Version List

Version	Change List	Date	Author
1.0.0	First Release	2022-7-19	Mark.Liu

Title	01_Cover	
Size: Custom	Document Number: CR182x_SIP_BGA	Rev: 1.0.0
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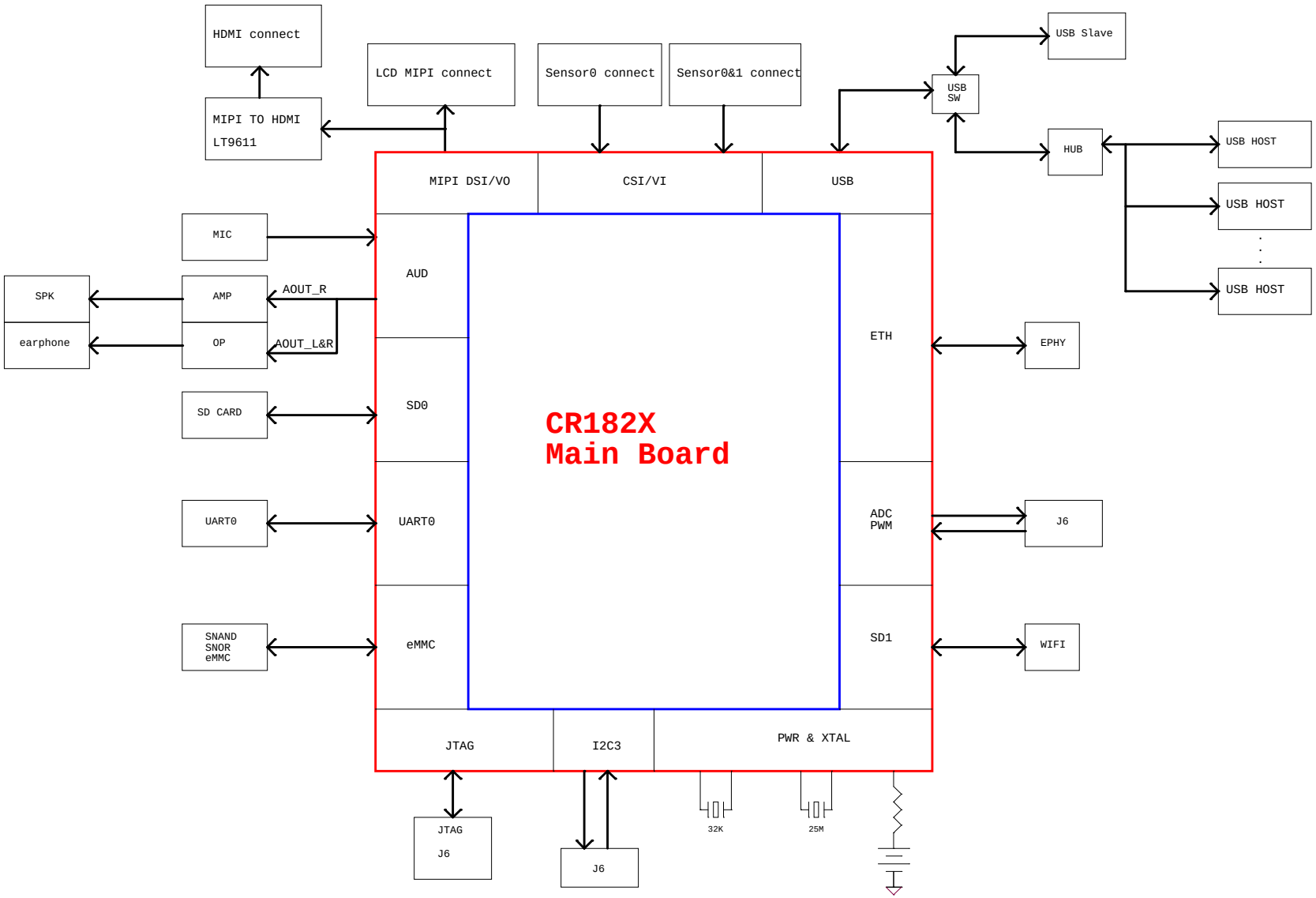
Block Diagram for CR182x



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Size: C	Document Number: CR182x_SIP_BGA	Rev: 1.0.0
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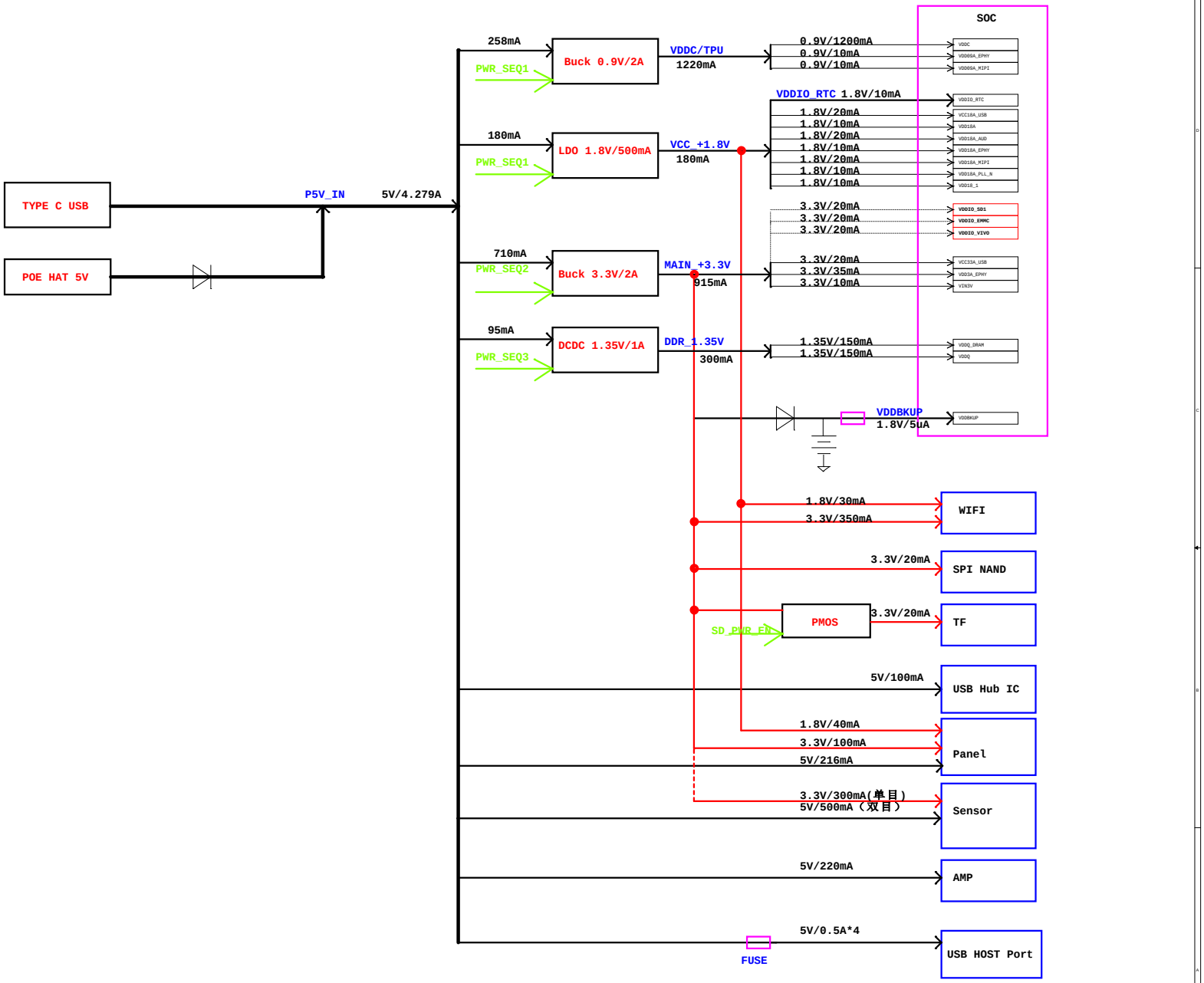

Title	03_Power tree	
Size: Custom	Document Number: CR182x_SIP_BGA	Rev: 0.0.0
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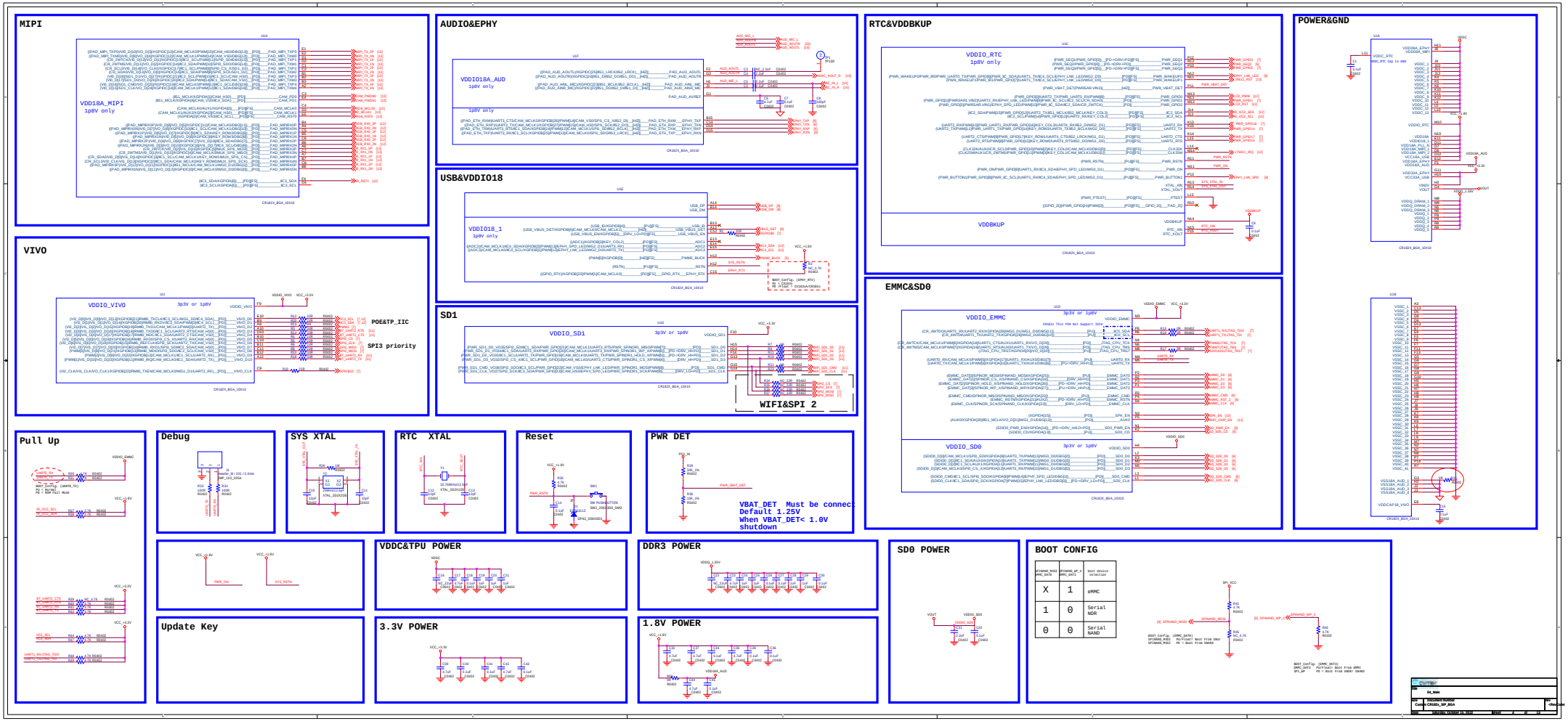
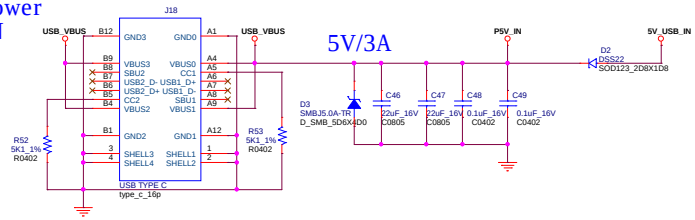
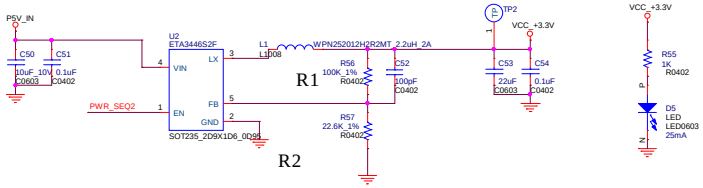


SFCNAND_MOSI / EMMC_DATA0	SFCNAND_WP_N / EMMC_DATA1	boot device selection
X	1	eMMC
1	0	Serial NOR
0	0	Serial NAND

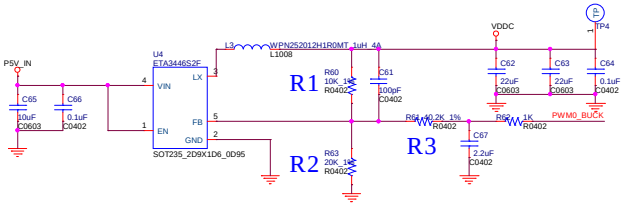
Power IN



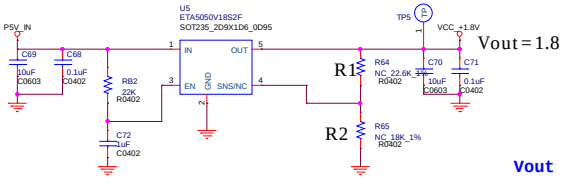
PWR_SEQ02



Vout = 0.6V * (R1/R2+1)=3.25V

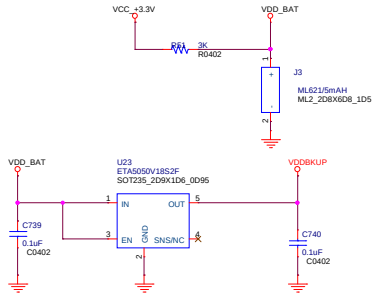


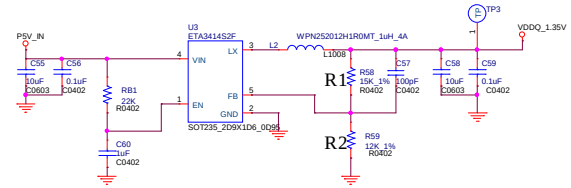
R2≧20kΩ for stability consideration.
Vout = 0.6V * (R1/R2+1) = 0.9V



Vout = 0.8V * (R1/R2+1) = 1.8V

RTC





Vout = 0.6V * (R1/R2+1) = 1.35V

NET

PWR_SEQ2 → PWR_SEQ2 [4]

PWM0_BUCK → PWM0_BUCK [4]

Title	05_SYS_Power	
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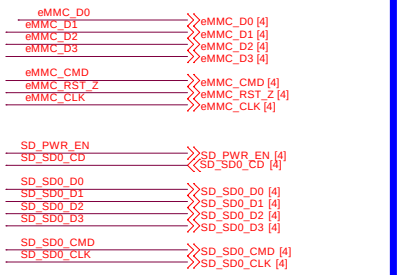
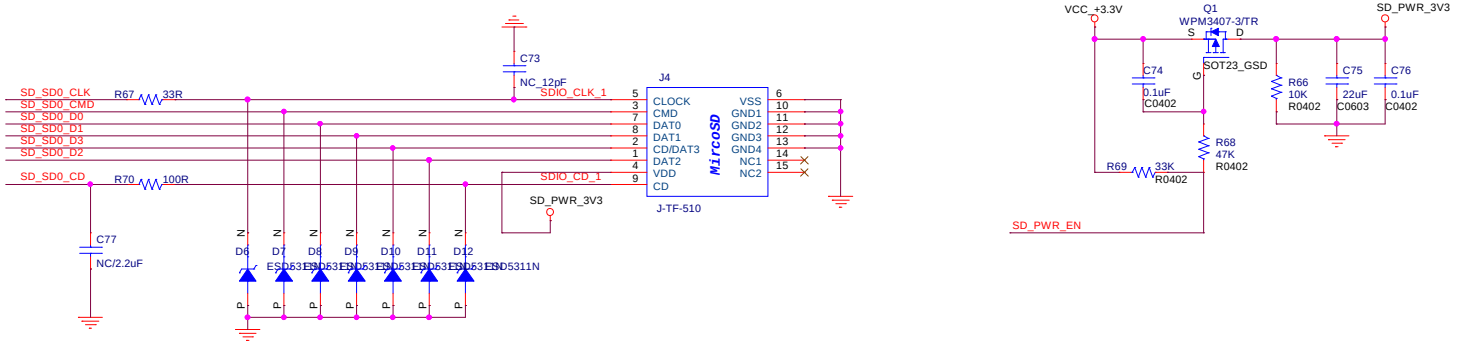
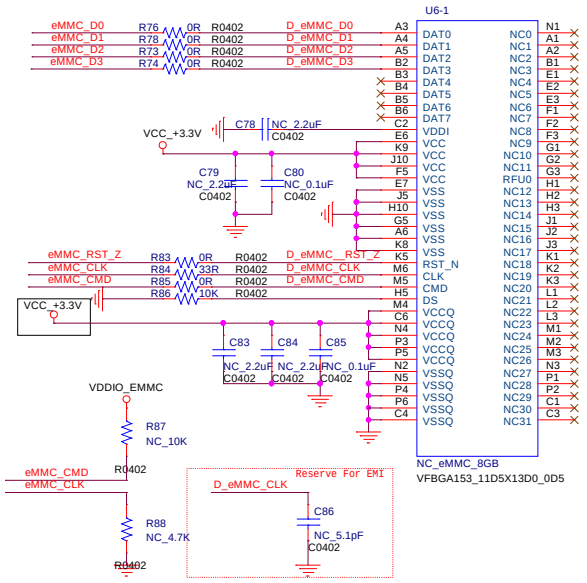
NET

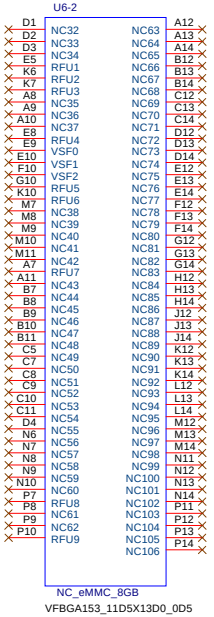


SD Card

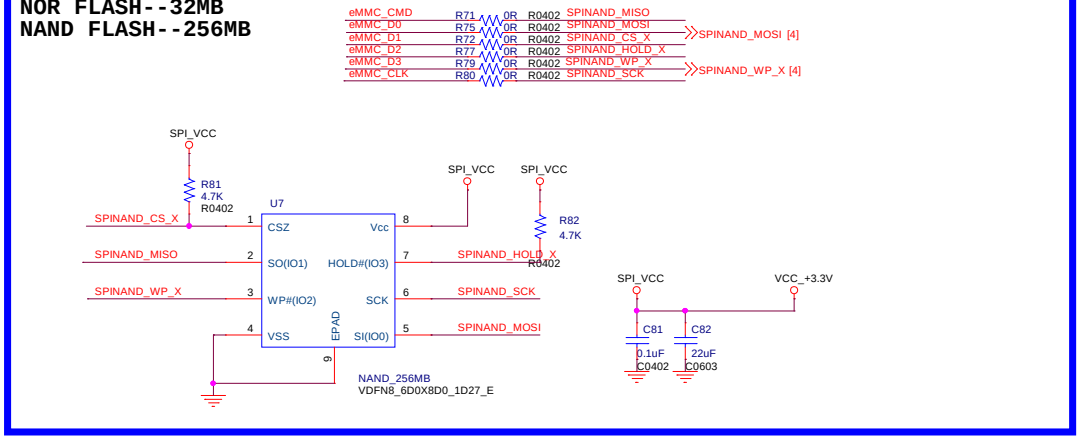


EMMC





SPIFLASH
NOR FLASH--32MB
NAND FLASH--256MB



CVITEK

Title	06_eMMC_SDIO_SPIFLASH	
Size: Custom	Document Number: CR182x_SIP_BGA	Rev: 1.0.0
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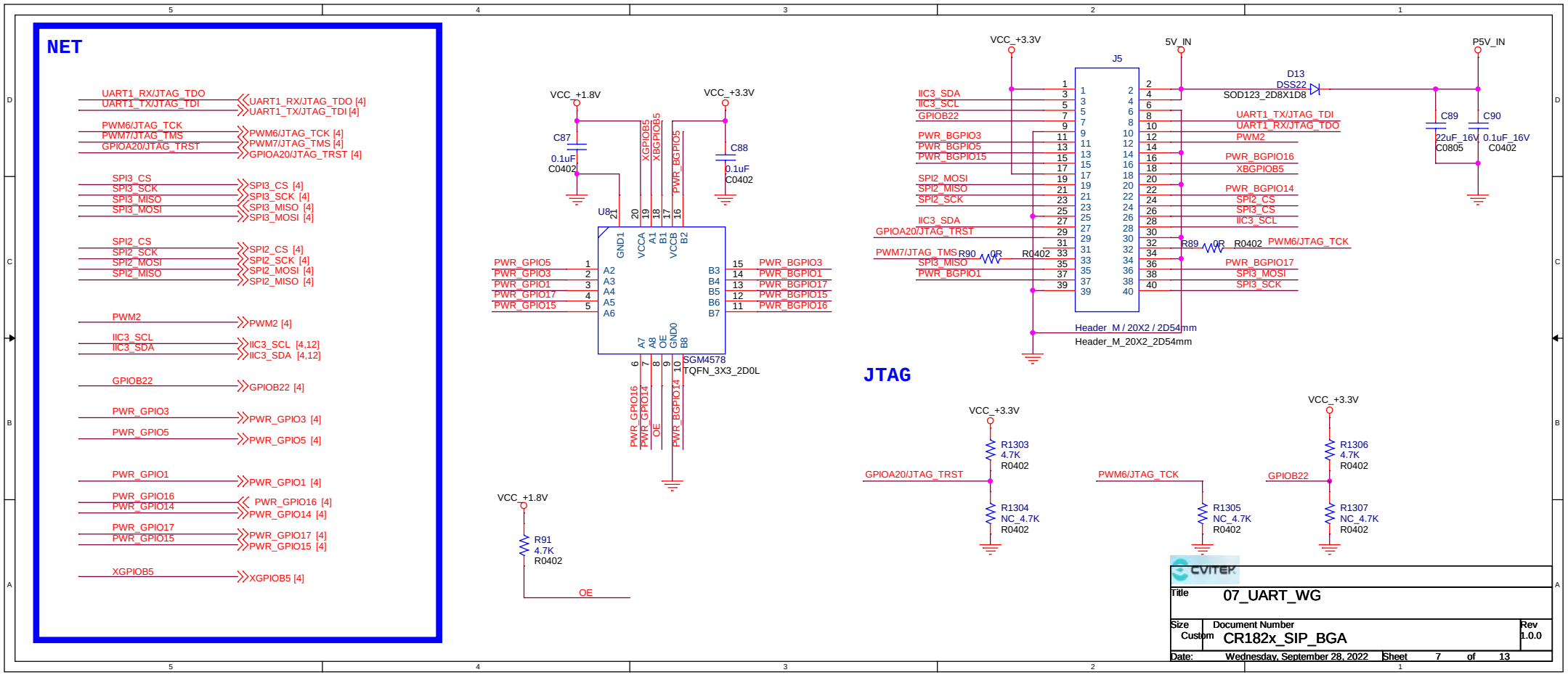
NET
UART1_RX/JTAG_TDO
UART1_TX/JTAG_TDI
UART1_RX/JTAG_TDO [4]
UART1_TX/JTAG_TDI [4]
PWM6/JTAG_TCK
PWM7/JTAG_TMS
GPIOA20/JTAG_TRST
PWM6/JTAG_TCK [4]
PWM7/JTAG_TMS [4]
GPIOA20/JTAG_TRST [4]
SPI3_CS
SPI3_SCK
SPI3_MISO
SPI3_MOSI
SPI3_CS [4]
SPI3_SCK [4]
SPI3_MISO [4]
SPI3_MOSI [4]
SPI2_CS
SPI2_SCK
SPI2_MOSI
SPI2_MISO
SPI2_CS [4]
SPI2_SCK [4]
SPI2_MOSI [4]
SPI2_MISO [4]
PWM2
PWM2 [4]
IIC3_SCL
IIC3_SDA
IIC3_SCL [4,12]
IIC3_SDA [4,12]
GPIOB22
GPIOB22 [4]
PWR_GPIO3
PWR_GPIO5
PWR_GPIO3 [4]
PWR_GPIO5 [4]
PWR_GPIO1
PWR_GPIO1 [4]
PWR_GPIO16
PWR_GPIO14
PWR_GPIO16 [4]
PWR_GPIO14 [4]
PWR_GPIO17
PWR_GPIO15
PWR_GPIO17 [4]
PWR_GPIO15 [4]
XGPIOB5
XGPIOB5 [4]
VCC_+1.8V
VCC_+3.3V
C87
0.1uF
C0402
C88
0.1uF
C0402
XGPIOB5
XBGPIOB5
PWR_BGPIO5
U8
GND1
VCCA
A1
B1
VCCB
B2
PWR_GPIO5
PWR_GPIO3
PWR_GPIO1
PWR_GPIO17
PWR_GPIO15
A2
A3
A4
A5
A6
B3
B4
B5
B6
B7
PWR_BGPIO3
PWR_BGPIO1
PWR_BGPIO17
PWR_BGPIO15
PWR_BGPIO16
A7
A8
OE
GND0
B8
PWR_GPIO16
PWR_GPIO14
OE
PWR_BGPIO14
SGM4578
TQFN_3X3_2D0L
VCC_+1.8V
R91
4.7K
R0402
OE
VCC_+3.3V
5V_IN
P5V_IN
J5
IIC3_SDA
IIC3_SCL
GPIOB22
PWR_BGPIO3
PWR_BGPIO5
PWR_BGPIO15
SPI2_MOSI
SPI2_MISO
SPI2_SCK
IIC3_SDA
GPIOA20/JTAG_TRST
PWM7/JTAG_TMS
SPI3_MISO
PWR_BGPIO1
R90
0R
R0402
D13
DSS22
SOD123_2D8X1D8
UART1_TX/JTAG_TDI
UART1_RX/JTAG_TDO
PWM2
PWR_BGPIO16
XBGPIOB5
PWR_BGPIO14
SPI2_CS
SPI3_CS
IIC3_SCL
R89
0R
R0402
PWM6/JTAG_TCK
PWR_BGPIO17
SPI3_MOSI
SPI3_SCK
Header_M / 20X2 / 2D54mm
Header_M_20X2_2D54mm
C89
22uF_16V
C0805
C90
0.1uF_16V
C0402
JTAG
VCC_+3.3V
R1303
4.7K
R0402
GPIOA20/JTAG_TRST
R1304
NC_4.7K
R0402
PWM6/JTAG_TCK
R1305
NC_4.7K
R0402
VCC_+3.3V
R1306
4.7K
R0402
GPIOB22
R1307
NC_4.7K
R0402
CVITEK
Title
07_UART_WG
Size
Custom
Document Number
CR182x_SIP_BGA
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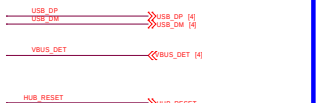
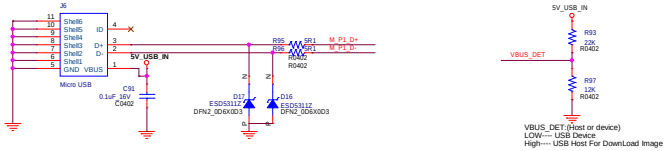
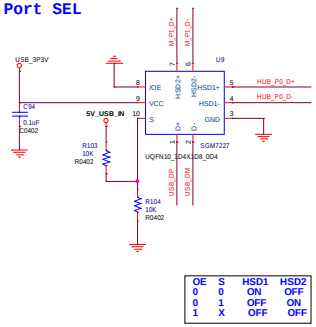
NET



USB UPDATE

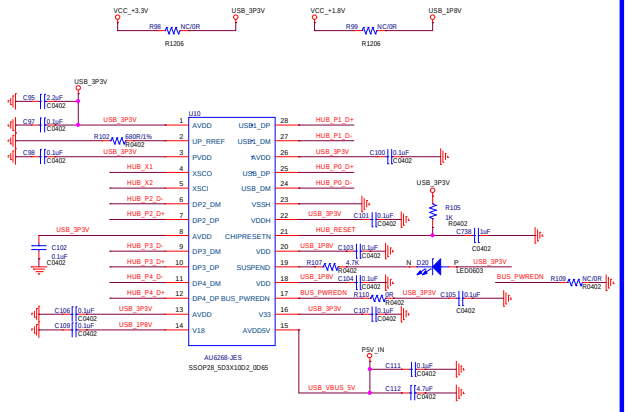


Port SEL

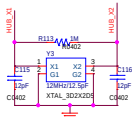


OE	S	HSD1	HSD2
0	0	ON	OFF
0	1	OFF	ON
1	X	OFF	OFF

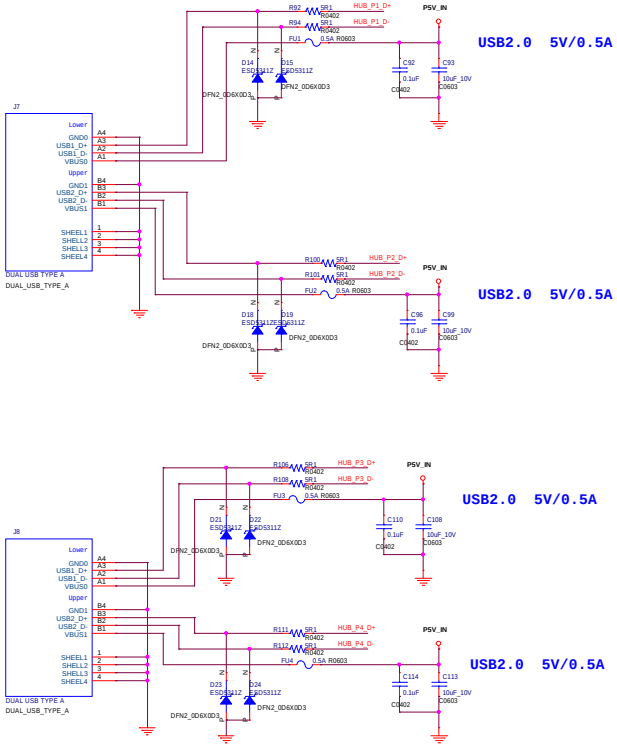
USB 2.0 HUB



USB HUB XTAL



USB2.0 port 1/2/3/4



File	08_USB
Size / Custom	Document Number: CR182x_SIP_BGA
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NET

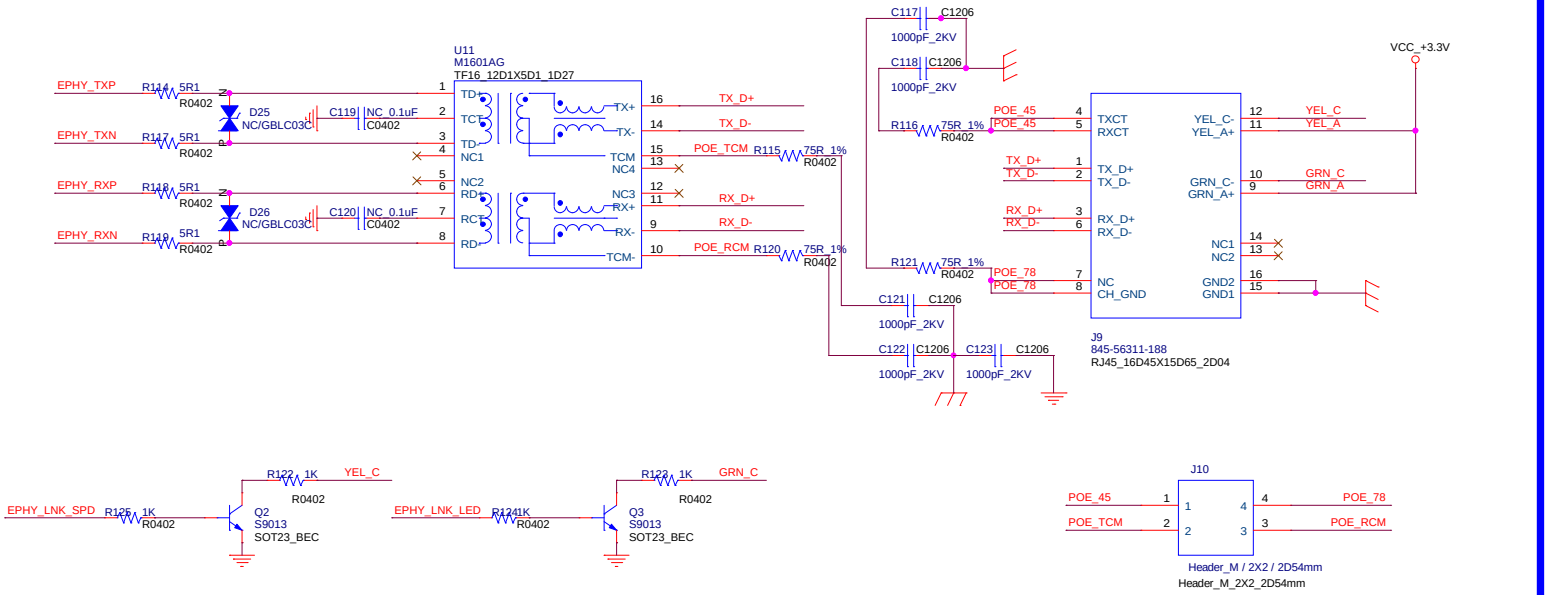
EPHY_TXP
EPHY_TXN
EPHY_RXP
EPHY_RXN

EPHY_TXP [4]
EPHY_TXN [4]
EPHY_RXP [4]
EPHY_RXN [4]

EPHY_LNK_LED
EPHY_LNK_SPD

EPHY_LNK_LED [4]
EPHY_LNK_SPD [4]

ETH



Title	09_RJ45	
Size: Custom	Document Number: CR182x_SIP_BGA	Rev: 1.0.0
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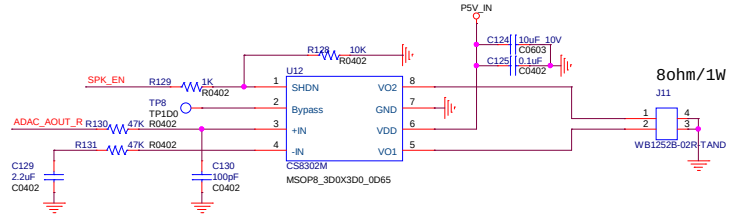
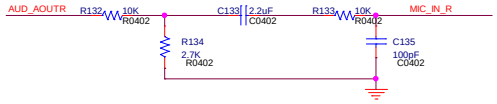
NET

ADAC_AOUT_R — ADAC_AOUT_R [4]
MIC_IN_L — MIC_IN_L [4]
MIC_IN_R — MIC_IN_R [4]
SPK_EN — SPK_EN [4]
AUD_AOUTL — AUD_AOUTL [4]
AUD_AOUTR — AUD_AOUTR [4]
AUD_MIC_L — AUD_MIC_L [4]

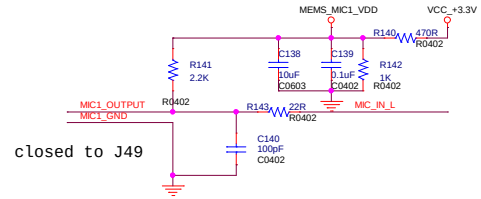
Audio AMP

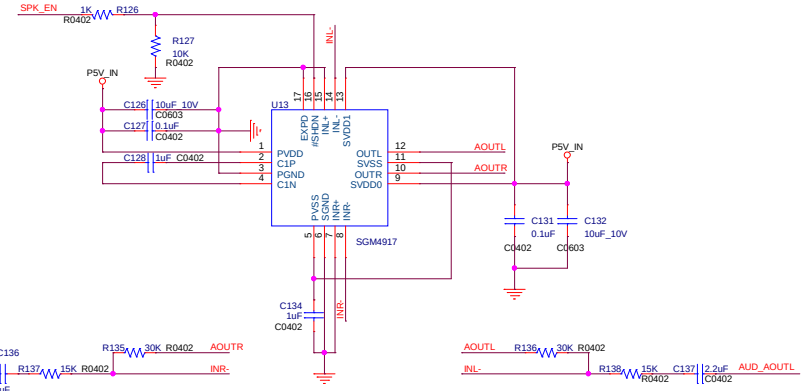


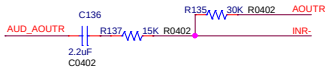
AEC

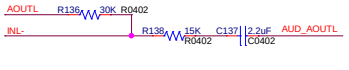


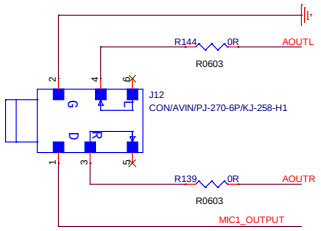
MIC

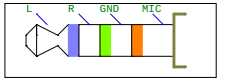












CVITEK

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Size: Custom	Document Number: CR182x_SIP_BGA	Rev: 1.0.0
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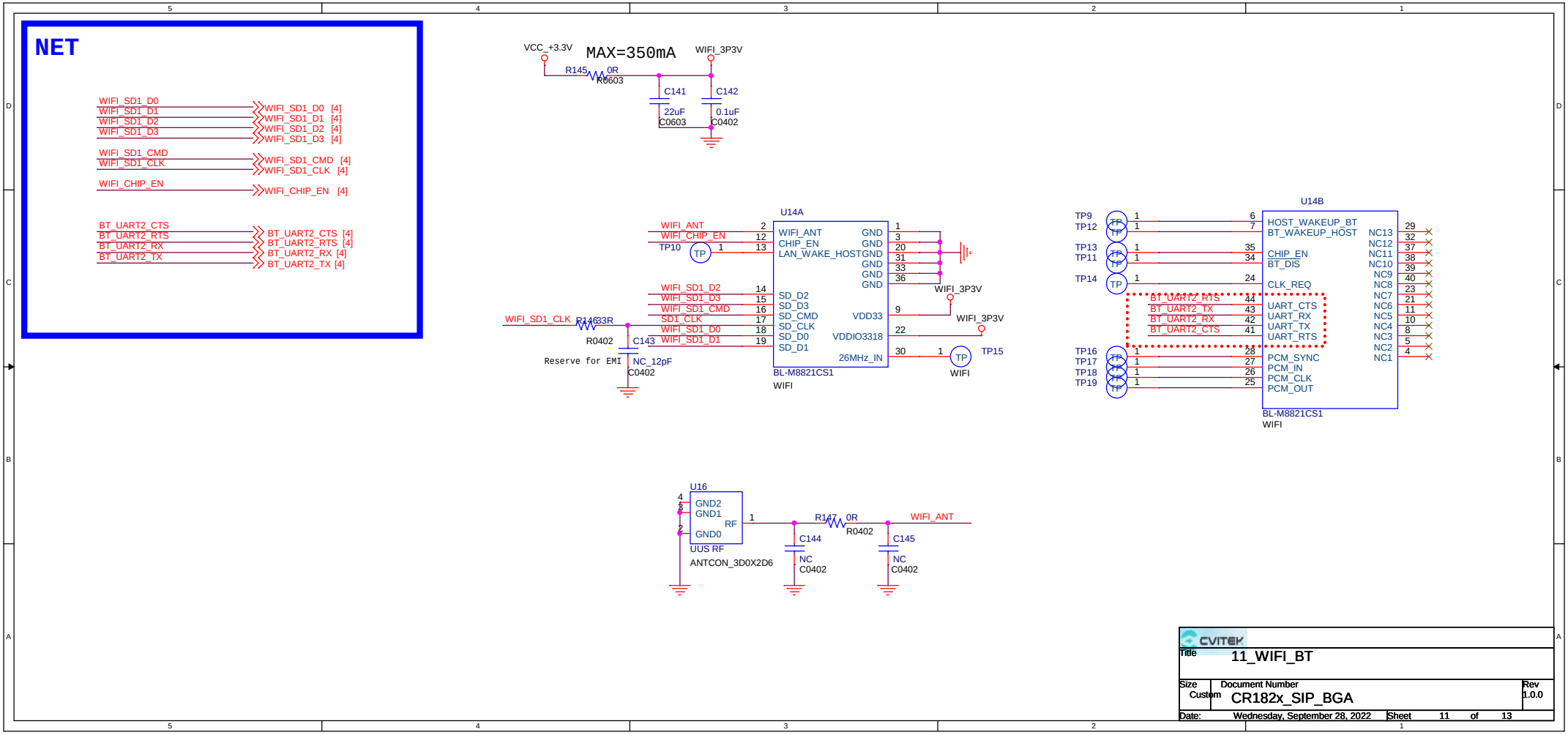
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WIFI_SD1_D0
WIFI_SD1_D1
WIFI_SD1_D2
WIFI_SD1_D3
WIFI_SD1_D0 [4]
WIFI_SD1_D1 [4]
WIFI_SD1_D2 [4]
WIFI_SD1_D3 [4]
WIFI_SD1_CMD
WIFI_SD1_CLK
WIFI_SD1_CMD [4]
WIFI_SD1_CLK [4]
WIFI_CHIP_EN
WIFI_CHIP_EN [4]
BT_UART2_CTS
BT_UART2_RTS
BT_UART2_RX
BT_UART2_TX
BT_UART2_CTS [4]
BT_UART2_RTS [4]
BT_UART2_RX [4]
BT_UART2_TX [4]
VCC_+3.3V
MAX=350mA
WIFI_3P3V
R145
0R
R0603
C141
22uF
C0603
C142
0.1uF
C0402
U14A
WIFI_ANT
WIFI_CHIP_EN
TP10
LAN_WAKE_HOST
SD_D2
SD_D3
SD_CMD
SD_CLK
SD_D0
SD_D1
VDD33
VDDIO3318
26MHz_IN
GND
BL-M8821CS1
WIFI
WIFI_SD1_CLK
R0402
C143
Reserve for EMI
NC_12pF
C0402
TP15
U14B
TP9
TP12
TP13
TP11
TP14
TP16
TP17
TP18
TP19
HOST_WAKEUP_BT
BT_WAKEUP_HOST
CHIP_EN
BT_DIS
CLK_REQ
UART_CTS
UART_RX
UART_TX
UART_RTS
PCM_SYNC
PCM_IN
PCM_CLK
PCM_OUT
NC13
NC12
NC11
NC10
NC9
NC8
NC7
NC6
NC5
NC4
NC3
NC2
NC1
U16
GND2
GND1
GND0
RF
UUS RF
ANTCON_3D0X2D6
R147
0R
R0402
C144
NC
C0402
C145
NC
C0402
CVITEK
Title
11_WIFI_BT
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Custom
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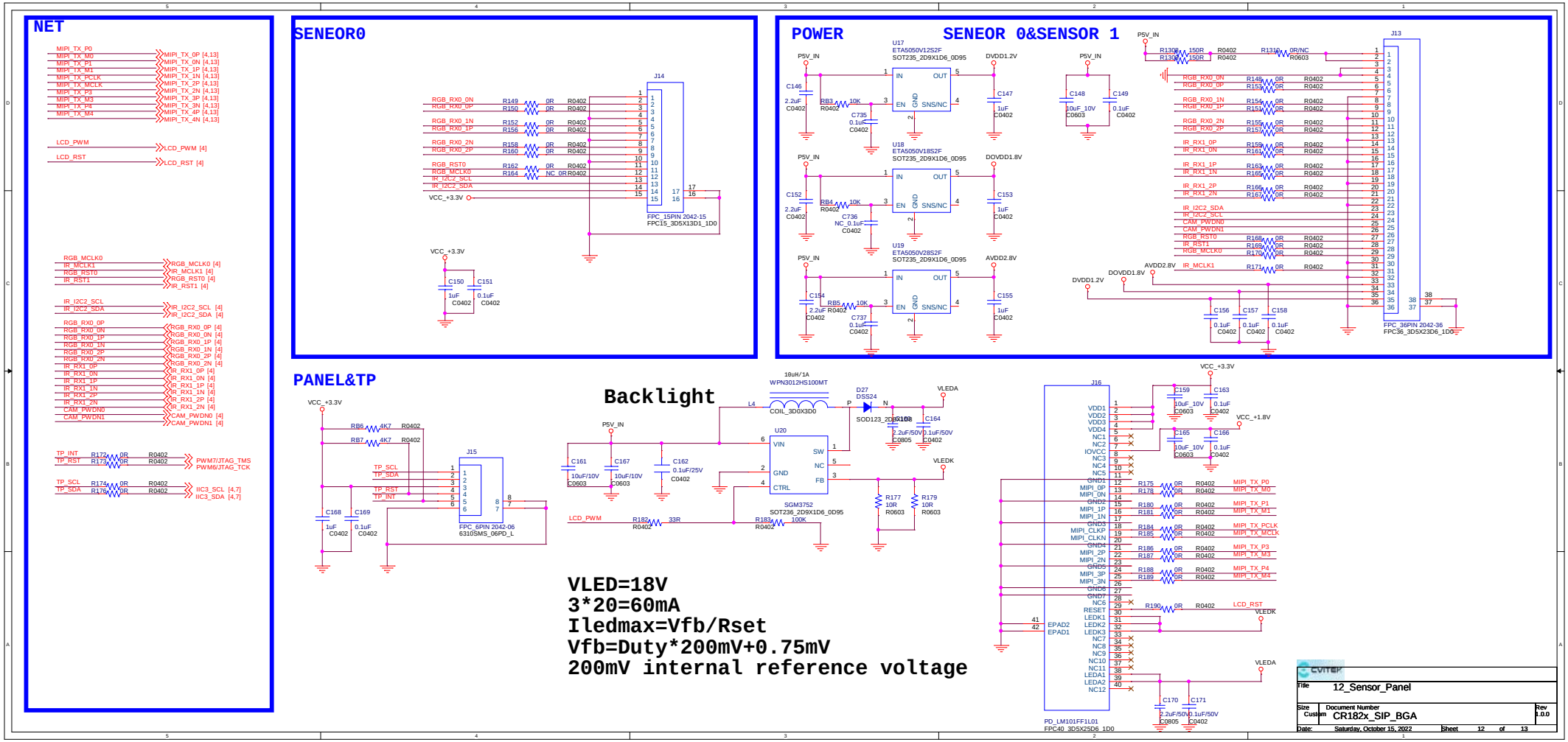
NET
MIPI_TX_P0
MIPI_TX_M0
MIPI_TX_P1
MIPI_TX_M1
MIPI_TX_PCLK
MIPI_TX_MCLK
MIPI_TX_P3
MIPI_TX_M3
MIPI_TX_P4
MIPI_TX_M4
LCD_PWM
LCD_RST
RGB_MCLK0
IR_MCLK1
RGB_RST0
IR_RST1
IR_I2C2_SCL
IR_I2C2_SDA
RGB_RX0_0P
RGB_RX0_0N
RGB_RX0_1P
RGB_RX0_1N
RGB_RX0_2P
RGB_RX0_2N
IR_RX1_0P
IR_RX1_0N
IR_RX1_1P
IR_RX1_1N
IR_RX1_2P
IR_RX1_2N
CAM_PWDN0
CAM_PWDN1
TP_INT
TP_RST
PWM7/JTAG_TMS
PWM6/JTAG_TCK
TP_SCL
TP_SDA
IIC3_SCL
IIC3_SDA
SENEOR0
J14
FPC_15PIN 2042-15
FPC15_3D5X13D1_1D0
POWER
SENEOR 0&SENSOR 1
U17
ETA5050V12S2F
SOT235_2D9X1D6_0D95
DVDD1.2V
U18
ETA5050V18S2F
DOVDD1.8V
U19
ETA5050V28S2F
AVDD2.8V
J13
FPC_36PIN 2042-36
FPC36_3D5X23D6_1D0
PANEL&TP
J15
FPC_6PIN 2042-06
6310SMS_06PD_L
Backlight
WPN3012HS100MT
SOD123_2D8X1D8
U20
SGM3752
SOT236_2D9X1D6_0D95
VLEDA
VLEDK
VLED=18V
3*20=60mA
Iledmax=Vfb/Rset
Vfb=Duty*200mV+0.75mV
200mV internal reference voltage
J16
PD_LM101FF1L01
FPC40_3D5X25D6_1D0
CVITEK
Title
12_Sensor_Panel
Size
Custom
Document Number
CR182x_SIP_BGA
Rev
1.0.0
Date:
Saturday, October 15, 2022
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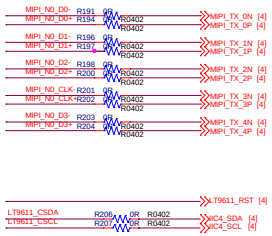
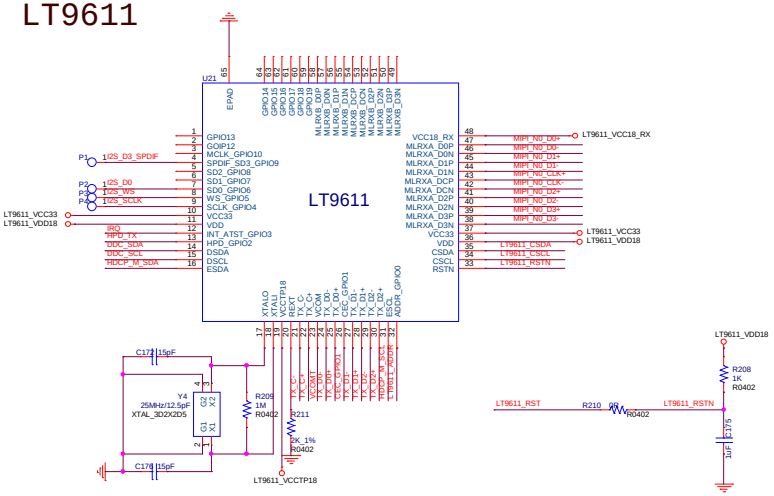
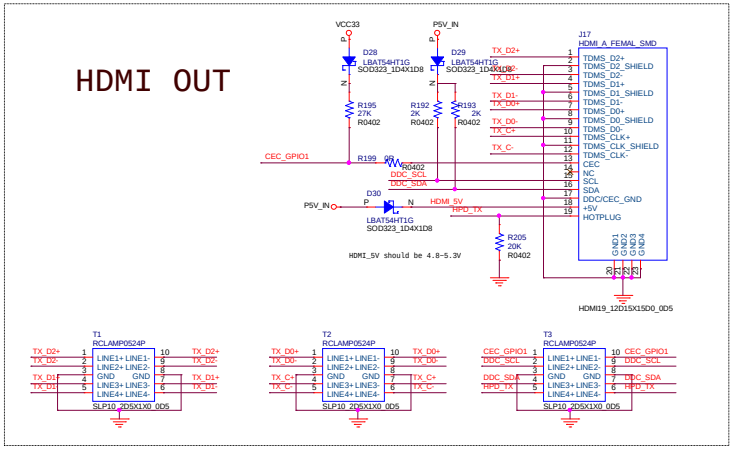
MIPI_IN

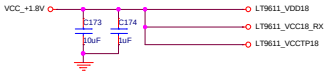


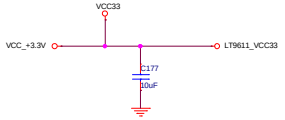
LT9611



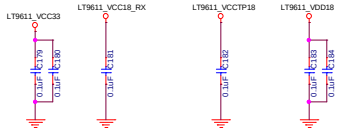
HDMI OUT



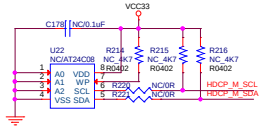




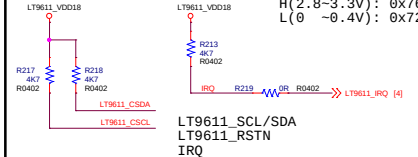
Decouple Cap: Close IC power pin



HDCP KEY



MIS



I2C address:
H(2.8~3.3V): 0x76(8bit), 0x3b(7bit)
L(0 ~0.4V): 0x72(8bit), 0x39(7bit)

LT9611_SCL/SDA
LT9611_RSTN
IRQ
These io is 1.8V and 3.3V compatible.

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