.5mil, 1oz
	FR4,thickness:3.8mil,Dielectric Constant:4.3	
BOTTOM(Signal3)		Cu,thickness:0.7mil,Plating to 1oz

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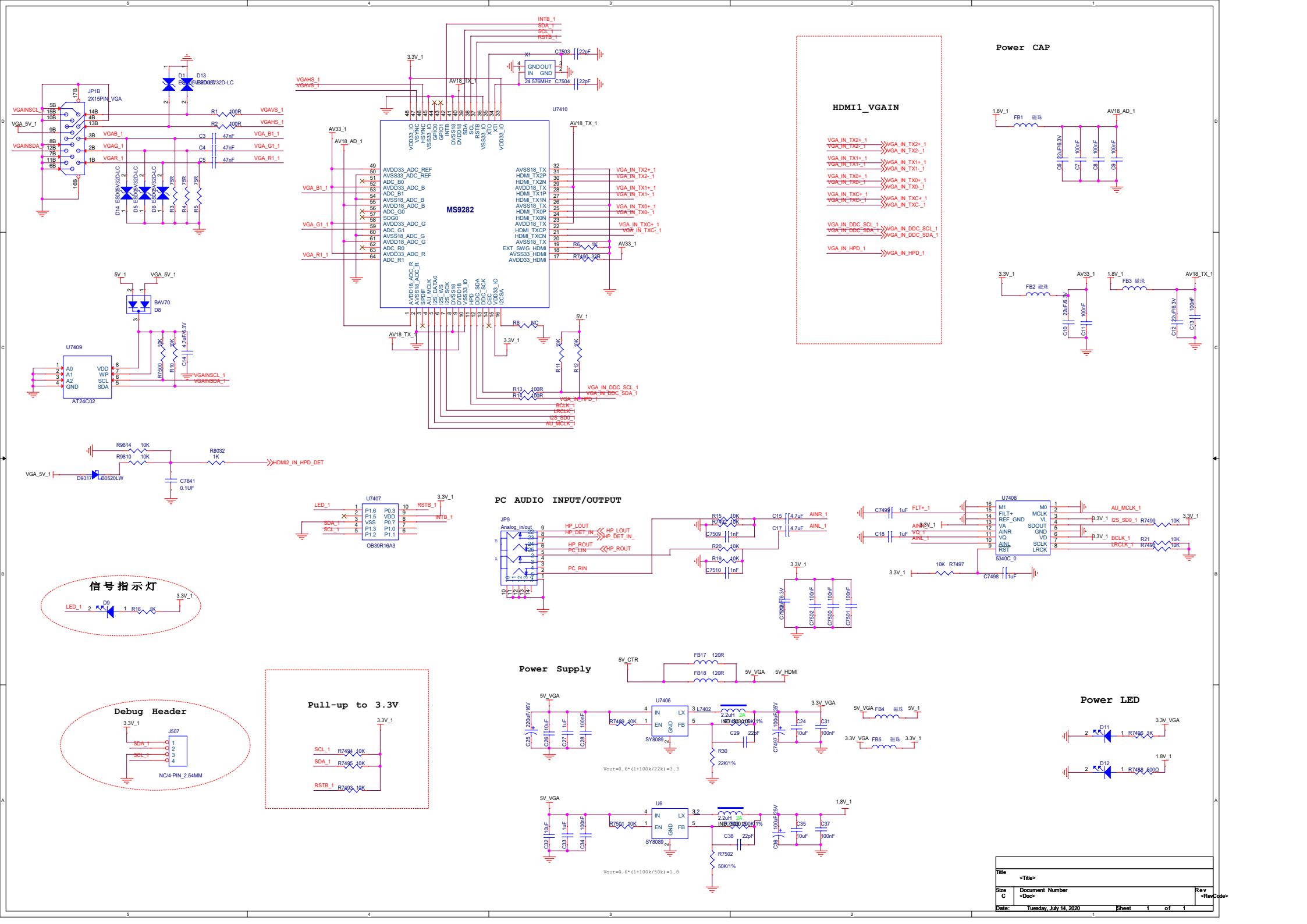
JP1B
2X15PIN_VGA
VGAINSCL_1
VGAINSDA_1
VGA_5V_1
VGAB_1
VGAG_1
VGAR_1
VGAVS_1
VGAHS_1
VGA_B1_1
VGA_G1_1
VGA_R1_1
D1
D13
ESD05V32D-LC
D14
D5
D6
D7
R1 100R
R2 100R
C3 47nF
C4 47nF
C5 47nF
R3 75R
R4 75R
R5 75R
U7410
MS9282
INTB_1
SDA_1
SCL_1
RSTB_1
X1
GNDOUT
IN GND
24.576MHz
C7503 22pF
C7504 22pF
3.3V_1
AV18_TX_1
AV33_1
AV18_AD_1
VGA_IN_TX2+_1
VGA_IN_TX2-_1
VGA_IN_TX1+_1
VGA_IN_TX1-_1
VGA_IN_TX0+_1
VGA_IN_TX0-_1
VGA_IN_TXC+_1
VGA_IN_TXC-_1
R6 1K
R7490 33R
R8 NC
R11 10K
R12 10K
R13 100R
R14 100R
VGA_IN_DDC_SCL_1
VGA_IN_DDC_SDA_1
VGA_IN_HPD_1
BCLK_1
LRCLK_1
I2S_SD0_1
AU_MCLK_1
5V_1
U7409
AT24C02
BAV70
D8
R7500 10K
R9 10K
C14 4.7uF/6.3V
R9814 10K
R9810 10K
R8032 1K
HDMI2_IN_HPD_DET
D9317
LB0520LW
C7841 0.1UF
U7407
OB39R16A3
LED_1
RSTB_1
INTB_1
HDMI1_VGAIN
Power CAP
FB1 磁珠
C6 22uF/6.3V
C7 100nF
C8 100nF
C9 100nF
FB2 磁珠
C10 22uF/6.3V
C11 100nF
FB3 磁珠
C12 22uF/6.3V
C13 100nF
PC AUDIO INPUT/OUTPUT
JP9
Analog_in/out
HP_LOUT
HP_DET_IN
HP_ROUT
PC_LIN
PC_RIN
R15 10K
R7492 10K
R20 10K
R19 10K
C15 4.7uF
C17 4.7uF
C7509 1nF
C7510 1nF
AINR_1
AINL_1
U7408
5340C_0
C7499 1uF
C18 1uF
FLT+_1
VQ_1
R7497 10K
C7498 1uF
R7499 10K
R21 10K
C7502 100nF
C7500 100nF
C7501 100nF
信号指示灯
D9
R16 1K
Debug Header
J507
NC/4-PIN_2.54MM
Pull-up to 3.3V
R7494 10K
R7495 10K
R7493 10K
Power Supply
5V_CTR
FB17 120R
FB18 120R
5V_VGA
5V_HDMI
U7406
L7402
2.2uH 2A
R7498 10K
R30 22K/1%
C29 22pF
C24 10uF
C31 100nF
C7497 100uF/25V
3.3V_VGA
FB4 磁珠
FB5 磁珠
Vout=0.6*(1+100k/22k)=3.3
U6
R7501 10K
C38 22pF
R7502 50K/1%
C35 10uF
C37 100nF
C36 100uF/25V
1.8V_1
Vout=0.6*(1+100k/50k)=1.8
Power LED
D11
R7496 1K
D12
R7488 500Ω
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<Doc>
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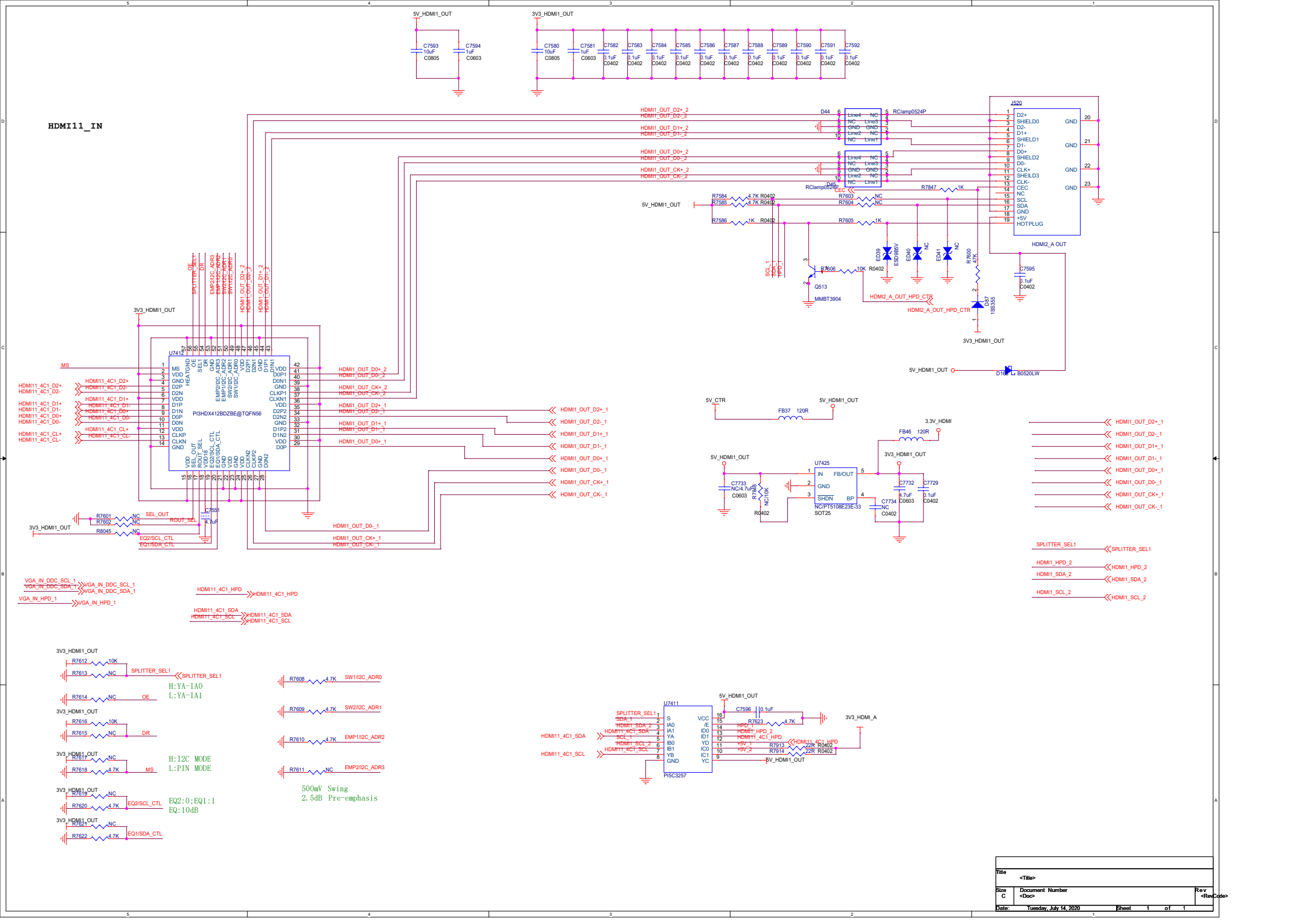
HDMI11_IN
5V_HDMI1_OUT
3V3_HDMI1_OUT
C7593 10uF C0805
C7594 1uF C0603
C7580 10uF C0805
C7581 1uF C0603
C7582 0.1uF C0402
C7583 0.1uF C0402
C7584 0.1uF C0402
C7585 0.1uF C0402
C7586 0.1uF C0402
C7587 0.1uF C0402
C7588 0.1uF C0402
C7589 0.1uF C0402
C7590 0.1uF C0402
C7591 0.1uF C0402
C7592 0.1uF C0402
HDMI1_OUT_D2+_2
HDMI1_OUT_D2-_2
HDMI1_OUT_D1+_2
HDMI1_OUT_D1-_2
HDMI1_OUT_D0+_2
HDMI1_OUT_D0-_2
HDMI1_OUT_CK+_2
HDMI1_OUT_CK-_2
D44 RClamp0524P
D45 RClamp0524P
J520
D2+
SHIELD0
D2-
D1+
SHIELD1
D1-
D0+
SHIELD2
D0-
CLK+
SHEILD3
CLK-
CEC
NC
SCL
SDA
GND
+5V
HOTPLUG
HDMI2_A OUT
R7584 4.7K R0402
R7585 4.7K R0402
R7586 1K R0402
R7603 NC
R7604 NC
R7605 1K
R7847 1K
R7606 10K R0402
Q513 MMBT3904
HDMI2_A_OUT_HPD_CTR
D39 ESD9B5V
D40 NC
D41 NC
R7600 47K
D37 1SS355
C7595 0.1uF C0402
D186 B0520LW
U7412 PI3HDX412BDZBE@TQFN56
MS
HDMI11_4C1_D2+
HDMI11_4C1_D2-
HDMI11_4C1_D1+
HDMI11_4C1_D1-
HDMI11_4C1_D0+
HDMI11_4C1_D0-
HDMI11_4C1_CL+
HDMI11_4C1_CL-
HDMI1_OUT_D2+_1
HDMI1_OUT_D2-_1
HDMI1_OUT_D1+_1
HDMI1_OUT_D1-_1
HDMI1_OUT_D0+_1
HDMI1_OUT_D0-_1
HDMI1_OUT_CK+_1
HDMI1_OUT_CK-_1
SPLITTER_SEL1
OE
DR
EMP2/I2C_ADR3
EMP1/I2C_ADR2
SW2/I2C_ADR1
SW1/I2C_ADR0
SEL_OUT
ROUT_SEL
EQ2/SCL_CTL
EQ1/SDA_CTL
R7601 NC
R7602 NC
R8045 NC
C7551 4.7uF
5V_CTR
FB37 120R
3.3V_HDMI
FB46 120R
U7425 SOT25
IN
FB/OUT
GND
SHDN
BP
NC/PT5108E23E-33
C7733 NC/4.7uF C0603
R7743 NC/10K R0402
C7732 4.7uF C0603
C7729 0.1uF C0402
C7734 NC C0402
VGA_IN_DDC_SCL_1
VGA_IN_DDC_SDA_1
VGA_IN_HPD_1
HDMI11_4C1_HPD
HDMI11_4C1_SDA
HDMI11_4C1_SCL
HDMI1_HPD_2
HDMI1_SDA_2
HDMI1_SCL_2
R7612 10K
R7613 NC
R7614 NC
R7616 10K
R7615 NC
R7617 NC
R7618 4.7K
R7619 NC
R7620 4.7K
R7621 NC
R7622 4.7K
H:YA-IA0
L:YA-IA1
H:I2C MODE
L:PIN MODE
EQ2:0;EQ1:1
EQ:10dB
R7608 4.7K SW1/I2C_ADR0
R7609 4.7K SW2/I2C_ADR1
R7610 4.7K EMP1/I2C_ADR2
R7611 NC EMP2/I2C_ADR3
500mV Swing
2.5dB Pre-emphasis
U7411 PI5C3257
SPLITTER_SEL1
SDA_1
HDMI1_SDA_2
SCL_1
HDMI1_SCL_2
HDMI11_4C1_SDA
HDMI11_4C1_SCL
C7596 0.1uF
R7623 4.7K
HPD_1
HDMI1_HPD_2
HDMI11_4C1_HPD
+5V_1
+5V_2
R7913 22R R0402
R7914 22R R0402
3V3_HDMI_A
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Document Number
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Rev
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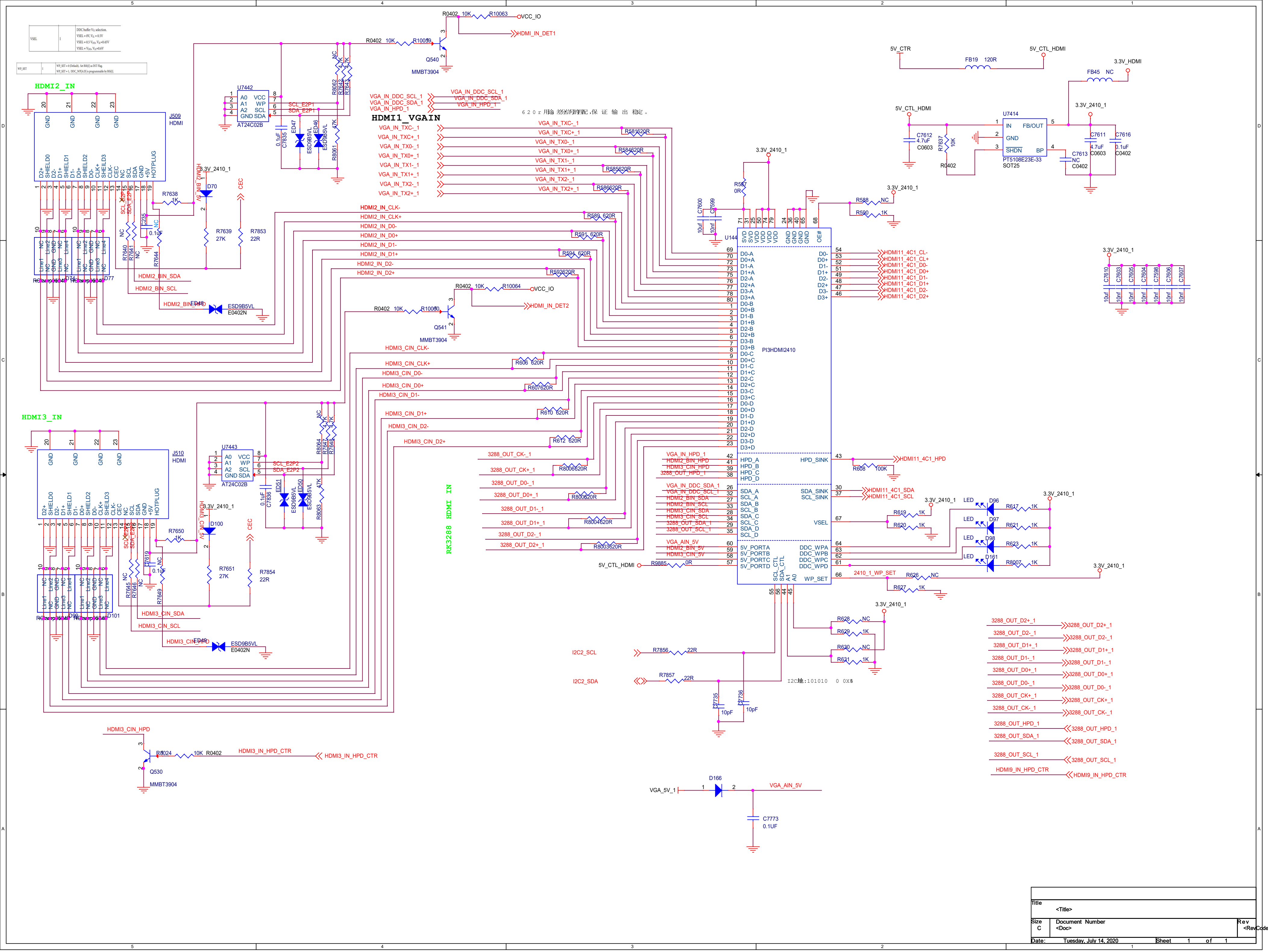

HDMI2_IN
HDMI1_VGAIN
HDMI3_IN
RK3288 HDMI IN
J509 HDMI
J510 HDMI
U7442 AT24C02B
U7443 AT24C02B
U144 PI3HDMI2410
U7414 PT5108E23E-33 SOT25
Q540 MMBT3904
Q541 MMBT3904
Q530 MMBT3904
HDMI_IN_DET1
HDMI_IN_DET2
VCC_IO
5V_CTR
5V_CTL_HDMI
3.3V_HDMI
3.3V_2410_1
FB19 120R
FB45 NC
VGA_IN_DDC_SCL_1
VGA_IN_DDC_SDA_1
VGA_IN_HPD_1
HDMI2_IN_CLK-
HDMI2_IN_CLK+
HDMI2_IN_D0-
HDMI2_IN_D0+
HDMI2_IN_D1-
HDMI2_IN_D1+
HDMI2_IN_D2-
HDMI2_IN_D2+
HDMI3_CIN_CLK-
HDMI3_CIN_CLK+
HDMI3_CIN_D0-
HDMI3_CIN_D0+
HDMI3_CIN_D1-
HDMI3_CIN_D1+
HDMI3_CIN_D2-
HDMI3_CIN_D2+
HDMI11_4C1_CL-
HDMI11_4C1_CL+
HDMI11_4C1_D0-
HDMI11_4C1_D0+
HDMI11_4C1_D1-
HDMI11_4C1_D1+
HDMI11_4C1_D2-
HDMI11_4C1_D2+
HDMI11_4C1_HPD
HDMI11_4C1_SDA
HDMI11_4C1_SCL
I2C2_SCL
I2C2_SDA
HDMI3_IN_HPD_CTR
HDMI9_IN_HPD_CTR
VGA_5V_1
VGA_AIN_5V
D166
C7773 0.1UF
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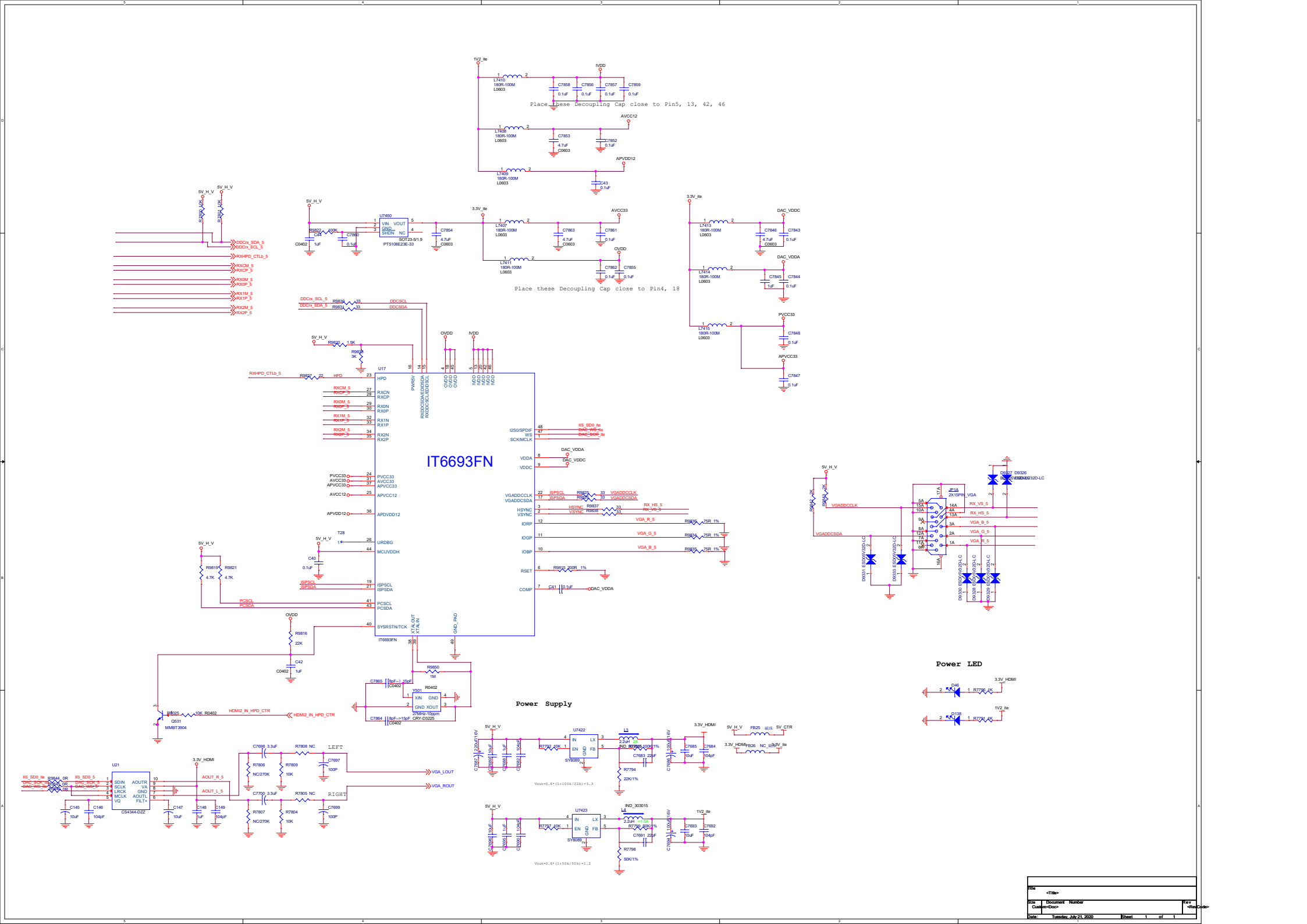

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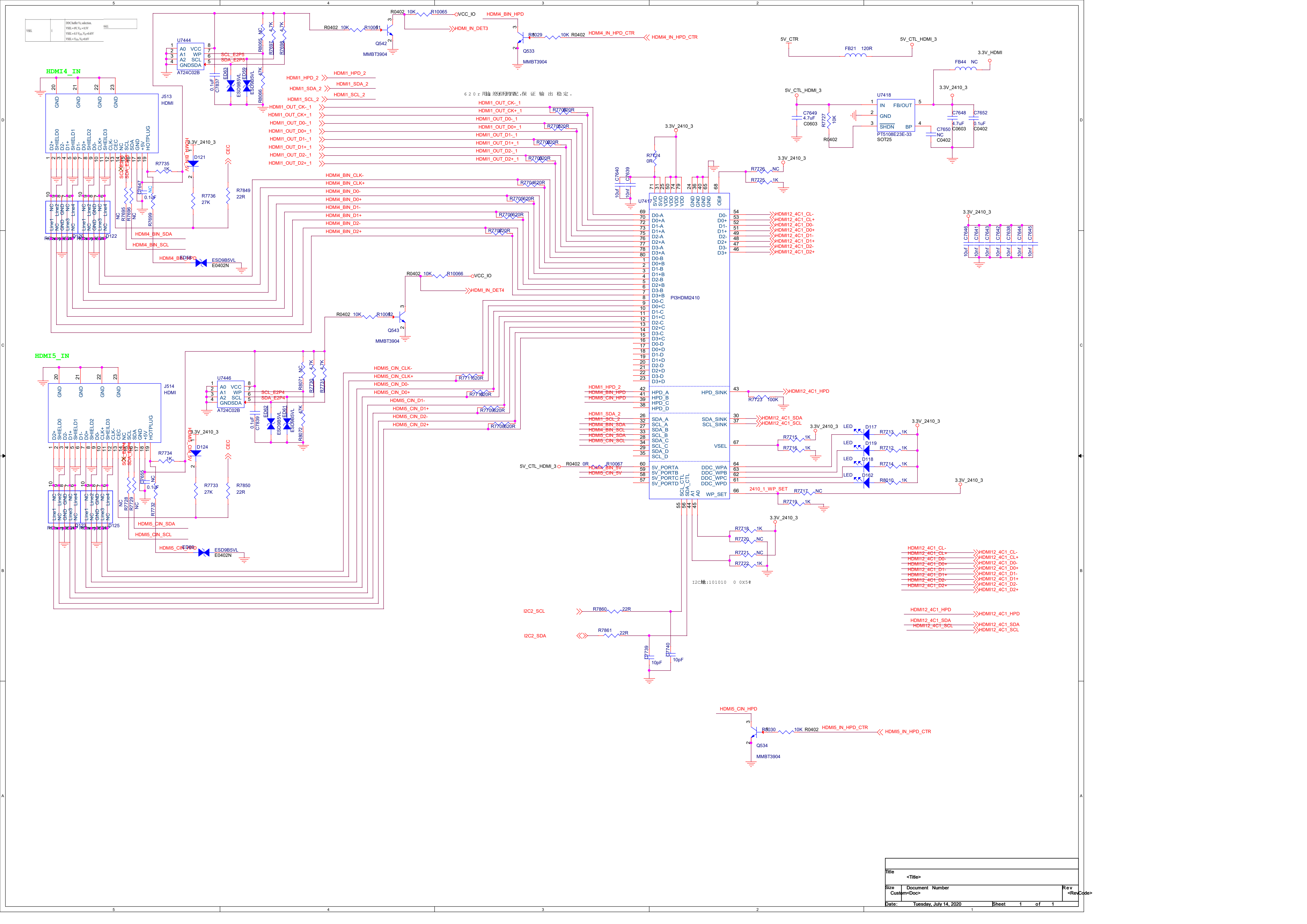

HDMI4_IN
HDMI5_IN
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J514 HDMI
U7444 AT24C02B
U7446 AT24C02B
U7417 PI3HDMI2410
U7418 PT5108E23E-33 SOT25
Q542 MMBT3904
Q533 MMBT3904
Q543 MMBT3904
Q534 MMBT3904
HDMI4_BIN_HPD
HDMI4_IN_HPD_CTR
HDMI_IN_DET3
HDMI_IN_DET4
HDMI5_CIN_HPD
HDMI5_IN_HPD_CTR
VCC_IO
5V_CTR
5V_CTL_HDMI_3
3.3V_HDMI
3.3V_2410_3
HDMI1_HPD_2
HDMI1_SDA_2
HDMI1_SCL_2
HDMI12_4C1_HPD
HDMI12_4C1_SDA
HDMI12_4C1_SCL
I2C2_SCL
I2C2_SDA
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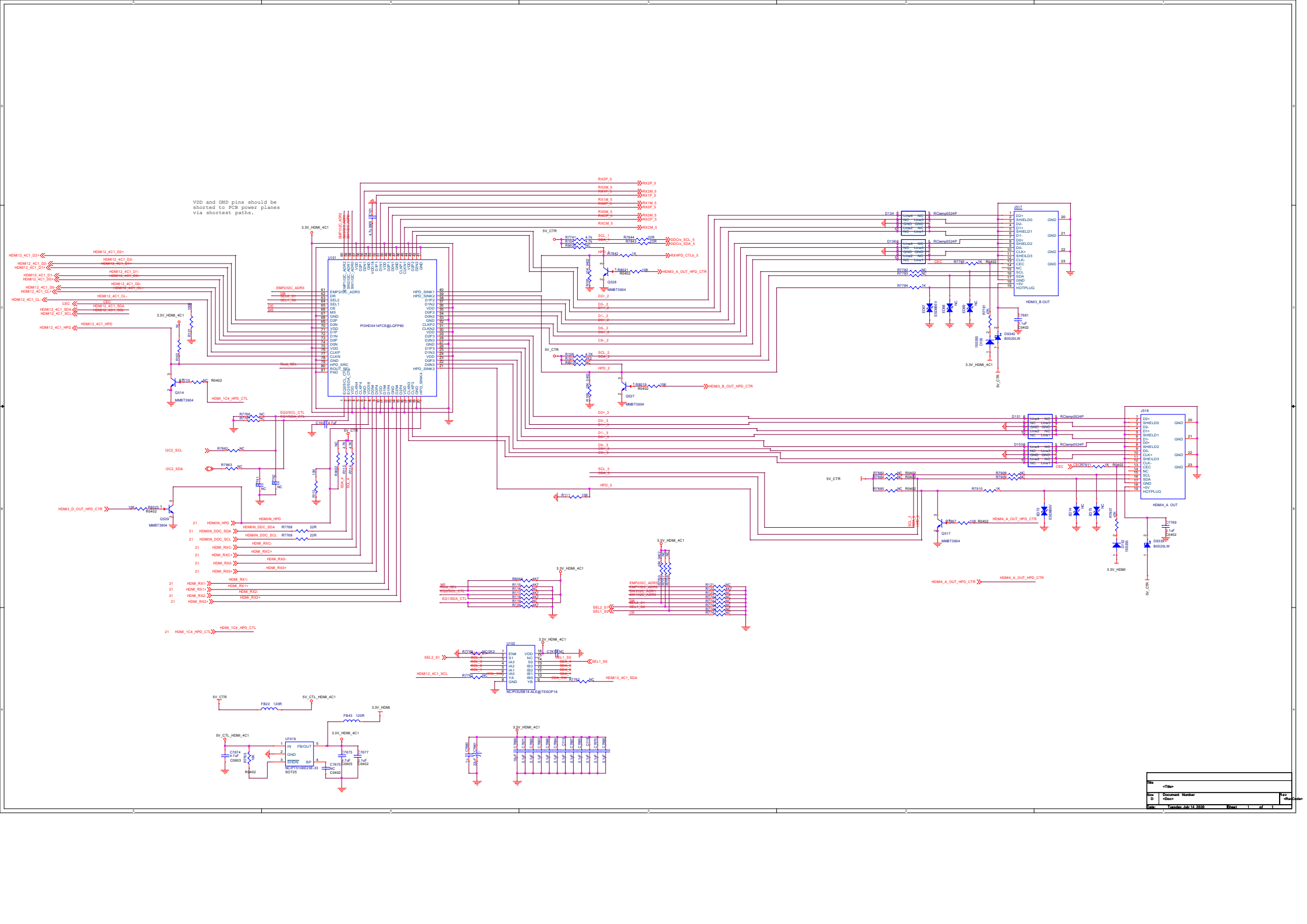

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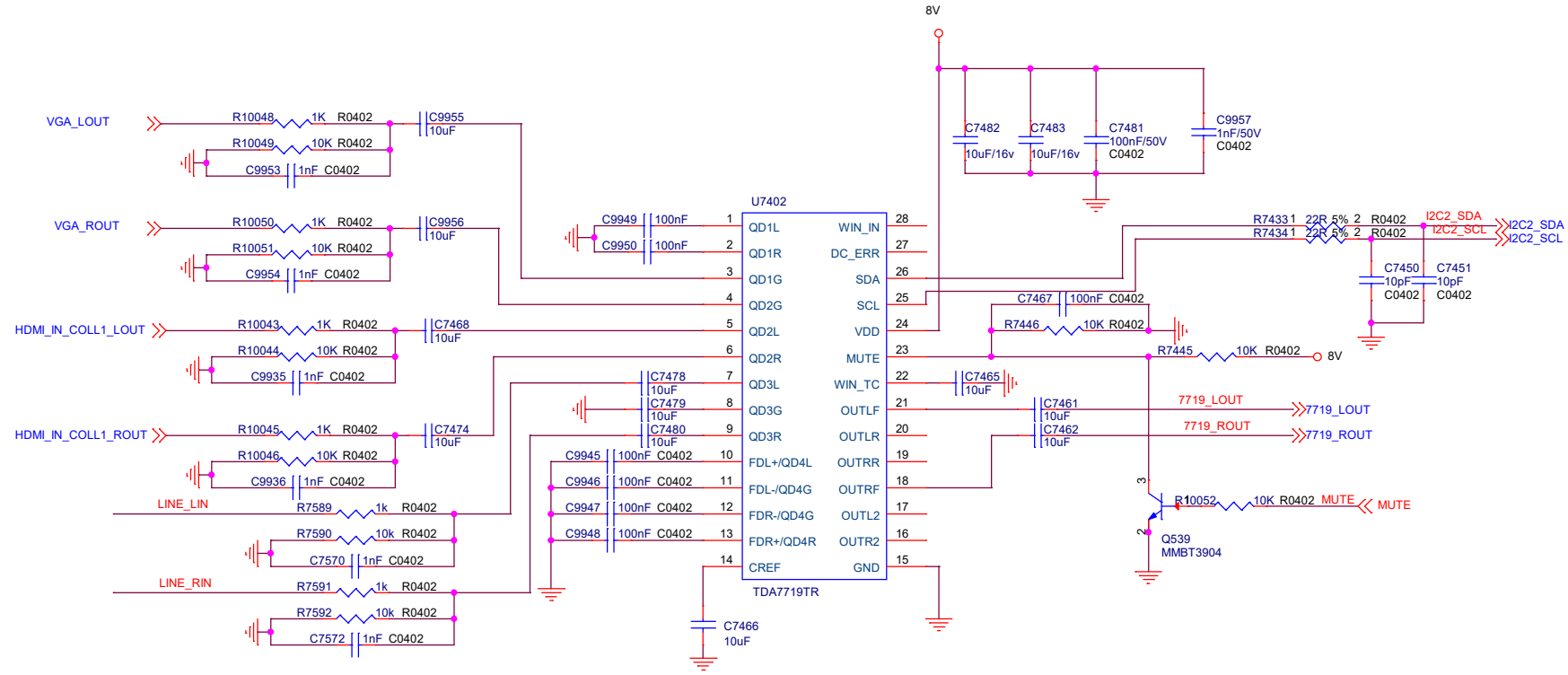

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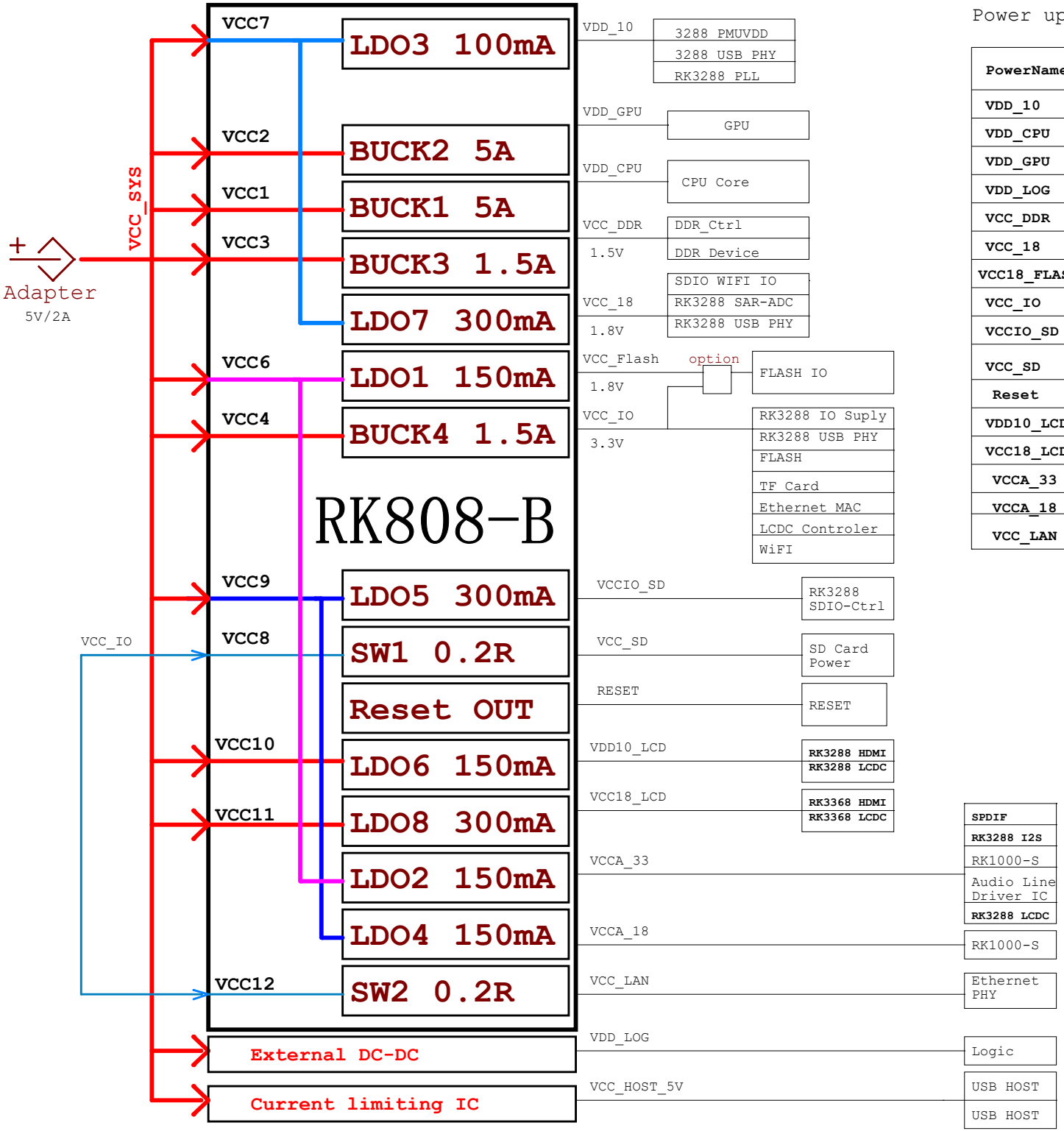

Power up Timing

PowerName	RK808-B Channel	timer 2mS	Default voltage	Normal voltage
VDD_10	LDO3	Slot:1	1.0V	1.0V
VDD_CPU	BUCK1	Slot:2	1.1V	DVFS
VDD_GPU	BUCK2	Slot:3	1.1V	DVFS
VDD_LOG	External DC-DC	Slot:4A	1.0V	DVFS
VCC_DDR	BUCK3	Slot:3	1.5V	1.5V
VCC_18	LDO7	Slot:3	1.8V	1.8V
VCC18_FLASH	LDO1	Slot:4	1.8V	1.8V
VCC_IO	BUCK4	Slot:4	3.3V	3.3V
VCCIO_SD	LDO5	Slot:5	3.3V	1.8V or 3.3V
VCC_SD	SW1	Slot:5	3.3V	3.3V
Reset		16*2mS+50mS		
VDD10_LCD	LDO6	OFF	0V	1.0V
VCC18_LCD	LDO8	OFF	0V	1.8V
VCCA_33	LDO2	OFF	0V	3.3V
VCCA_18	LDO4	OFF	0V	1.8V
VCC_LAN	SW2	OFF	0V	3.3V

Rockchip 瑞芯微电子

Title: Power Tree
File: RK3288_BOX_Ref REV:3.0
Create Date: Sunday, January 26, 2014 Page Num: 4
Modify Date: Tuesday, July 14, 2020 Page Total: 24