

Z2101AX-M2-D Gigabit Ports WIFI 6 5G ROUTER



1 Overview

1.1 Brief overview

This document describes the electrical characteristics, RF performance, dimensions and application environment of Z2101AX. Under the introduction of this document, end users or developers can quickly understand the hardware functions of Z2101AX-M2-D. It is a WiFi 6 home router, which can access the Internet through WAN port, and then share the Internet through wireless WiFi 6 and 1000Mbps wired LAN.

1.2 Reference standard

Relevant standards and specifications:



- USB3.0/USB2.0 Bus Standard
- IEEE802.11n/g/b/a/ac/ax
- IEEE802.3/802.3u/802.ab

3 Main features of the product

- 1).Support IEEE 802.11ax/ac/n/11b/g standard.
- 2).1*WAN+3*LAN 10/100/1000Mbps ports.
- 3).1* USB 3.0 data interface.
- 4).High speed 1800Mbps,dualband and gigabit ports.
- 5).M.2 interface,LCC/PCIE interface compatible design.
- 6).Support MESH automatic networking.
- 7).Standard SIM card slot.Support SIM/USIM card.

4 Hardware

4.1 Interface

Ports	1*1000M WAN Port (Auto MDI/MDIX) IEEE 802.3/802.3u/802.ab
	3* 1000M LAN Ports(Auto MDI/MDIX) IEEE 802.3/802.3u/802.ab
USB	1* USB3.0
DC port	DC5.0*2.1MM interface
Button	1* Reset button
antennas	2* external omnidirectional 5dBi 2.4G antennas, 2* external omnidirectional 5dBi 5.8G antennas
	4* internal omnidirectional 5dBi 5G antennas

4.2 Function of indicator light

SYS LED	<p>1. the red light is on during the start-up process, and the start-up is completed, and the red light is off and the green light is on</p> <p>2. press mesh to enter mesh pairing state. The green light flashes once a second, and other lights are not on</p> <p>3. the main equipment network is normal, and the green light and blue light are on simultaneously (blue)</p> <p>The connection from the device mesh is successful, the distance is far from the green light, the red light is on (Orange), and the distance is suitable for the green light and the blue light is on simultaneously (blue)</p>
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4.3 Introduction of hardware platform

Processor	MT7621A MIPS Dual-Core CPU, 880MHZ Main Frequency
WIFI chipset	MT7905D+MT7975D IEEE 802.11n/g/b/a/ac/ax,High speed up to 1800Mbps
Ram	DDR3 256MB
Flash	Nor Flash 16MB
	Don't support NAND Flash

5 Description of power supply and power consumption

	Test conditions	minimum value	Rated Value	Maximum Value
working voltage	T A = 25°C	6V	12V	14V
Absolute working voltage	T A = 25°C	5.5V		16V
Working current	VIN=12V, T A = 25°C	0.6A	0.8A	1A



6 WIFI Introduction of wireless parameters

6.4 WIFI 2.4G

It is compatible with IEEE 802.11 B / g / N / ax and supports IEEE 802.11 D / h / K. Support 20MHz, 40MHz, adopt 2T2R MU-MIMO antenna technology, the maximum connection rate is up to 573.5mbps. The following is the description of power frequency, receiving sensitivity and transmitting power of 2.4G WiFi.

	illustration	Maximum Value	Rated Value	Minimum Value
Working frequency		2484Mhz		2412Mhz
Receiving sensitivity	11 Mbps CCK	-86dBm	-87.5dBm	-89dBm
	54 Mbps OFDM	-70dBm	-71dBm	-72dBm
	HE20, MCS 11	-67dBm	-68dBm	-69dBm
	HE40, MCS 11	-65dBm	-66dBm	-67dBm
Transmitting power	11 Mbps CCK	19dBm	18dBm	17dBm
	54 Mbps OFDM	18dBm	17dBm	16dBm
	HE20, MCS 11	17dBm	16dBm	15dBm
	HE40, MCS 11	16dBm	15dBm	14dBm

6.2 WIFI 5.8G

Compatible with IEEE 802.11 a / AC / ax, supporting IEEE 802.11 D / E / h / I / K / R / W; Support 20MHz, 40MHz, 80MHz, adopt 2T2R MU-MIMO antenna technology, the maximum connection rate is up to 1201mbps. The following is a description of power



frequency, receiving sensitivity and transmitting power of 5.8G WiFi.

	illustration	Maximun Value	Rated Value	minimum value
working frequency		5825MHz		5180Mhz
Receiving sensitivity	54 Mbps OFDM	-70dBm	-71dBm	-72dBm
	HE20, MCS 11	-67dBm	-68dBm	-69dBm
	HE40, MCS 11	-66dBm	-67dBm	-68dBm
	HE80, MCS 11	-55dBm	-56dBm	-57dBm
Transmitting power	54 Mbps OFDM	18dBm	17dBm	16dBm
	HE20, MCS 11	17dBm	16dBm	15dBm
	HE40, MCS 11	16dBm	15dBm	14dBm
	HE80, MCS 11	15dBm	14dBm	13dBm

8 Introduction of structural parameters and accessories

weight (KG)	TBD	
Size	L*W*H=171*220*47.5 MM	
Color	Black	
Accessories	Power adapter	12V/2A 1PCS
	User Manual	1PCS
	certificate	1PCS
	Ethernet cable	Super Cat5 cable 1PCS



9 Product working environment requirements

Working temperature	0℃ - 40℃
Store temperature	-40℃ - 70℃
Working humidity	10% - 90%RH Non condensing
Store humidity	5% - 90%RH Non condensing

10 Software configuration information

Default IP	192.168.1.1
Username/password	root/admin
2.4G SSID	WIFI6-XXXXXX (X is the last 6 bits of MAC address), default no password
5.8G SSID	WIFI6-5G-XXXXXX (X is the last 6 bits of MAC address), default no password