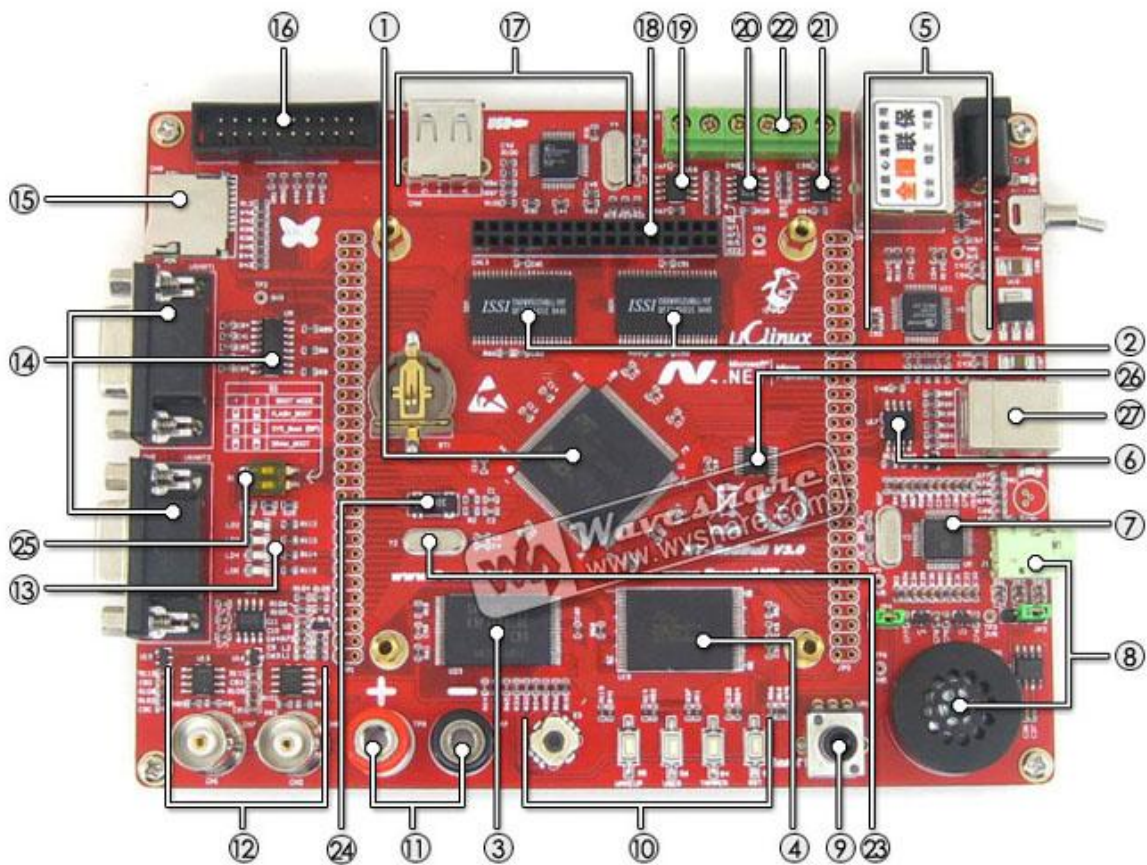


## Features

- MCU: STM32F103ZET6 from STMicroelectronics, incorporates the high-performance ARM® Cortex™-M3 32-bit RISC core operating at a 72 MHz frequency in LQFP144 package. The STM32F103ZET6 offers high-speed embedded memories(512KB FLASH, 64KB RAM), 12-bit ADC, PWM, I2C, SPI, I2S, SDIO, USART, USB, and CAN.
- 3.5" TFT LCD touch screen, 320\*240 resolution, 262k color, 8-bit or 16-bit interfaces, FSMC bus, stand-alone touch controller: ADS7843
- Memories:
  - 1 MBit SRAM \* 2
  - 128 MBytes NAND FLASH
  - 16 MBytes NOR Flash
  - 16 MBit Flash with SPI interface
  - 2 KBit EEPROM with I2C interface
  - MicroSD card slot, SD bus (the SD card is not included), supports FATFS
- Onboard high performance MP3/WMA/MIDI audio decoder and ADPCM encoder: VS1003B. It is a single-chip MP3/WMA/MIDI audio decoder and ADPCM encoder. It contains a highperformance, proprietary low-power DSP processor core VS DSP4, working data memory, 5 KiB instruction RAM and 0.5 KiB data RAM for user applications, serial control and input data interfaces, 4 general purpose I/O pins, an UART, as well as a high-quality variable-sample-rate mono ADC and stereo DAC, followed by an earphone amplifier and a common buffer.
- Audio output: 3.5mm earphone jack & onboard speaker
- USB host port, features a embedded USB Host/Slave controller: SL811HS
- USB device port, supported by STM32F103ZET6
- Ethernet module,features a ethernet controller: DM9000A
  - Integrated 10/100M transceiver with HP Auto-MDIX
  - IEEE802.3x flow control for full-duplex mode
  - Integrated 16 KBytes SRAM
  - Supports IP/TCP/UDP checksum generation and checking
  - Supports automatically load vendor ID and product ID from EEPROM
- Other communication features: CAN, RS485, RS232
- Boot mode selection switches
- Integrated Voltmeter and Dual Channel Oscilloscope circuit
- Human-Machine Interfaces: four user LEDs, one joystick(5 directions), four buttons (Wakeup, User, Tamper, Reset)
- Debugging interface: 20-pin JTAG port, compatible with ST-Link, JLink, NLink2, etc



1. MCU: STM32F103ZET6, LQFP144 package
2. Two SRAM, 1 MBit (ISSI)
3. NAND Flash, 128 MBytes (SAMSUNG)
4. NOR Flash, 16 MBytes (SPANSION)
5. Ethernet module °Ethernet controller: DM9000A  
°RJ45 connector
6. 16 MBit Flash with SPI interface: SST25VF016B
7. MP3/WMA/MIDI audio decoder and ADPCM encoder: VS1003B
8. 3.5mm earphone jack & onboard speaker
9. Adjustable potentiometer, for analog input
10. one joystick (5 directions) & four buttons (Wakeup, User, Tamper, Reset)
11. Voltmeter probe connector
12. BNC female connectors, for dual channel oscilloscope circuit CH1, CH2
13. Four user LEDs
14. RS232 module °RS232 transceiver: SP3232  
°Two DB9 connector
15. MicroSD card slot
16. 20-pin JTAG debugger header, compatible with ST-Link, JLink, NLink2, etc

17. USB module ◦USB host port  
◦Embedded USB Host/Slave controller: SL811HS
18. TFT LCD module connector
19. 2 KBit EEPROM with I2C interface: 24LC02
20. RS485 transceiver: SP3485
21. CAN2.0A/B transceiver: SN65VHD230
22. Screw-terminated connectors for CAN & RS485
23. 8M external crystal
24. 32.768KHz crystal, supports RTC
25. Switches for boot mode selection
26. Address decoder: 74HC139
27. USB2.0 device port

### **Development Resources**

- Related softwares
- Examples
- Schematic
- Library for STM32
- Development documents
- Datasheets of onboard chips

### **Package Contains**

- 1.RB-STM32F103 Development Board (including 3.5" LCD Module)
- 2.USB Cable
- 3.Serial Cable
- 4.RJ45 Ethernet Cable
- 5.Oscilloscope Probe
- 6.5V Power Adapter (NOT included any more)
- 7.User Guide CD (including development resources)