

产品型号: ZBT-WE2001

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产品规格书

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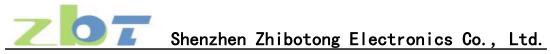


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1 Overview

1.1 Brief overview

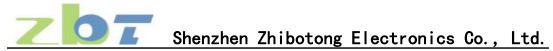
This document describes the electrical characteristics, RF performance, dimensions and application environment of ZBT-WE2001-A. Under the introduction of this document description, end users or developers can quickly understand the hardware functions of ZBT-WE2001-A.

ZBT-WE2001-A is a home wireless router product that accesses the Internet through 4G mobile communication dial-up, and then shares the Internet network through wireless WiFi 4 and 100Mbps wired LAN.

1.2 Guideline

Relevant standard specifications:

- USB2.0 bus standard
- SIM/USIM interface standard
- IEEE<mark>802.1</mark>1n/g/b
- IEEE802.3/802.3u
- 4G mobile communication standard, which is determined by the selected 4G mobile communication module



2 Product Image





3 Product main features

- Using MT7620N solution, MIPS24KEc architecture CPU, main frequency up to 580MHZ
- Main chip integrated baseband 2.4G WIFI rate up to 300Mbps
- With 64MB DDR2, and 8MB Nor Flash
- 1WAN, 1LAN full 100M adaptive network port, support automatic flip (Auto MDI/MDIX)
- Support "one-key flashing mode", that is, long press the reset button to turn on the machine to enter the rescue flashing mode
- Built-in TYPE A USB2.0 standard interface and LCC patch module interface (choose one of two), which can be used to connect 4G mobile communication module
- External standard Nano SIM card (small card) interface, support
 SIM/USIM card
- External WiFi and 4G antenna, wireless signal 360 degrees without dead angle
- This product supports hardware watchdog function, which can automatically restart the device when the routing system fails



4 hardware function

4.1 Introduction to hardware interface

Network port	1* LAN port, 100Mbps supports automatic flip (Auto MDI/MDIX) Compliant with IEEE 802.3/802.3u		
	1 *WAN port, 100Mbps supports automatic flip (Auto MDI/MDIX) Compliant with IEEE 802.3/802.3u		
SIM Card	Nano SIM card interface 1, support SIM/USIM		
Power interface	1* DC power interface		
button	1* reset button		
	1* omnidirectional 2.4G external antenna		
	1* built-in 2.4G FPC antenna		
Antenna	1* omnidirectional 4G external antenna		
	1* built-in 4G FPC antenna		
4G module	TYPE A USB2.0 standard interface and LCC SMD module interface		
interface	(choose one of two)		



4.2 Introduction to the function of indicator lights

LAN LED	Connected to the Internet port is always on, and flashes when there	
LAN LLD	is data communication	
4G LED light	When the 4G module is recognized and works normally, the LED	
46 LED light	light is always on, and it is off when the 4G module is faulty	
2.4G WIFI	Always on when the 2.4G WIFI function is turned on, flashing when	
LED WIFI	there is data communication, and off when the 2.4G WIFI is not	
LED	turned on or the 2.4G WIFI function fails	
Power supply	Always on when the power is on, off when the power fails or is not	
LED	connected to the power	
WAN LED	Connected to the Internet port is always on, and flashes when there	
	is data communication	

4.3 Hardware Platform Introduction

processor	MT7620N MIPS24KEc Architecture CPU, the main frequency i	
processor	up to 580MHZ	
2.4G WIFI Chipset	MT762 <mark>0N integrat</mark> ed 2.4G WIFI function IEEE 802.11n/g/b, the highest rate is 300Mbps	
2.4G WIFI Chipset		
5.8G WIFIChipset	NA	
RAM	DDR2 64MB	
Flash	Nor Flash 8MB	
	Not support NAND Flash	



4.4 Hardware watchdog function introduction

This hardware product is designed with a hardware watchdog function. After the hardware watchdog is powered on, it will automatically turn on and detect the heartbeat level output by the routing system that jumps once per second. If the routing system itself fails (such as crash), it will also Naturally, the heartbeat level can no longer be output. At this time, if the hardware watchdog has not detected the heartbeat level within 120 seconds, it will shut down itself for 15 seconds and then restart the entire system.

The routing system can independently control the power supply of the 4G module. When the routing system detects the 4G module dialing failure, it can use the corresponding GPIO to power off the faulty 4G module, and then power it up again to restart the 4G module.

Hard <mark>ware watch</mark> dog specific functions		
system <mark>error 4G module dial</mark> failure		
Power off and restart the system Only restart the 4G		
module		



5 4G Mobile communication function

This product has built-in TYPE A USB2.0 standard interface and LCC patch module interface (choose one of two), which can be used to expand 4G mobile communication functions. The built-in TYPE A USB2.0 interface supports USB 2.0 bus. Different types of 4G modules can be selected to support 4G frequency bands in different countries. For detailed 4G functions, please communicate with Zhibotong customer service and refer to the 4G module specification to determine.

5.1 4G Module technical parameters

The module of this product adopts the Quectel EC200T series LTE Cat 4 module specially designed for IoT and M2M applications. It supports a maximum downlink rate of 150 Mbps and a maximum uplink rate of 50 Mbps, and is compatible with Quectel multi-network standard LTE Standard EC2x (EC25, EC21 and EC20 R2.1) series modules and UMTS/HSPA+ UC200T series modules, to achieve seamless switching between 3G network and 4G network.

5.2 Other features

✓ (U)SIM Card detection (optional)

Supply voltage: 3.4~4.5V ,typical 3.6V

Operating temperature: -35~+75°C



6 WIFI Wireless parameter introduction

6.1 WIFI EVM index

	Mode Description	index parameter	unit
5)44: 1	802.11B 11Mbps	≤ -1 5 dB	dBm
	802.11G 54 Mbps	≤ -25 dB	dBm
EVM index	802.11N HT20@ MCS7	≤ -28 dB	dBm
	802.11N HT40@ MCS7	≤ -28 dB	dBm





6.2 WIFI 2.4G

Compatible with IEEE 802.11 b/g/n, supports IEEE 802.11 d/h/k; supports 20MHz, 40MHz, adopts 2T2R MIMO antenna technology, and the highest connection rate is up to 300Mbps. The following is the description of the power frequency, receiving sensitivity and transmitting power of 2.4G WIFI.

	illustrate	maximu m value	Rated value	minimu m	Unit
working frequency		2484		2412	MHz
	11 Mbps CCK	-86	-87.5	-89	dBm
Receive sensitivity	54 Mbps OFDM	-70	-72	-74	dBm
	BW=20MHz MCS 7	-68	-70	-72	dBm
	BW=40MHz MCS 7	-66	-68	-70	dBm
	11 Mbps CCK	20	19	18	dBm
transmit power	54 Mbps OFDM	17	16	15	dBm
	BW=20MHz MCS 7	17	16	15	dBm
	BW=40MHz MCS 7	16	15	14	dBm



7 Power supply and power consumption description

	Test Conditions	minimu	Rated	maximu	unit
	rest Conditions	m	value	m value	unit
Operating	T A = 25°C	G	12	15	V
Voltage	1 A - 25 C	6	12	15	V
Absolute working	T A = 25°C	E		16	V
voltage	1 A - 25 C	5		16	V
Working	VIN=12V,TA=25°C	0.2	0.5	1	٨
current	VIIN-12V, 1A=25 C	0.2	0.5	l	Α

Please use the standard power adapter of ZBT to supply power to this product. If the standard power supply of ZBT is not used, please supply power to this product in strict accordance with the above power specifications, otherwise the product will be damaged. If you use battery or vehicle power supply for power supply, be sure to take anti-static and anti-surge measures.

8 Structural parameters and accessories introduction

Weight (KG)	TBD	
Shell size	L*W*H= 170*	94.5 <mark>*27.86MM</mark>
color matching	Black	
	manual	1PCS
	certificate	1PCS
117	cable	1PCS

9 Product working environment requirements

Operating temperature	0°C to 40°C
storage temperature	-40℃to 70℃
Working humidity	10% to 90%RH non-condensing



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Storage humidity 5% to 90%RH non-condensing

10 Software configuration information

Default IP	192.168.1.1
Username	root/odmin
/Password	root/admin
0.40.0010	WIFI-XXXXXX (X is the last 6 digits of the MAC address), no
2.4G SSID	password by default
E 00 00ID	WIFI-5G-XXXXXX(X is the last 6 digits of the MAC address), no
5.8G SSID	password by default

The above is the general default configuration information of the product. The WIFI SSID of our company's OS firmware or OPENWRT firmware may be different, but the default IP and WEB login name and password of this product remain unchanged. For other detailed software functions, please refer to the product description.