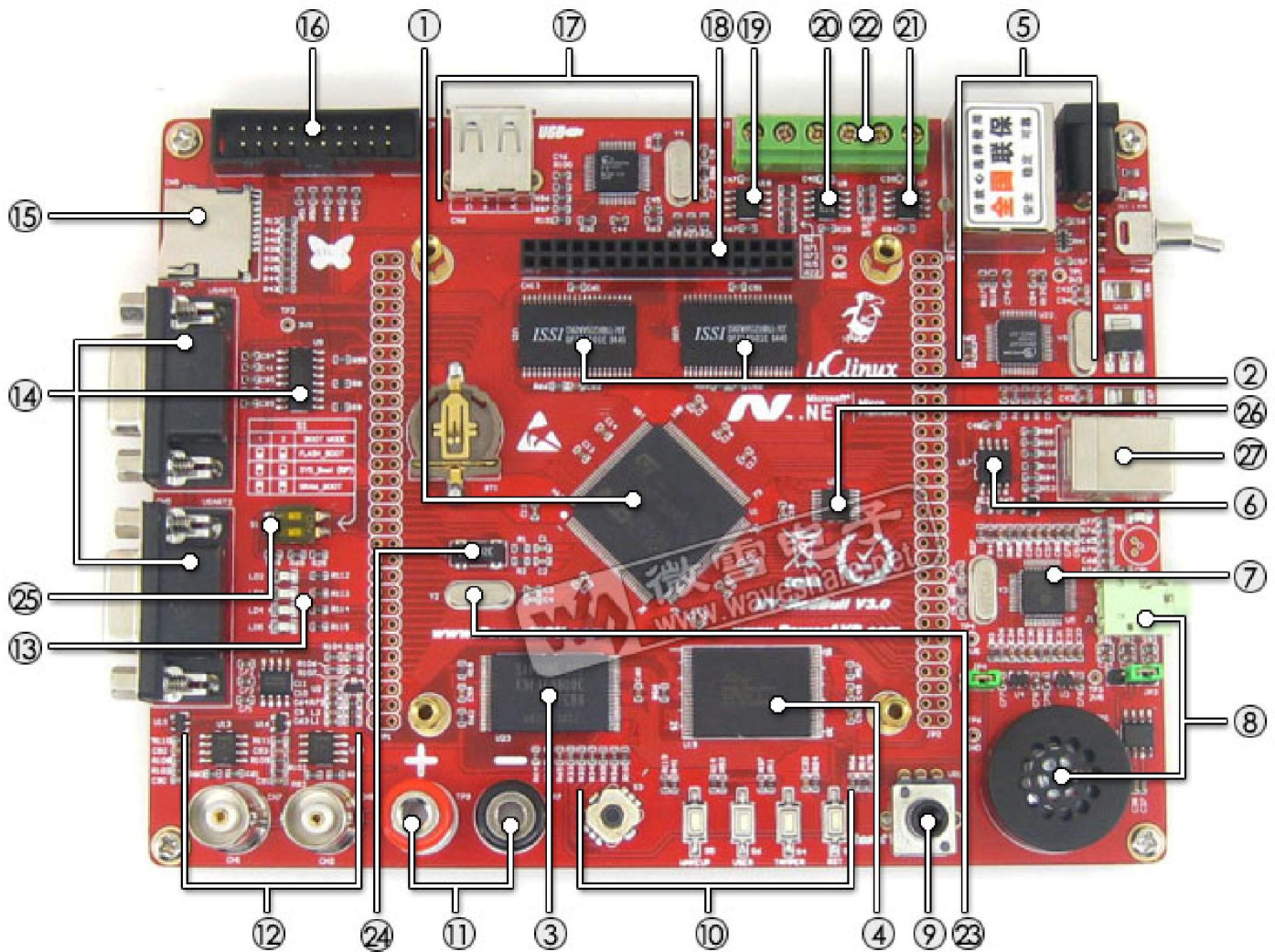


# RB-STM32F103

## Product introduction

RB-STM32F103 is a cost-effective and versatile STM32 MCU development platform. It is equipped with commonly used 32-bit MCU off-chip resources, emulation interface, and the materials and routines provided with the board, allowing you to comprehensively in the shortest time. Master the STM32 microcontroller programming technology, especially suitable for microcontroller developers and electronic enthusiasts.

RB-STM32F103 development board main resources and related applications:



1. CPU: STM32F103ZET6, ARM Cortex-M3 core, 512kB Flash, 64KB RAM, LQFP 144-pin package
  - 32-bit RISC performance processor
  - 32-bit ARM Cortex-M3 architecture optimization
  - 72 MHz operating frequency / 90 MIPS (1.25 DMIPS / MHz)
  - Hardware division and single cycle multiplication
  - Fast nestable interrupt, 6~12 clock cycles
  - With MPU protection set access rules
2. 1MBit \*2 SRAM (ISSI)
3. 128M bytes NADN Flash (SAMSUNG)
4. 16M bytes of NOR Flash (SPANSION)
5. 100M/10M adaptive Ethernet interface (DM9000A), IEEE802.3x flow control full-duplex mode, 16KB SRAM, support IP/TCP/UDP check generation and inspection, automatic loading of supplier ID and product identification from EEPROM advantage
6. 16Mbit SPI Serial Flash (SST25VF016B)
7. Onboard VS1003B high-performance MP3 decoder chip, support decoding music formats including MP3, WMA, WAV, MIDI, P-MIIDI, recording encoding format IMA ADPCM (mono). Microphone and Line input input modes; support MP3 and WAV streams; low power consumption; internal phase-locked loop clock multiplier; high quality stereo digital-to-analog converter (DAC); 16-bit adjustable chip Internal analog-to-digital converter (ADC); high quality stereo earphone drive (30 ohms); separate analog, digital and IO power supplies; serial data and control interface (SPI);
8. External speaker, 3.5mm interface stereo headphone jack
9. Adjustable potentiometer, input analog signal
10. a 5-way joystick, a Reset button, a wakeup button, a Tamper button, a custom button
11. Voltmeter input interface
12. BNC input terminal, integrated dual channel CH1, CH2 oscilloscope circuit
13. 4 custom LEDs
14. RS232 serial communication interface (DB9)
15. MicroSD card slot (SD mode, no SD card), file system (FATFS)
16. Standard ARM JTAG 20 PIN emulation interface (easy to connect ST-LINK, JLINK, ULINK2 and other emulators)
17. USB HOST interface, embedded master/slave device controller (SL811HS), can communicate with USB devices at full speed or low speed.
18. LCD slot, support 3.5-inch 320\*240 large screen 260,000-color TFT-LCD module, support 8/16-bit bus interface, mirror screen, ultra-high definition, FSMC control, also equipped with ADS7843 touch controller
19. External 2K IIC interface EEPROM (24LC02)
20. RS485 serial communication chip (SP3485)
21. CAN2.0A/B communication chip (SN65VHD230)
22. CAN2.0A/B communication interface, RS485 serial communication interface
23. 8M external quartz crystal
24. 32.768KHz quartz crystal oscillator, providing RTC clock
25. BOOT selection bit, using switch mode, making it easier for users to use
26. 74HC139 address decoder
27. USB2.0 full speed DEVICE interface

Each board comes with uCOSII + UCGUI demo program, and the CD comes with the source code of the compiled uCOSII + UCGUI routine, allowing you to easily enter the embedded world!

## Product Image



## Supporting materials

The following is included in the product package CD:

- install software
  - Contains a variety of good and easy to use software, is a tool for development
- Driver library
  - The official underlying drivers for each peripheral make development faster
- Experimental routine
  - Contains a large number of routines based on board hardware content
- Documentation
  - The datasheet of each device gives you more details
- Learning materials
  - Get an excellent introduction to STM32, so you can get started quickly
- Application document
  - ST's official application documents provide more in-depth development of STM32
- Schematic

## Detailed configuration

1. RB-STM32F103 development board x1
2. 3.5 inch large screen color LCD module x1
3. USB slave adapter cable x1
4. Serial download line x1
5. RJ-45 network cable x1
6. Oscilloscope probe x1
7. 5V power adapter x1
8. Product CD (including programming examples, learning materials, software) x1

