



Model: ZBT-WE5930AC-A

Version: V1.0

# Product Specification

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# 1 Overview

## 1.1 Preview

This document describes ZBT-WE5930AC-A's electrical characteristics, RF performance, size, application environment and so on. From this document, end users or developers can quickly understand the hardware functions of this router.

ZBT-WE5930AC-A is a 4G routing product for home used. It accesses the Internet through 4G mobile communication dial-up or 100Mbps WAN port dial-up, and then shares the wireless WiFi and internet network to user or device.

And also, it can be supported wired Ethernet. Customers can be connected WAN port by wired Ethernet cable to share wireless WiFi and wired network to user or device.

## 1.2 Guideline

Related standards:

- USB2.0 bus standard
- SIM/USIM slot standard
- IEEE802.11n/g/b/ac
- IEEE802.3/802.3u
- 4G mobile communication standard depend on the 4G mobile communication module which we selected

## 2. Product Image





### **3 .Selling point**

- Adopt MTK7628AN+MTK7612EN chipset,MIPS24KEc architecture CPU, main frequency is up to 580MHZ
- Support 2.4G and 5.8G, rated up to 1200Mbps
- Support 802.11 N/G/B/AC protocols.
- 64MB DDR2, match with 8MB Nor Flash
- 1\*WAN and 3\*LAN 100Mbps adaptive network port, support automatic flip (Auto MDI/MDIX)
- Support "one-click flash mode", Long press the reset button to boot and then

will enter the rescue flash mode

- Built-internal 4G module to support 3G&4G function,
- One standard SIM card slot, support SIM/USIM card
- External high gain omnidirectional antenna with 360° wireless signal
- This product supports hardware watchdog function, when the routing system fails, it will restart the device automatically.

## 4. Hardware function

### 4.1 Hardware interface introduction

|                     |   |
|---------------------|---|
| 4G Module           | <b>Equipped with cat 6 module.</b><br>Frequency band:<br>FDD : B1/3/5/7/8/20/28<br>TDD: B38/40/41<br>WCDMA:B1/3/5/8 |
| Network port        | 1*WAN,100Mbps support automatic flip ( Auto MDI/MDIX )<br>IEEE 802.3/802.3u,802.11n/g/b                             |
|                     | 3*LAN,100Mbps support automatic flip ( Auto MDI/MDIX )<br>IEEE 802.3/802.3u,802.11n/g/b                             |
| SIM card slot       | 1*SIM slot, support SIM/USIM,1*TF card slot.  |
| Power               | DC5.0*2.1MM port  |
| Reset button        | 1* reset button   |
| Antenna             | 2*2.4G & 5dbi external Omnidirectional antennas   |
|                     | 2*4G 5dbi external Omnidirectional antennas   |
|                     | 2* 5.8G external Omnidirectional antennas   |
| 4G module interface | It is directly SMT LCC+LGA 4G module to support 3G&4G function.   |

## 4.2 Indicator light introduction

|               |  |
|---------------|--|
| WAN LED       | Connect to the Internet port, the indicator will be always light, and it will flash when there is data communication, the network port with LED  |
| LAN1 LED      | Connect to the Internet port, the indicator will be always light, and it will flash when there is data communication, the network port with LED  |
| LAN2 LED      | Connect to the Internet port, the indicator will be always light, and it will flash when there is data communication, the network port with LED  |
| LAN3 LED      | Connect to the Internet port, the indicator will be always light, and it will flash when there is data communication, the network port with LED  |
| 2.4G WIFI LED | Turn on 2.4G WIFI function,the indicator will be always light, and it will flashes when there is data communication, Turn off 2.4G WIFI or 2.4G WIFI function fails, the indicator will be off. The first light on the left side of the upper row                            |
| 4G LED        | Fast flashing (on and off once in 600ms):No SIM card or network registration failed<br>Slow flashing (once at 3000ms and off once at 75ms):Standby mode<br>Fast flashing (on and off once in 75ms):Dialing is normal, data link is established<br>Constant light:Sleep state |
| Power LED     | It is always on when the power is connecting, and it will be off when the power supply is faulty or is not connected to the power.,The first light on the left side of the below row   |

## 4.3 Hardware platform introduction

|                |   |
|----------------|---|
| Processor      | MT7628AN, integrates 2.4G WIFI function |
| 5.4G WIFI chip | MTK7612EN                               |
| RAM            | DDR2 64MB                               |
| FASH           | Nor Flash 8MB                           |
|                | Do not support NAND Flash               |



## 4.4 Hardware watchdog function introduction

This hardware product has designed the hardware watchdog function. The hardware watchdog will automatically turn on after power on. And detect the heartbeat level output by the routing system once every 1 second. If the routing system itself fails (such as a crash), it will not be able to output the heartbeat level. At this time, if the hardware watchdog has not detected a heartbeat within 120 seconds Level, it will automatically shut down, restart the entire system in 15 seconds.

The routing system can independently control the power supply of each 4G module. When the routing system detects any module dialing failure, it will automatically power off the failed 4G module, and then power on again to restart the 4G module.

## 5 4G mobile communication function

This product has been SMT one 4G module to support 4G mobile communication functions. Adapter USB2.0 bus. Changing different 4G modules can support the 4G frequency bands of different countries. For more detailed 4G functions, please contact Zhibotong customer service, and refer to the specification of 4G module .

## 6 Description of power supply and power consumption

|                 | Test Conditions | Min Value | Rated value | Max Value | Unit |
|-----------------|-----------------|-----------|-------------|-----------|------|
| Working Voltage | T A = 25° C     | 6         | 12          | 14        | V    |





|                          |                      |     |     |    |   |
|--------------------------|----------------------|-----|-----|----|---|
| Absolute working voltage | T A = 25° C          | 5.5 |     | 16 | V |
| Working current          | VIN=12V, T A = 25° C | 0.4 | 0.6 | 1  | A |

Please use the ZBT standard power adapter to supply power for this product. If you do not use the ZBT standard power adapter, please strictly follow the above power supply specifications to supply power for this product, otherwise it will damage the product. If you use batteries or vehicle power supply, please be sure to take anti-static and anti-surge measures.

## 8 Introduction of structural parameters and accessories

|                 |                             |                               |
|-----------------|-----------------------------|-------------------------------|
| Weight (KG)     | 1.02KG                      |                               |
| Size            | L*W*H=168.61*129.02*17.94mm |                               |
| Color           | Gray                        |                               |
| Including parts | Power adapter               | 12V/1A 1PCS                   |
|                 | Instructions                | 1PCS                          |
|                 | Certificate of conformity   | 1PCS                          |
|                 | Net cable                   | 1PCS                          |
|                 | Antenna                     | 2.4G external antennas 2PCS   |
|                 |                             | 4G external 5DB antennas 2PCS |

## 9 Product working environment requirements

|                     |                             |
|---------------------|-----------------------------|
| Working temperature | -0℃ to 40℃                  |
| Storage temperature | -40℃ to 70℃                 |
| Working humidity    | 10% to 90%RH Non-condensing |
| Storage temperature | 5% to 90%RH Non-condensing  |



## 10 Software configuration information

|                    |   |
|--------------------|---|
| Default IP         | 192.168.1.1   |
| Username/ Password | root/admin  |
| 2.4G SSID          | WIFI-XXXXXX (X is the last 6 digits of the MAC address), No password by default |

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