DRAWINGS

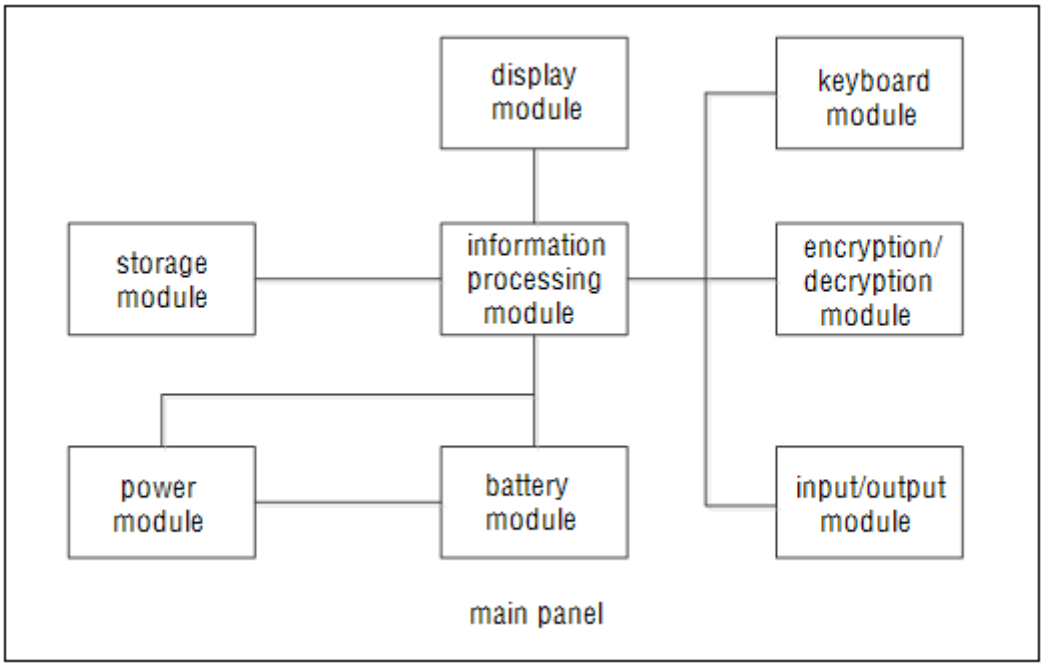


Fig. 1

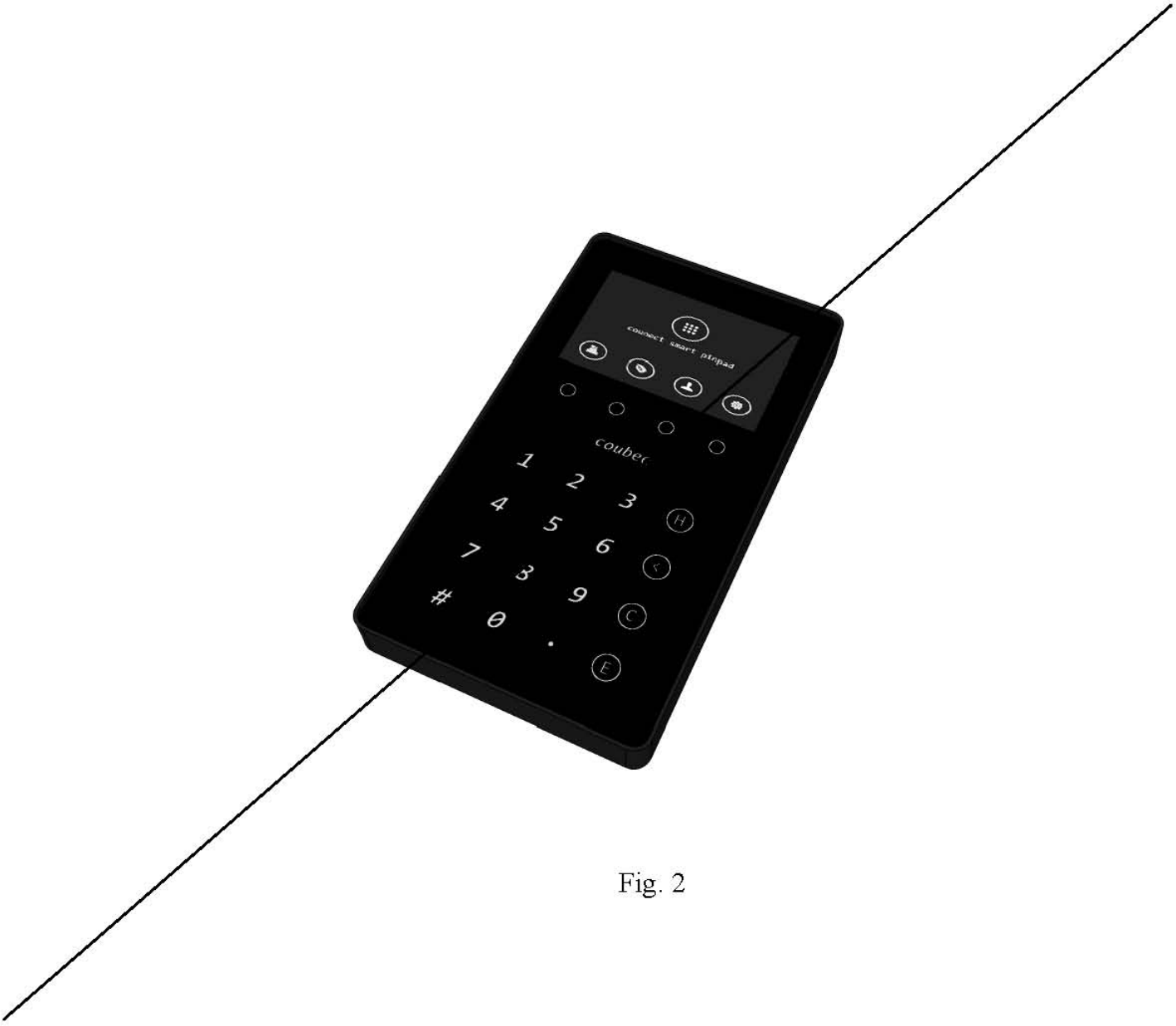


Fig. 2

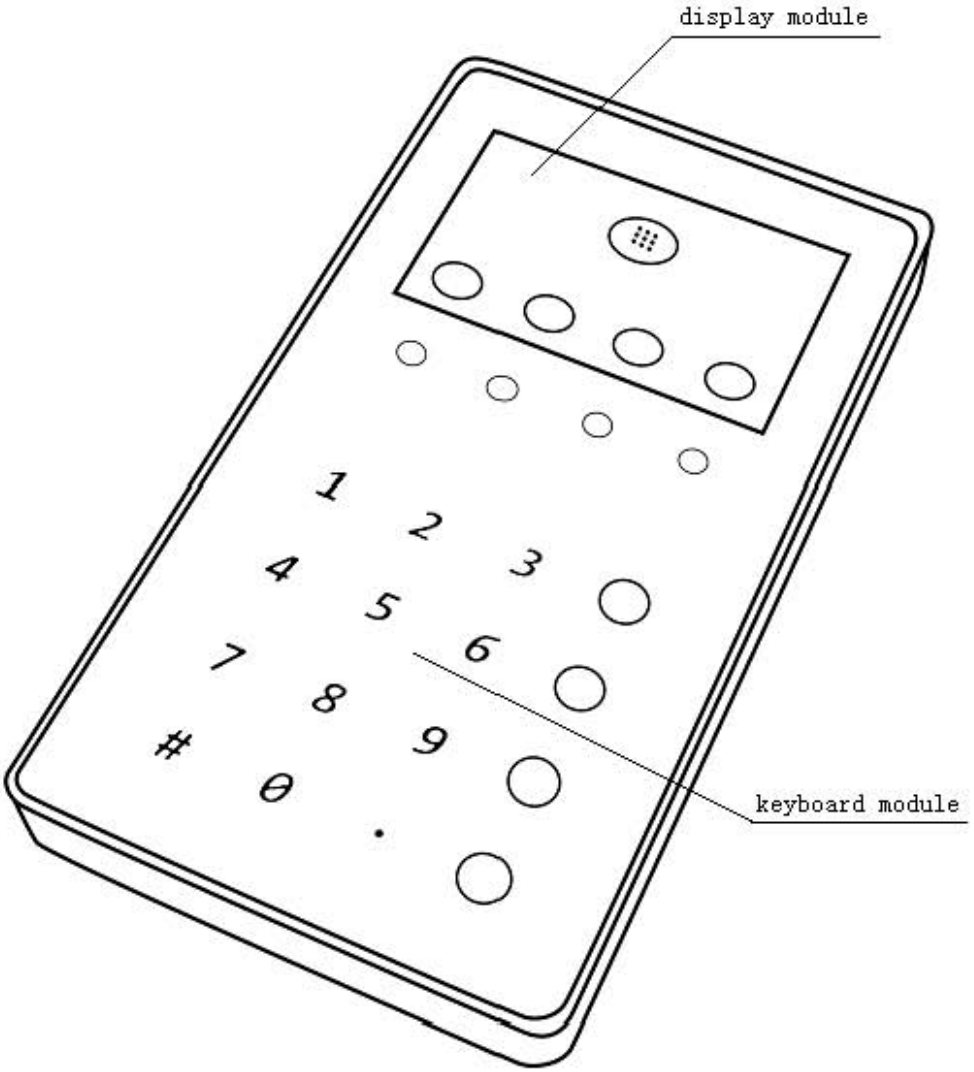


Fig. 2

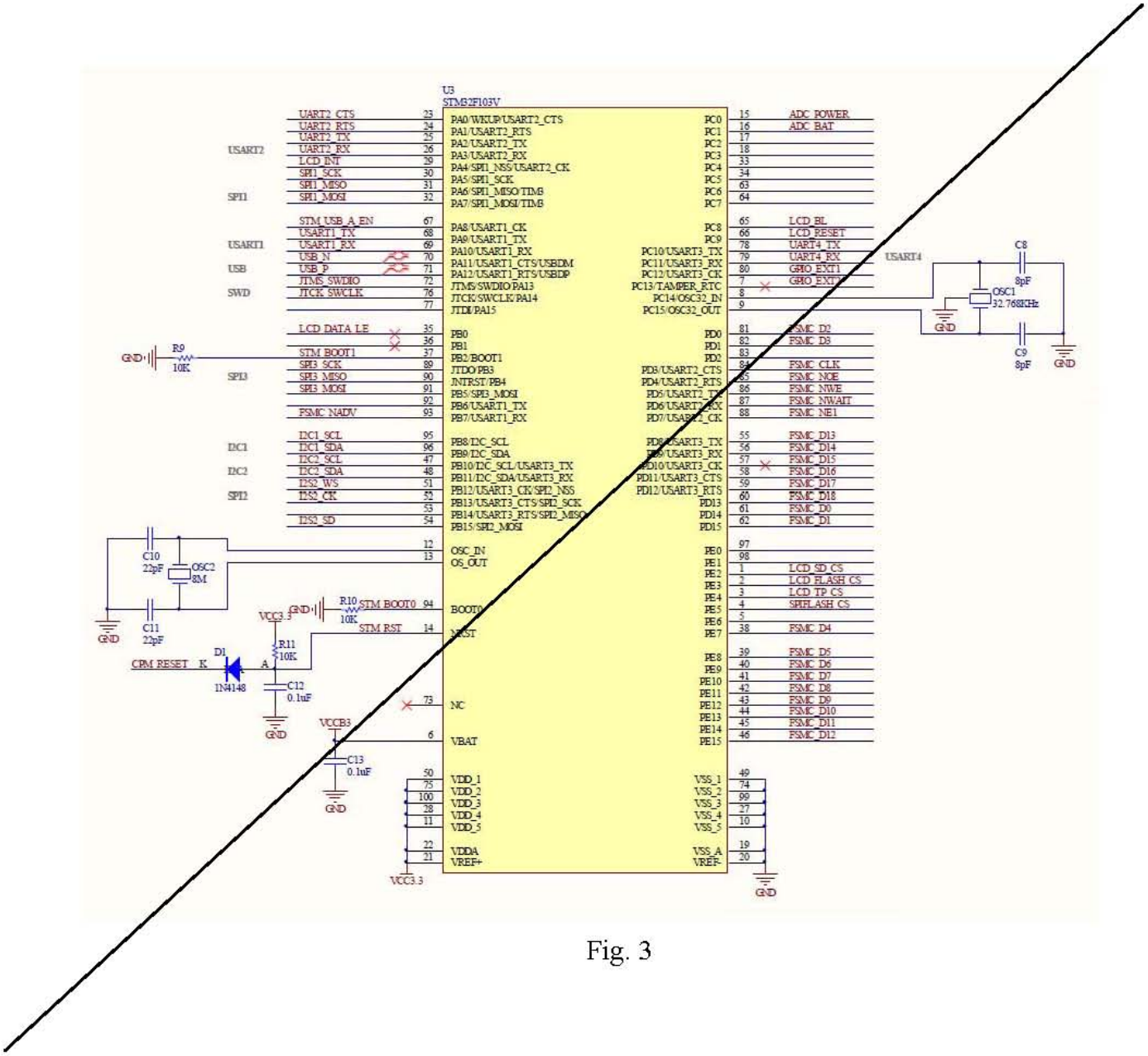

U3
STM32F103V
PA0/WKUP/USART2_CTS
PA1/USART2_RTS
PA2/USART2_TX
PA3/USART2_RX
PA4/SPI1_NSS/USART2_CK
PA5/SPI1_SCK
PA6/SPI1_MISO/TIM3
PA7/SPI1_MOSI/TIM3
PA8/USART1_CK
PA9/USART1_TX
PA10/USART1_RX
PA11/USART1_CTS/USBDM
PA12/USART1_RTS/USBDP
JTMS/SWDIO/PA13
JTCK/SWCLK/PA14
JTDI/PA15
PB0
PB1
PB2/BOOT1
JTDO/PB3
JNTRST/PB4
PB5/SPI3_MOSI
PB6/USART1_TX
PB7/USART1_RX
PB8/I2C_SCL
PB9/I2C_SDA
PB10/I2C_SCL/USART3_TX
PB11/I2C_SDA/USART3_RX
PB12/USART3_CK/SPI2_NSS
PB13/USART3_CTS/SPI2_SCK
PB14/USART3_RTS/SPI2_MISO
PB15/SPI2_MOSI
OSC_IN
OS_OUT
BOOT0
NRST
NC
VBAT
VDD_1
VDD_2
VDD_3
VDD_4
VDD_5
VDDA
VREF+
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
PC10/USART3_TX
PC11/USART3_RX
PC12/USART3_CK
PC13/TAMPER_RTC
PC14/OSC32_IN
PC15/OSC32_OUT
PD0
PD1
PD2
PD3/USART2_CTS
PD4/USART2_RTS
PD5/USART2_TX
PD6/USART2_RX
PD7/USART2_CK
PD8/USART3_TX
PD9/USART3_RX
PD10/USART3_CK
PD11/USART3_CTS
PD12/USART3_RTS
PD13
PD14
PD15
PE0
PE1
PE2
PE3
PE4
PE5
PE6
PE7
PE8
PE9
PE10
PE11
PE12
PE13
PE14
PE15
VSS_1
VSS_2
VSS_3
VSS_4
VSS_5
VSS_A
VREF-
UART2_CTS
UART2_RTS
UART2_TX
UART2_RX
LCD_INT
SPI1_SCK
SPI1_MISO
SPI1_MOSI
STM_USB_A_EN
USART1_TX
USART1_RX
USB_N
USB_P
JTMS_SWDIO
JTCK_SWCLK
LCD_DATA_LE
STM_BOOT1
SPI3_SCK
SPI3_MISO
SPI3_MOSI
FSMC_NADV
I2C1_SCL
I2C1_SDA
I2C2_SCL
I2C2_SDA
I2S2_WS
I2S2_CK
I2S2_SD
ADC_POWER
ADC_BAT
LCD_BL
LCD_RESET
UART4_TX
UART4_RX
GPIO_EXT1
GPIO_EXT2
FSMC_D2
FSMC_D3
FSMC_CLK
FSMC_NOE
FSMC_NWE
FSMC_NWAIT
FSMC_NE1
FSMC_D13
FSMC_D14
FSMC_D15
FSMC_D16
FSMC_D17
FSMC_D18
FSMC_D0
FSMC_D1
LCD_SD_CS
LCD_FLASH_CS
LCD_TP_CS
SPIFLASH_CS
FSMC_D4
FSMC_D5
FSMC_D6
FSMC_D7
FSMC_D8
FSMC_D9
FSMC_D10
FSMC_D11
FSMC_D12
USART1
USART2
SPI1
USB
SWD
SPI3
I2C1
I2C2
SPI2
USART4
R9
10K
R10
10K
R11
10K
C10
22pF
C11
22pF
OSC2
8M
C12
0.1uF
C13
0.1uF
C8
8pF
C9
8pF
OSC1
32.768KHz
D1
1N4148
CPM_RESET
GND
VCC3.3
VCCB3

Fig. 3

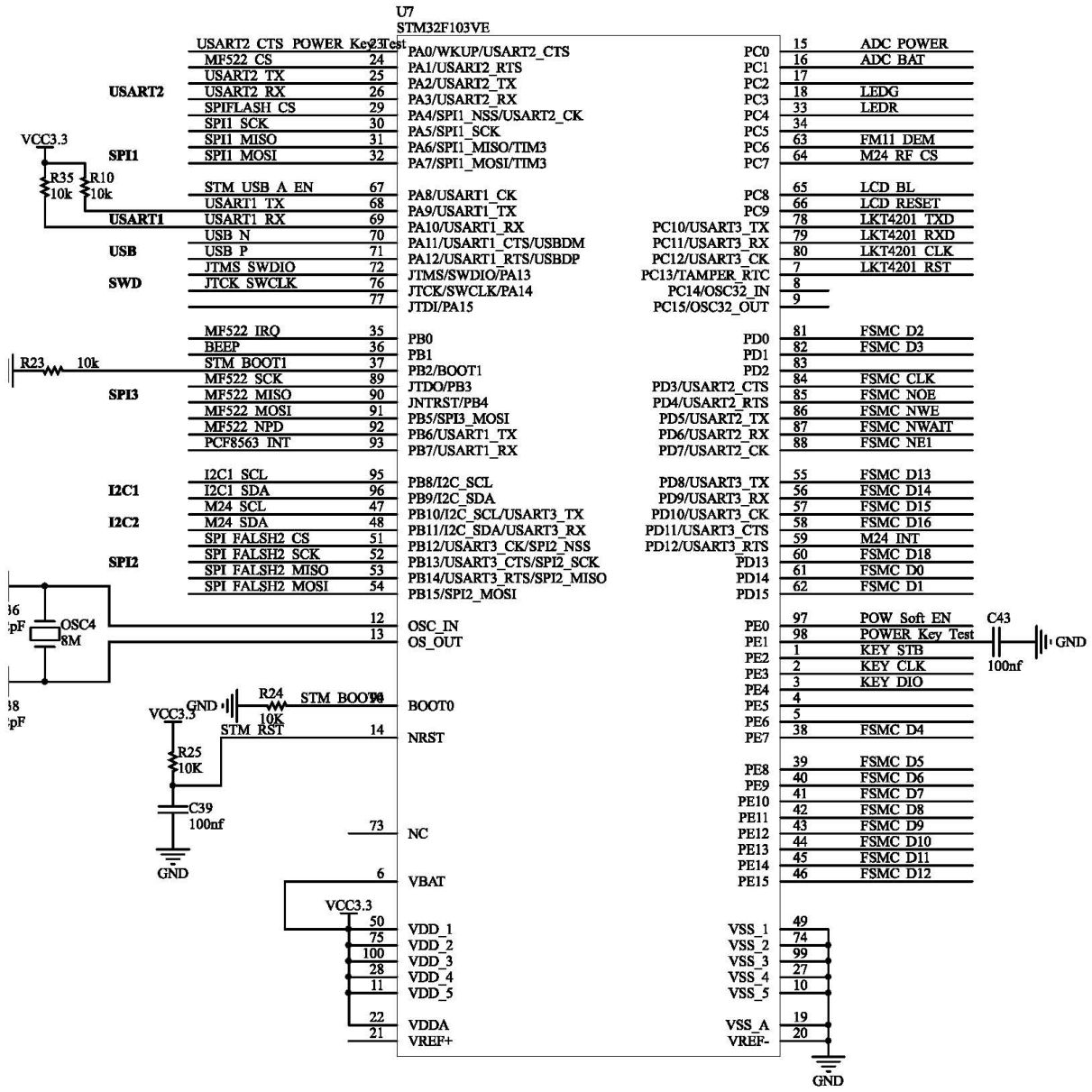

U7
STM32F103VE
USART2_CTS_POWER_Key_Test 23
MF522_CS 24
USART2_TX 25
USART2_RX 26
SPIFLASH_CS 29
SPI1_SCK 30
SPI1_MISO 31
SPI1_MOSI 32
STM_USB_A_EN 67
USART1_TX 68
USART1_RX 69
USB_N 70
USB_P 71
JTMS_SWDIO 72
JTCK_SWCLK 76
77
MF522_IRQ 35
BEEP 36
STM_BOOT1 37
MF522_SCK 89
MF522_MISO 90
MF522_MOSI 91
MF522_NPD 92
PCF8563_INT 93
I2C1_SCL 95
I2C1_SDA 96
M24_SCL 47
M24_SDA 48
SPI_FALSH2_CS 51
SPI_FALSH2_SCK 52
SPI_FALSH2_MISO 53
SPI_FALSH2_MOSI 54
12
13
14
73
6
50
75
100
28
11
22
21
PA0/WKUP/USART2_CTS
PA1/USART2_RTS
PA2/USART2_TX
PA3/USART2_RX
PA4/SPI1_NSS/USART2_CK
PA5/SPI1_SCK
PA6/SPI1_MISO/TIM3
PA7/SPI1_MOSI/TIM3
PA8/USART1_CK
PA9/USART1_TX
PA10/USART1_RX
PA11/USART1_CTS/USBDM
PA12/USART1_RTS/USBDP
JTMS/SWDIO/PA13
JTCK/SWCLK/PA14
JTDI/PA15
PB0
PB1
PB2/BOOT1
JTDO/PB3
JNTRST/PB4
PB5/SPI3_MOSI
PB6/USART1_TX
PB7/USART1_RX
PB8/I2C_SCL
PB9/I2C_SDA
PB10/I2C_SCL/USART3_TX
PB11/I2C_SDA/USART3_RX
PB12/USART3_CK/SPI2_NSS
PB13/USART3_CTS/SPI2_SCK
PB14/USART3_RTS/SPI2_MISO
PB15/SPI2_MOSI
OSC_IN
OS_OUT
BOOT0
NRST
NC
VBAT
VDD_1
VDD_2
VDD_3
VDD_4
VDD_5
VDDA
VREF+
PC0 15 ADC_POWER
PC1 16 ADC_BAT
PC2 17
PC3 18 LEDG
PC4 33 LEDR
PC5 34
PC6 63 FM11_DEM
PC7 64 M24_RF_CS
PC8 65 LCD_BL
PC9 66 LCD_RESET
PC10/USART3_TX 78 LKT4201_TXD
PC11/USART3_RX 79 LKT4201_RXD
PC12/USART3_CK 80 LKT4201_CLK
PC13/TAMPER_RTC 7 LKT4201_RST
PC14/OSC32_IN 8
PC15/OSC32_OUT 9
PD0 81 FSMC_D2
PD1 82 FSMC_D3
PD2 83
PD3/USART2_CTS 84 FSMC_CLK
PD4/USART2_RTS 85 FSMC_NOE
PD5/USART2_TX 86 FSMC_NWE
PD6/USART2_RX 87 FSMC_NWAIT
PD7/USART2_CK 88 FSMC_NE1
PD8/USART3_TX 55 FSMC_D13
PD9/USART3_RX 56 FSMC_D14
PD10/USART3_CK 57 FSMC_D15
PD11/USART3_CTS 58 FSMC_D16
PD12/USART3_RTS 59 M24_INT
PD13 60 FSMC_D18
PD14 61 FSMC_D0
PD15 62 FSMC_D1
PE0 97 POW_Soft_EN
PE1 98 POWER_Key_Test
PE2 1 KEY_STB
PE3 2 KEY_CLK
PE4 3 KEY_DIO
PE5 4
PE6 5
PE7 38 FSMC_D4
PE8 39 FSMC_D5
PE9 40 FSMC_D6
PE10 41 FSMC_D7
PE11 42 FSMC_D8
PE12 43 FSMC_D9
PE13 44 FSMC_D10
PE14 45 FSMC_D11
PE15 46 FSMC_D12
VSS_1 49
VSS_2 74
VSS_3 99
VSS_4 27
VSS_5 10
VSS_A 19
VREF- 20
USART2
SPI1
USART1
USB
SWD
SPI3
I2C1
I2C2
SPI2
VCC3.3
R35 10k
R10 10k
R23 10k
R24 10K
R25 10K
C39 100nf
C43 100nf
OSC4 8M
GND
STM_RST
STM_BOOT0
VCC3.3
GND

Fig. 3

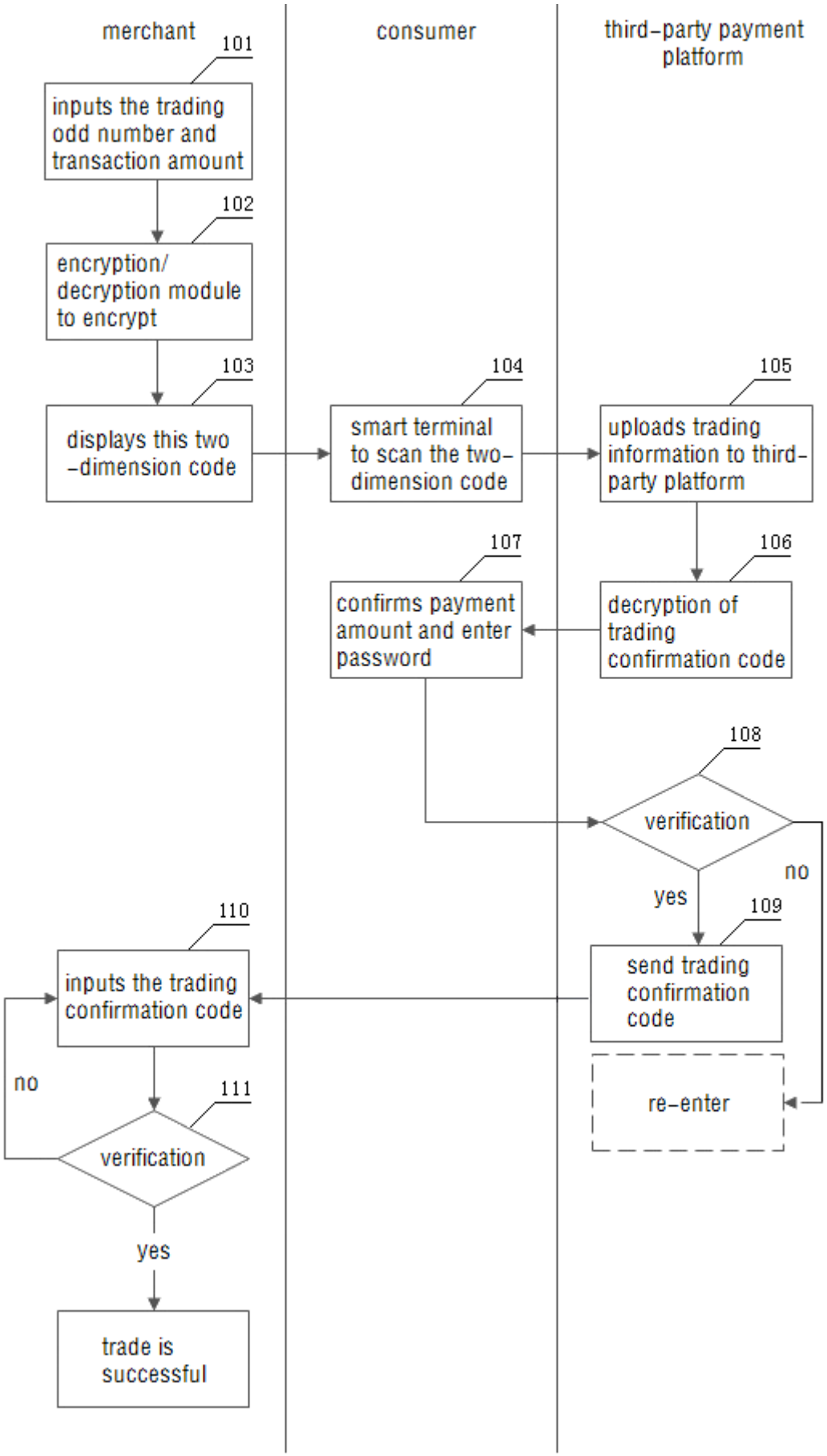

merchant
consumer
third-party payment platform
101
inputs the trading odd number and transaction amount
102
encryption/ decryption module to encrypt
103
displays this two -dimension code
104
smart terminal to scan the two-dimension code
105
uploads trading information to third-party platform
106
decryption of trading confirmation code
107
confirms payment amount and enter password
108
verification
no
yes
109
send trading confirmation code
re-enter
110
inputs the trading confirmation code
no
111
verification
yes
trade is successful

Fig.4