

MCU_ABC

1

2

3

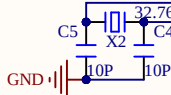
4

U1A

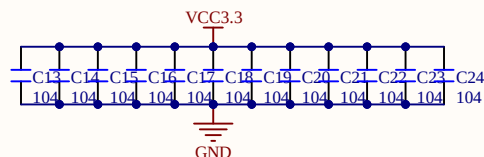
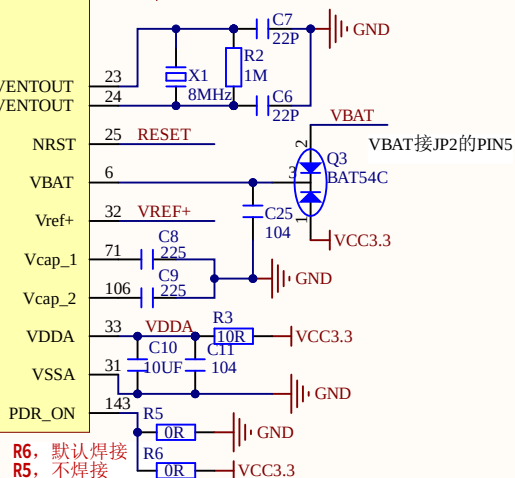
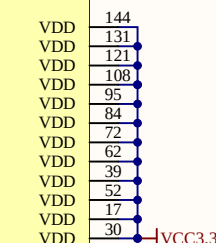
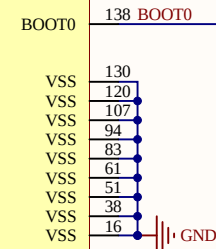
WK_UP	PA0	34	PA0-WKUP/USART2_CTS/UART4_TX/ETH_MII_CRS/TMR2_CH1_ETR/TMR5_CH1/TMR8_ETR/WKUP/ADC123_IN0/EVENTOUT
	PA1	35	PA1/USART2_RTS/UART4_RX/ETH_RMII_REF_CLK/ETH_MII_RX_CLK/TMR2_CH2/TMR5_CH2/ADC123_IN1/EVENTOUT
	PA2	36	PA2/USART2_TX/TMR2_CH3/TMR5_CH3/TMR9_CH1/ETH_MDIO/ADC123_IN2/ETH_MDIO/EVENTOUT
	PA3	37	PA3/USART2_RX/TMR2_CH4/TMR5_CH4/TMR9_CH2/OTG_HS_ULPI_D0/ETH_MII_COL/ADC123_IN3/DMC_CKE/ EVENTOUT
DCMI_HREF	PA4	40	PA4/SPI1_NSS/SPI3_NSS/USART2_CK/DCI_HSYNC/OTG_HS_SOF/I2S3_WS/DAC_OUT/ADC12_IN4/EVENTOUT
	PA5	41	PA5/SPI1_SCK/OTG_HS_ULPI_CK/TMR2_CH1_ETR/TMR8_CH1N/DAC2_OUT2/ADC12_IN5/EVENTOUT
DCMI_PCLK	PA6	42	PA6/SPI1_MISO/TMR1_BKIN/TMR3_CH1/TMR8_BKIN/TIM13_CH1/DCI_PIXCLK/ADC12_IN6/EVENTOUT
	PA7	43	PA7/SPI1_MOSI/TMR1_CH1N/TMR3_CH2/TMR8_CH1N/TMR14_CH1/ETH_MII_RX_DV/ETH_RMII_CRS_DV/ADC12_IN7/EVENTOUT
DCMI_XCLK	PA8	100	PA8/TMR1_CH1/USART1_CK/I2C3_SCL/MCO/OTG_FS_SOF/EVENTOUT
USART1_TX	PA9	101	PA9/TMR1_CH2/USART1_TX/I2C3_SMBAL/OTG_FS_VBUS/DCI_D0/EVENTOUT
USART1_RX	PA10	102	PA10/TMR1_CH3/USART1_RX/OTG_FS_ID/DCI_D1/EVENTOUT
USB_D-	PA11	103	PA11/TMR1_CH4/USART1_CTS/CAN1_RX/OTG_FS_DM/EVENTOUT
USB_D+	PA12	104	PA12/TMR1_ETR/USART1_RTS/CAN1_TX/OTG_FS_DP/EVENTOUT
SWDIO	PA13	105	PA13/JTMS_SWDIO/EVENTOUT
SWDCLK	PA14	109	PA14/JTCK_SWCLK/EVENTOUT
	PA15	110	PA15/JTDI/SPI1_NSS/SPI3_NSS/TMR2_CH1_ETR/I2S3_WS/EVENTOUT

T_SCK	PB0	46	PB0/TMR1_CH2N/TMR3_CH3/TMR8_CH2N/OTG_HS_ULPI_D1/ETH_MII_RXD2/ADC12_IN8/EVENTOUT
T_PEN	PB1	47	PB1/TMR1_CH3N/TMR3_CH4/TMR8_CH3N/OTG_HS_ULPI_D2/ETH_MII_RXD3/ADC12_IN9/EVENTOUT
T_MISO	PB2	48	PB2/BOOT1/EVENTOUT
SPI1_SCK	PB3	133	PB3/JTDO/TRACESWO/TMR2_CH2/SPI1_SCK/SPI3_SCK/I2S3_CK/EVENTOUT
SPI1_MISO	PB4	134	PB4/NTRST/TMR3_CH1/SPI1_MISO/SPI3_MISO/I2S3ext_SD/EVENTOUT
SPI1_MOSI	PB5	135	PB5/TMR3_CH2/SPI1_MOSI/SPI3_MOSI/CAN2_RX/I2C1_SMBAL/OTG_HS_ULPI_D7/ETH_PPS_OUT/DCI_D10/I2S3_SD/EVENTOUT
DCMI_D5	PB6	136	PB6/TMR4_CH1/USART1_TX/CAN2_TX/I2C1_SCL/DCI_D5/EVENTOUT
DCMI_VSYNC	PB7	137	PB7/TMR4_CH2/USART1_RX/SMC_NL/I2C1_SDA/DCI_VSYNC/EVENTOUT
IIC_SCL	PB8	139	PB8/TMR4_CH3/TMR10_CH1/CAN1_RX/SDIO_D4/ETH_MII_TXD3/I2C1_SCL/DCI_D6/EVENTOUT
IIC_SDA	PB9	140	PB9/TMR4_CH4/TMR11_CH1/CAN1_TX/SDIO_D5/SPI2_NSS/I2C1_SDA/DCI_D7/I2S2_WS/EVENTOUT
	PB10	69	PB10/SPI2_SCK/TMR2_CH3/USART3_TX/I2C2_SCL/OTG_HS_ULPI_D3/ETH_MII_RX_ER/I2S2_CK/EVENTOUT
	PB11	70	PB11/TMR2_CH4/USART3_RX/I2C2_SDA/OTG_HS_ULPI_D4/ETH_MII_TX_EN/ETH_RMII_TX_EN/EVENTOUT
	PB12	73	PB12/SPI2_NSS/TMR1_BKIN/USART3_CK/CAN2_RX/I2C2_SMBAL/OTG_HS_ULPI_D5/OTG_HS_ID/ETH_MII_TXD0/ETH_RMII_TXD0/I2S2_WS/EVENTOUT
	PB13	74	PB13/SPI2_SCK/TMR1_CH1N/USART3_CTS/CAN2_TX/OTG_HS_ULPI_D6/OTG_HS_VBUS/ETH_MII_TXD1/ETH_RMII_TXD1/I2S2_CK/EVENTOUT
F_CS	PB14	75	PB14/SPI2_MISO/TMR1_CH2N/TMR8_CH2N/TMR12_CH1/USART3_RTS/OTG_HS_DM/I2S2ext_SD/EVENTOUT
LCD_BL	PB15	76	PB15/SPI2_MOSI/TMR1_CH3N/TMR8_CH3N/TMR12_CH2/OTG_HS_DP/I2S2_SD/RTC_REFIN/EVENTOUT

	PC0	26	PC0/OTG_HS_ULPI_STP/ADC123_IN10/EVENTOUT
	PC1	27	PC1/ETH_MDC/ADC123_IN11/EVENTOUT
	PC2	28	PC2/SPI2_MISO/OTG_HS_ULPI_DIR/ETH_MII_TXD2/I2S2ext_SD/ADC123_IN12/EVENTOUT
	PC3	29	PC3/SPI2_MOSI/OTG_HS_ULPI_NXT/ETH_MII_TX_CLK/I2S2_SD/ADC123_IN13/EVENTOUT
	PC4	44	PC4/ETH_MII_RX_D0/ETH_RMII_RX_D0/ADC12_IN14/EVENTOUT
	PC5	45	PC5/ETH_MII_RX_D1/ETH_RMII_RX_D1/ADC12_IN15/EVENTOUT
	DCMI_D0	PC6	96
	DCMI_D1	PC7	97
SDIO_D0	DCMI_D2	PC8	98
SDIO_D1	DCMI_D3	PC9	99
SDIO_D2		PC10	111
SDIO_D3	DCMI_D4	PC11	112
SDIO_SCK		PC12	113
	T_CS	PC13	7
			8
			9
			PC14-OSC32_IN/EVENTOUT
			PC15-OSC32_OUT/EVENTOUT

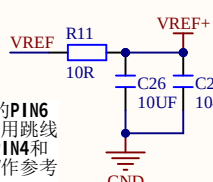


STM32F407ZGT6

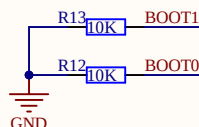


VREF

VREF通过JP1的PIN6引出, 默认使用跳线帽短接JP1的PIN4和PIN6, 用3.3V作参考



BOOT



BOOT0和BOOT1默认都用电阻连接到GND, 从用户代码启动

BOOT0同时和KEY0连接, 按下KEY0, 可以把BOOT0拉高!! 方便进入BootLoader模式!

Title:

M144Z-M4.PrjPCB

Author:

ALIENTEK

Date:

2024/4/23

Revision:

V1.0

Size:

A4

File:

CORE_ABC.SchDoc

Version:

V1.0



正点原子

1

2

3

4

MCU_DEFG

U1B

FSMC_D2	PD0	114
FSMC_D3	PD1	115
SDIO_CMD	PD2	116
	PD3	117
FSMC_NOE	PD4	118
FSMC_NWE	PD5	119
DCMI_SCL	PD6	122
DCMI_SDA	PD7	123
FSMC_D13	PD8	77
FSMC_D14	PD9	78
FSMC_D15	PD10	79
FSMC_A16	PD11	80
FSMC_A17	PD12	81
FSMC_A18	PD13	82
FSMC_D0	PD14	85
FSMC_D1	PD15	86

FSMC_NBL0	PE0	141
FSMC_NBL1	PE1	142
	PE2	1
	PE3	2
KEY0	PE4	3
DCMI_D6	PE5	4
DCMI_D7	PE6	5
FSMC_D4	PE7	58
FSMC_D5	PE8	59
FSMC_D6	PE9	60
FSMC_D7	PE10	63
FSMC_D8	PE11	64
FSMC_D9	PE12	65
FSMC_D10	PE13	66
FSMC_D11	PE14	67
FSMC_D12	PE15	68

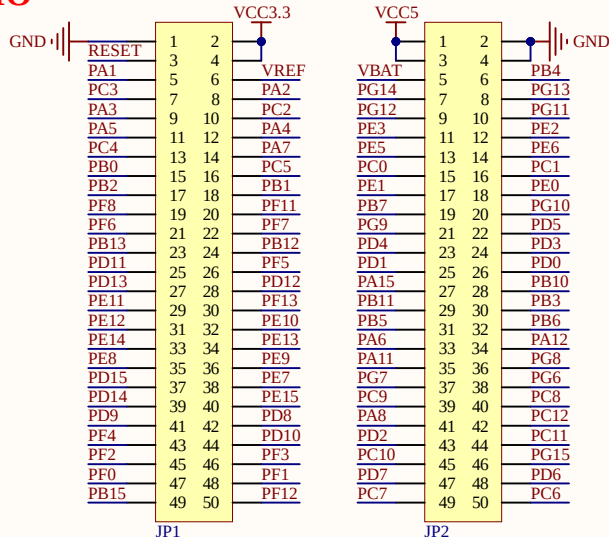
PD0/SMC_D2/CAN1_RX/EVENTOUT
PD1/SMC_D3/CAN1_TX/EVENTOUT
PD2/TMR3_ETR/UART5_RX/SDIO_CMD/DCI_D11/EVENTOUT
PD3/SMC_CLK/USART2_CTS/EVENTOUT
PD4/SMC_NOE/USART2_RTS/EVENTOUT
PD5/SMC_NWE/USART2_TX/EVENTOUT
PD6/SMC_WAIT/USART2_RX/EVENTOUT
PD7/SMC_NE1/SMC_NCE2/USART2_CK/EVENTOUT
PD8/SMC_D13/USART3_TX/EVENTOUT
PD9/SMC_D14/USART3_RX/EVENTOUT
PD10/SMC_D15/USART3_CK/DMC_DQ10/EVENTOUT
PD11/SMC_A16/SMC_CLE/USART3_CTS/EVENTOUT
PD12/SMC_A17/SMC_ALE/TIM4_CH1/USART3_RTS/EVENTOUT
PD13/SMC_A18/TMR4_CH2/DMC_DQ12/EVENTOUT
PD14/SMC_D0/TMR4_CH3/DMC_DQ13/EVENTOUT
PD15/SMC_D1/TMR4_CH4/DMC_DQ14/EVENTOUT

PF0/SMC_A0/DMC_A10/I2C2_SDA/EVENTOUT
PF1/SMC_A1/DMC_A0/I2C2_SCL/EVENTOUT
PF2/SMC_A2/DMC_A1/I2C2_SBA/EVENTOUT
PF3/SMC_A3/DMC_A2/ADC3_IN9/EVENTOUT
PF4/SMC_A4/DMC_A3/ADC3_IN14/EVENTOUT
PF5/SMC_A5/ADC3_IN15/EVENTOUT
PF6/TMR10_CH1/SMC_NIORD/DMC_A4/ADC3_IN4/EVENTOUT
PF7/TMR11_CH1/SMC_NREG/DMC_A5/ADC3_IN5/EVENTOUT
PF8/TMR13_CH1/SMC_NIOWR/DMC_A6/ADC3_IN6/EVENTOUT
PF9/TMR14_CH1/ADC3_IN7/SMC_CD/DMC_A7/EVENTOUT
PF10/SMC_INTR/DMC_A8/ADC3_IN8/EVENTOUT
PF11/DCI_D12/DMC_UDQM/EVENTOUT
PF12/SMC_A6/EVENTOUT
PF13/SMC_A7/EVENTOUT
PF14/SMC_A8/EVENTOUT
PF15/SMC_A9/EVENTOUT

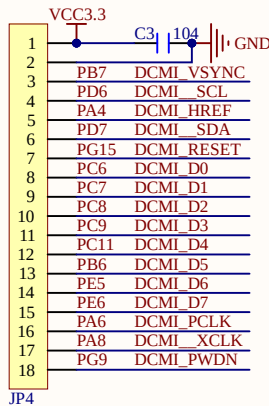
PG0/SMC_A10/EVENTOUT
PG1/SMC_A11/DMC_CK/EVENTOUT
PG2/SMC_A12/DMC_DQ15/EVENTOUT
PG3/SMC_A13/DMC_DQ0/EVENTOUT
PG4/SMC_A14/DMC_DQ1/EVENTOUT
PG5/SMC_A15/DMC_DQ2/EVENTOUT
PG6/SMC_INT2/DMC_DQ3/EVENTOUT
PG7/SMC_INT3/USART6_CK/EVENTOUT
PG8/USART6_RTS/ETH_PPS_OUT/DMC_DQ4/EVENTOUT
PG9/SMC_NE2/SMC_NCE3/USART6_RX/EVENTOUT
PG10/SMC_NCE4_1/SMC_NE3/EVENTOUT
PG11/SMC_NCE4_2/ETH_MII_TX_EN/ETH_RMII_TX_EN/EVENTOUT
PG12/SMC_NE4/USART6_RTS/EVENTOUT
PG13/SMC_A24/USART6_CTS/ETH_MII_TXD0/ETH_RMII_TXD0/EVENTOUT
PG14/SMC_A25/USART6_TX/ETH_MII_TXD1/ETH_RMII_TXD1/EVENTOUT
PG15/DMC_LDQM/USART6_CTS/DCI_D13/EVENTOUT

STM32F407ZGT6

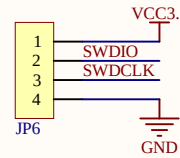
IO



OLED&CAMERA

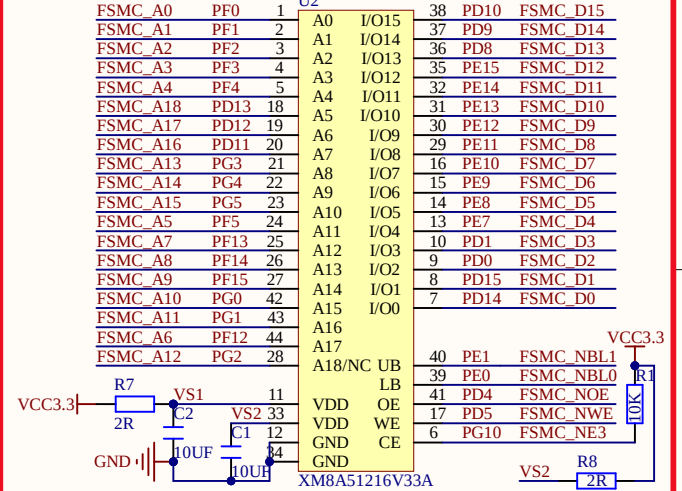


SWD



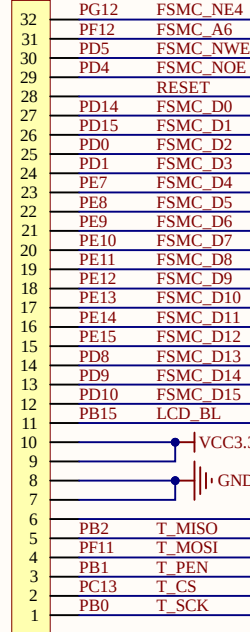
SRAM

U2



LCD

JP5

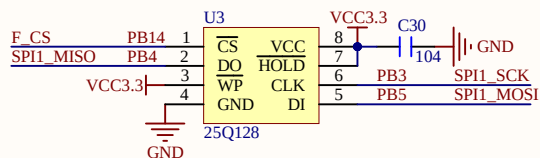


Title:
M144Z-M4.PrjPCB
Author:
ALIENTEK
Date:
2024/4/23
Revision:
V1.0

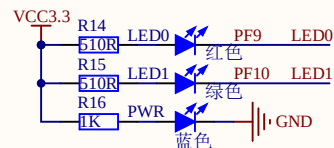
Size:
A4
File:
CORE_DEFG.SchDoc
Version:
V1.0



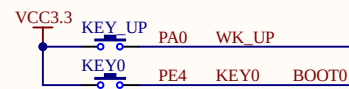
FLASH



LED



KEY

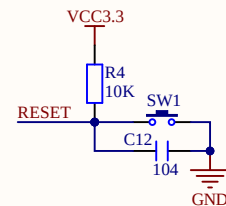


BOOT0和KEY0(PE4)共用KEY0按键

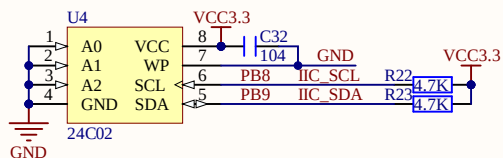
按下KEY0, 可以把BOOT0拉高!!
方便进入BootLoader模式!

BOOT0仅在上电阶段起作用!
不影响上电后, PE4的正常使用

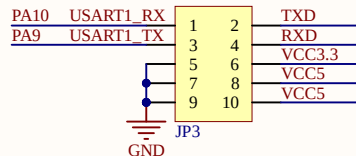
RESET



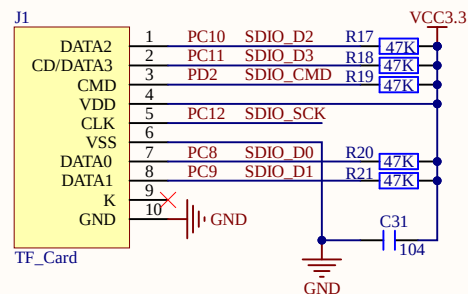
EEPROM



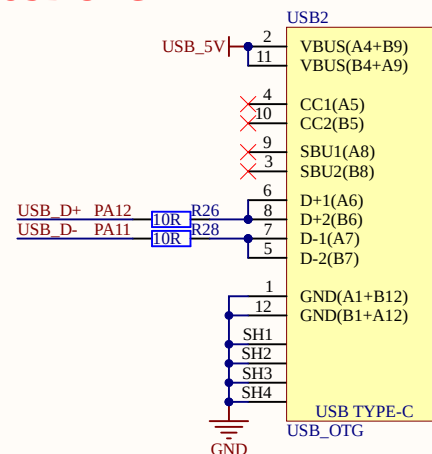
USB_UART & VOUT



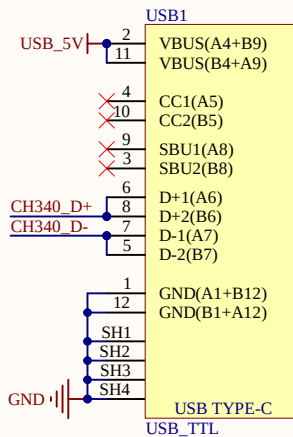
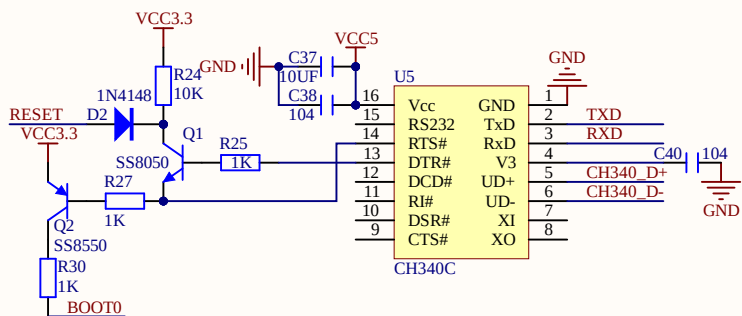
TF CARD



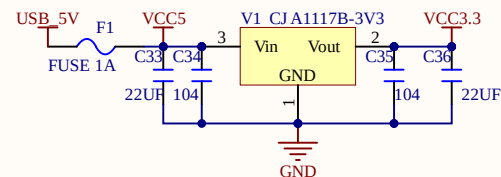
USB OTG



USB UART & USB POWER



LDO



Title:
M144Z-M4.PrjPCB
Author:
ALIENTEK
Date:
2024/4/23
Revision:
V1.0

Size:
A4
File:
DEVICE.SchDoc
Version:

