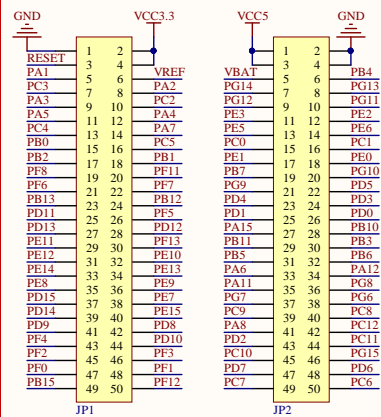
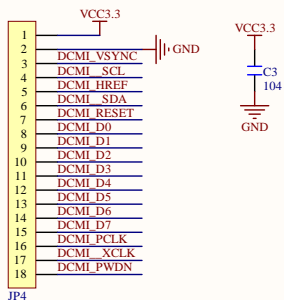


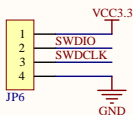
## 10



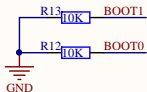
## OLED&CAMERA



## SWD

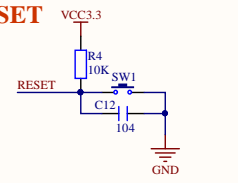
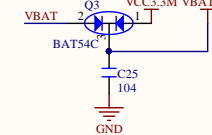
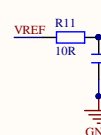
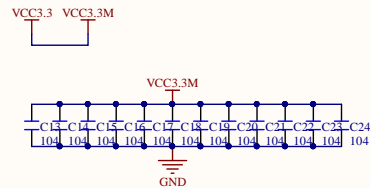


## BOOT



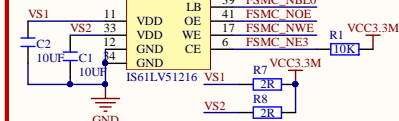
## MCU

WK_UP	PA0	34	UI	PA0-WKUP/U2_CTS/U4_TX/ETH_MIL_CRS/TIM2_CH1_ETR/TIM5_CH1/TIM8_ETR/ADC123_IN0	PE0/TIM4_ETR/FSMC_NBL0/DCMI_D2	141	PE0	FSMC_NBL0
	PA1	35		PA1/U2_RTS/U4_RX/ETH_RMIL_REF_CLK/ETH_MIL_RX_CLK/TIM2_CH2/TIM5_CH2/ADC123_IN1	PE1/FSMC_NBL1/DCMI_D3	142	PE1	FSMC_NBL1
	PA2	36		PA2/U2_TX/TIM3_CH3/TIM5_CH3/TIM9_CH1/ETH_MDIO/ADC123_IN2	PE2/TRACECLK/FSMC_A23/TIM9_CH1_TXD3	2	PE2	
	PA3	37		PA3/U2_RX/TIM2_CH4/TIM5_CH4/TIM9_CH2/OTG_HS_ULPI_D0/ETH_MIL_COL/ADC123_IN3	PE3/TRACED1/FSMC_A20/DCMI_D4	3	PE4	KEY0
STM_DAC	DCMI_HREF	PA4	40	PA4/SPI1_NSS/U2_CK/DCMI_HSYN/OTG_HS_SOF/I2S3_W5/DACL1_OUT/ADC12_IN4	PE4/TRACED1/FSMC_A20/DCMI_D4	4	PE5	DCMI_D6
	STM_ADC	PA5	41	PA5/SPI1_SCK/OTG_HS_ULPI_CLK/TIM2_CH1_ETR/TIM8_CH1N/DACL2_OUT/ADC12_IN5	PE5/TRACED2/FSMC_A21/TIM9_CH1_TXD6	5	PE6	DCMI_D7
	DCMI_PCLK	PA6	42	PA6/SPI1_MOSI/TIM1_BKIN/TIM4_CH1/TIM8_BKIN/TIM13_CH1/DCMI_PCLK/ADC12_IN6	PE6/TRACED3/FSMC_A22/TIM9_CH2/DCMI_D7	6	PE7	DCMI_D8
		PA7	43	PA7/SPI1_MOSI/TIM1_CH1N/TIM3_CH2/TIM8_CH1N/TIM14_CH1/ETH_MIL_RX_DV/ETH_RMIL_CRS_DV/ETH_RMIL_CRS_DV/ETH_RMIL_CRS_DV	PE7/FSMC_A23/TIM9_CH3/DCMI_D8	7	PE8	DCMI_D9
	DCMI_XCLK	PA8	100	PA8/TIM1_CH1/U1_CK/I2C3_SCL/MCO1/OTG_HS_SOF	PE8/FSMC_D5/TIM1_CH1N	8	PE9	FSMC_D5
	USART1_TX	PA9	101	PA9/TIM1_CH2/U1_TX/I2C3_SMB4/OTG_HS_VBUS/DCMI_D0	PE9/FSMC_D6/TIM1_CH1	9	PE10	FSMC_D6
	USART1_RX	PA10	102	PA10/TIM1_CH3/U1_RX/OTG_HS_ID/DCMI_D1	PE10/FSMC_D7/TIM1_CH2N	10	PE11	FSMC_D7
	USB_D+	PA11	103	PA11/TIM1_CH4/U1_CTS/CAN1_RX/OTG_HS_DM	PE11/FSMC_D8/TIM1_CH2N	11	PE12	FSMC_D8
	USB_D-	PA12	104	PA12/TIM1_ETR/U1_RTS/CAN1_TX/OTG_HS_DP	PE12/FSMC_D9/TIM1_CH3N	12	PE13	FSMC_D9
	SWDIO	PA13	105	PA13/JTMS_SWIO	PE13/FSMC_D10/TIM1_CH3	13	PE14	FSMC_D10
	SWDCLK	PA14	109	PA14/JTCK_SWCLK	PE14/FSMC_D11/TIM1_CH4	14	PE15	FSMC_D11
		PA15	110	PA15/JTD0/SPI1_NSS/SPI3_NSS/TIM2_CH1_ETR/I2S3_W5	PE15/FSMC_D12/TIM1_BKIN	15	PF0	FSMC_D12
						16	PF0	FSMC_A0
	T_SCK	PB0	46	PB0/TIM1_CH2N/TIM3_CH3/TIM8_CH2N/OTG_HS_ULPI_D1/ETH_MIL_RXD2/ADC12_IN8	PF0/FSMC_A0/I2C2_SCL	17	PF1	FSMC_A1
	T_PEN	PB1	47	PB1/TIM1_CH3N/TIM3_CH4/TIM8_CH3N/OTG_HS_INTN/ETH_MIL_RXD3/ADC12_IN9	PF1/FSMC_A1/I2C2_SDA	18	PF2	FSMC_A2
T_MISO	BOOT1	PB2	48	PB2/BOOT1	PF2/FSMC_A2/I2C2_SMB4	19	PF3	FSMC_A3
SPI1_SCK		PB3	133	PB3/JTDO/TRACESWO/TIM2_CH2/SPI1_SCK/SPI3_SCK/I2S3_CK	PF3/FSMC_A3/ADC3_IN9	20	PF4	FSMC_A4
SPI1_MISO		PB4	134	PB4/INTSTR1/TIM3_CH1/SPI1_MISO/SPI3_MISO/I2S3ext_SD	PF4/FSMC_A4/ADC3_IN15	21	PF5	FSMC_A5
SPI1_MOSI		PB5	135	PB5/TIM3_CH2/SPI1_MOSI/SPI3_MOSI/CAN2_RX/I2C3_SMB4/OTG_HS_ULPI_D7/ETH_PPS_OUT/DCMI_D10/I2S3_SD	PF5/FSMC_A5/ADC3_IN14	22	PF6	FSMC_A6
	DCMI_D5	PB6	136	PB6/TIM4_CH1/U1_CK/CAN2_TX/ETH_MIL_SCL/DCMI_D5	PF6/TIM11_CH1/FSMC_NIORD/ADC3_IN15	23	PF7	FSMC_A7
	DCMI_VSYNC	PB7	137	PB7/TIM4_CH2/U1_RX/FSMC_NL/I2C1_SDA/DCMI_VSYNC	PF7/TIM11_CH1/FSMC_NIWRG/ADC3_IN5	24	PF8	FSMC_A8
	IC_SCL	PB8	139	PB8/TIM4_CH3/TIM10_CH1/CAN1_RX/SDIO_D4/ETH_MIL_TXD3/I2C1_SCL/DCMI_D6	PF8/TIM11_CH1/FSMC_NIORD/ADC3_IN6	25	PF9	FSMC_A9
	IC_SDA	PB9	140	PB9/TIM4_CH4/TIM11_CH1/CAN1_TX/SDIO_D5/SPI2_NSS/I2C1_SDA/DCMI_D7/I2S2_W5	PF9/TIM14_CH1/FSMC_CD/ADC3_IN7	26	PF10	FSMC_A10
		PB10	69	PB10/SPI2_SCK/TIM2_CH3/U5_TX/I2C2_SCL/OTG_HS_ULPI_D3/I2S2_CK	PF10/FSMC_INTR/ADC3_IN8	27	PF11	FSMC_A11
		PB11	70	PB11/TIM2_CH4/U3_RX/I2C2_SDA/HS_ULPI_D4/ETH_MIL_TX_EN/ETH_RMIL_TX_EN	PF11/DCMI_D12	28	PF12	FSMC_A12
		PB12	73	PB12/SPI2_NSS/TIM1_BKIN/U5_CK/CAN2_RX/I2C2_SMB4/OTG_HS_ULPI_D5/OTG_HS_ID/ETH_MIL_TXD0/ETH_RMIL_TXD0/I2S2_CK	PF12/FSMC_A13	29	PF13	FSMC_A13
		PB13	74	PB13/SPI2_SCK/TIM1_CH1N/U5_CTS/CAN2_TX/OTG_HS_ULPI_D6/OTG_HS_VBUS/ETH_MIL_TXD1/ETH_RMIL_TXD1/I2S2_CK	PF13/FSMC_A8	30	PF14	FSMC_A14
F_CS		PB14	75	PB14/SPI2_MOSI/TIM1_CH2N/TIM8_CH2N/TIM12_CH1/U3_RTS/OTG_HS_DM/I2S2ext_SD	PF14/FSMC_A7	31	PF15	FSMC_A15
LCD_BL		PB15	76	PB15/SPI2_MOSI/TIM1_CH3N/TIM8_CH3N/TIM12_CH2/OTG_HS_DP/I2S2_SD	PF15/FSMC_A9	32	PG0	FSMC_A10
		PC0	26	PC0/OTG_HS_ULPI_STP/ADC123_IN10	PG0/FSMC_A10	33	PG1	FSMC_A11
		PC1	27	PC1/ETH_MDC/ADC123_IN11	PG1/FSMC_A11	34	PG2	FSMC_A12
		PC2	28	PC2/SPI2_MISO/OTG_HS_ULPI_DIR/ETH_MIL_TXD2/I2S2ext_SD/ADC123_IN12	PG2/FSMC_A12	35	PG3	FSMC_A13
		PC3	29	PC3/SPI2_MOSI/OTG_HS_ULPI_NXT/ETH_MIL_TX_CLK/I2S2_SD/ADC123_IN13	PG3/FSMC_A13	36	PG4	FSMC_A14
		PC4	44	PC4/ETH_MIL_RXD0/ETH_RMIL_RXD0/ADC12_IN15	PG4/FSMC_A14	37	PG5	FSMC_A15
	DCMI_D0	PC6	96	PC6/ETH_MIL_RXD1/ETH_RMIL_RXD1/ADC12_IN15	PG5/FSMC_A15	38	PG6	FSMC_A16
	DCMI_D1	PC7	97	PC7/TIM4_CH1/TIM8_CH1/U6_TX/SDIO_D6/DCMI_D0/I2S2_MCK	PG6/FSMC_INTR	39	PG7	FSMC_A17
	DCMI_D2	PC8	98	PC8/TIM2_CH3/TIM8_CH2/U6_RX/SDIO_D7/DCMI_D1/I2S2_MCK	PG7/FSMC_INTR3/U6_CK	40	PG8	FSMC_A18
SDIO_D0	DCMI_D3	PC9	99	PC9/TIM3_CH3/TIM8_CH3/U6_CK/SDIO_D0/DCMI_D2	PG8/U6_RTS/ETH_PPS_OUT	41	PG9	FSMC_A19
SDIO_D1	DCMI_D3	PC9	99	PC9/TIM3_CH4/TIM8_CH4/I2C3_SDA/SDIO_D1/DCMI_D3/MCO1/I2S2_CKIN	PG9/FSMC_NE2/FSMC_NCE3/U6_RX	42	PG10	DCMI_PWDN
SDIO_D2	DCMI_D2	PC10	111	PC10/SPI3_SCK/U5_TX/U4_RX/SDIO_D2/DCMI_D8/I2S3_CK	PG10/FSMC_NCE4_1/FSMC_NE3	43	PG10	FSMC_NE3
SDIO_D3	DCMI_D4	PC11	112	PC11/SPI3_MISO/U5_RX/U4_RX/SDIO_D3/DCMI_D4/I2S3ext_SD	PG11/FSMC_NCE4_2/ETH_MIL_TX_EN/ETH_RMIL_TX_EN	44	PG11	FSMC_NE4
SDIO_SCK	DCMI_D3	PC12	113	PC12/SPI3_MOSI/U5_CK/U5_TX/SDIO_CK/DCMI_D9/I2S3_SD	PG12/FSMC_NE4/U6_RTS	45	PG12	FSMC_NE4
	T_CS	PC13	7	PC13/RTC_AFI	PG13/FSMC_A24/U6_CTS/ETH_MIL_TXD0/ETH_RMIL_TXD0	46	PG13	FSMC_NE4
		8		PC14-OSC32_IN	PG14/FSMC_A25/U6_TX/ETH_MIL_TXD1/ETH_RMIL_TXD1	47	PG14	FSMC_NE4
		9		PC15-OSC32_OUT	PG15/U6_CTS/DCMI_D13	48	PG15	DCMI_RESET
						49	PH0-OSC_IN	
						50	PH1-OSC_OUT	
						51	NRST	
						52	RESET	
						53	VBAT_IN	
						54	VREF+	
						55	Vref+	
						56	Vcap_1	
						57	Vcap_2	
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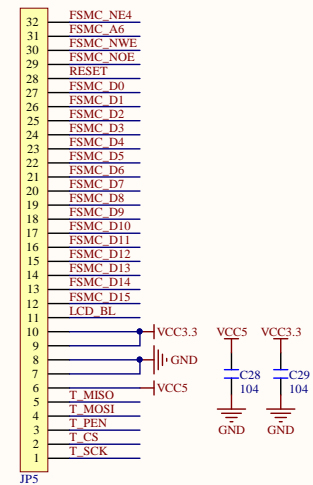


## SRAM

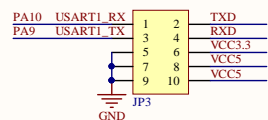
FSMC A0		U2		38		FSMC D15	
FSMC A1	2	A1	I/O15	37	FSMC D14		
FSMC A2	3	A1	I/O14	36	FSMC D13		
FSMC A3	4	A2	I/O13	35	FSMC D12		
FSMC A4	5	A3	I/O12	32	FSMC D11		
FSMC A18	18	A5	I/O10	31	FSMC D10		
FSMC A17	19	A6	I/O9	30	FSMC D9		
FSMC A16	20	A7	I/O8	29	FSMC D8		
FSMC A13	21	A8	I/O7	16	FSMC D7		
FSMC A14	22	A9	I/O6	15	FSMC D6		
FSMC A15	23	A10	I/O5	14	FSMC D5		
FSMC A5	24	A11	I/O4	13	FSMC D4		
FSMC A7	25	A12	I/O3	10	FSMC D3		
FSMC A8	26	A13	I/O2	9	FSMC D2		
FSMC A9	27	A12	I/O2	8	FSMC D1		
FSMC A10	42	A14	I/O1	7	FSMC D0		
FSMC A11	43	A15	I/O0				
FSMC A6	44	A16					
FSMC A12	28			40	FSMC NBL1		



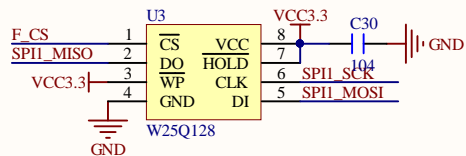
## LCD



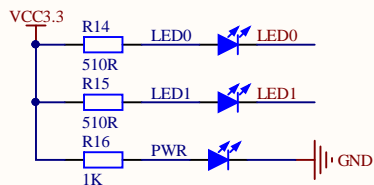
## USB\_TTL/USART1



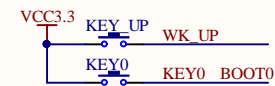
## FLASH



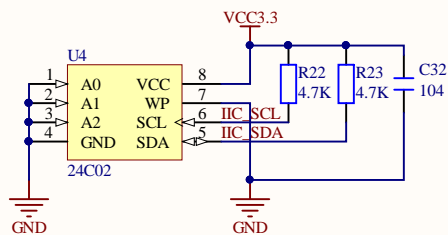
## LED



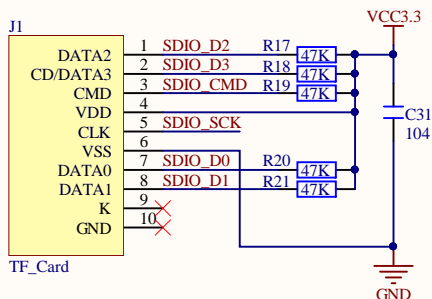
## KEY



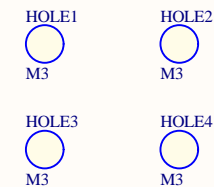
## EEPROM



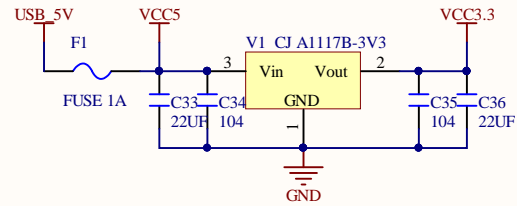
## TF CARD



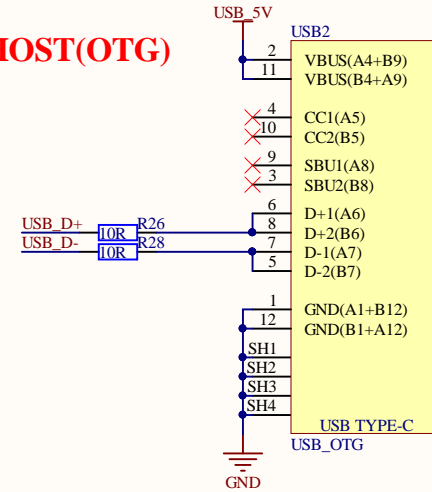
## M3过孔



## 3.3V POWER



## USB SLAVE / HOST(OTG)



## USB USART

