

MCU_A

| | | | | | | |
|---|--------------|--|-----------|------|-----|--|
| A | WK_UP | | PA0 | 22 | U1A | PA0/TIM2_CH1/TIM2_ETR/TIM5_CH1/TIM8_ETR/TIM15_BKIN/USART2_CTS_NSS/UART4_TX/SDMMC2_CMD/SAI2_SD_B/ETH_MII_CRS/ADC_INP16/WKUP0 |
| | KEY0 | | PA1 | 23 | | PA1/TIM2_CH2/TIM5_CH2/LPTIM3_OUT/TIM15_CH1N/USART2_RTS/UART4_RX/QUADSPI_BK1_IO3/SAI2_MCK_B/ETH_MII_RX_CLK/ETH_RMII_REF_CLK/LCD_R2/ADC1_INN16_INP17 |
| | GBC_RX | | PA2 | 24 | | PA2/TIM2_CH3/TIM5_CH3/LPTIM4_OUT/TIM15_CH1/USART2_TX/SAI2_SCK_B/ETH_MDIO/MDIOS_MDIO/LCD_R1/ADC12_INP14/WKUP1 |
| | GBC_TX | | PA3 | 25 | | PA3/TIM2_CH4/TIM5_CH4/LPTIM5_OUT/TIM15_CH2/USART2_RX/LCD_B2/OTG_HS_ULPI_D0/ETH_MII_COL/LCD_B5/ADC12_INP15 |
| | DCMI_HREF | | STM_DAC | PA4 | | PA4/TIM5_ETR/SPI1_NSS/I2S1_WS/SPI3_NSS/I2S3_WS/USART2_CK/SPI6_NSS/OTG_HS_SOF/DCMI_HSYNC/LCD_VSYNC/ADC12_INP18/DAC1_OUT1 |
| | STM_ADC | | PA5 | 29 | | PA5/TIM2_CH1/TIM2_ETR/TIM8_CH1N/SPI1_SCK/I2S1_CK/SPI6_SCK/OTG_HS_ULPI_CK/LCD_R4/ADC12_INN18_INP19/DAC1_OUT2 |
| | DCMI_PCLK | | PA6 | 30 | | PA6/TIM1_BKIN/TIM3_CH1/TIM8_BKIN/SPI1_MISO/I2S1_SDI/SPI6_MISO/TIM13_CH1/TIM8_BKIN_COMP12/MDIOS_MDC/TIM1_BKIN_COMP12/DCMI_PIXCLK/LCD_G2/ADC12_INP3 |
| | DCMI_RESET | | PA7 | 31 | | PA7/TIM1_CH1N/TIM3_CH2/TIM8_CH1N/SPI1_MOSI/I2S1_SDO/SPI6_MOSI/TIM14_CH1/ETH_MII_RX_DV/ETH_RMII_CRS_DV/FMC_SDNEW/ADC12_INN3_INP7/OPAMP1_VINM |
| | DCMI_XCLK | | REMOTE_IN | PA8 | | PA8/MCO1/TIM1_CH1/HRTIM_CHB2/TIM8_BKIN/I2C3_SCL/USART1_CK/OTG_FS_SOF/UART7_RX/TIM8_BKIN2_COMP12/LCD_B3/LCD_R6 |
| | USART1_TX | | PA9 | 68 | | PA9/TIM1_CH2/HRTIM_CHC1/LPUART1_TX/I2C3_SMBA/SPI2_SCK/I2C2_CK/USART1_TX/FDCAN1_RXFD_MODE/ETH_TX_ER/DCMI_D0/LCD_R5/OTG_FS_VBUS |
| B | USART1_RX | | PA10 | 69 | | PA10/TIM1_CH3/HRTIM_CHC2/LPUART1_RX/USART1_RX/FDCAN1_TXFD_MODE/OTG_FS_ID/MDIOS_MDIO/LCD_B4/DCMI_D1/LCD_B1 |
| | USB_DM | | PA11 | 70 | | PA11/TIM1_CH4/HRTIM_CHD1/LPUART1_CTS/SPI2_NSS/I2S2_WS/UART4_RX/USART1_CTS_NSS/FDCAN1_RX/OTG_FS_DM/LCD_R4 |
| | USB_DP | | PA12 | 71 | | PA12/TIM1_ETR/HRTIM_CHD2/LPUART1_RTS/SPI2_SCK/I2S2_CK/UART4_TX/USART1_RTS/SAI2_FS_B/FDCAN1_TX/OTG_FS_DP/LCD_R5 |
| | JTMS | | PA13 | 72 | | PA13/JTMS_SWDIO |
| | JTCK | | PA14 | 76 | | PA14/JTCK-SWCLK |
| | KEY1 | | JTDI | PA15 | | PA15/JTDI/TIM2_CH1/TIM2_ETR/HRTIM_FLT1/HDMI_CEC/SPI1_NSS/I2S1_WS/SPI3_NSS/I2S3_WS/SPI6_NSS/UART4_RTS/UART7_TX |
| | T_SCK | | PB0 | 34 | | PB0/TIM1_CH2N/TIM3_CH3/TIM8_CH2N/DFSDM_CKOUT/UART4_CTS/LCD_R3/OTG_HS_ULPI_D1/ETH_MII_RXD2/LCD_G1/ADC12_INN5_INP9/OPAMP1_VINP/COMP_1_INP |
| | T_PEN | | PB1 | 35 | | PB1/TIM1_CH3N/TIM3_CH4/TIM8_CH3N/DFSDM_DATIN1/LCD_R6/OTG_HS_ULPI_D2/ETH_MII_RXD3/LCD_G0/ADC12_INP5/COMP_1_INM |
| | QSPI_BK1_CLK | | PB2 | 36 | | PB2/SAI1_D1/DFSDM_CKIN1/SAI1_SD_A/SPI3_MOSI/I2S3_SDO/SAI4_SD_A/QUADSPI_CLK/SAI4_D1/ETH_TX_ER/COMP_1_INP/RTC_OUT |
| | T_MOSI | | JTDO | PB3 | | PB3/JTDO/TIM2_CH2/HRTIM_FLT4/SPI1_SCK/I2S1_CK/SPI3_SCK/I2S3_CK/SPI6_SCK/SDMMC2_D2/UART7_RX |
| C | LEDR | | JTRST | PB4 | | PB4/NJTRST/TIM16_BKIN/TIM3_CH1/HRTIM_EEV6/SPI1_MISO/I2S1_SDI/SPI3_MISO/I2S3_SDI/SPI2_NSS/I2S2_WS/SPI6_MISO/SDMMC2_D3/UART7_TX |
| | LCD_BL | | PB5 | 91 | | PB5/TIM17_BKIN/TIM3_CH2/HRTIM_EEV7/I2C1_SMBA/SPI1_MOSI/I2S1_SDO/I2C4_SMBA/SPI3_MOSI/I2S3_SDO/SPI6_MOSI/FDCAN2_RX/OTG_HS_ULPI_D7/ETH_PPS_OUT/FMC_SDCKE1/DCMI_D10/UART5_RX |
| | QSPI_BK1_NCS | | PB6 | 92 | | PB6/TIM16_CH1N/TIM4_CH1/HRTIM_EEV8/I2C1_SCL/HDMI_CEC/I2C4_SCL/USART1_TX/LPUART1_TX/FDCAN2_TX/QUADSPI_BK1_NCS/DFSDM_DATIN5/FMC_SDNE1/DCMI_D5/UART5_TX |
| | DCMI_VSYNC | | PB7 | 93 | | PB7/TIM17_CH1N/TIM4_CH2/HRTIM_EEV9/I2C1_SDA/USART1_RX/LPUART1_RX/FDCAN2_TXFD_MODE/DFSDM_CKIN5/FMC_NL/DCMI_VSYNC/PVD_IN |
| | DCMI_D6 | | PB8 | 95 | | PB8/TIM16_CH1/TIM4_CH3/DFSDM_CKIN7/I2C1_SCL/I2C4_SCL/SDMMC1_CKIN/UART4_RX/FDCAN1_RX/SDMMC2_D4/ETH_MII_TXD3/SDMMC1_D4/DCMI_D6/LCD_B6 |
| | DCMI_D7 | | PB9 | 96 | | PB9/TIM17_CH1/TIM4_CH4/DFSDM_DATIN7/I2C1_SDA/SPI2_NSS/I2S2_WS/I2C4_SDA/SDMMC1_CDIR/UART4_TX/FDCAN1_TX/SDMMC2_D5/I2C4_SMBA/SDMMC1_D5/DCMI_D7/LCD_B7 |
| | DCMI_SCL | | IIC_SCL | PB10 | | PB10/TIM2_CH3/HRTIM_SCOUT/LPTIM2_IN1/I2C2_SCL/SPI2_SCK/I2S2_CK/DFSDM_DATIN7/USART3_TX/QUADSPI_BK1_NCS/OTG_HS_ULPI_D3/ETH_MII_RX_ER/LCD_G4 |
| | DCMI_SDA | | IIC_SDA | PB11 | | PB11/TIM2_CH4/HRTIM_SCIN/LPTIM2_ETR/I2C2_SDA/DFSDM_CKIN7/USART3_RX/OTG_HS_ULPI_D4/ETH_MII_TX_EN/ETH_RMII_TX_EN/LCD_G5 |
| | SPI2_CS | | PB12 | 51 | | PB12/TIM1_BKIN/I2C2_SMBA/SPI2_NSS/I2S2_WS/DFSDM_DATIN1/USART3_CK/FDCAN2_RX/OTG_HS_ULPI_D5/ETH_MII_TXD0/ETH_RMII_TXD0/OTG_HS_ID/TIM1_BKIN_COMP12/UART5_RX |
| | SPI2_SCK | | PB13 | 52 | | PB13/TIM1_CH1N/LPTIM2_OUT/SPI2_SCK/I2S2_CK/DFSDM_CKIN1/USART3_CTS_NSS/FDCAN2_TX/OTG_HS_ULPI_D6/ETH_MII_TXD1/ETH_RMII_TXD1/UART5_TX/OTG_HS_VBUS |
| D | SPI2_MISO | | PB14 | 53 | | PB14/TIM1_CH2N/TIM2_CH1/TIM8_CH2N/USART1_TX/SPI2_MISO/I2S2_SDI/DFSDM_DATIN2/USART3_RTS/UART4_RTS/SDMMC2_D0/OTRG_HS_DM |
| | SPI2_MOSI | | PB15 | 54 | | PB15/RTC_REFIN/TIM1_CH3N/TIM12_CH2/TIM8_CH3N/USART1_RX/SPI2_MOSI/I2S2_SDO/DFSDM_CKIN2/UART4_CTS/SDMMC2_D1/OTG_HS_DP |
| | NRF_CE | | PC0 | 15 | | PC0/DFSDM_CKIN0/DFSDM_DATIN4/SAI2_FS_B/OTG_HS_ULPI_STP/FMC_SDNEW/LCD_R5/ADC123_INP10 |
| | LIGHT_SENSOR | | PC1 | 16 | | PC1/SAI1_D1/DFSDM_DATIN0/DFSDM_CKIN4/SPI2_MOSI/I2S2_SDO/SAI1_SD_A/SAI4_SD_A/SDMMC2_CK/SAI4_D1/ETH_MDC/MDIOS_MDC/ADC123_INN10_INP11/WKUP5 |
| | GBC_KEY | | PC2 | 17 | | PC2/DFSDM_CKIN1/SPI2_MISO/I2S2_SDI/DFSDM_CKOUT/OTG_HS_ULPI_DIR/ETH_MII_TXD2/FMC_SDNE0/ADC123_INN11_INP12 |
| | NRF_IRQ | | GBC_LED | PC3 | | PC3/DFSDM_DATIN1/SPI2_MOSI/I2S2_SDO/OTG_HS_ULPI_NXT/ETH_MII_TX_CLK/FMC_SDCKE0/ADC12_INN12_INP13 |
| | DCMI_PWDN | | PC4 | 32 | | PC4/DFSDM_CKIN2/I2S1_MCK/SPDIFRX_IN2/ETH_MII_RXD0/ETH_RMII_RXD0/FMC_SDNE0/ADC12_INP4/OPAMP1_VOUT/COMP_1_INM |
| | T_CS | | PC5 | 33 | | PC5/SAI1_D3/DFSDM_DATIN2/SPDIFRX_IN3/SAI4_D3/ETH_MII_RXD1/ETH_RMII_RXD1/FMC_SDCKE0/COMP_1_OUT/ADC12_INN4_INP8/OPAMP1_VINM |
| | DCMI_D0 | | PC6 | 63 | | PC6/HRTIM_CHA1/TIM3_CH1/TIM8_CH1/DFSDM_CKIN3/I2S2_MCK/USART6_TX/SDMMC1_D0DIR/FMC_NWAIT/SDMMC2_D6/SDMMC1_D6/DCMI_D0/LCD_SWPMI_IO |
| | DCMI_D1 | | PC7 | 64 | | PC7/TRG0/HRTIM_CHA2/TIM3_CH2/TIM8_CH2/DFSDM_DATIN3/I2S3_MCK/USART6_RX/SDMMC1_D123DIR/FMC_NE1/SDMMC2_D7/SWPMI_TX/SDMMC1_D7/DCMI_D1/LCD_G6 |

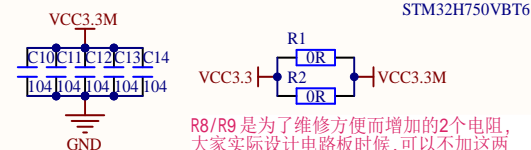
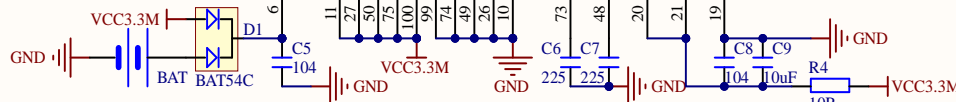
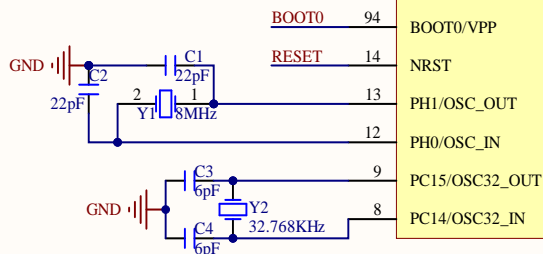
STM32H750VBT6

| | |
|-------------------------|---------------------|
| Title: | |
| MiniPRO STM32H750 Board | |
| Author: | Size: |
| ATOM | A4 |
| Date: | File: |
| 2022/6/17 | CORE_PIN_ABC.SchDoc |
| Revision: | Version: |
| | V1.5 |



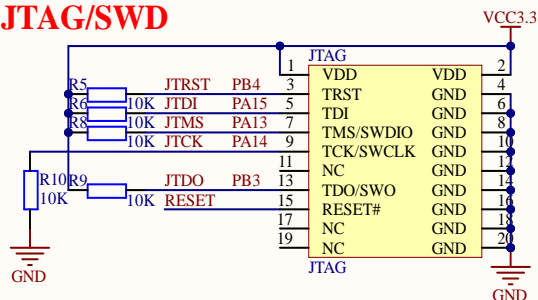
MCU_B

| | | | | | |
|---------|--------------|------|----|-----|--|
| | FMC_D2 | PD0 | 81 | U1B | PD0/DFSDM_CKIN6/SAI3_SCK_A/UART4_RX/FDCAN1_RX/FMC_D2/FMC_DA2 |
| | FMC_D3 | PD1 | 82 | | PD1/DFSDM_DATIN6/SAI3_SD_A/UART4_TX/FDCAN1_TX/FMC_D3/FMC_DA3 |
| | SD1_CMD | PD2 | 83 | | PD2/TIM3_ETR/UART5_RX/SDMMC1_CMD/DCMI_D11 |
| DCMI_D5 | | PD3 | 84 | | PD3/DFSDM_CKOUT/SPI2_SCK/I2S2_CK/USART2_CTS_NSS/FMC_CLK/DCMI_D5/LCD_G7 |
| | FMC_NOE | PD4 | 85 | | PD4/HRTIM_FLT3/SAI3_FS_A/USART2_RTS/FDCAN1_RXFD_MODE/FMC_NOE |
| | FMC_NWE | PD5 | 86 | | PD5/HRTIM_EEV3/USART2_TX/FDCAN1_TXFD_MODE/FMC_NWE |
| | T_MISO | PD6 | 87 | | PD6/SAI1_D1/DFSDM_CKIN4_DATIN1/SPI3_MOSI/I2S3_SDO/SAI1_SD_A/USART2_RX/SAI4_SD_A/FDCAN2_RXFD_MODE/SAI4_D1/SDMMC2_CK/FMC_NWAIT/DCMI_D10/LCD_B2 |
| | FMC_NE1 | PD7 | 88 | | PD7/DFSDM_DATIN4/SPI1_MOSI/I2S1_SDO/DFSDM_CKIN1/USART2_CK/SPDIFRX_IN0/SDMMC2_CMD/FMC_NE1 |
| | FMC_D13 | PD8 | 55 | | PD8/DFSDM_CKIN3/SAI3_SCK_B/USART3_TX/SPDIFRX_IN1/FMC_D13/FMC_DA13 |
| | FMC_D14 | PD9 | 56 | | PD9/DFSDM_DATIN3/SAI3_SD_B/USART3_RX/FDCAN2_RXFD_MODE/FMC_D14/FMC_DA14 |
| | FMC_D15 | PD10 | 57 | | PD10/DFSDM_CKOUT/SAI3_FS_B/USART3_CK/FDCAN2_TXFD_MODE/FMC_D15/FMC_DA15/LCD_B3 |
| | QSPI_BK1_IO0 | PD11 | 58 | | PD11/LPTIM2_IN2/I2C4_SMBA/USART3_CTS_NSS/QUADSPI_BK1_IO0/SAI2_SD_A/FMC_A16 |
| | QSPI_BK1_IO1 | PD12 | 59 | | PD12/LPTIM1_IN1/TIM4_CH1/LPTIM2_IN1/I2C4_SCL/USART3_RTS/QUADSPI_BK1_IO1/SAI2_FS_A/FMC_A17 |
| | QSPI_BK1_IO3 | PD13 | 60 | | PD13/LPTIM1_OUT/TIM4_CH2/I2C4_SDA/QUADSPI_BK1_IO3/SAI2_SCK_A/FMC_A18 |
| | FMC_D0 | PD14 | 61 | | PD14/TIM4_CH3/SAI3_MCLK_B/UART8_CTS/FMC_D0/FMC_DA0 |
| | FMC_D1 | PD15 | 62 | | PD15/TIM4_CH4/SAI3_MCLK_A/UART8_RTS/FMC_D1/FMC_DA1 |
| | | | | | |
| | NRF_CS | PE0 | 97 | | PE0/LPTIM1_ETR/TIM4_ETR/HRTIM_SCIN/LPTIM2_ETR/UART8_RX/FDCAN1_RXFD_MODE/SAI2_MCK_A/MFC_NBL0/DCMI_D2 |
| | | PE1 | 98 | | PE1/LPTIM1_IN2/HRTIM_SCOUT/UART8_TX/FDCAN1_TXFD_MODE/FMC_NBL1/DCMI_D3 |
| | QSPI_BK1_IO2 | PE2 | 1 | | PE2/SAI1_CK1/SPI4_SCK/SAI1_MCLK_A/SAI4_MCLK_A/QUADSPI_BK1_IO2/SAI4_CK1/ETH_MII_TXD3/FMC_A23 |
| | FMC_A19 | PE3 | 2 | | PE3/TIM15_BKIN/SAI1_SD_B/SAI4_SD_B/FMC_A19 |
| | BEEP | PE4 | 3 | | PE4/SAI1_D2/DFSDM_DATIN3/TIM15_CH1N/SPI4_NSS/SAI1_FS_A/SAI4_FS_A/SAI4_D2/FMC_A20/DCMI_D4/LCD_B0 |
| | LEDB | PE5 | 4 | | PE5/SAI1_CK2/DFSDM_CKIN3/TIM15_CH1/SPI4_MISO/SAI1_SCK_A/SAI4_SCK_A/SAI4_CK2/FMC_A21/DCMI_D6/LCD_G0 |
| | LEDG | PE6 | 5 | | PE6/TIM1_BKIN2/SAI1_D1/TIM15_CH2/SPI4_MOSI/SAI1_SD_A/SAI4_SD_A/SAI4_D1/SAI2_MCK_B/TIM1_BKIN2_COMP12/FMC_A22/DCMI_D7/LCD_G1 |
| | FMC_D4 | PE7 | 37 | | PE7/TIM1_ETR/DFSDM_DATIN2/UART7_RX/QUADSPI_BK2_IO0/FMC_D4/FMC_DA4/OPAMP2_VOUT/COMP_2_INM |
| | FMC_D5 | PE8 | 38 | | PE8/TIM1_CH1N/DFSDM_CKIN2/UART7_TX/QUADSPI_BK2_IO1/FMC_D5/FMC_DA5/COMP_2_OUT/OPAMP2_VINM |
| | FMC_D6 | PE9 | 39 | | PE9/TIM1_CH1/DFSDM_CKOUT/UART7_RTS/QUADSPI_BK2_IO2/FMC_D6/FMC_DA6/OPAMP2_VINP/COMP_2_INP |
| | FMC_D7 | PE10 | 40 | | PE10/TIM1_CH2N/DFSDM_DATIN4/UART7_CTS/QUADSPI_BK2_IO3/FMC_D7/FMC_DA7/COMP_2_INM |
| | FMC_D8 | PE11 | 41 | | PE11/TIM1_CH2/DFSDM_CKIN4/SPI4_NSS/SAI2_SD_B/FMC_D8/FMC_DA8/LCD_G3/COMP_2_INP |
| | FMC_D9 | PE12 | 42 | | PE12/TIM1_CH3N/DFSDM_DATIN5/SPI4_SCK/SAI2_SCK_B/FMC_D9/FMC_DA9/COMP_1_OUT/LCD_B4 |
| | FMC_D10 | PE13 | 43 | | PE13/TIM1_CH3/DFSDM_CKIN5/SPI4_MISO/SAI2_FS_B/FMC_D10/FMC_DA10/COMP_2_OUT/LCD_DE |
| | FMC_D11 | PE14 | 44 | | PE14/TIM1_CH4/SPI4_MOSI/SAI2_MCK_B/FMC_D11/FMC_DA11/LCD_CLK |
| | FMC_D12 | PE15 | 45 | | PE15/TIM1_BKIN/HDMI_CEC/FMC_D12/FMC_DA12/TIM1_BKIN_COMP12/LCD_R7 |

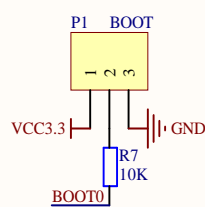


R8/R9 是为了维修方便而增加的2个电阻,大家实际设计电路板时候,可以不加这两个电阻. VCC3.3M 直接连接3.3 V即可

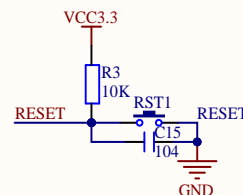
JTAG/SWD



RESET



BOOT

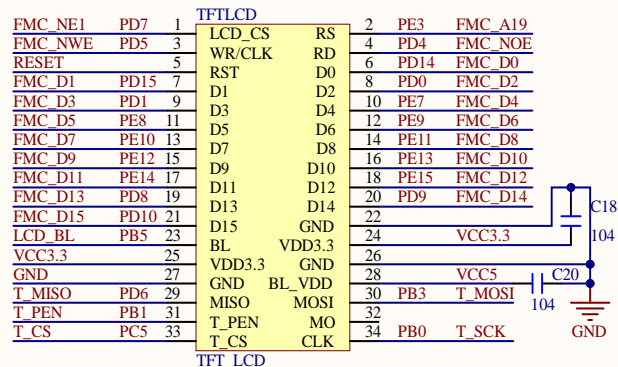


Title: MiniPRO STM32H750 Board
Author: ATOM
Date: 2022/6/17
Revision:

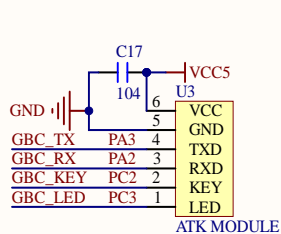
Size: A4
File: CORE_PIN_DEF.SchDoc
Version: V1.5



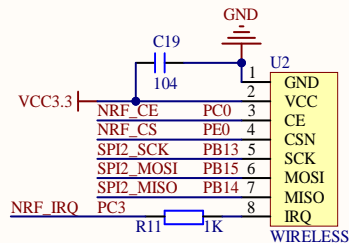
LCD



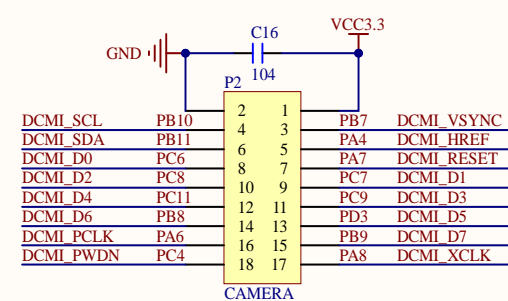
ATK MODULE



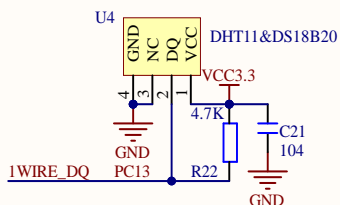
WIRELESS



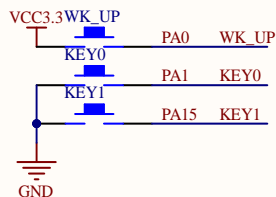
OLED&CAMERA



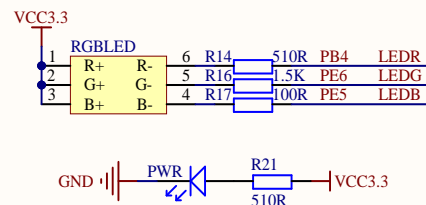
TEMP&HUMI SENSOR



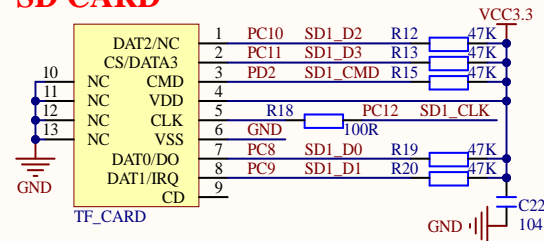
KEY



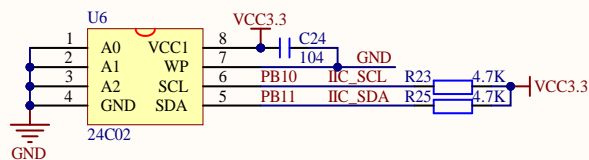
LED



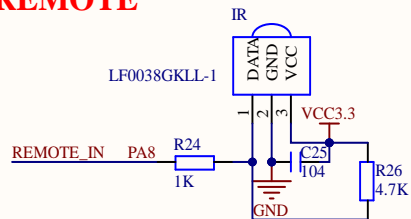
SD CARD



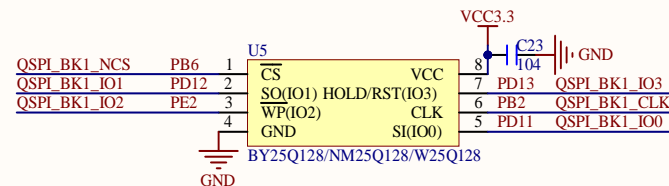
EEPROM



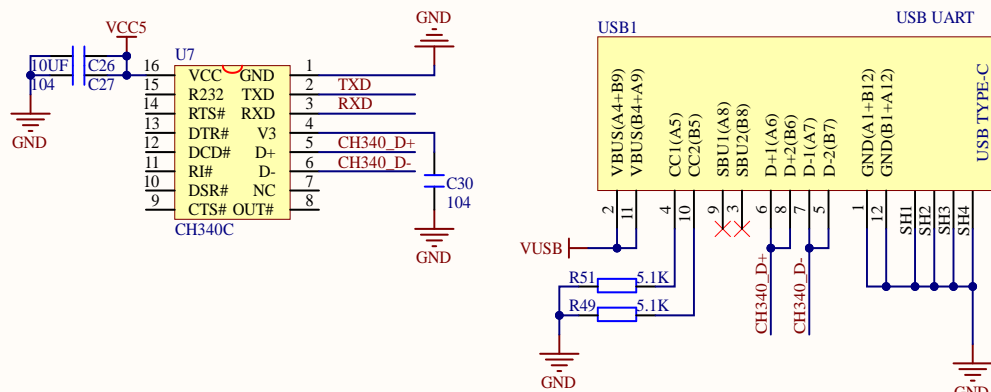
REMOTE



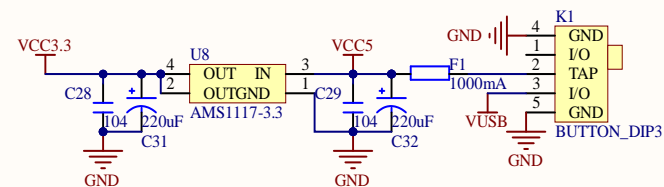
QSPI FLASH



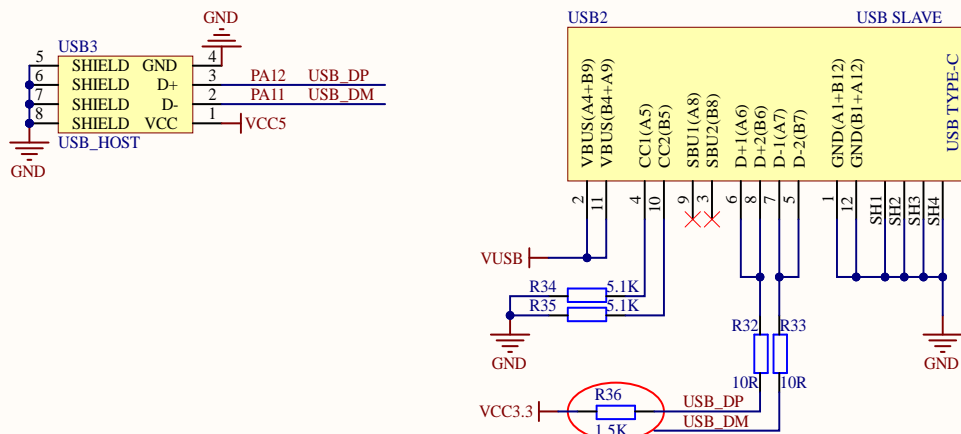
USB UART



LDO

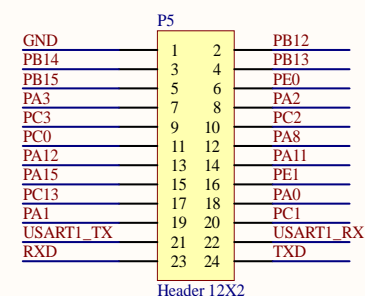
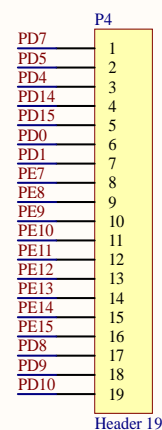
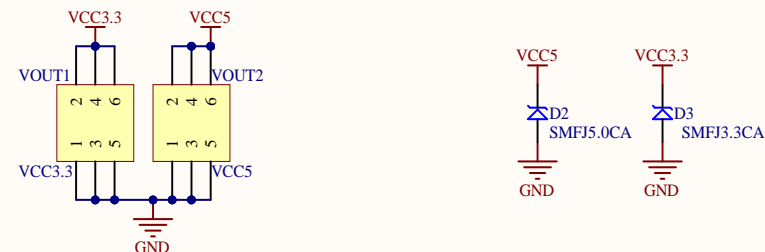


USB SLAVE & HOST



由于H750内置了USB上拉电阻，外接 R36这个电阻会导致 USB Host U 盘实验，在不接入U盘的时候，出现死机的情况，所以硬件上已经去掉这个电阻！

ON BOARD POWER SOURCE



| | |
|-----------------------------------|---------------------------|
| Title: MiniPRO STM32H750 Board | |
| Author: ATOM | Size: A4 |
| Date: 2022/6/17 | File: POWER&USB.SchDoc |
| Revision: | Version: V1.5 |



