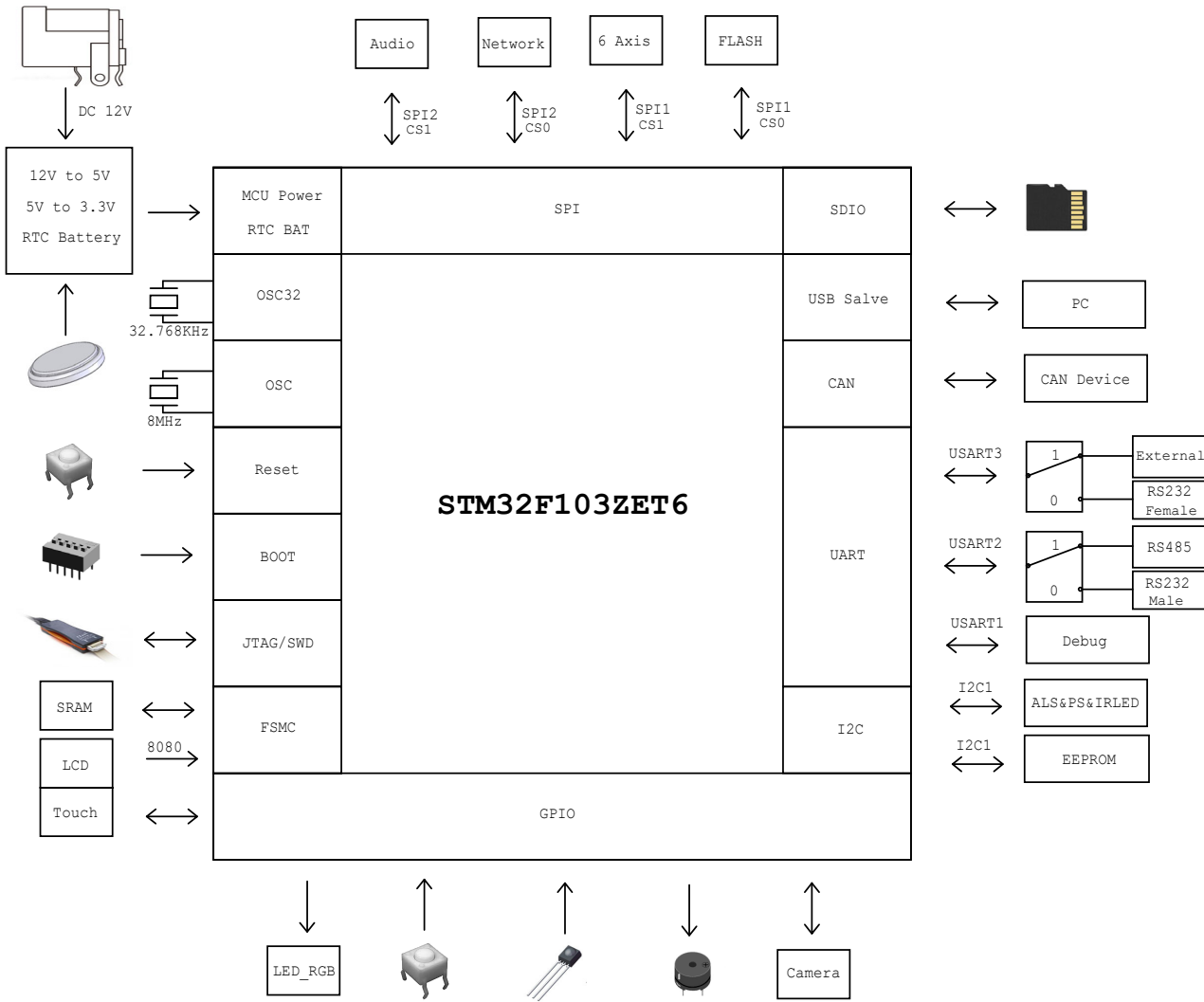


Block Diagram



Contents

Sheet	Sheet Name
01	Block Diagram & Contents & Revision History
02	MCU
03	Boot & JTAG & Clock & Reset
04	Power
05	Modules
06	SRAM & LCD & SD Card
07	USB Serial
08	RS232 & RS485 & CAN & USB
09	Network
10	Audio
11	GPIO Export & Camera

Revision History

Date	Revision	Change Note
20200601	100ASK_STM32F1_V1.0	First editor

深圳百问网科技有限公司

Shenzhen 100ask Technology Co., Lt

www.100ask.net

<https://100ask.taobao.com>

Title:

100ASK_STM32F103

Size:

Document Number:

Rev:

A4

01_Block Diagram

V1.0

Date:

Monday, July 06, 2020

Sheet:

1 of 11

U1A

{5,11} KEY1 >>> 34
{11} GPIO1 >>> 35
{7,11} USART2_TX >>> 36
{7,11} USART2_RX >>> 37
{5,11} SPI1_CS0 >>> DAC 40
{5,11} SPI1_SCK >>> 41
{5,11} SPI1_MISO >>> 42
{5,11} SPI1_MOSI >>> 43
{9,11} ENC28J60_INT >>> 100
{7,11} USART1_TX >>> 101
{7,11} USART1_RX >>> 102
{8,11} USB_DM >>> 103
{8,11} USB_DP >>> 104
{3,11} JTMS >>> 105
{3,11} JTCK >>> 109
{3,11} JTDI >>> 110

{5,11} LED_R >>> 46
{5,11} LED_G >>> 47
{3,11} BOOT1 >>> 48
{3,11} JTDO >>> 133
{3,11} JNTRST >>> 134
{5,11} LED_B >>> 135
{5,11} I2C1_SCL >>> 136
{5,11} I2C1_SDA >>> 137
{8,11} CAN_RX >>> 139
{8,11} CAN_TX >>> 140
{7,11} USART3_TX >>> 69
{7,11} USART3_RX >>> 70
{9,11} SPI2_CS0 >>> 73
{9,10,11} SPI2_SCK >>> 74
{9,10,11} SPI2_MISO >>> 75
{9,10,11} SPI2_MOSI >>> 76

{5,11} ADC >>> 26
{5,11} ICM20608_INT >>> 27
{11} GPIO3 >>> 28
{11} GPIO2 >>> 29
{5,11} SPI1_CS1 >>> 44
{8,11} RS485_RE >>> 45
{6,11} LCD_PWM >>> 96
{5,11} CAPTURE >>> 97
{6,11} SDIO_D0 >>> 98
{6,11} SDIO_D1 >>> 99
{6,11} SDIO_D2 >>> 111
{6,11} SDIO_D3 >>> 112
{6,11} SDIO_CLK >>> 113
{5,11} KEY3 >>> 7
{3} OSC32_IN >>> 8
{3} OSC32_OUT >>> 9

{6,11} FSMC_D2 >>> 114
{6,11} FSMC_D3 >>> 115
{6,11} SDIO_CMD >>> 116
{10,11} SPI2_CS1 >>> 117
{6,11} FSMC_NOE >>> 118
{6,11} FSMC_NWE >>> 119
{10,11} VS1053B_XDCS >>> 122
{10,11} VS1053B_DREQ >>> 123
{6,11} FSMC_D13 >>> 77
{6,11} FSMC_D14 >>> 78
{6,11} FSMC_D15 >>> 79
{6,11} FSMC_A16 >>> 80
{6,11} FSMC_A17 >>> 81
{6,11} FSMC_A18 >>> 82
{6,11} FSMC_D0 >>> 85
{6,11} FSMC_D1 >>> 86

PA0-WKUP/USART2_CTS/ADC123_IN0/TIM2_CH1_ETR/TIM5_CH1/TIM8_ETR
PA1/USART2_RTS/ADC123_IN1/TIM5_CH2/TIM2_CH2
PA2/USART2_TX/TIM5_CH3/ADC123_IN2/TIM2_CH3
PA3/USART2_RX/TIM5_CH4/ADC123_IN3/TIM2_CH4
PA4/SPI1_NSS/USART2_CK/DAC_OUT1/ADC12_IN4
PA5/SPI1_SCK/DAC_OUT2/ADC12_IN5
PA6/SPI1_MISO/TIM8_BKIN/ADC12_IN6/TIM3_CH1/TIM1_BKIN
PA7/SPI1_MOSI/TIM8_CH1N/ADC12_IN7/TIM3_CH2/TIM1_CH1N
PA8/USART1_CK/TIM1_CH1/MCO
PA9/USART1_TX/TIM1_CH2
PA10/USART1_RX/TIM1_CH3
PA11/USART1_CTS/USBDM/CAN_RX/TIM1_CH4
PA12/USART1_RTS/USBDP/CAN_TX/TIM1_ETR
PA13/JTMS_SWDIO
PA14/JTCK_SWCLK
PA15/JTDI/SPI3_NSS/I2S3_WS/TIM2_CH1_ETR/SPI1_NSS

PB0/ADC12_IN8/TIM3_CH3/TIM8_CH2N/TIM1_CH2N
PB1/ADC12_IN9/TIM3_CH4/TIM8_CH3N/TIM1_CH3N
PB2/BOOT1
PB3/JTDO/SPI3_SCK/I2S3_CK/TRACESWO/TIM2_CH2/SPI1_SCK
PB4/JNTRST/SPI3_MISO/TIM3_CH1/SPI1_MISO
PB5/I2C1_SMBA/SPI3_MOSI/I2S3_SD/TIM3_CH2/SPI1_MOSI
PB6/I2C1_SCL/TIM4_CH1/USART1_TX
PB7/I2C1_SDA/FSMC_NADV/TIM4_CH2/USART1_RX
PB8/TIM4_CH3/SDIO_D4/I2C1_SCL/CAN_RX
PB9/TIM4_CH4/SDIO_D5/I2C1_SDA/CAN_TX
PB10/I2C2_SCL/USART3_TX/TIM2_CH3
PB11/I2C2_SDA/USART3_RX/TIM2_CH4
PB12/SPI2_NSS/I2S2_WS/I2C2_SMB/USART3_CK/TIM1_BKIN
PB13/SPI2_SCK/I2S2_CK/USART3_CTS/TIM1_CH1N
PB14/SPI2_MISO/TIM1_CH2N/USART3_RTS
PB15/SPI2_MOSI/I2S2_SD/TIM1_CH3N

PC0/ADC123_IN10
PC1/ADC123_IN11
PC2/ADC123_IN12
PC3/ADC123_IN13
PC4/ADC12_IN14
PC5/ADC12_IN15
PC6/I2S2_MCK/TIM8_CH1/SDIO_D6/TIM3_CH1
PC7/I2S3_MCK/TIM8_CH2/SDIO_D7/TIM3_CH2
PC8/TIM8_CH3/SDIO_D0/TIM3_CH3
PC9/TIM8_CH4/SDIO_D1/TIM3_CH4
PC10/UART4_TX/SDIO_D2/USART3_TX
PC11/UART4_RX/SDIO_D3/USART3_RX
PC12/UART5_TX/SDIO_CK/USART3_CK
PC13/TAMPER-RTC
PC14/OSC32_IN
PC15/OSC32_OUT

PD0/FSMC_D2/CAN_RX
PD1/FSMC_D3/CAN_TX
PD2/TIM3_ETR/UART5_RX/SDIO_CMD
PD3/FSMC_CLK/USART2_CTS
PD4/FSMC_NOE/USART2_RTS
PD5/FSMC_NWE/USART2_TX
PD6/FSMC_NWAIT/USART2_RX
PD7/FSMC_NE1/FSMC_NCE2/USART2_CK
PD8/FSMC_D13/USART3_TX
PD9/FSMC_D14/USART3_RX
PD10/FSMC_D15/USART3_CK
PD11/FSMC_A16/USART3_CTS
PD12/FSMC_A17/TIM4_CH1/USART3_RTS/
PD13/FSMC_A18/TIM4_CH2
PD14/FSMC_D0/TIM4_CH3
PD15/FSMC_D1/TIM4_CH4

TIM4_ETR/FSMC_NBL0/PE0
FSMC_NBL1/PE1
TRACECK/FSMC_A23/PE2
TRACED0/FSMC_A19/PE3
TRACED1/FSMC_A20/PE4
TRACED2/FSMC_A21/PE5
TRACED3/FSMC_A22/PE6
FSMC_D4/TIM1_ETR/PE7
FSMC_D5/TIM1_CH1N/PE8
FSMC_D6/TIM1_CH1/PE9
FSMC_D7/TIM1_CH2N/PE10
FSMC_D8/TIM1_CH2/PE11
FSMC_D9/TIM1_CH3N/PE12
FSMC_D10/TIM1_CH3/PE13
FSMC_D11/TIM1_CH4/PE14
FSMC_D12/TIM1_BKIN/PE15

FSMC_A0/PF0
FSMC_A1/PF1
FSMC_A2/PF2
FSMC_A3/PF3
FSMC_A4/PF4
FSMC_A5/PF5
ADC3_IN4/FSMC_NIORD/PF6
ADC3_IN5/FSMC_NREG/PF7
ADC3_IN6/FSMC_NIOWR/PF8
ADC3_IN7/FSMC_CD/PF9
ADC3_IN8/FSMC_INTR/PF10
FSMC_NIOS16/PF11
FSMC_A6/PF12
FSMC_A7/PF13
FSMC_A8/PF14
FSMC_A9/PF15

FSMC_A10/PG0
FSMC_A11/PG1
FSMC_A12/PG2
FSMC_A13/PG3
FSMC_A14/PG4
FSMC_A15/PG5
FSMC_INT2/PG6
FSMC_INT3/PG7
PG8
FSMC_NE2/FSMC_NCE3/PG9
FSMC_NCE4_1/FSMC_NE3/PG10
FSMC_NCE4_2/PG11
FSMC_NE4/PG12
FSMC_A24/PG13
FSMC_A25/PG14
PG15

141 >>> FSMC_NBL0 {6,11}
142 >>> FSMC_NBL1 {6,11}
1 >>> FSMC_A23 {6,11}
2 >>> KEY4 {5,11}
3 >>> USB_MODE {8,11}
4 >>> AP3426_INT {5,11}
5 >>> TP_GPIO2 {6,11}
58 >>> FSMC_D4 {6,11}
59 >>> FSMC_D5 {6,11}
60 >>> FSMC_D6 {6,11}
63 >>> FSMC_D7 {6,11}
64 >>> FSMC_D8 {6,11}
65 >>> FSMC_D9 {6,11}
66 >>> FSMC_D10 {6,11}
67 >>> FSMC_D11 {6,11}
68 >>> FSMC_D12 {6,11}

10 >>> FSMC_A0 {6,11}
11 >>> FSMC_A1 {6,11}
12 >>> FSMC_A2 {6,11}
13 >>> FSMC_A3 {6,11}
14 CAMERA_WEN >>> FSMC_A4 {6,11}
15 >>> FSMC_A5 {6,11}
18 >>> TP_GPIO5 {6,11}
19 >>> TP_GPIO4 {6,11}
20 >>> TP_GPIO3 {6,11}
21 >>> LCD_GPIO {6,11}
22 >>> TP_GPIO1 {6,11}
49 >>> LCD_RST {6,11}
50 >>> FSMC_A6 {6,11}
53 CAMERA_OE >>> FSMC_A7 {6,11}
54 CAMERA_VSYNC >>> FSMC_A8 {6,11}
55 >>> FSMC_A9 {6,11}

56 CAMERA_D0 >>> FSMC_A10 {6,11}
57 CAMERA_D1 >>> FSMC_A11 {6,11}
87 CAMERA_D2 >>> FSMC_A12 {6,11}
88 CAMERA_D3 >>> FSMC_A13 {6,11}
89 CAMERA_D4 >>> FSMC_A14 {6,11}
90 CAMERA_D5 >>> FSMC_A15 {6,11}
91 >>> CAMERA_D6 {11}
92 >>> CAMERA_D7 {11}
93 >>> ENC28J60_WOL {9,11}
124 >>> VS1053B_XREST {10,11}
125 >>> FSMC_NE3 {6,11}
126 >>> BUZZER {5,11}
127 >>> FSMC_NE4 {6,11}
128 >>> 8002A_EN {10,11}
129 >>> IRDA {5,11}
132 >>> KEY2 {5,11}

25 >>> NRST {3,11}
138 >>> BOOT0 {3,11}
23 >>> OSC_IN {3}
24 >>> OSC_OUT {3}
106 X

NRST
BOOT0
OSC_IN
OSC_OUT
NC



深圳百问网科技有限公司

Shenzhen 100ask Technology Co., Lt

www.100ask.net

https://100ask.taobao.com

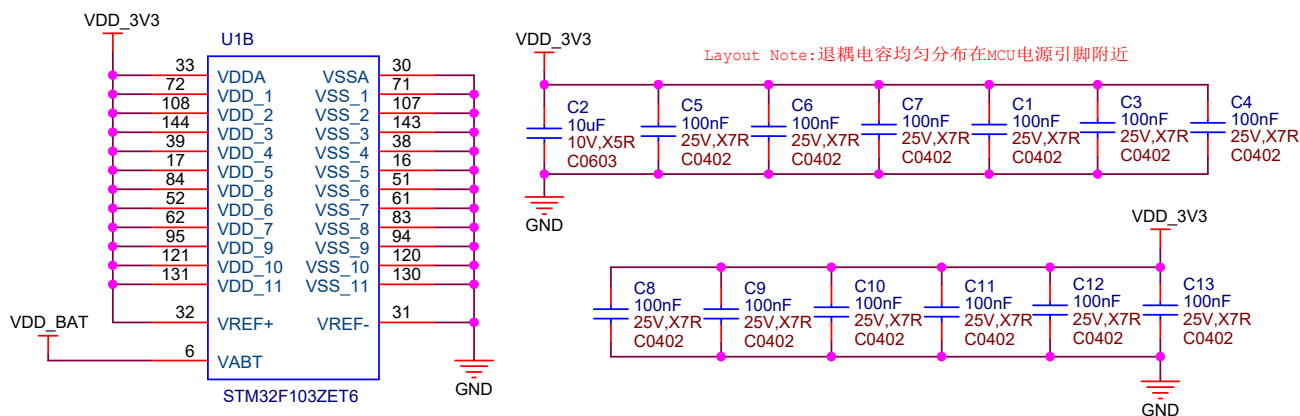
Title: 100ASK_STM32F103

Size: A4 Document Number: 02_MCU Rev: V1.0

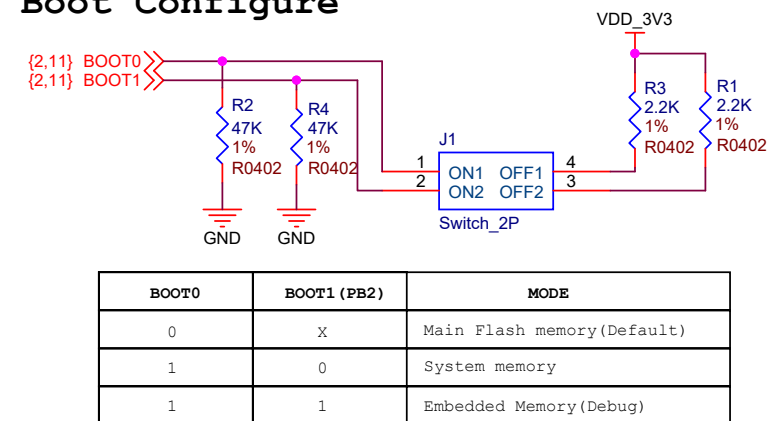
Date: Monday, July 06, 2020 Sheet: 2 of 11

STM32F103ZET6

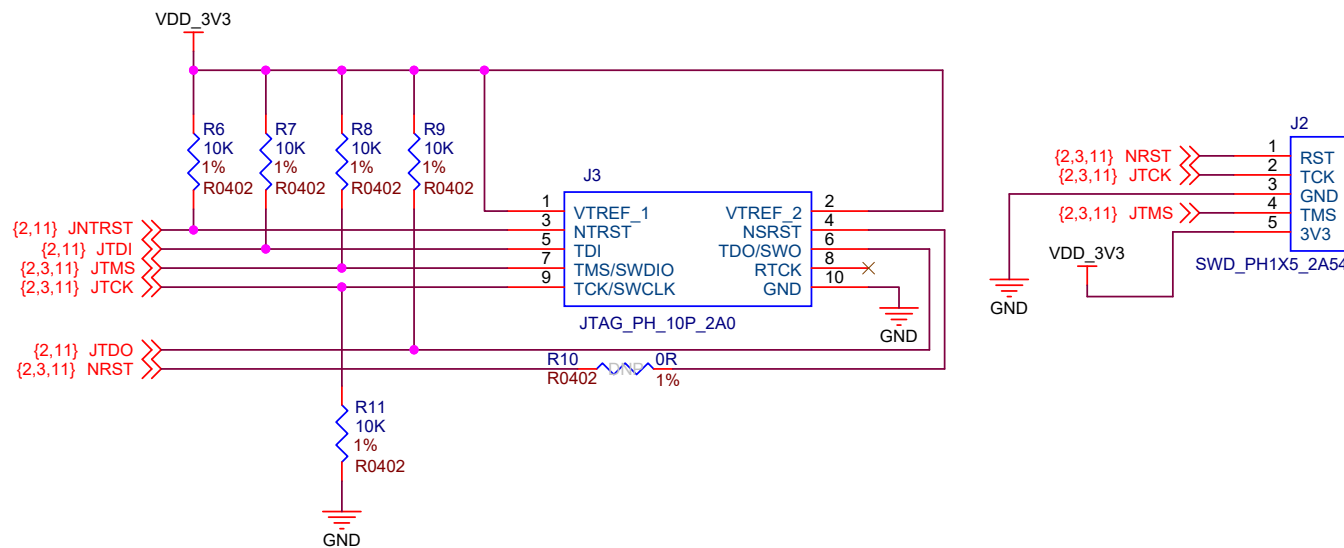
MCU Power



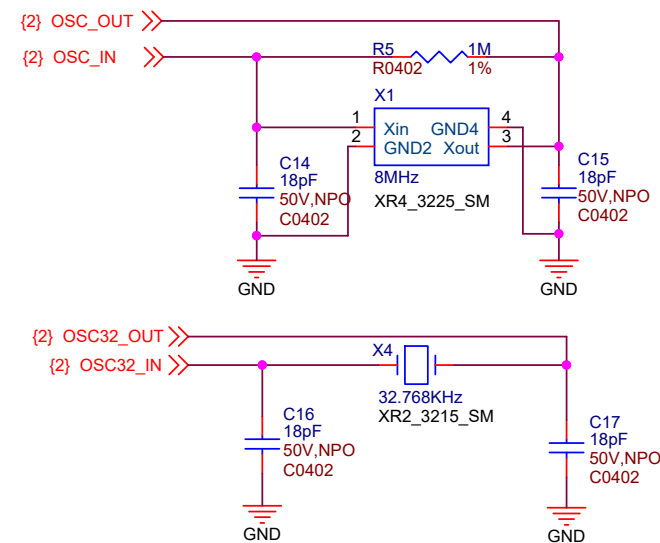
Boot Configure



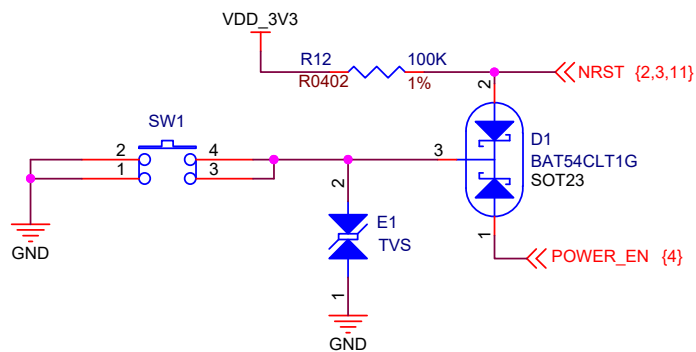
JTAG & SWD



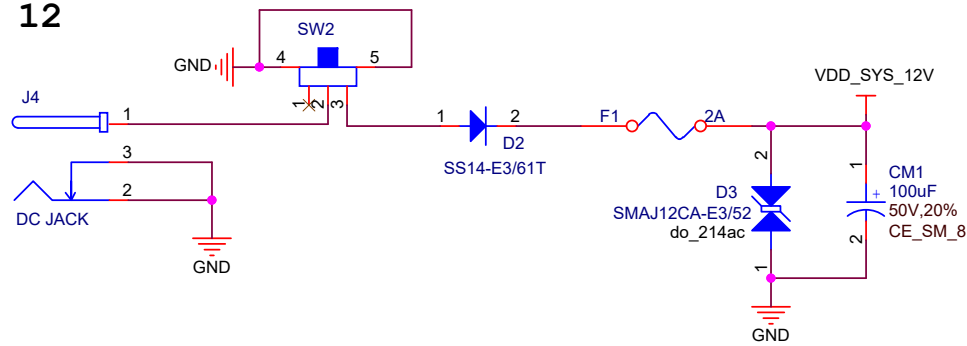
Clock



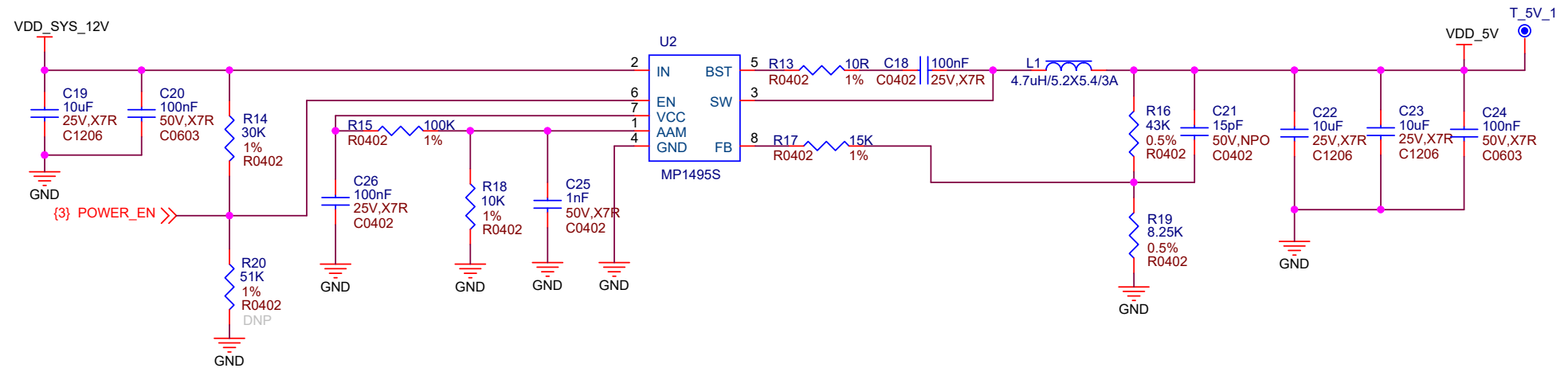
Reset



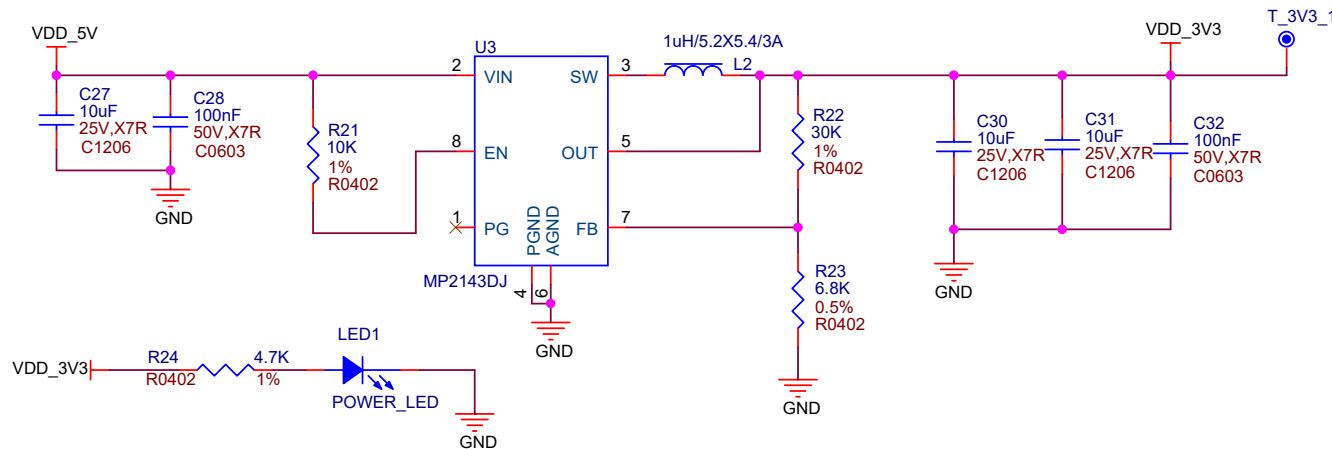
DC IN 12



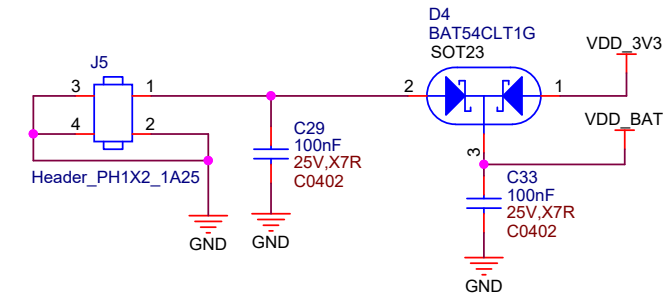
DC 12V to DC 5V



DC 5V to DC 3.3V



RTC BAT



深圳百问网科技有限公司

Shenzhen 100ask Technology Co., Lt

www.100ask.net

<https://100ask.taobao.com>

Title: 100ASK_STM32F103

Size:

A4

Document Number:

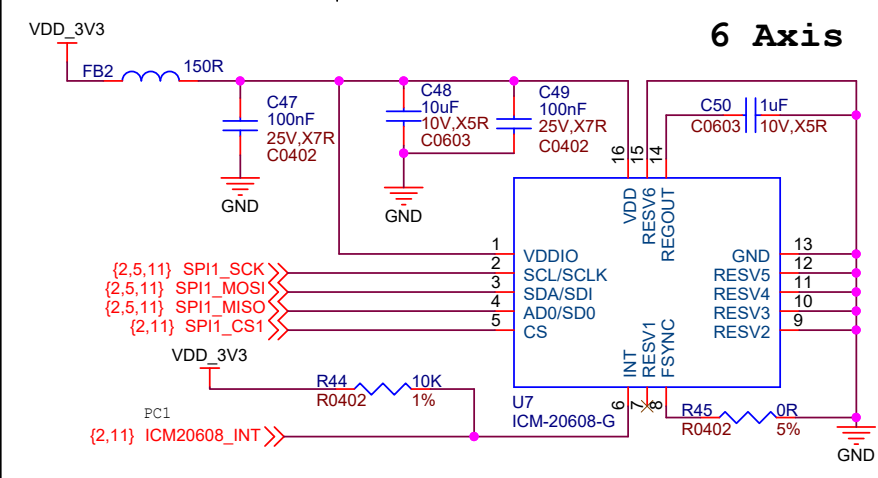
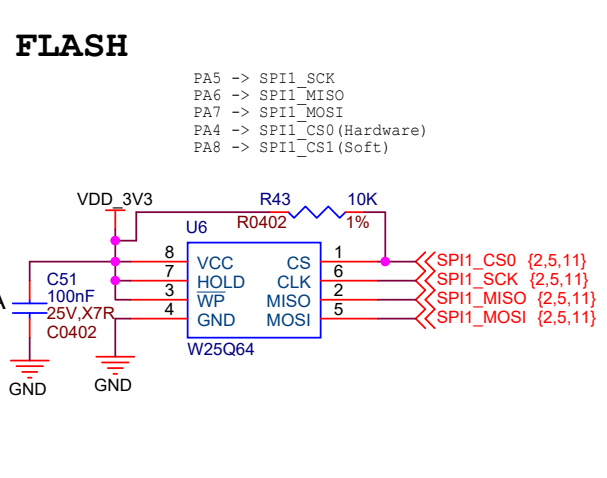
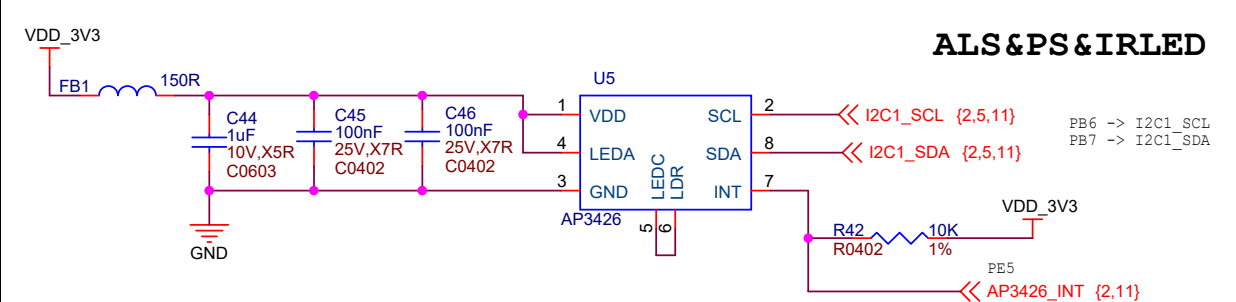
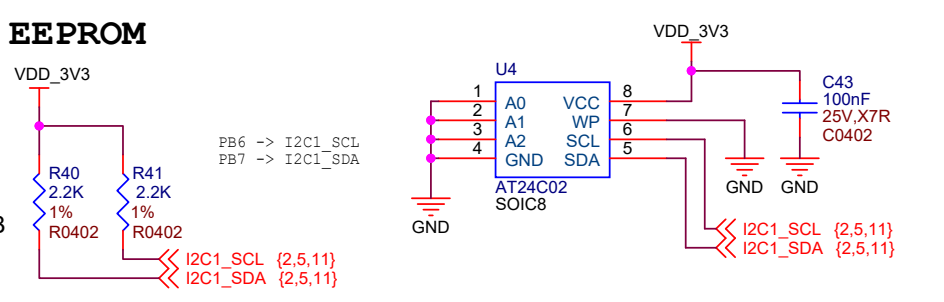
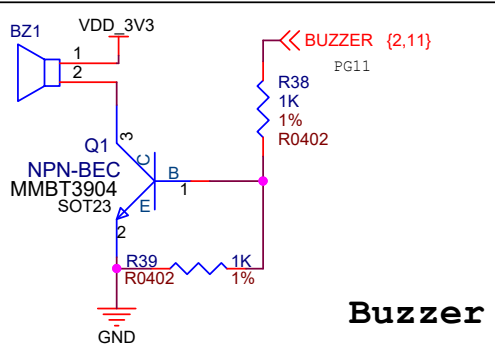
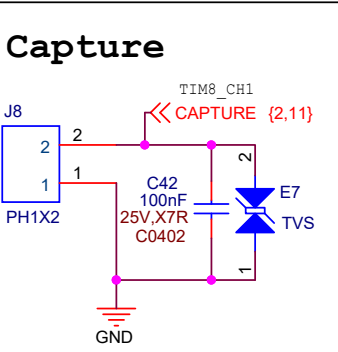
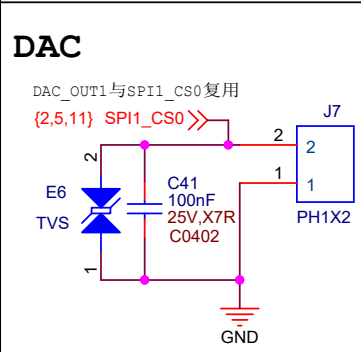
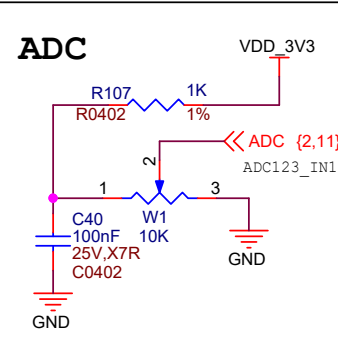
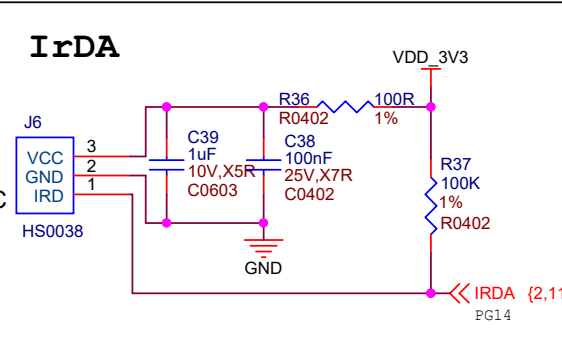
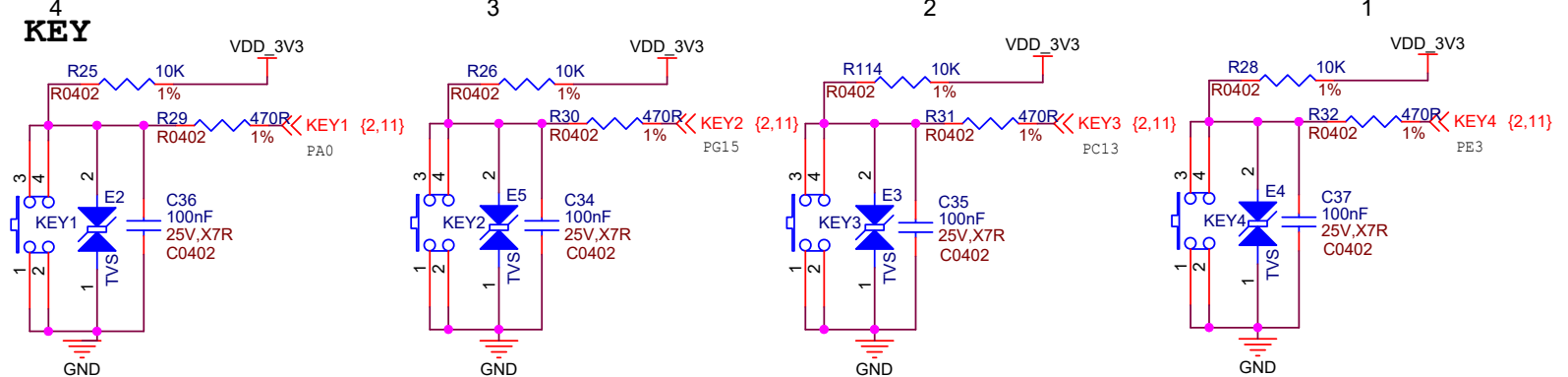
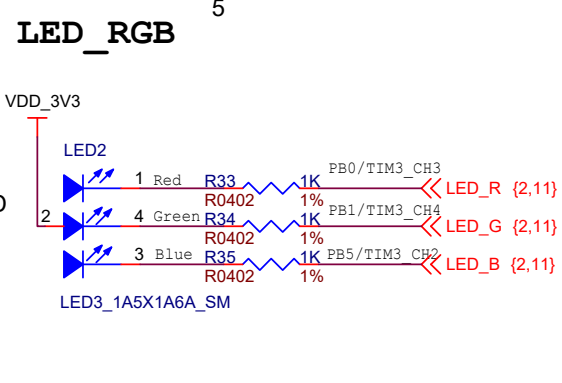
04_Power

Rev:

V1.0

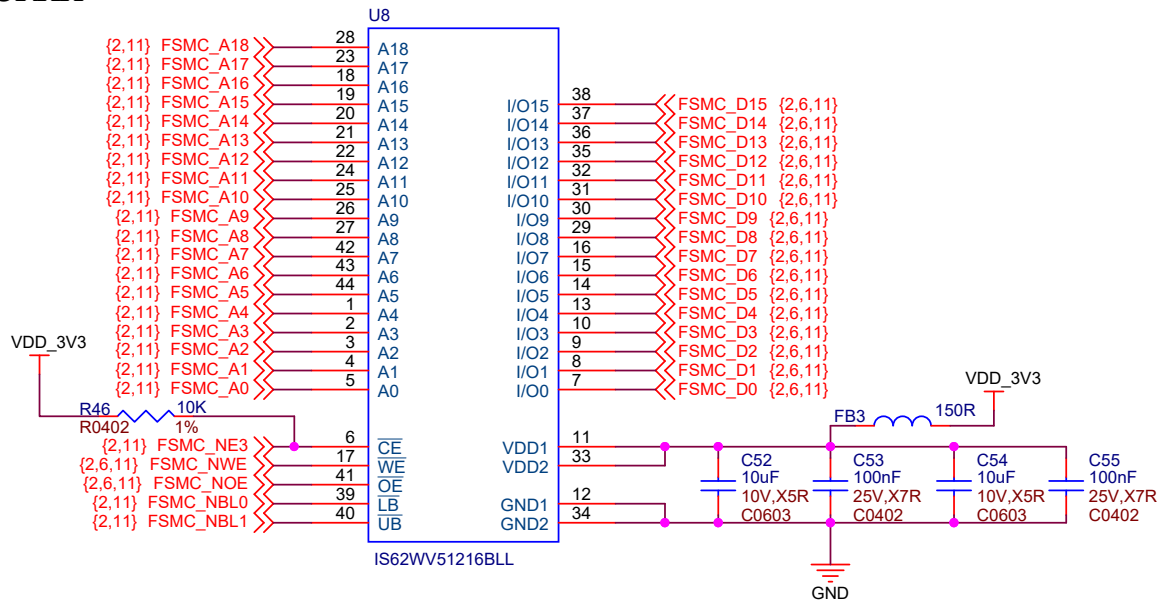
Date: Monday, July 06, 2020

Sheet: 4 of 11

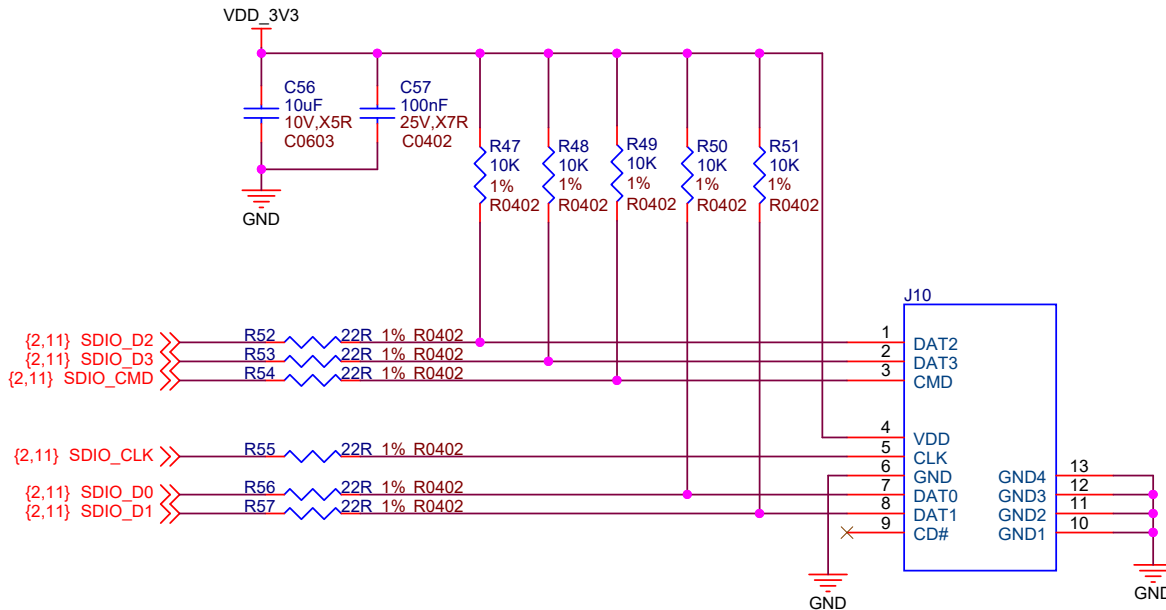


	深圳百问网科技有限公司	
	Shenzhen 100ask Technology Co., Ltd	
www.100ask.net		https://100ask.taobao.com
Title: 100ASK_STM32F103		
Size: A4	Document Number: 05_Modules	Rev: V1.0
Date: Tuesday, July 07, 2020		Sheet: 5 of 11

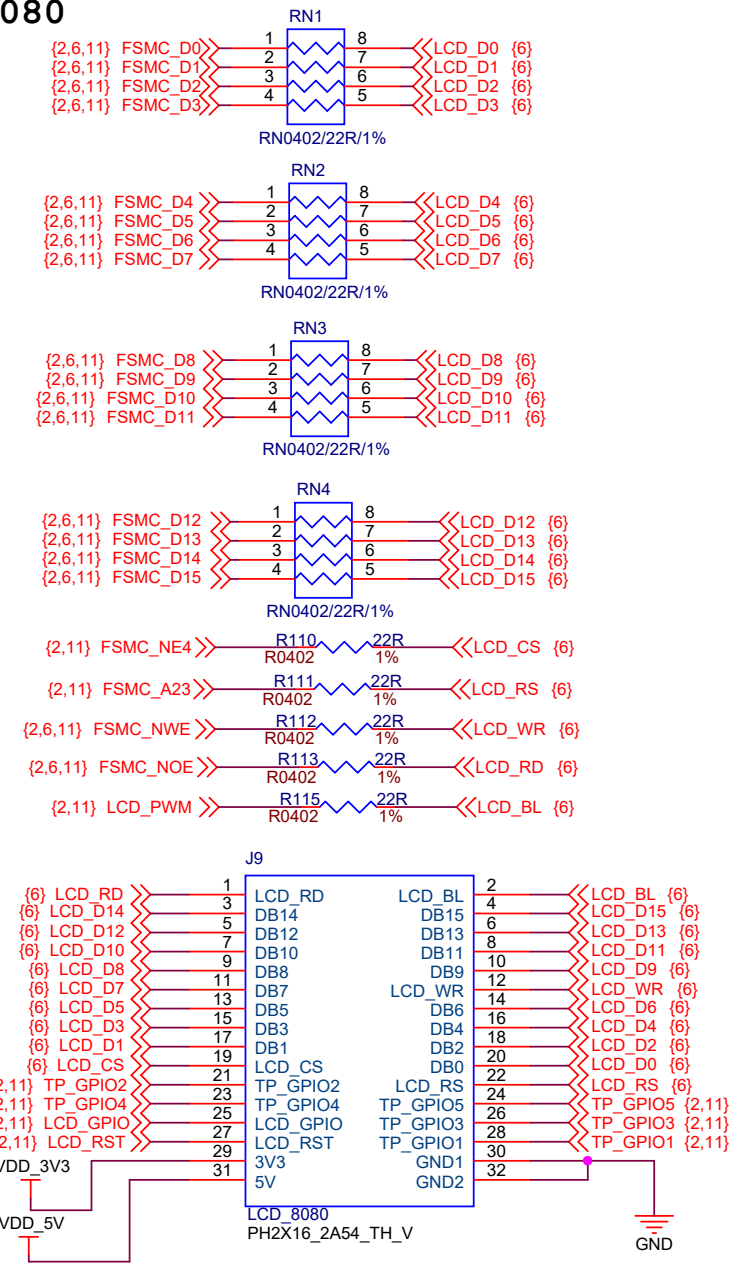
SRAM



SD Card

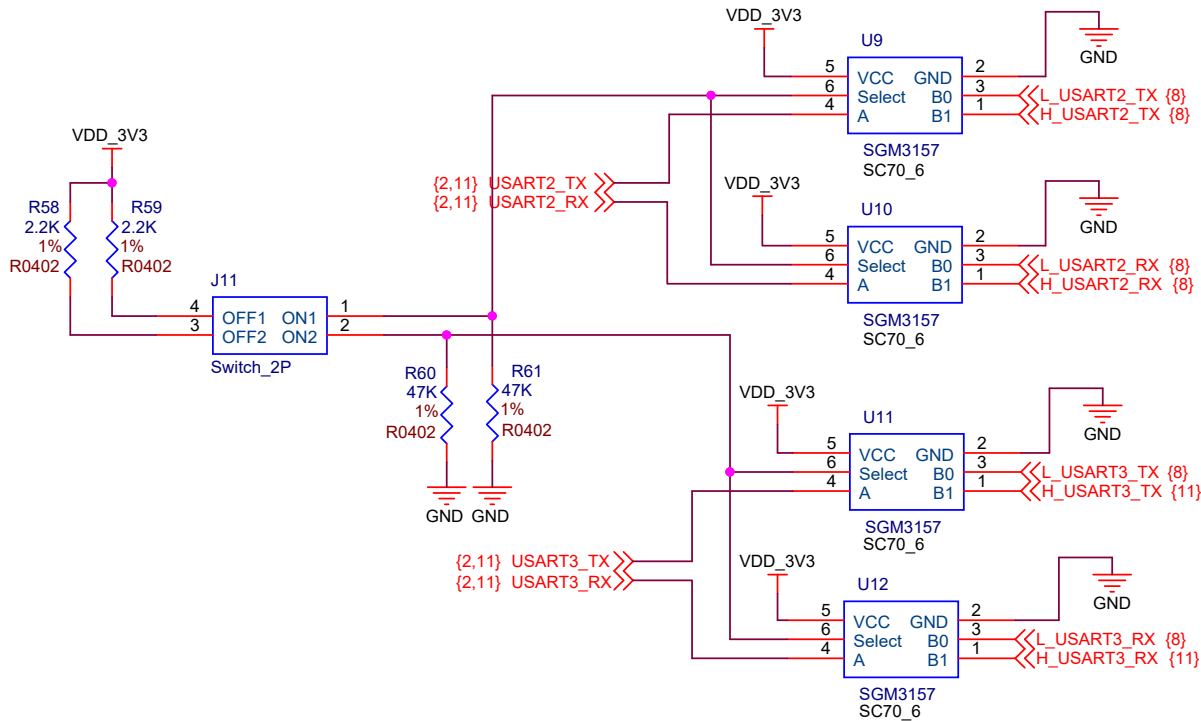


LCD_8080

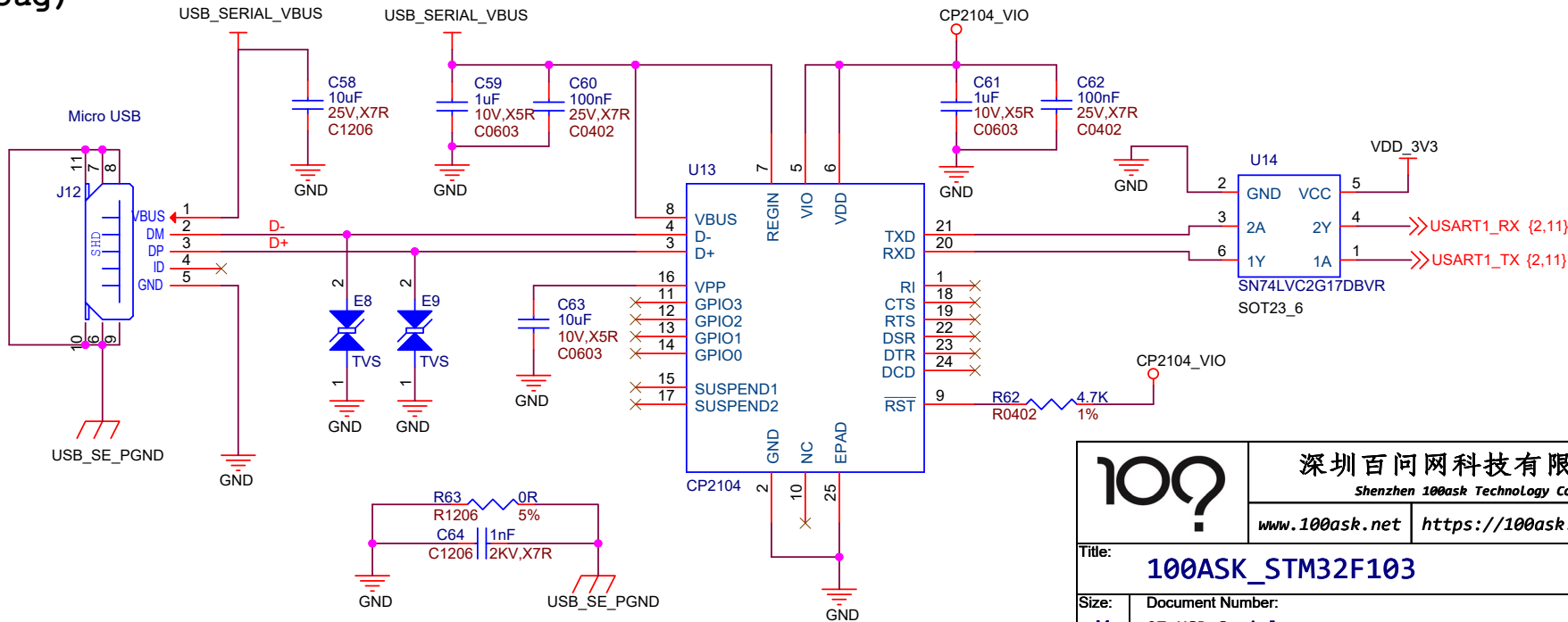



USART Switch

Resources	Function1	Function2	Note
USART1	Debug	X	Only
USART2	RS232 Male	RS485	J11: 0X 1X
USART3	RS232 Female	External	J11: X0 X1
UART4	X	X	No use
UART5	X	X	No use



USB Serial (Debug)





深圳百问网科技有限公司

Shenzhen 100ask Technology Co., Lt

www.100ask.net<https://100ask.taobao.com>

Title:

100ASK_STM32F103

Size: A4

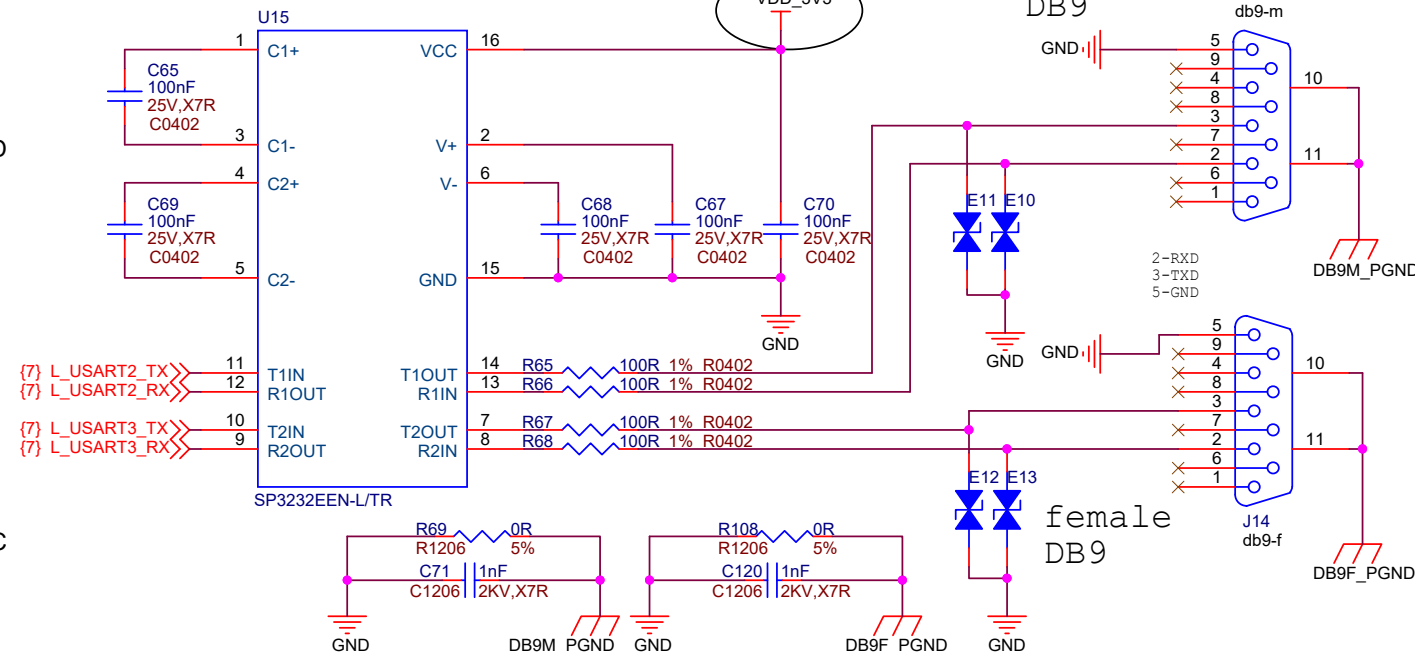
Document Number: 07_USB Serial

Rev: V1.0

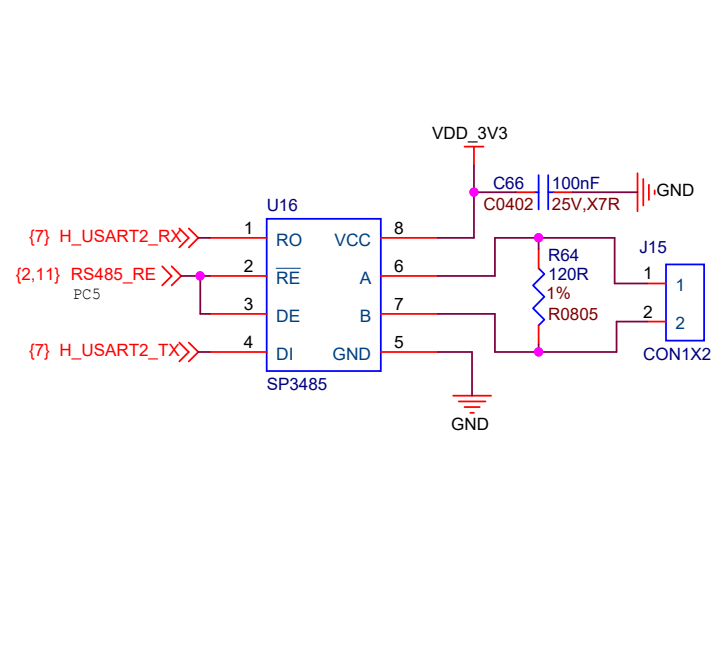
Date: Monday, July 06, 2020

Sheet: 7 of 11

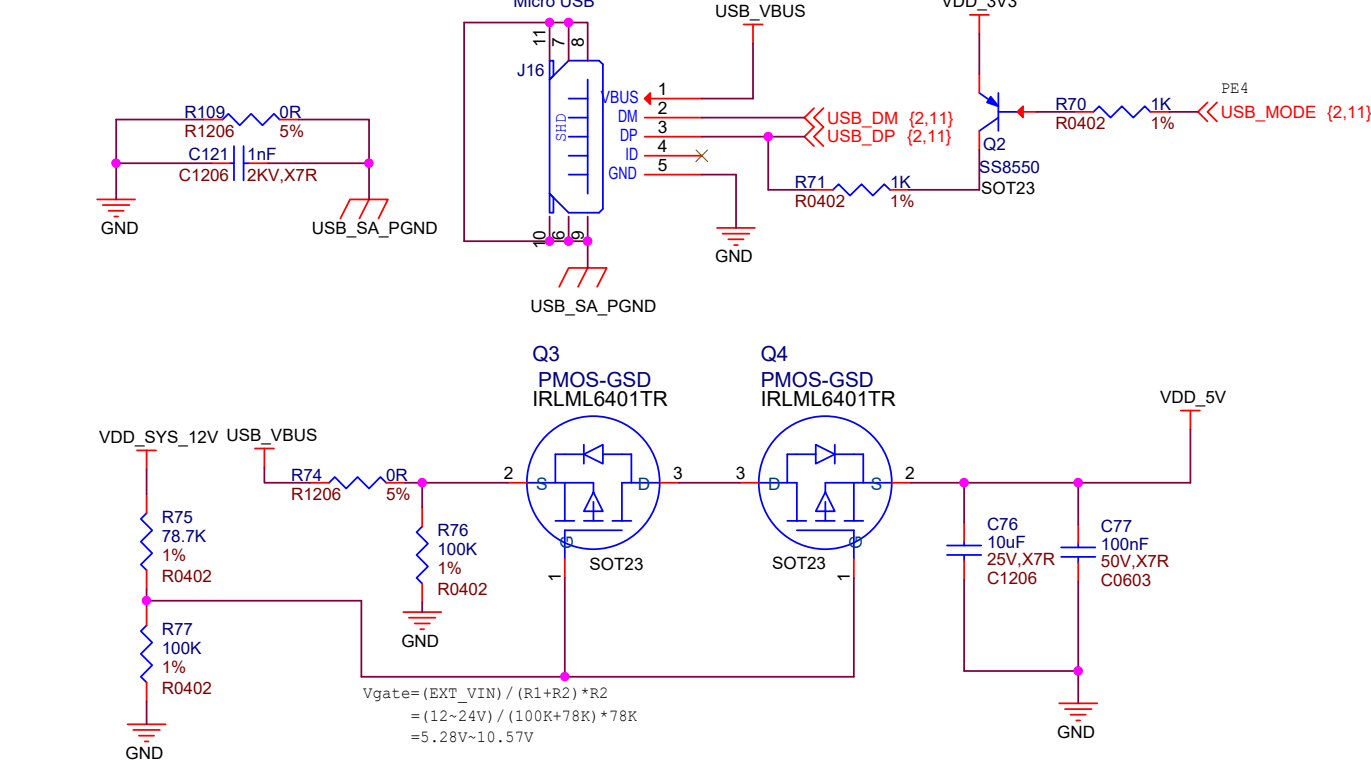
RS232



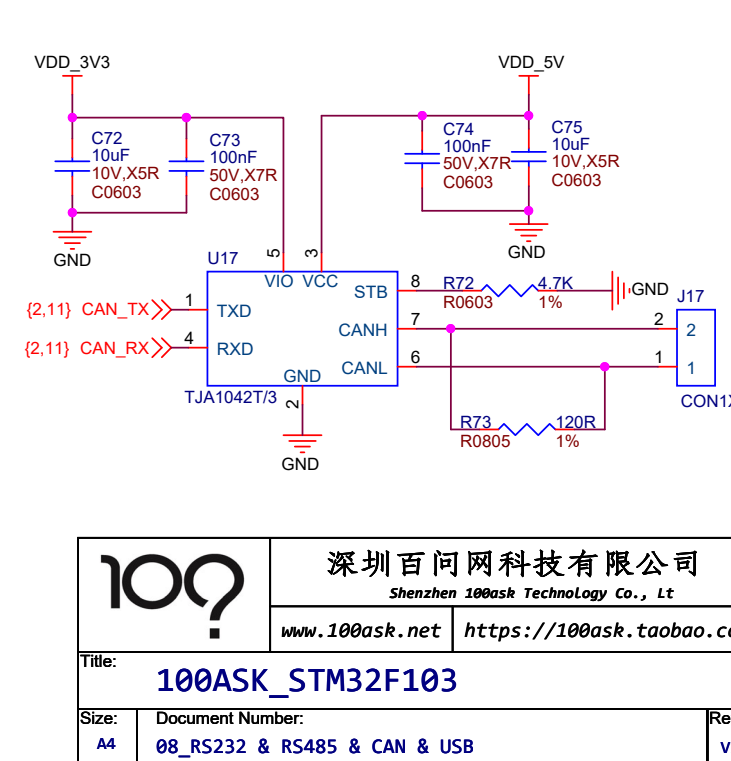
RS485



USB Salve



CAN



深圳百问网科技有限公司

Shenzhen 100ask Technology Co., Lt

www.100ask.net

https://100ask.taobao.com

Title: 100ASK_STM32F103

Size: A4

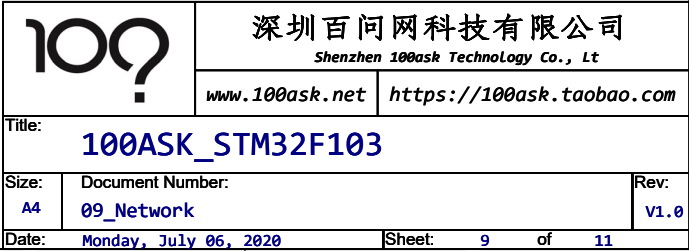
Document Number: 08_RS232 & RS485 & CAN & USB

Rev: V1.0

Date: Monday, July 06, 2020

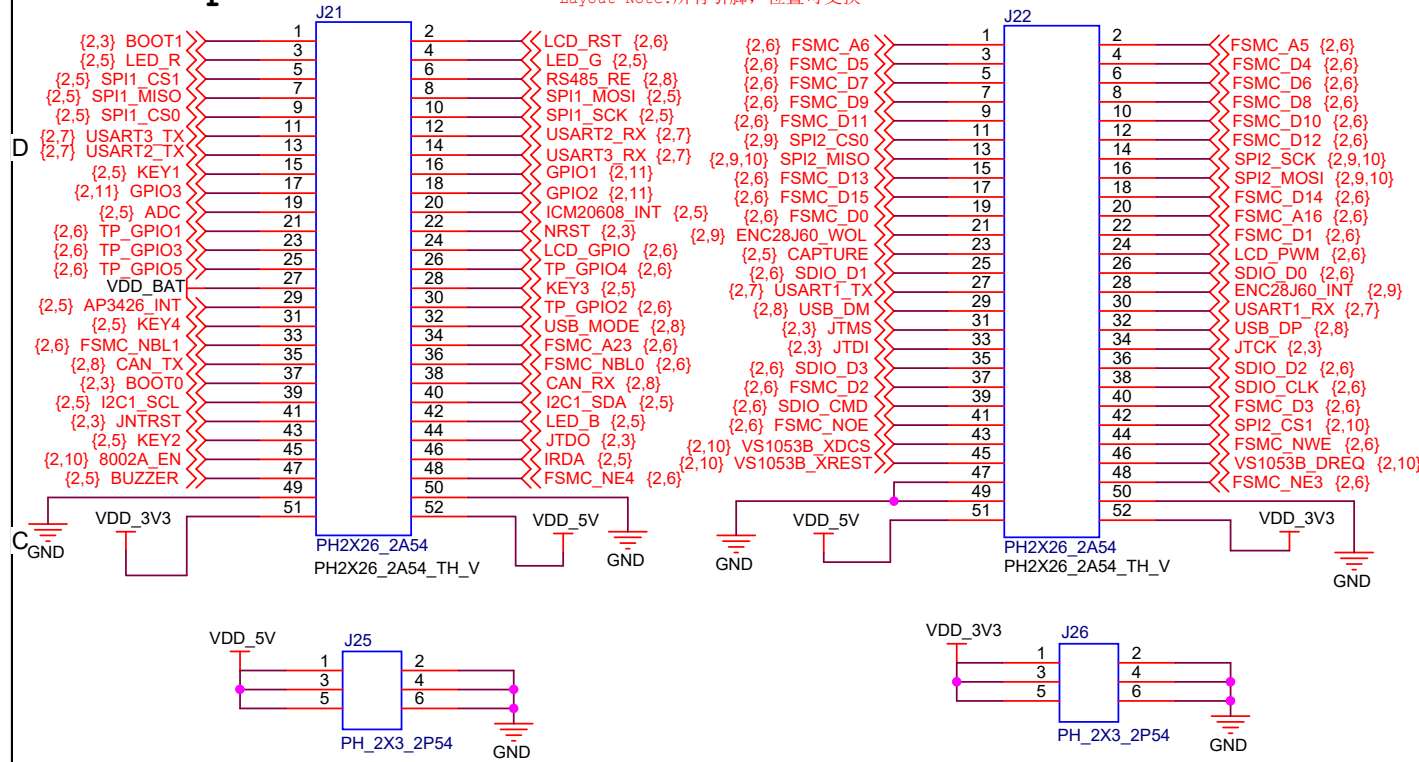
Sheet: 8 of 11

A

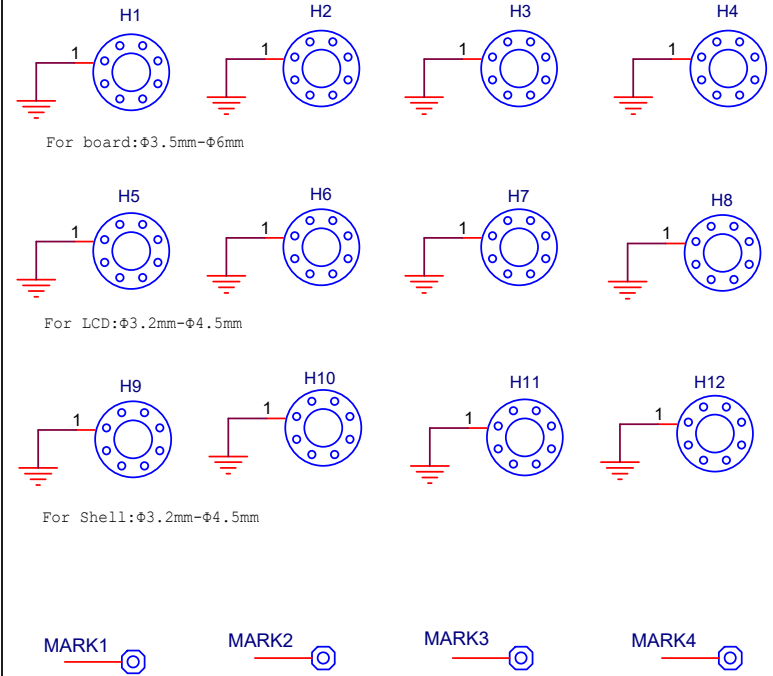


GPIO Export

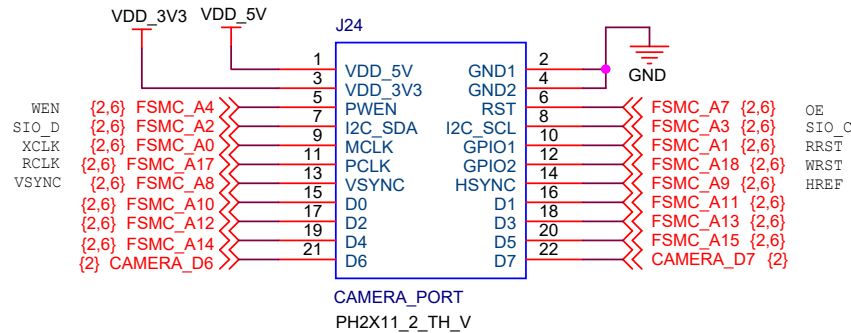
Layout Note:所有引脚，位置可交换



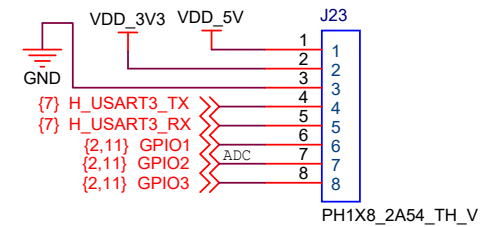
Hole



Camera



External Module



	深圳百问网科技有限公司 Shenzhen 100ask Technology Co., Lt	
	www.100ask.net	https://100ask.taobao.com
Title: 100ASK_STM32F103		
Size: A4	Document Number: 11_GPIO Export & Camera	Rev: V1.0
Date: Monday, July 06, 2020	Sheet: 11	of 11