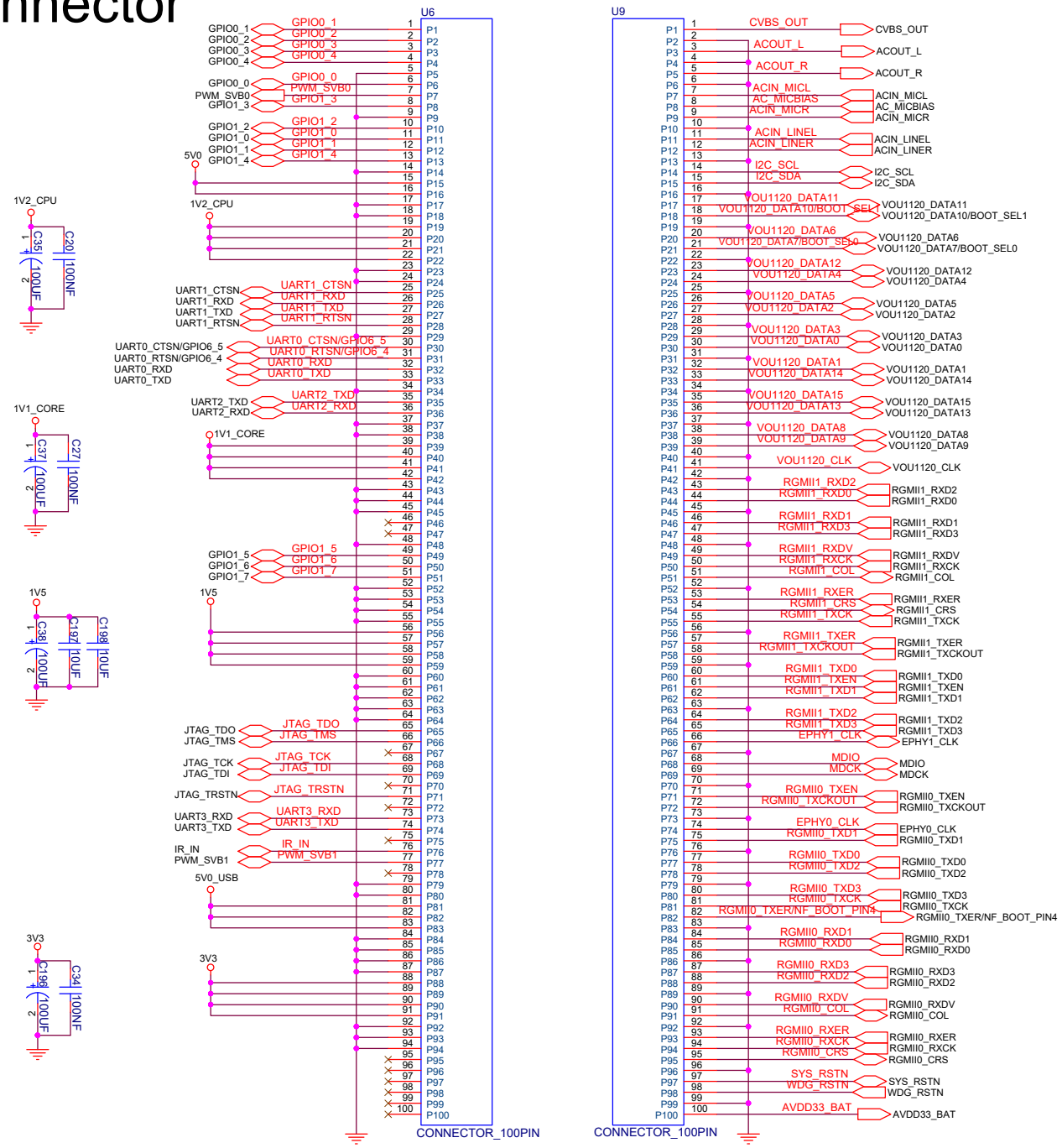
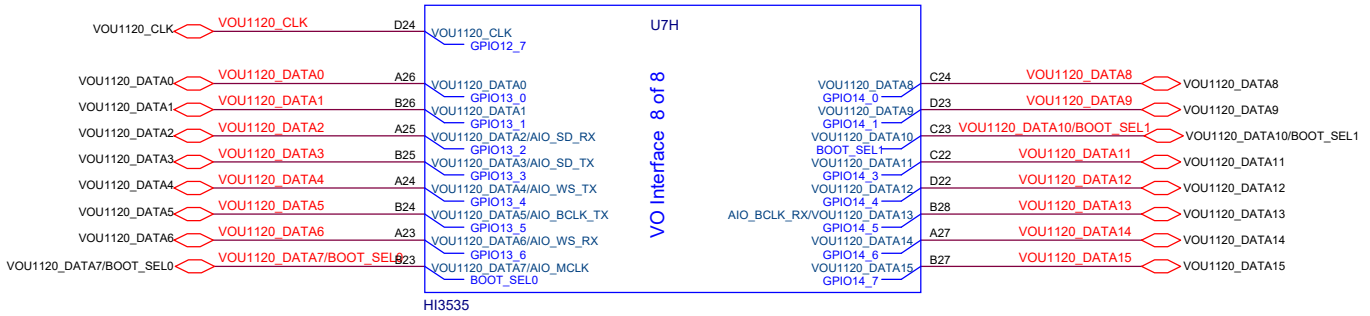
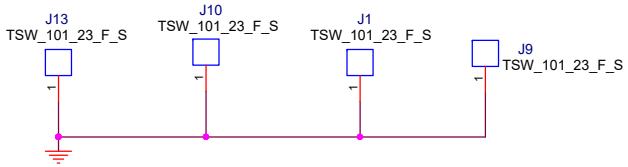
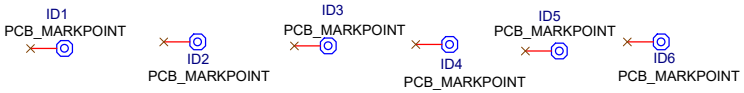
Connector


U6
GPIO0_1
GPIO0_2
GPIO0_3
GPIO0_4
GPIO0_0
PWM_SVB0
GPIO1_3
GPIO1_2
GPIO1_0
GPIO1_1
GPIO1_4
5V0
1V2_CPU
UART1_CTSN
UART1_RXD
UART1_TXD
UART1_RTSN
UART0_CTSN/GPIO6_5
UART0_RTSN/GPIO6_4
UART0_RXD
UART0_TXD
UART2_TXD
UART2_RXD
1V1_CORE
GPIO1_5
GPIO1_6
GPIO1_7
1V5
JTAG_TDO
JTAG_TMS
JTAG_TCK
JTAG_TDI
JTAG_TRSTN
UART3_RXD
UART3_TXD
IR_IN
PWM_SVB1
5V0_USB
3V3
CONNECTOR_100PIN
U9
CVBS_OUT
ACOUT_L
ACOUT_R
ACIN_MICL
AC_MICBIAS
ACIN_MICR
ACIN_LINEL
ACIN_LINER
I2C_SCL
I2C_SDA
VOU1120_DATA11
VOU1120_DATA10/BOOT_SEL1
VOU1120_DATA6
VOU1120_DATA7/BOOT_SEL0
VOU1120_DATA12
VOU1120_DATA4
VOU1120_DATA5
VOU1120_DATA2
VOU1120_DATA3
VOU1120_DATA0
VOU1120_DATA1
VOU1120_DATA14
VOU1120_DATA15
VOU1120_DATA13
VOU1120_DATA8
VOU1120_DATA9
VOU1120_CLK
RGMII1_RXD2
RGMII1_RXD0
RGMII1_RXD1
RGMII1_RXD3
RGMII1_RXDV
RGMII1_RXCK
RGMII1_COL
RGMII1_RXER
RGMII1_CRS
RGMII1_TXCK
RGMII1_TXER
RGMII1_TXCKOUT
RGMII1_TXD0
RGMII1_TXEN
RGMII1_TXD1
RGMII1_TXD2
RGMII1_TXD3
EPHY1_CLK
MDIO
MDCK
RGMII0_TXEN
RGMII0_TXCKOUT
EPHY0_CLK
RGMII0_TXD1
RGMII0_TXD0
RGMII0_TXD2
RGMII0_TXD3
RGMII0_TXCK
RGMII0_TXER/NF_BOOT_PIN4
RGMII0_RXD1
RGMII0_RXD0
RGMII0_RXD3
RGMII0_RXD2
RGMII0_RXDV
RGMII0_COL
RGMII0_RXER
RGMII0_RXCK
RGMII0_CRS
SYS_RSTN
WDG_RSTN
AVDD33_BAT
CONNECTOR_100PIN

VO


U7H
VO Interface 8 of 8
HI3535
VOU1120_CLK
VOU1120_DATA0
VOU1120_DATA1
VOU1120_DATA2
VOU1120_DATA3
VOU1120_DATA4
VOU1120_DATA5
VOU1120_DATA6
VOU1120_DATA7/BOOT_SEL0
D24
A26
B26
A25
B25
A24
B24
A23
B23
GPIO12_7
GPIO13_0
GPIO13_1
GPIO13_2
GPIO13_3
GPIO13_4
GPIO13_5
GPIO13_6
BOOT_SEL0
C24
D23
C23
C22
D22
B28
A27
B27
GPIO14_0
GPIO14_1
BOOT_SEL1
GPIO14_3
GPIO14_4
GPIO14_5
GPIO14_6
GPIO14_7
AIO_BCLK_RX
VOU1120_DATA8
VOU1120_DATA9
VOU1120_DATA10/BOOT_SEL1
VOU1120_DATA11
VOU1120_DATA12
VOU1120_DATA13
VOU1120_DATA14
VOU1120_DATA15

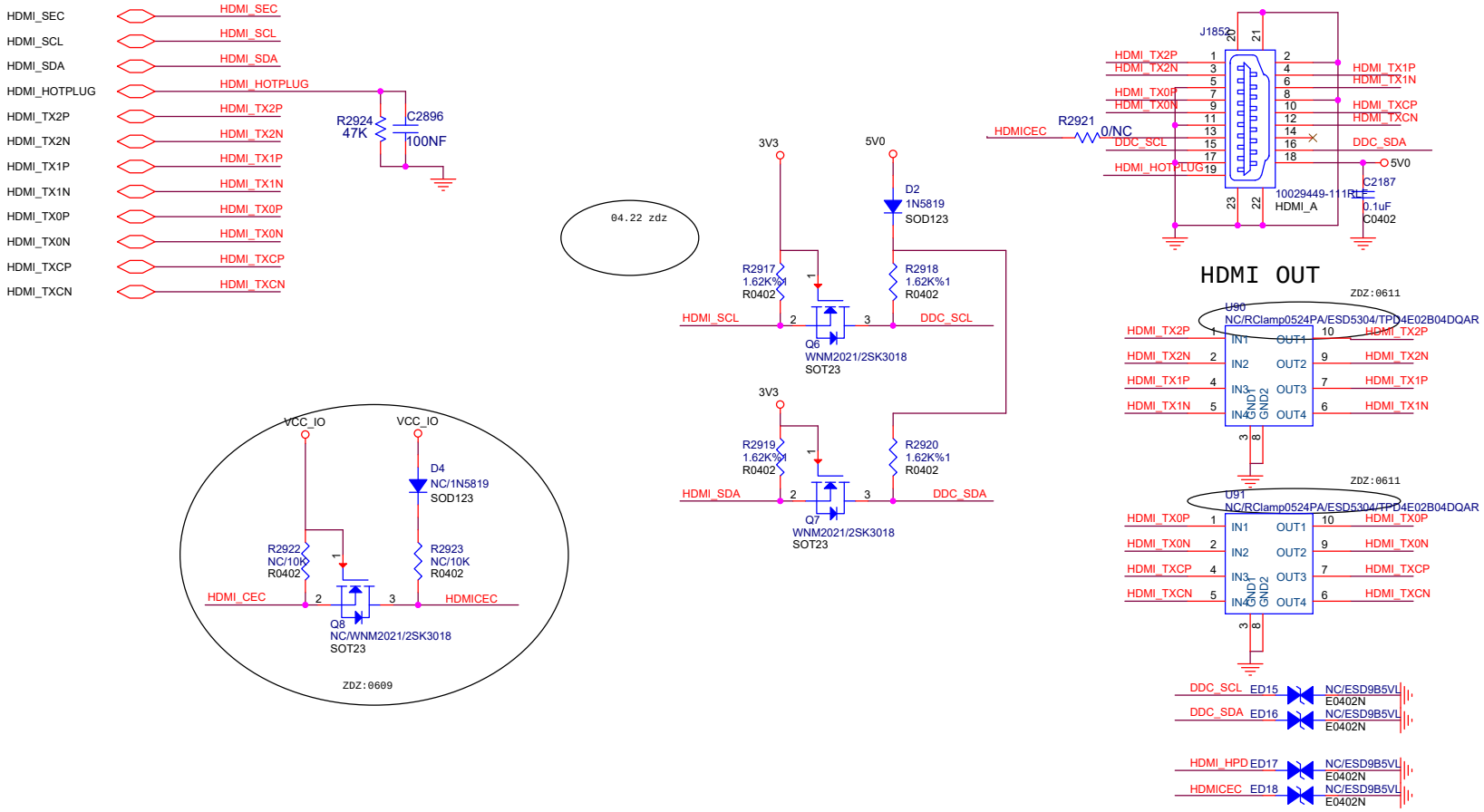

J13
TSW_101_23_F_S
J10
TSW_101_23_F_S
J1
TSW_101_23_F_S
J9
TSW_101_23_F_S
1


ID1
PCB_MARKPOINT
ID2
PCB_MARKPOINT
ID3
PCB_MARKPOINT
ID4
PCB_MARKPOINT
ID5
PCB_MARKPOINT
ID6
PCB_MARKPOINT

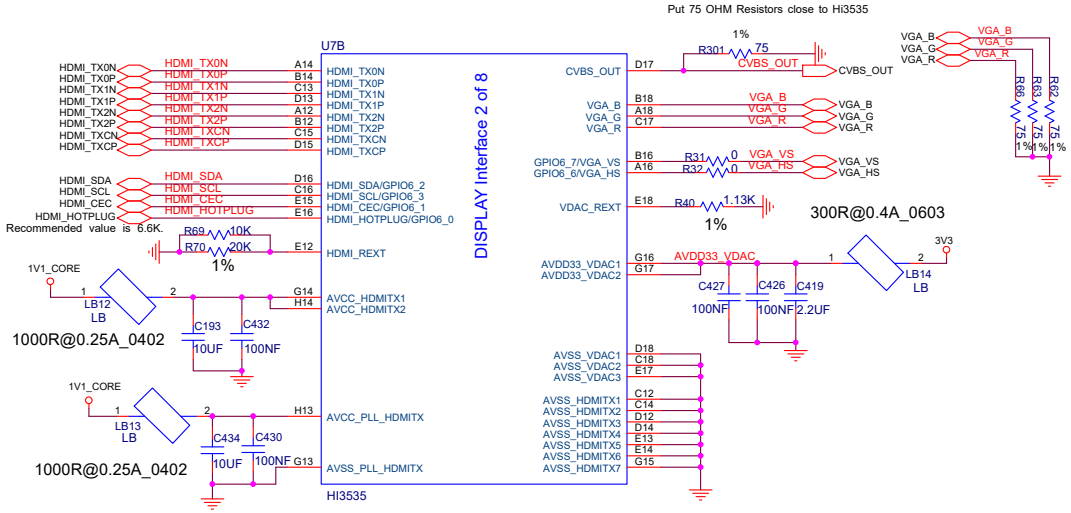
HDMI

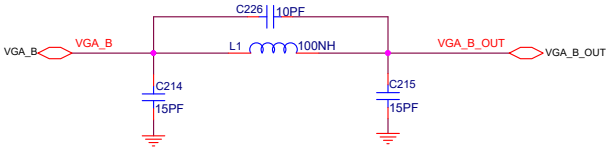
The HDMI differential trace impedance is 100 OHM.

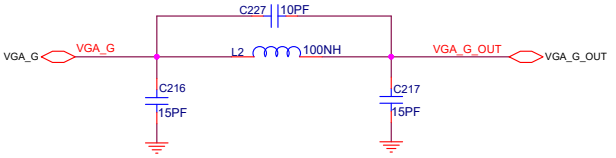
The HDMI trace length is less than 5 inch.

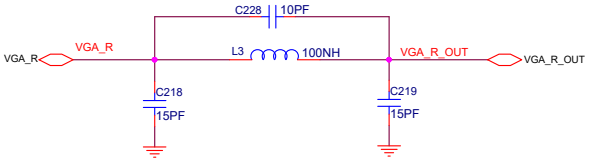


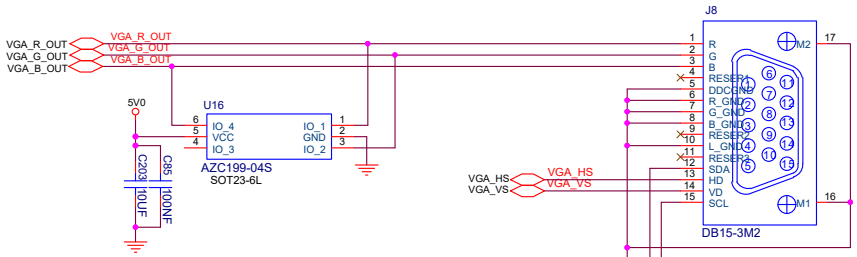
DISPLAY

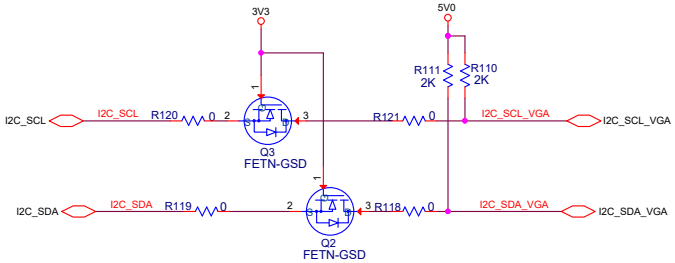

Put 75 OHM Resistors close to Hi3535
U7B
DISPLAY Interface 2 of 8
HI3535
HDMI_TX0N
HDMI_TX0P
HDMI_TX1N
HDMI_TX1P
HDMI_TX2N
HDMI_TX2P
HDMI_TXCN
HDMI_TXCP
HDMI_SDA
HDMI_SCL
HDMI_CEC
HDMI_HOTPLUG
Recommended value is 6.6K.
R69 10K
R70 20K
1%
HDMI_REXT
1V1_CORE
LB12
LB
1000R@0.25A_0402
C193 10UF
C432 100NF
AVCC_HDMITX1
AVCC_HDMITX2
LB13
C434 10UF
C430 100NF
AVCC_PLL_HDMITX
AVSS_PLL_HDMITX
CVBS_OUT
R301 75
VGA_B
VGA_G
VGA_R
R66 75 1%
R63 75 1%
R62 75 1%
GPIO6_7/VGA_VS
GPIO6_6/VGA_HS
R31 0
R32 0
VDAC_REXT
R40 1.13K 1%
300R@0.4A_0603
AVDD33_VDAC1
AVDD33_VDAC2
C427 100NF
C426 100NF
C419 2.2UF
LB14
3V3
AVSS_VDAC1
AVSS_VDAC2
AVSS_VDAC3
AVSS_HDMITX1
AVSS_HDMITX2
AVSS_HDMITX3
AVSS_HDMITX4
AVSS_HDMITX5
AVSS_HDMITX6
AVSS_HDMITX7


C226 10PF
VGA_B
L1 100NH
VGA_B_OUT
C214 15PF
C215 15PF


C227 10PF
VGA_G
L2 100NH
VGA_G_OUT
C216 15PF
C217 15PF


C228 10PF
VGA_R
L3 100NH
VGA_R_OUT
C218 15PF
C219 15PF


VGA_R_OUT
VGA_G_OUT
VGA_B_OUT
U16
AZC199-04S
SOT23-6L
C203 10UF
C85 100NF
J8
DB15-3M2
VGA_HS
VGA_VS
I2C_SDA_VGA
I2C_SCL_VGA
U8
AZC199-04S
SOT23-6L
C171 10UF
C170 100NF


3V3
5V0
R111 2K
R110 2K
I2C_SCL
R120 0
Q3
FETN-GSD
R121 0
I2C_SCL_VGA
I2C_SDA
R119 0
Q2
FETN-GSD
R118 0
I2C_SDA_VGA

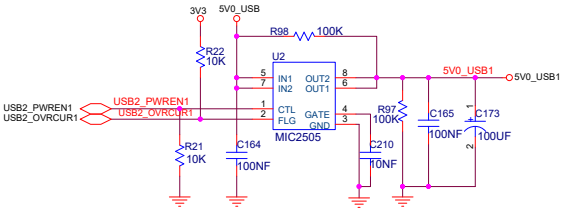
USB & SATA

The USB differential trace impedance is 90 OHM.

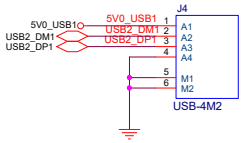
The USB trace length is less than 5 inch.

The SATA differential trace impedance is 100 OHM.

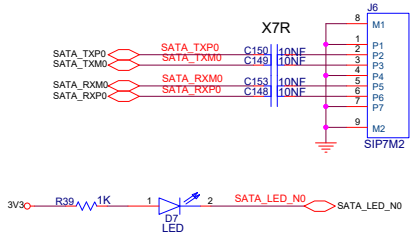
The SATA trace length is less than 5 inch.



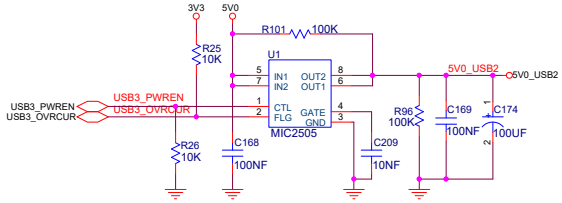
USB2.0 Port1

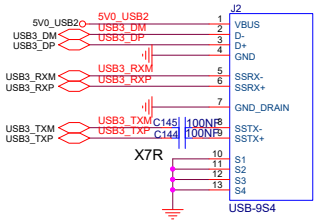


SATA3.0 Port0

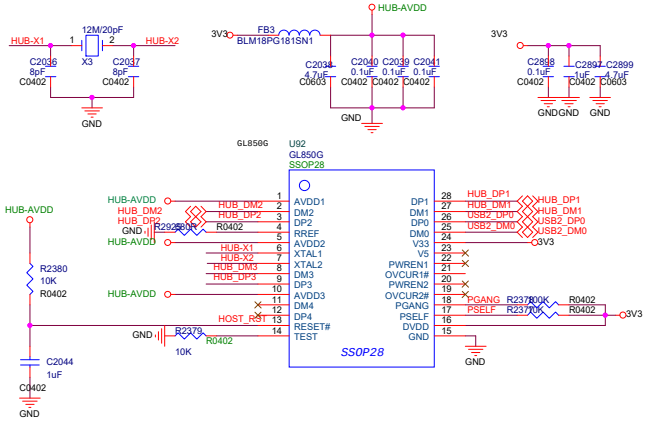


USB3.0

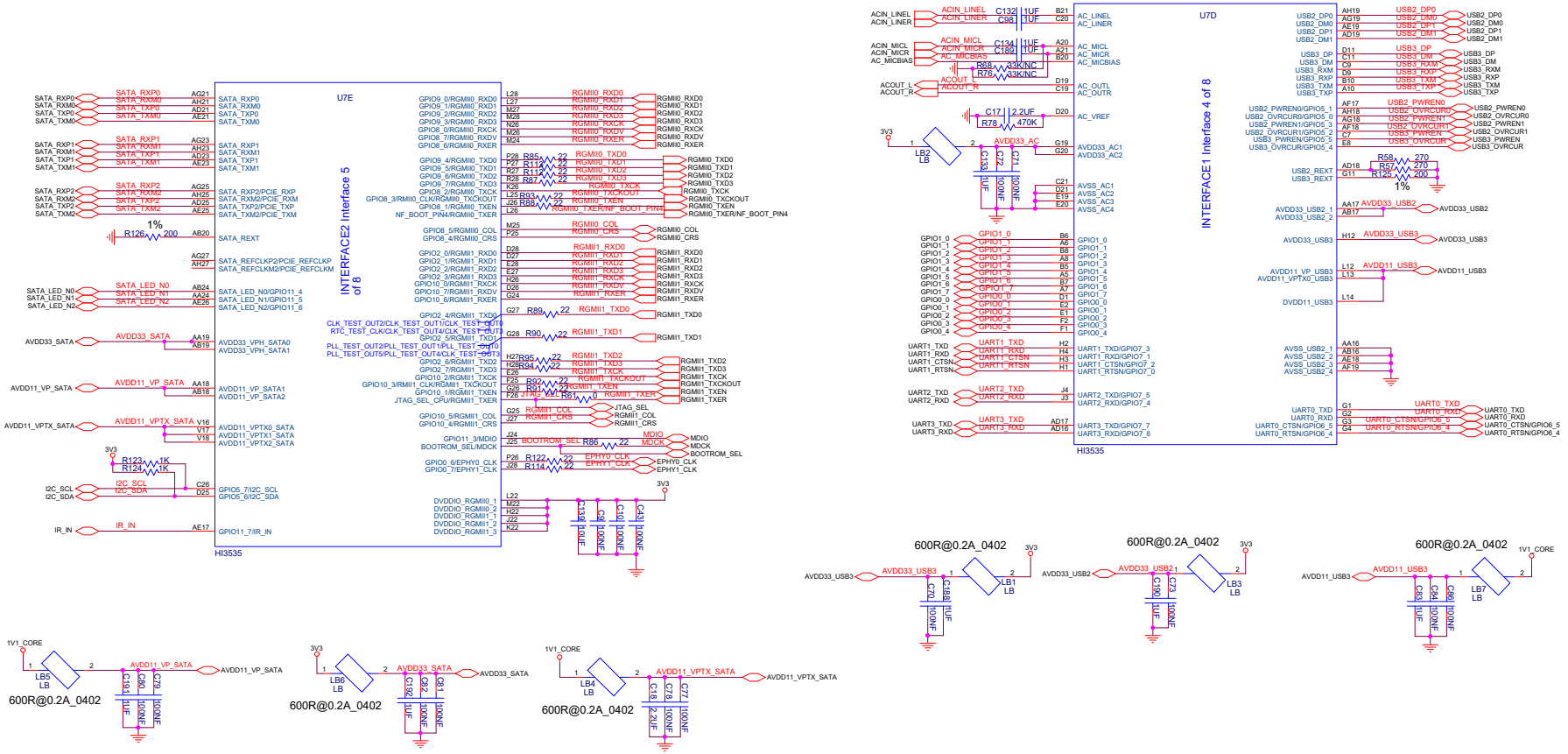




USB HUB



Interface


U7E
INTERFACE2 Interface 5 of 8
HI3535
U7D
INTERFACE1 Interface 4 of 8
HI3535
600R@0.2A_0402
LB1 LB
LB2 LB
LB3 LB
LB4 LB
LB5 LB
LB6 LB
LB7 LB

Power on setting pins

NF_BOOT_PIN[4:0]

00011 2k page size,4bit ecc,64page/block,5addr

00100 4k page size,24bit ecc,256page/block,5addr
00101 2k page size,24bit ecc,64page/block,5addr
00111 8k page size,24bit ecc,256page/block,5addr

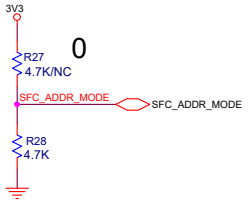
01000 4k page size,4bit ecc,128page/block,5addr
01001 4k page size,4bit ecc,64page/block,5addr
01010 2k page size,4bit ecc,64page/block,4addr
01011 4k page size,24bit ecc,128page/block,5addr
01101 8k page size,24bit ecc,128page/block,5addr

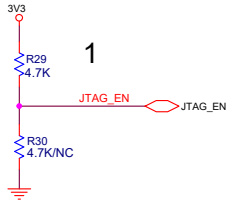
10000 8k page size,24bit ecc,64page/block,5addr
10001 4k page size,24bit ecc,64page/block,5addr
10101 2k page size,4bit ecc,128page/block,5addr
10110 2k page size,8bit ecc,128page/block,5addr
11001 2k page size,24bit ecc,128page/block,5addr
11010 2k page size,8bit ecc,64page/block,5addr
11110 4k page size,8bit ecc,64page/block,5addr
11111 4k page size,8bit ecc,128page/block,5addr

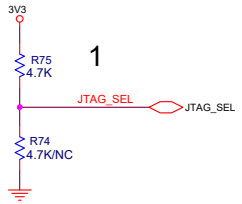
	SFC_ADDR_MODE
0	3 Byte mode
1	4 Byte mode

	JTAG_EN
0	Disable JTAG
1	Enable JTAG

	JTAG_SEL
0	Other
1	CPU

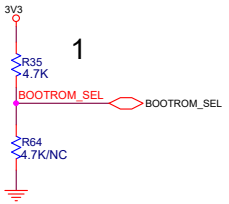


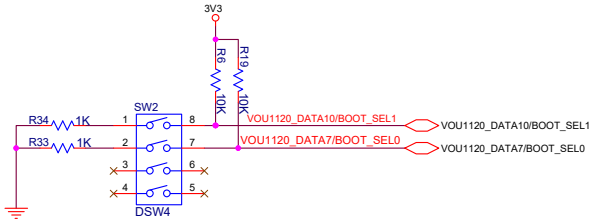


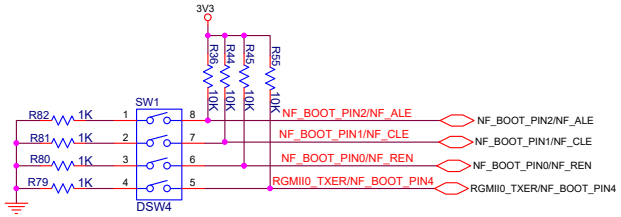


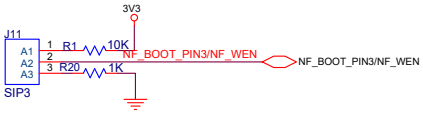
	BOOTROM_SEL
0	Boot from BOOT_SEL
1	Boot from Bootrom

	BOOT_SEL[1:0]
00	SPI FLASH
01	DDR
10	NAND FLASH
11	Reserve

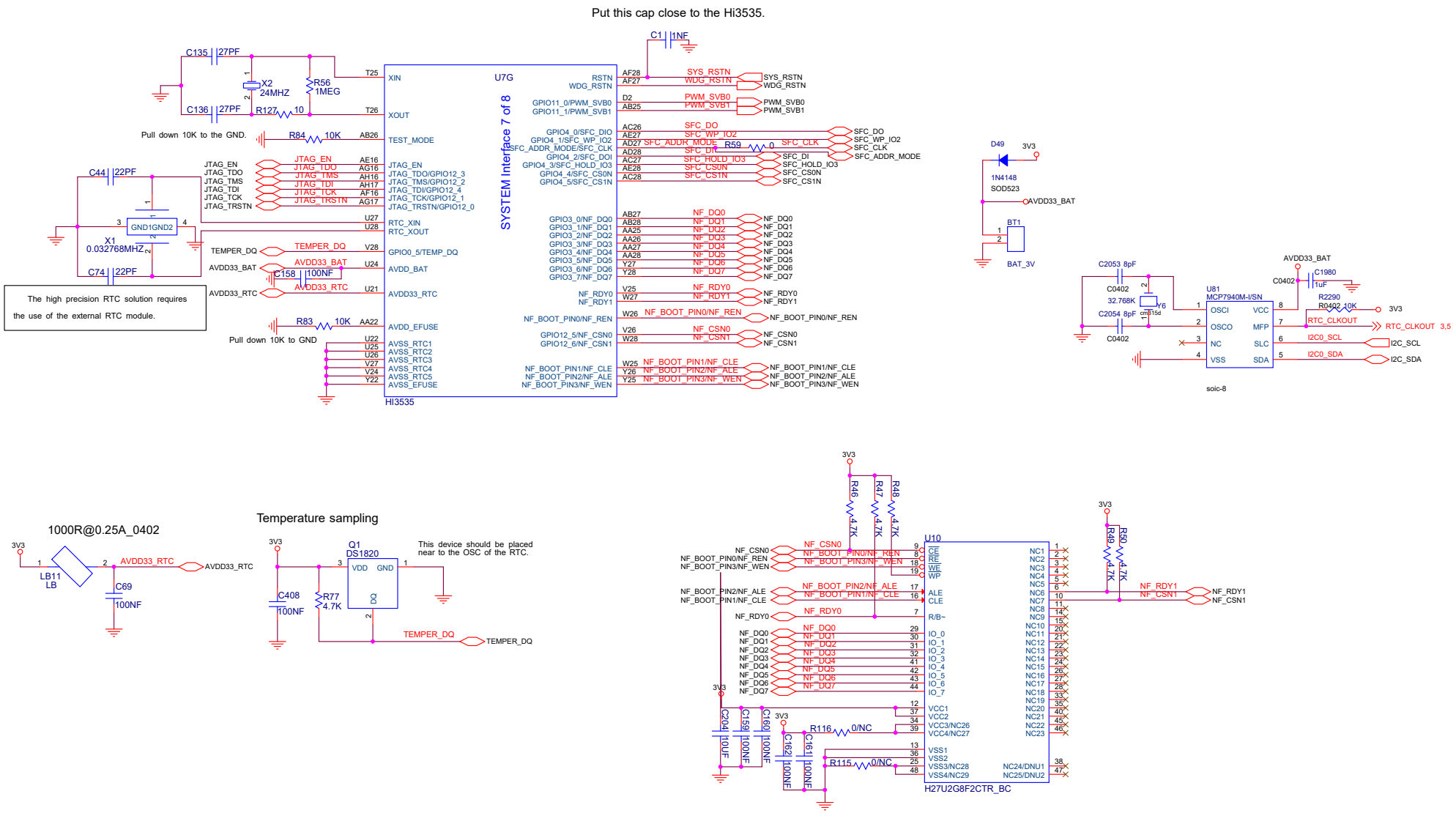






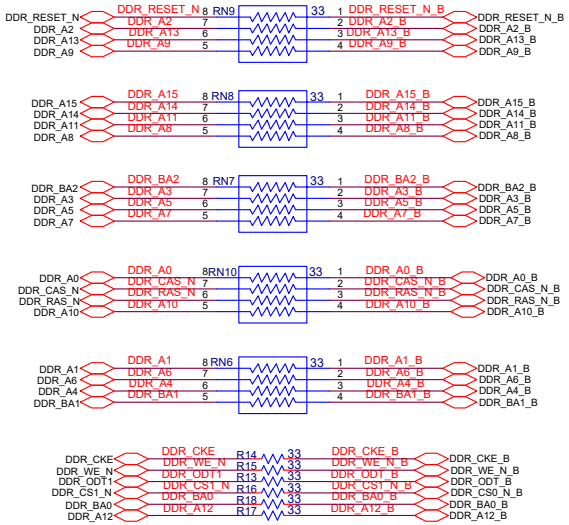


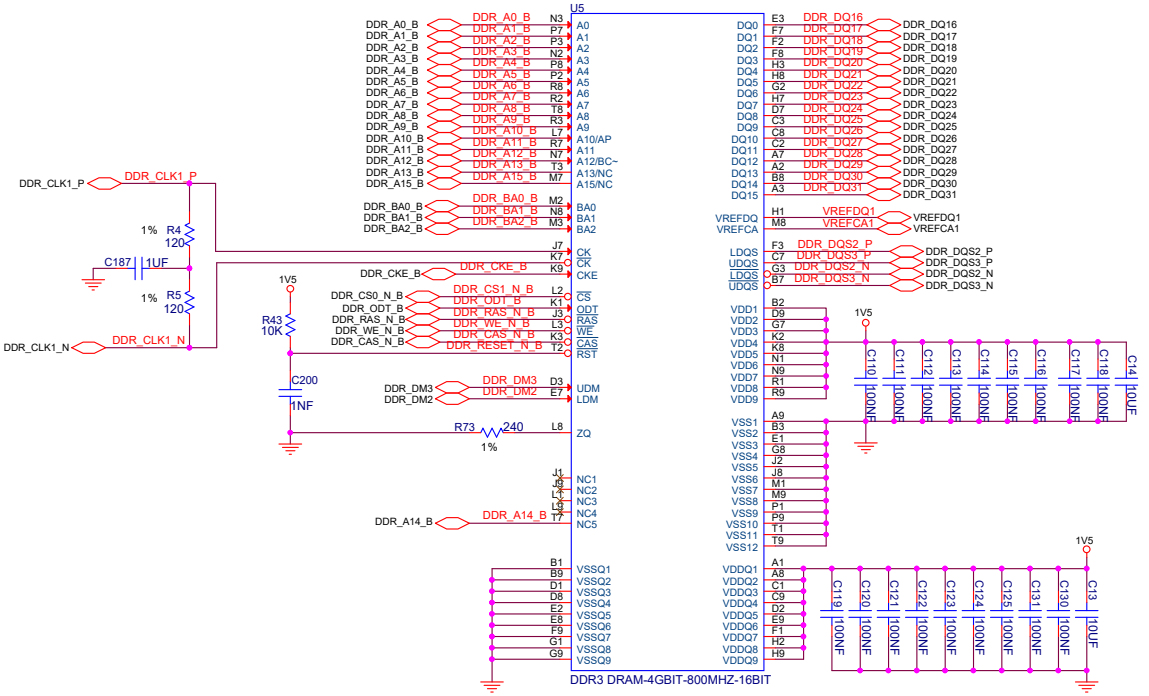
SYSTEM & FLASH

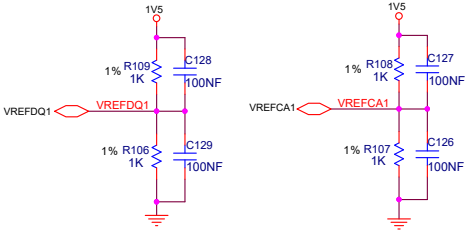


DDR3_B

The routing design of the DDR must be
the same as that for the Hi3535 demo board.

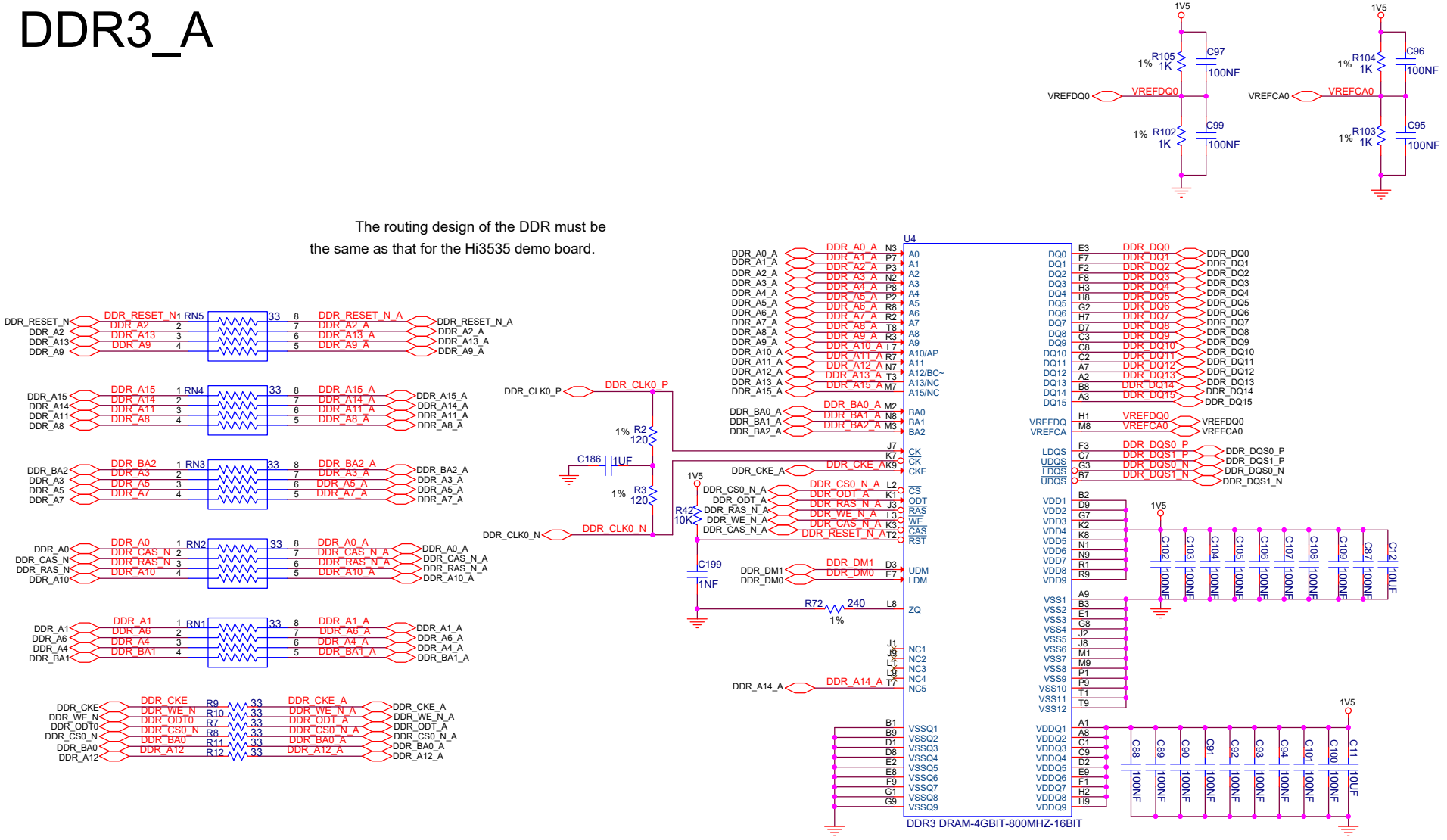




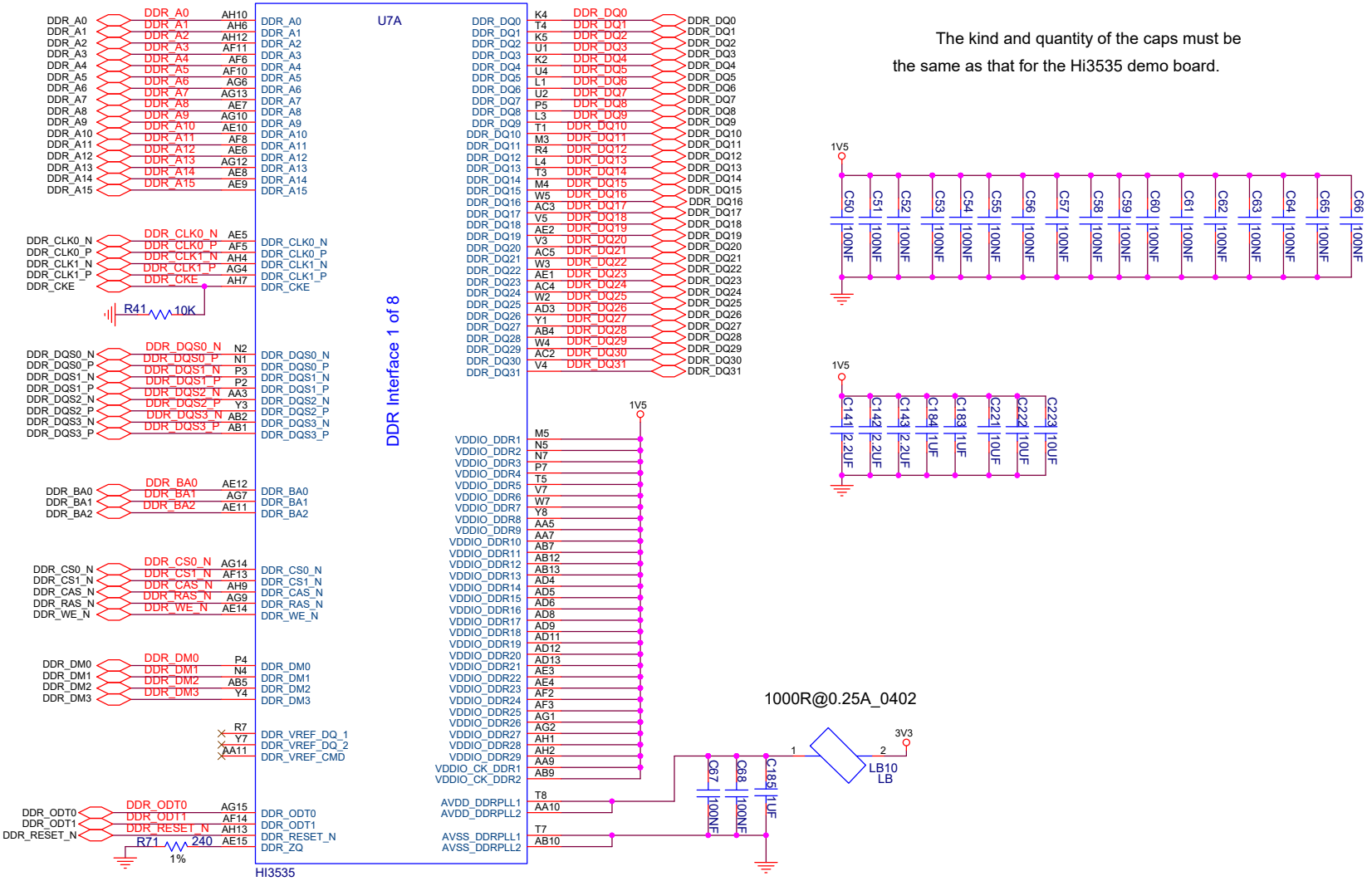


DDR3_A

The routing design of the DDR must be the same as that for the Hi3535 demo board.

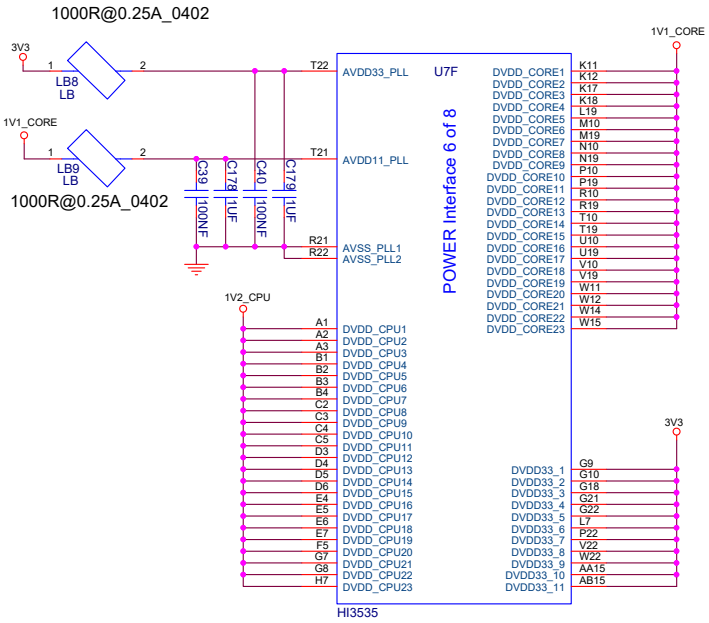


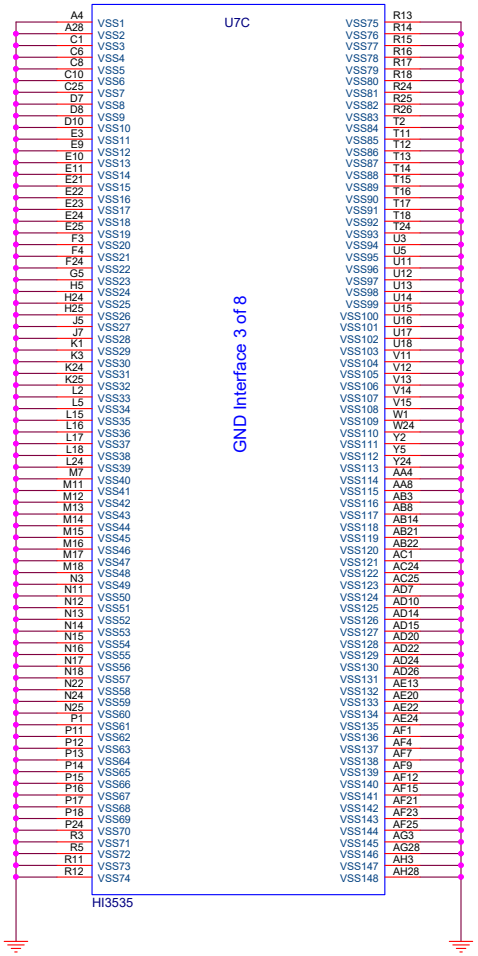
HI3535 DDR3



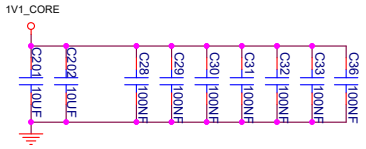
The kind and quantity of the caps must be the same as that for the Hi3535 demo board.

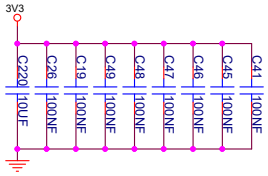
POWER & VSS

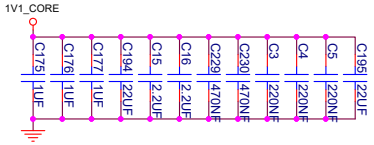


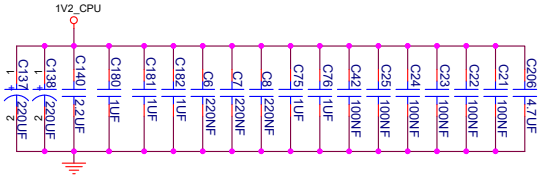


The kind and quantity of the caps must be the same as that for the Hi3535 demo board.

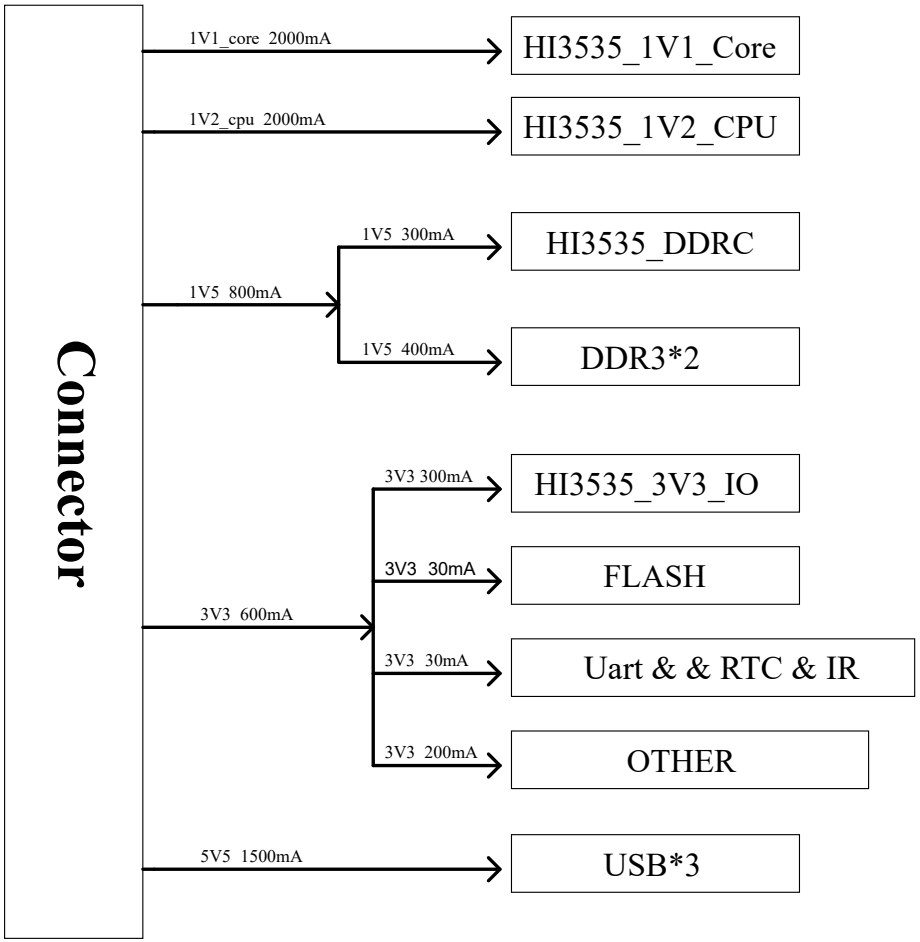




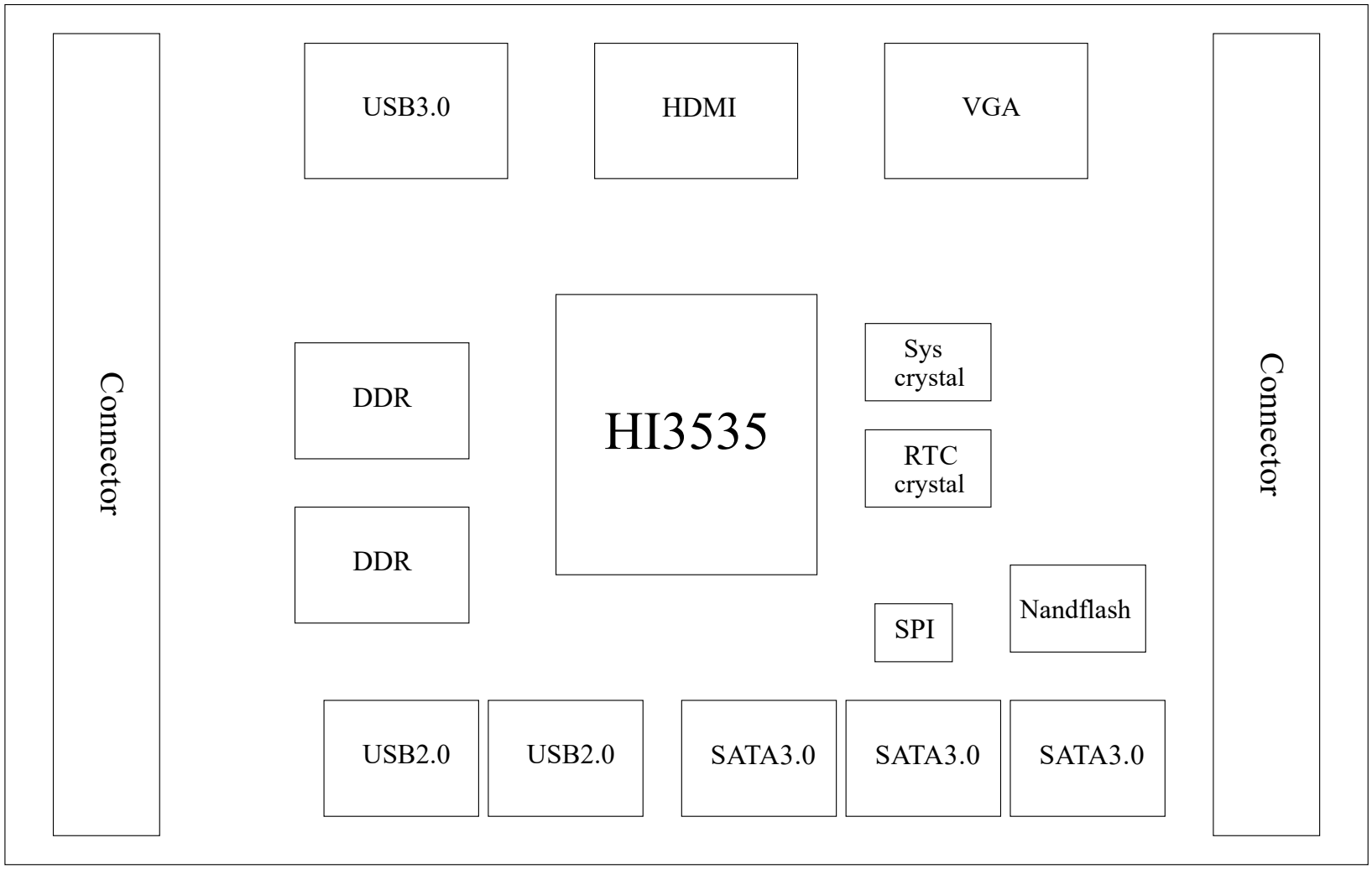




POWER TREE


Connector
1V1_core 2000mA
HI3535_1V1_Core
1V2_cpu 2000mA
HI3535_1V2_CPU
1V5 800mA
1V5 300mA
HI3535_DDRC
1V5 400mA
DDR3*2
3V3 600mA
3V3 300mA
HI3535_3V3_IO
3V3 30mA
FLASH
3V3 30mA
Uart & & RTC & IR
3V3 200mA
OTHER
5V5 1500mA
USB*3

BLOCK DIAGRAM



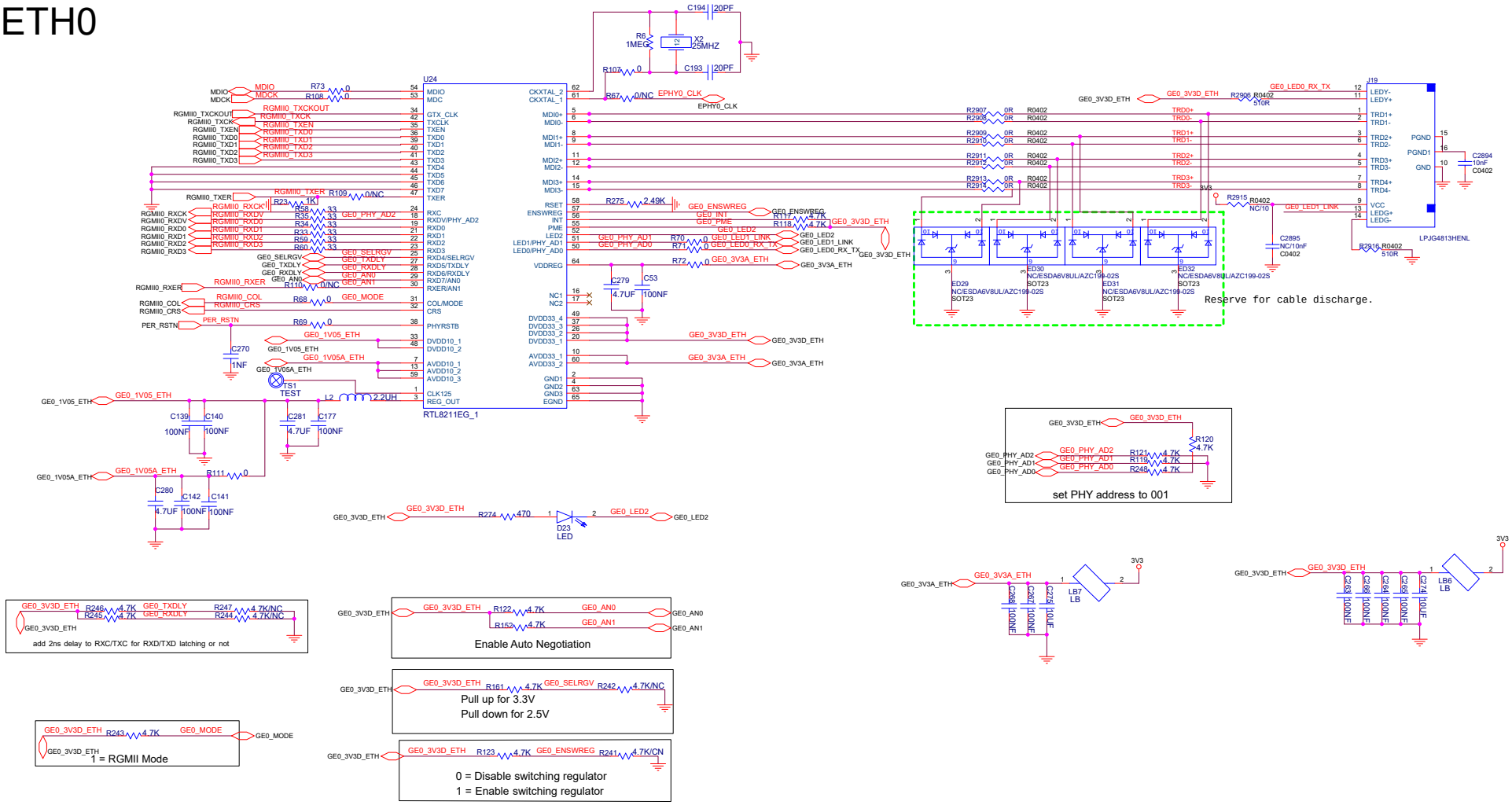
CHANGE LIST

2013.07.10 Ver.A schematic

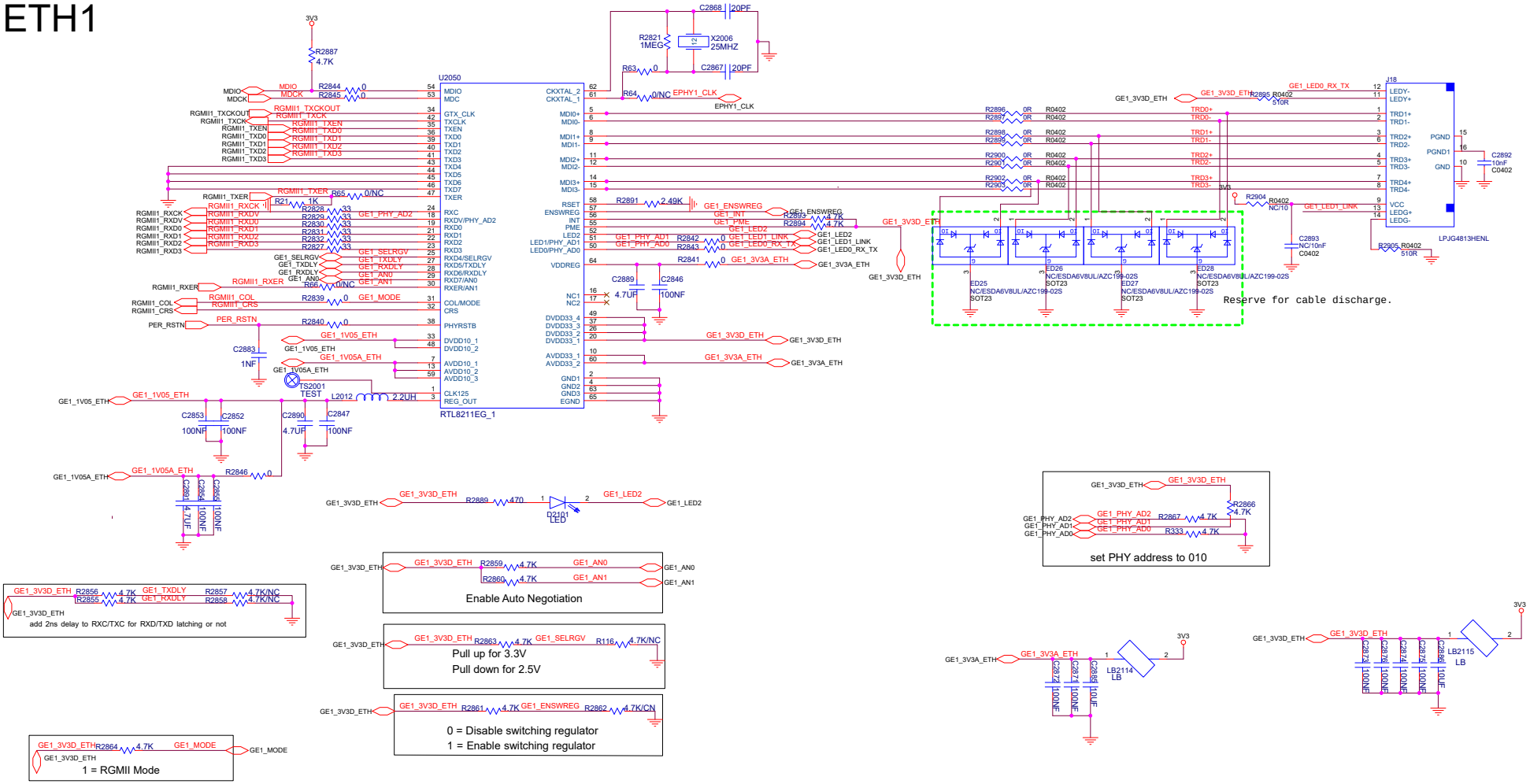
2013.09.27 Change C144 C145 form 10nF to 100nF

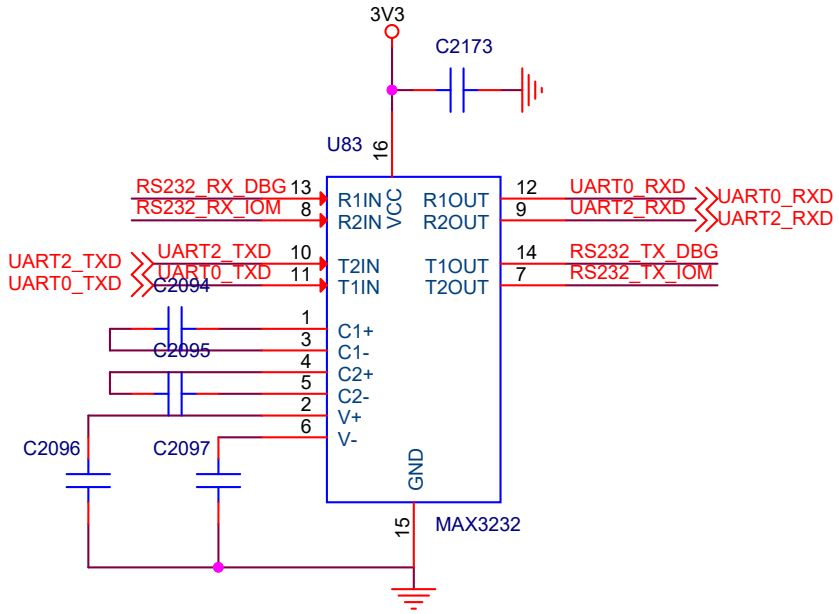
Hi3535DMEB VER.A

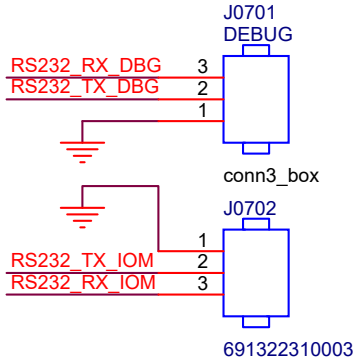
ETH0


U24
RTL8211EG_1
J19
LPJG4813HENL
Reserve for cable discharge.
set PHY address to 001
add 2ns delay to RXC/TXC for RXD/TXD latching or not
Enable Auto Negotiation
Pull up for 3.3V
Pull down for 2.5V
1 = RGMII Mode
0 = Disable switching regulator
1 = Enable switching regulator
LB7
LB6
LED
TEST

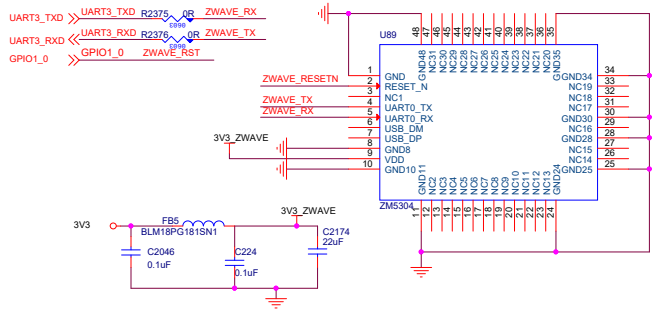
ETH1

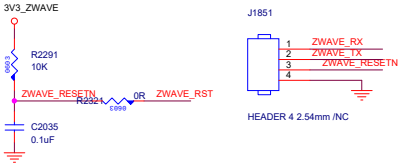

U2050
RTL8211EG_1
X2006
25MHZ
J18
LPJG4813HENL
Reserve for cable discharge.
set PHY address to 010
Enable Auto Negotiation
Pull up for 3.3V
Pull down for 2.5V
0 = Disable switching regulator
1 = Enable switching regulator
1 = RGMII Mode
add 2ns delay to RXC/TXC for RXD/TXD latching or not
LB2114
LB2115
LB


3V3
C2173
U83
16
RS232_RX_DBG
RS232_RX_IOM
13
8
R1IN
R2IN
VCC
R1OUT
R2OUT
12
9
UART0_RXD
UART2_RXD
UART0_RXD
UART2_RXD
UART2_TXD
UART0_TXD
C2094
10
11
T2IN
T1IN
T1OUT
T2OUT
14
7
RS232_TX_DBG
RS232_TX_IOM
1
3
4
5
2
6
C1+
C1-
C2+
C2-
V+
V-
C2095
C2096
C2097
GND
15
MAX3232

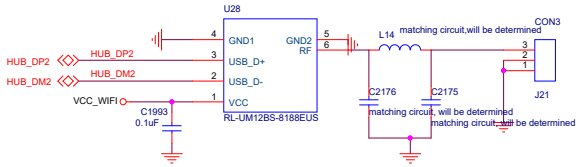

J0701
DEBUG
RS232_RX_DBG
RS232_TX_DBG
3
2
1
conn3_box
J0702
1
RS232_TX_IOM
RS232_RX_IOM
2
3
691322310003

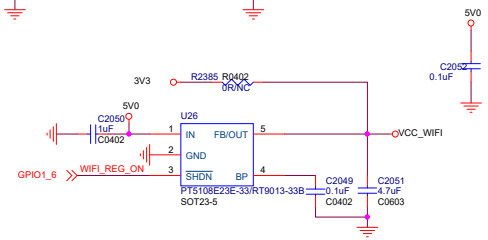
WWAN-3G

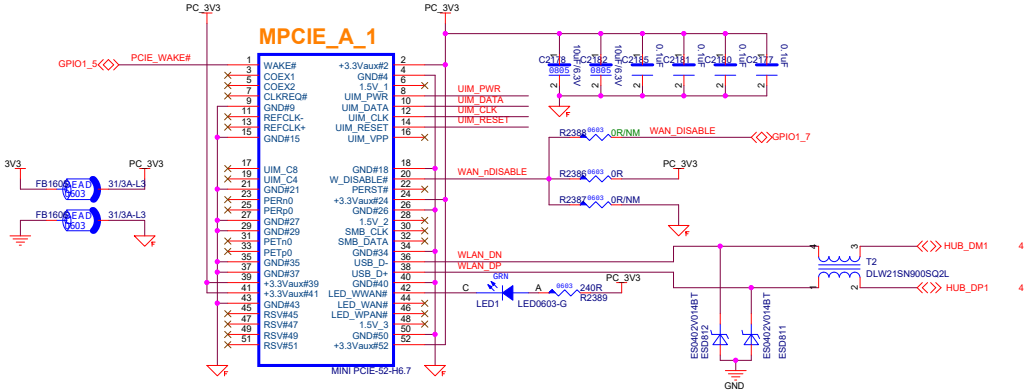

UART3_TXD
UART3_RXD
GPIO1_0
R2375 0R 0805
R2376 0R 0805
ZWAVE_RX
ZWAVE_TX
ZWAVE_RST
U89
ZM5304
ZWAVE_RESETN
3V3_ZWAVE
3V3
FB5
BLM18PG181SN1
C2046 0.1uF
C224 0.1uF
C2174 22uF

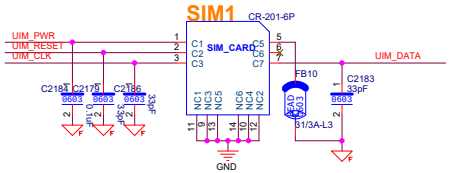

3V3_ZWAVE
R2291 10K
ZWAVE_RESETN
R2321 0R
ZWAVE_RST
C2035 0.1uF

J1851
ZWAVE_RX
ZWAVE_TX
ZWAVE_RESETN
HEADER 4 2.54mm /NC


U28
HUB_DP2
HUB_DM2
VCC_WIFI
C1993 0.1uF
GND1
GND2 RF
USB_D+
USB_D-
VCC
RL-UM12BS-8188EUS
L14 matching circuit,will be determined
CON3
J21
C2176
C2175
matching circuit, will be determined


5V0
C2052 0.1uF
3V3
R2385 R0402 0R/NC
C2050 1uF C0402
U26
IN
FB/OUT
GND
SHDN
BP
PT5108E23E-33/RT9013-33B
SOT23-5
VCC_WIFI
GPIO1_6
WIFI_REG_ON
C2049 0.1uF C0402
C2051 4.7uF C0603


MPCIE_A_1
PC_3V3
GPIO1_5
PCIE_WAKE#
MINI PCIE-52+H6.7
UIM_PWR
UIM_DATA
UIM_CLK
UIM_RESET
WAN_DISABLE
WAN_nDISABLE
R2388 0R/NM
R2386 0R
R2387 0R/NM
GPIO1_7
WLAN_DN
WLAN_DP
LED1
LED0603-G
R2389 240R
T2
DLW21SN900SQ2L
HUB_DM1
HUB_DP1
ESD402/014BT
ESD812
ESD811
GND
FB1600READ 0603 31/3A-L3


SIM1
CR-201-6P
SIM_CARD
UIM_PWR
UIM_RESET
UIM_CLK
UIM_DATA
FB10
C2183 33pF
GND