



MINI-STM32 Manual

STM32F103RBT6(development board) with 2.8" TFT-module

On-board resources:

- * CPU: STM32F103RBT6; (LQFP64-pin, on-chip integrated 128K flash, 20KRAM, 16Bit A / D; PWM, CAN, USB and other resources)
- *With a 2.8-inch TFT true color touch screen module, color touch module configuration ADS7843 (or RSM1843 instead) controller, support for a SD card (SPI mode) can be used to store pictures, in support of AT45DBxxx of a DATA FLASH (can be used for storage)
- * USB interface, make USB experiment
- * RS232 interface (ISP download), make RS232 communicate experiment
- * AD adjuster
- * standard ARM JTAG 20 pin
- * A RTC in support, the four users LED lights, a power indicator light, a USB communication indicator, two user keys
- * 8MHz crystal,32.768KHz crystal
- * USB power supply
- * All I / O port through the standard pitch leads 2.54MM
- * Board Size: 82MM X 55MM

MINI-STM32 board have two type mode

- 1, Start from User Flash
- 2, Start from System Memory, come into ISP function

J1	Start mode
1-2	Start from User Flash
2-3	Start from System Memory, come into ISP function

MINI-STM32 Board have a RS232 interface (UART1, RS232) ,

UART1 support ISP download

Foot position	Functional Description	Foot Position	Functional Description
1	NC	2	UART1_TXD
3	UART1_RXD	4	NC



5	GND	6	NC
7	NC	8	NC
9	NC		

Reset Mode

JTAG emulate input reset signal

MINI-STM32 Power Supply

Used the USB cable as the Power supply, power supply current < 200MA

USB interface:

Foot position	Functional Description	Foot position	Functional Description
+	DP		DM
V	VBUS (power)	G	GND

Foot position	Functional Description	Foot position	Functional Description
J1	Boot0 jumper	J2	USB-B interface, USB communicate and power supply
J3	USB data wire, DM interface jumper	J4	USB data wire, DP interface jumper
JTAG	20PIN JTAG emulate	RS232	UART1 interface, ISP download
JP1	TFT interface or IO interface jumper	JP2	TFT interface, PB, PC interface
JP3	JTAG mode or SWD mode jumper	JP4	(PA, PB) IO

JP4 (PA, PB)IO

Foot position	Functional Description	IO	Foot position	Functional Description	IO

1	PA0	PA0	2	PA1	PA1
3	PA2	PA2	4	PA3	PA3
5	PA4	PA4	6	PA5	PA5
7	PA6	PA6	8	PA7	PA7
9	PA8	PA8	10	PA9	PA9
11	PA10	PA10	12	PA11	PA11
13	PA12	PA12	14	PA13	PA13
15	PA14	PA14	16	PA15	PA15
17	PB0	PB0	18	PB1	PB1
19	PB2	PB2	20	PB3	PB3
21	PB4	PB4	22	PB5	PB5
23	PB6	PB6	24	PB7	PB7
25	3V3	电源	26	GND	地

JTAG CN1

Figure 10. JTAG debugging connector CN9 (top view)

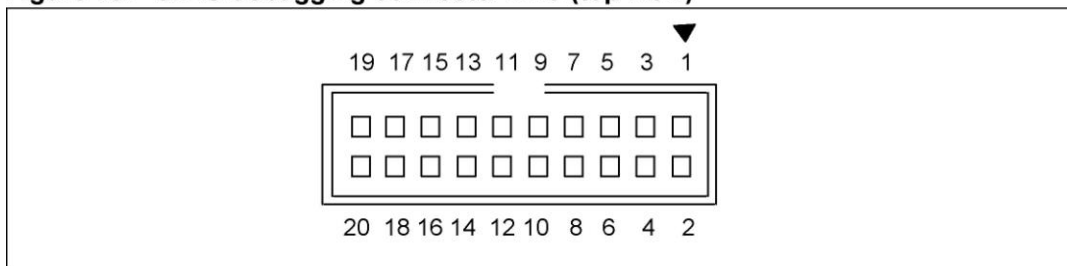


Table 22. JTAG debugging connector CN9

Pin number	Description	Pin number	Description
1	3.3V power	2	3.3V power
3	PB4	4	GND
5	PA15	6	GND
7	PA13	8	GND
9	PA14	10	GND
11	RTCK	12	GND
13	PB3	14	GND
15	RESET#	16	GND
17	DBGQR	18	GND
19	DBGACK	20	GND

TFT LCD interface

Foot position	Functional Description	I/O	Foot position	Functional Description	I/O	Foot position	Functional Description	I/O
1	3V3	power	2	GND	GND	3	DB00	PE0
4	DB01	PE1	5	DB02	PE2	6	DB03	PE3
7	DB04	PE4	8	DB05	PE5	9	DB06	PE6
10	DB07	PE7	11	DB08	PE8	12	DB09	PE9
13	DB10	PE10	14	DB11	PE11	15	DB12	PE12
16	DB13	PE13	17	DB14	PE14	18	DB15	PE15
19	CS	PC6	20	RS	PD13	21	WR	PD14
22	RD	PD15	23	RESET	RESET	24	EN	NC
25	MISO	PC11	26	INT	PC5	27	MOSI	PC12
28	LE	PB2	29	SCLK	PC10	30	F_CS	PC7
31	TP_CS	PC8	32	SD_CS	PC9			