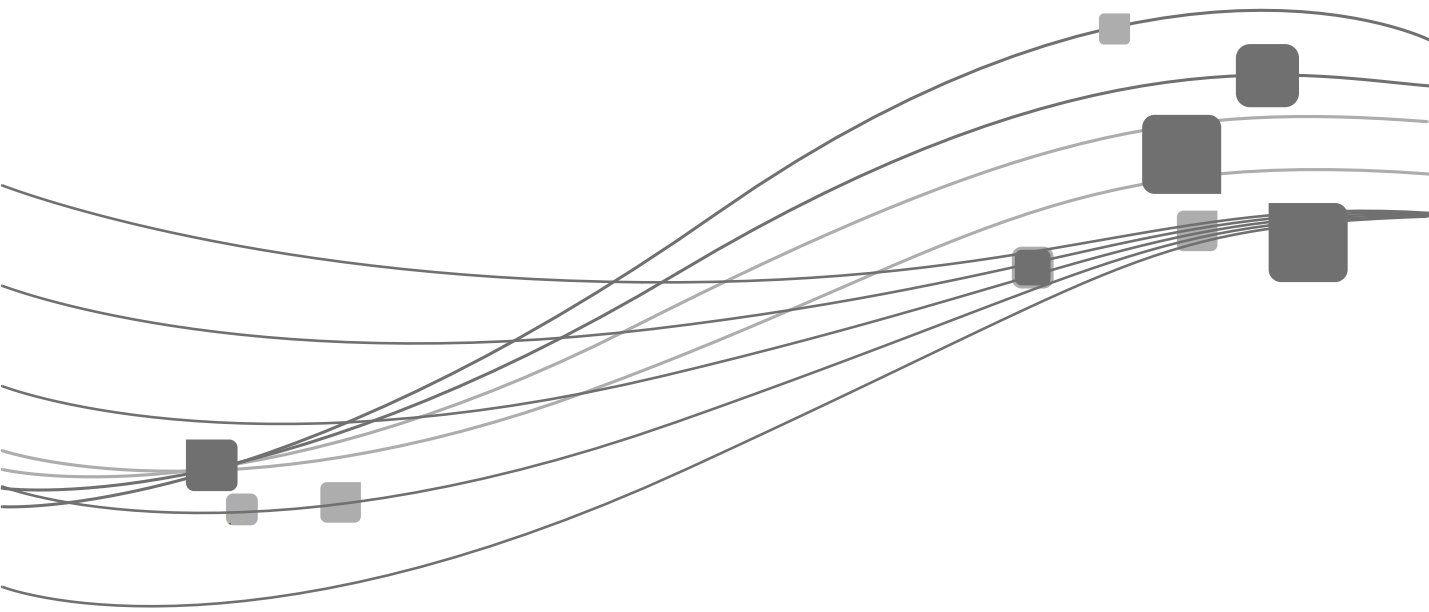
ZXHN H268N

Home Gateway

User Manual



ZTE CORPORATION

1 Safety Guidance

1.1 Safety Check

Before installing the VDSL2 equipment, check all the below listed items:

1. Electric safety

   Ensure no inflammable, conductive or moist objects and no ageing-cables around the equipment. Place all electrical appliances safely.

2. Equipment position

   - ▶Install the equipment in a ventilated environment avoid of any electric devices nearby.
   - ▶Place the equipment on a stable and flat surface.
   - ▶The equipment must be protected from sunshine. It must be kept away from electro-magnet interference.
   - ▶The equipment must be protected from heat and water sources.
   - ▶Ensure the power supply is available. The fluctuation range of input voltage should be in the range of ±10%. Do not share the power socket with other electrical devices.

1.2 Safety Cautions

Please pay attention to the following cautions:

- ■ Read the user manual carefully before using the equipment.
- ■ Note all Cautions in the user manual and product guide.
- ■ Do not use any accessory or components that are not belonging to the equipment.
- ■ Use the power adapter, which is provided in the package.
- ■ Connect the phone with the VDSL2 line directly, and lead the line out from the phone interface of the splitter.
- ■ Do not place any object on the equipment.
- ■ The equipment must be kept dry and clean. Ensure the equipment environment has ventilation and rainproof capability.
- ■ To protect the equipment against lightning and thunderstorm, please remove the power plug and all connection cables.
- ■ Use a soft and dry cloth to clean the equipment. Ensure the equipment is power Off before cleaning.
- ■ Power Off the idle equipment.

- Keep the ventilation-hole clean and unblocked. Otherwise, it may cause short circuit, fire or damage the equipment. Do not spray liquid on the equipment surface.
- Do not open the equipment especially in power On state.
- Confirm the power is Off before plugging/unplugging the power.
- Keep all components and accessories of the equipment away from children.

Note:

Please read the above safety guidance carefully before equipment use. Users should assume responsibilities for any accidents due to incompliance with the above instructions.

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2 Overview

The ZXHN H268N is a VDSL2 access device, which supports multiple line transmission modes. In user side, it provides four 10/100Base-T Ethernet interfaces, and the wireless user access in compliance with the IEEE802.11b/g/n standard. It can provide the transmission of broadband data service, which is suitable for using in a wide range of both residential (in-home) and commercial (offices, apartments, hotels, warehouses) network applications.

2.1 Features

The ZXHN H268N is a VDSL2 MODEM. It supports the following features:

- ITU-T G.993.2 VDSL2 standard (up to profile 30a) and ITU-T G.992.5 ADSL2+ standard.
- It supports LAN protocol.
- It supports WLAN with high-speed data transfer rates up to 300 Mbps, compatible with IEEE 802.11b/g/n, 2.4GHz compliant equipment.
- It supports IEEE802.3 and IEEE802.3u.
- It supports speed auto-negotiation.
- It supports Half duplex/Full duplex.
- It supports user-friendly GUI for web configuration.
- It supports L2TP/PPTP/IPSec VPN pass-through
- It supports parental control function to restrict children usage.
- It supports self-learning bridge (IEEE 802.1D Transparent Bridging).
- It supports virtual server, IP filter, and demilitarized military zone (DMZ) host.

2.2 Product Specifications

Technical Specifications	
Dimension	**210 mm (L) × 140 mm (W) × 32 mm (H)**
Certification	**CE Certification and Wi-Fi Certification**
Power adapter	**Model NO: RD1201500-C55-1YG, RD1201500-C55-1OG**
	Input: AC 100 V – 240 V, 50 Hz/60 Hz **Output: DC 12 V, 1.5 A**
Environment Requirements	
Operation temperature	**0 °C – 40 °C (32 °F – 104 °F)**
Operation humidity	**5% – 95% (non-condensing)**
Wi-Fi Radio Specifications	
Radio Frequencies	**Maximum Output Power**
Wi-Fi 2.4 GHz band: 2400 – 2483.5 MHz	**EIRP < 20 dBm**
Software and Hardware Versions	
Software version	**V1.1.x (x can be 0 – 9) , 0y (y can be 01 – 99)**

x and y represent different customization, and do not affect the product firmware and RF output power.

2.3 Package Check

After unpacking the ZXHN H268N product, check that the following items are complete.

Name	Quantity
ZXHN H268N	**1**
Splitter	**1**
Power Adapter	**1**
RJ-45 Ethernet cable	**1**
RJ-11 telephone cable	**2**
User Manual	**1**

Note:

If any item is found to be wrong, missing, or damaged, contact your service provider. Keep the package and all the items in good condition if you want to replace the product.

Note:

Please use a power adapter that matches the ZXHN H268N package.

2.4 System Requirement

Before installing the ZXHN H268N, please check the following items.

1. VDSL Services Subscription

   If you have subscribed for the VDSL service, your VDSL operator must provide at least one valid IP address for you (static allocation or dialup dynamic allocation).

2. Computer configuration

   Please make sure that the system has been equipped with the 10M/100M Ethernet adapter and supports the TCP/IP protocol.

   Because VDSL can be used for broadband access and involves a wide range of multimedia services, you are recommended use a computer with such configurations as: above Pentium III, 64M memory, 10G hard disk, graphic accelerating adapter with above 2M display memory, audio adapter and sound box.

3. Operating system

   Operating systems can be Windows XP or later. For system configuration in the WEB interface, the browser of Internet Explorer V 8.0 or later.

3 Installation Preparation

3.1 Hardware Description

Front panel

Figure 3-1 shows the indicators on the front panel of the ZXHN H268N

Figure 3-1 The Front Panel

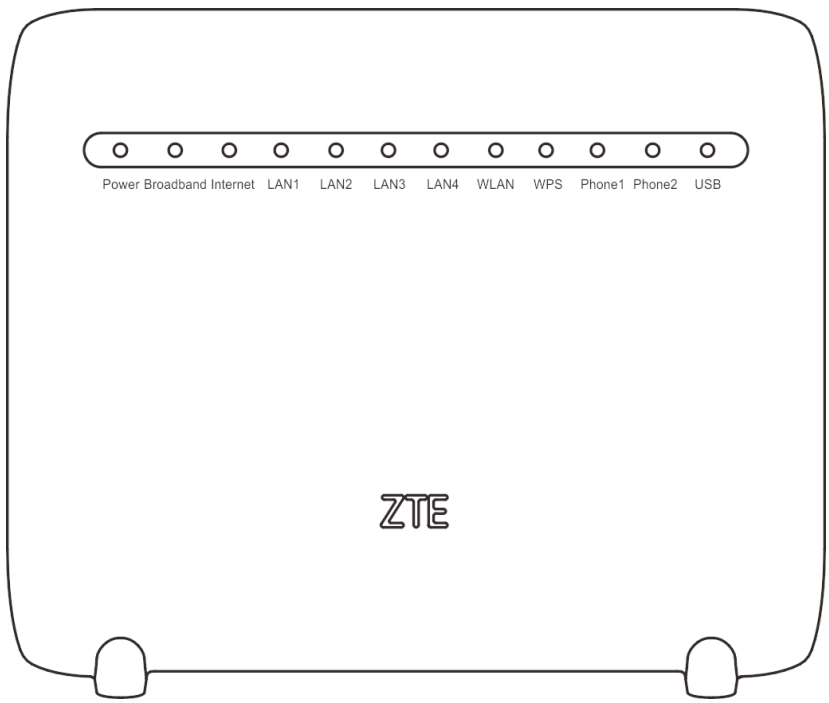


Table 3-1 describes the indicators on the front panel of the ZXHN H268N unit.

Table 3-1 Descriptions of Indicators

LED Indicator	Status	Description
Power	Solid green	ZXHN H268N is powered on.
	Solid red	ZXHN H268N self-check failed.
	Off	ZXHN H268N is powered off.
Boardband	Solid green	DSL synchronization is normal and the link connection is normal.
	Fast flashing green	Now in the handshaking process to establish the link connection.
	Slowly flashing green	Physical link exists, however carrier wave has not been detected.
	Off	Link has not been established.
Internet	Solid green	The connection is established and a correct IP address is obtained.
	Solid red	Internet connection failed.
	Flashing green	Currently in data transmission.
LAN1–LAN4	Solid green	The network is in connection. There is no data flow.
	Flashing green	The network is in connection. There is data flow.
	Off	There is Ethernet fault or the network is disconnected.

LED Indicator	Status	Description
WLAN	Solid green	WLAN module is enabled. There is no data flow.
	Flashing green	Currently in data transmission. Flashing frequency indicates WiFi network traffic.
	Off	The WLAN RF switch is off.
WPS	Solid green	WPS access is successful. This solid-on light will be automatically off after 5 minutes.
	Fast flashing green	The WPS accessing of the WLAN terminal is Faulty.
	Slowly flashing green	WLAN terminal is in WPS accessing process.
	Off	WPS button is not used./The indication of successful connection is over. There is a fault.
Phone1 – Phone2	Solid green	ZXHN H268N has registered on the VoIP network.
	Flashing green	There is data flow.
	Off	The device is not powered on. The device fails to register to the soft switch.
USB	Solid green	USB device is connected and available.
	Flashing green	Date is transmitting through USB port.
	Off	USB port is disabled or USB device is not connected.

Rear panel

Figure 3-2 shows the buttons on the side panel of the ZXHN H268N.

Figure 3-2 The Side Panel

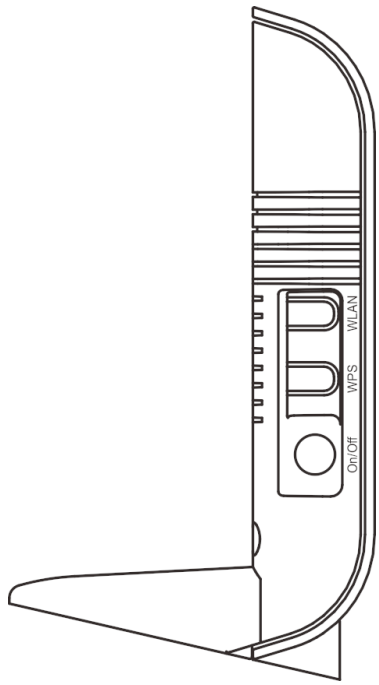


Table 3-2 describes the buttons on the side panel of the ZXHN H268N.

Table 3-2 The Side Panel

Button	**Function**
On/Off	Power switch, to power on or power off the device
WPS	WLAN Protected Setup
WLAN	WLAN switch, to turn on or turn off the WLAN

Figure 3-3 shows the interfaces and buttons on the back panel of the ZXHN H268N.

Figure 3-3 The Back Panel

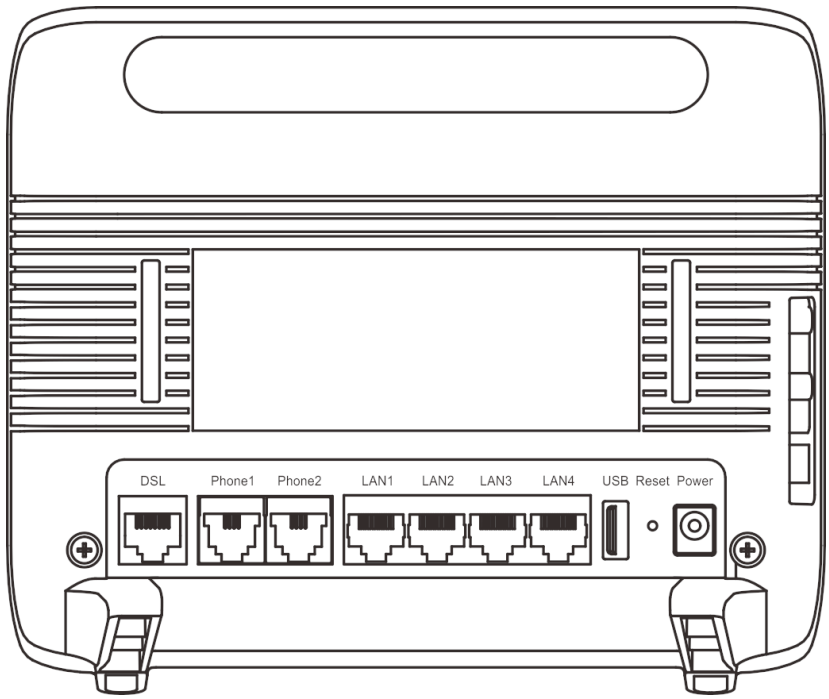


Table 3-3 describes the interfaces and buttons on the back panel of the ZXHN H268N.

Table 3-3 The Back Panel

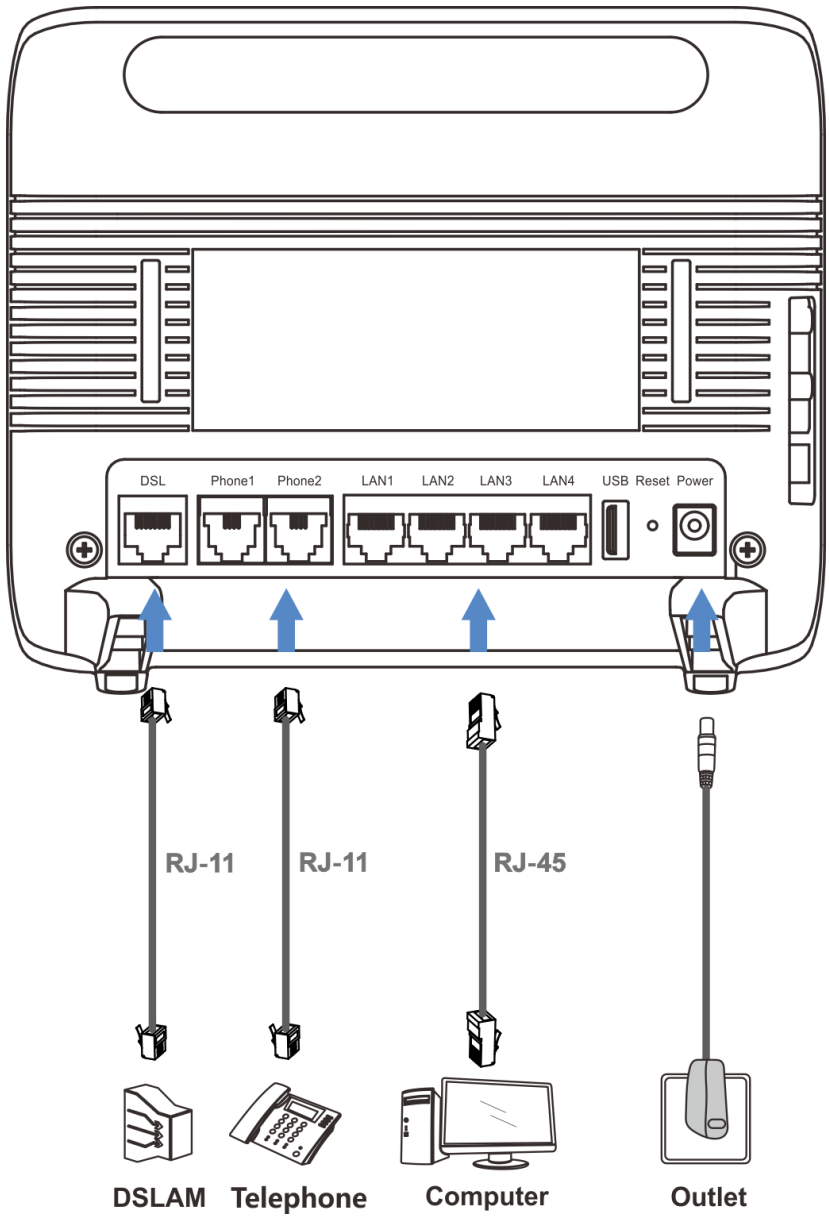
Interface/Button	**Function**
DSL	Use the telephone line to connect the modem with the VDSL2 cable or splitter.
Phone1 – Phone2	RJ-11 port. It is used to connected to the phone through the telephone line.
LAN1– LAN4	It is used to connect the modem to computer or other network devices.
USB	Standard USB 3.0 interface. Connect a USB storage device for file sharing, fast backup and data restoration. Also connect a 3G Dongle device for accessing the Internet.

Interface/Button	Function
Reset	During power on period, hold on this button for more than 5 seconds to reset the current settings to the factory default setting, and then the system automatically restarts.
Power	Power supply port. It is connected to the power adapter.

3.2 Hardware Connection

Figure 3-4 shows the devices that are connected to interfaces of the ZXHN H268N

Figure 3-4 Cable Connection



After the devices are connected to the ZXHN H268N device, press the power button. When the corresponding indicators on the front panel are On, you can enjoy various services provided by the service provider.

For a MODEM with the WiFi function, for example, a ZXHN H268N, its wireless network scope is affected by the number of walls, wall thickness, wall locations, wall materials, ceilings, and other objects. Meanwhile, the material types and background RF noise also affect the wireless network.

To maximize the wireless network scope, comply with the following methods:

1. Reduce the number of walls and ceilings between the ZXHN H268N and other network devices.

   Each wall or ceiling reduces the wireless network scope by 1 to 30 meters. Properly place the ZXHN H268N to reduce the number of walls and ceilings.
2. Comply with the straight line principle between network devices.

   At 45 degree angle, a wall with the thickness being half a meter is as thick as one meter. To receive more signals, devices need to be placed to enable the signals to be transmitted directly through walls or ceilings.
3. The wireless network scope is also affected by building materials.

   The scope is affected by solid metal doors or aluminum studs. Try to place accessing points, wireless routers, and computers, and then signals can be transmitted through dry walls or open channels, for example, FRP products, metal products, insulated walls, filing cabinet, bricks, and concrete weaken the wireless signals.
4. Make sure that the ZXHN H268N with the WiFi function keeps far away from the following devices:

   Keep at least two meters far away from electrical devices or components that generate RF noise. Signals are greatly weakened or even completely disappeared by a 2.4GHz wireless mobile or X-10, for example, a microwave oven, home security system, blue tooth device, or icebox.

Note:

Even through the 2.4GHz wireless mobile is not used, the signals generated by the fixed phone also interfere with the wireless network.

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4 Troubleshooting

- **All indicators are Off when the ZXHN H268N equipment is powered On.**

  First make sure that you have inserted the power adapter of the ZXHN H268N into a working power socket and that the ZXHN H268N has been powered On (the switch button is pressed down). If the indicators are still Off after confirmation of the above items, may be the hardware is damaged. You may contact local operator for maintenance. Never dismantle the equipment by yourself.

■ Sometimes, the VDSL2 users cannot access to the Internet normally

First check whether the ZXHN H268N is in the normal state (Check the indicators according to this user manual). If yes, the computer or application network may be faulty. This is unrelated with VDSL2. If the ZXHN H268N is abnormal, check the status of indicators one by one to remove the fault.

It is suggested to check the following items before seeking help from operator:

i. The VDSL2 telephone cable connectors are proper.

ii. The VDSL2 is away from the power cable and large-power electronic devices.

iii. No telephone extensions and fax machines are connected between the VDSL2 incoming line and splitter.

iv. The splitter has been installed correctly.

v. The ZXHN H268N has good heat dissipation ratio.

What are reasons for VDSL2 synchronization failure (also referred as link down or link establishment failure)?

If the VDSL2 suddenly fails to be synchronized (link down) during application, usually the Link indicator on the ZXHN H268N will not be ON. It is suggested to check the following steps one by one:

i. First check the quality of incoming cables and incoming cable connectors.

ii. Install the ZXHN H268N correctly based on the user guidance. Minimize the number of taps.

iii. Check whether the telephone cables and VDSL2 are in good connection or whether the telephone cables are normal.

iv. Try to disconnect the splitter and directly connect the ZXHN H268N to the incoming user cable end. Ensure the problem is not due to improper installation or incoming user line quality. If the VDSL2 can be synchronized again, it means that installation of the incoming user side is improper. Please reinstall it according to the user guide.

v. If the VDSL2 still fails to be synchronized when the ZXHN H268N is connected to the incoming user cable end, contact the operators to check whether it is due to external line failure or ZXHN H268N failure.

vi. If the splitter problem is determined, call the operator for maintenance or replacement.

vii. If the problem is due to the end office equipment failure, call the operator to confirm it.

viii. Too long connection cable between the splitter and ZXHN H268N may cause poor anti-interference performance and synchronization difficulty. Therefore, the connection cable should not be too long.

ZTE

Tomorrow never waits

CERTIFICATION

CHECKER

DATE

ZTE

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