

ZXHN H268A

Home Gateway

User Manual

Version: V1.0

ZTE CORPORATION
ZTE Plaza, Hi-Tech Park, Nanshan District, Shenzhen, Guangdong, P.R.China
Postcode: 518057
Tel: (86) 755 26770801
Fax: +86-755-26770801
URL: <http://support.zte.com.cn>
E-mail: 800@zte.com.cn

LEGAL INFORMATION

Copyright © 2016 ZTE CORPORATION.

The contents of this document are protected by copyright laws and international treaties. Any reproduction or distribution of this document or any portion of this document, in any form by any means, without the prior written consent of ZTE CORPORATION is prohibited. Additionally, the contents of this document are protected by contractual confidentiality obligations.

All company, brand and product names are trade or service marks, or registered trade or service marks, of ZTE CORPORATION or of their respective owners.

This document is provided “as is”, and all express, implied, or statutory warranties, representations or conditions are disclaimed, including without limitation any implied warranty of merchantability, fitness for a particular purpose, title or non-infringement. ZTE CORPORATION and its licensors shall not be liable for damages resulting from the use of or reliance on the information contained herein.

ZTE CORPORATION or its licensors may have current or pending intellectual property rights or applications covering the subject matter of this document. Except as expressly provided in any written license between ZTE CORPORATION and its licensee, the user of this document shall not acquire any license to the subject matter herein.

ZTE CORPORATION reserves the right to upgrade or make technical change to this product without further notice.

Users may visit the ZTE technical support website <http://support.zte.com.cn> to inquire for related information.

The ultimate right to interpret this product resides in ZTE CORPORATION.

Serial Number: SJ-20150916162339-001

Publishing Date: 2016-04-08(R1.0)

Chapter 1

Safety Guidance

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 $\pm 10\%$. Do not share the power socket with other electrical devices.

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.

➤ **Notes:**

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

Chapter 2

Overview

ZXHN H268A is an advanced home gateway. It provides high speed internet, IPTV and voice over IP services through the VDSL2/ADSL2+ or GE uplink.

Features

It supports the following features:

- It provides 4 Gigabit Ethernet LAN interfaces.
- It supports Dual-Band concurrent Wi-Fi up to 300 Mbps (compatible with IEEE 802.11n, 2.4 GHz compliant equipment) and 1.3 Gbps (compatible with IEEE 802.11ac, 5 GHz compliant equipment).
- It provides multiple lines via the FXS phone ports.
- It supports USB LTE/3G dongle backup in case of primary Internet connection failure.
- It provides media service in home network with a DLNA certified DMS.
- It supports IPv4 / IPv6 dual stack mechanism for IPv6 network migration.
- It supports TR-069, including TR-098 data model and TR-104 voice provisioning.

Product Specifications

Item	Specification
Dimensions	221 mm×180 mm×33 mm (Length × Width × Height)
Operation temperature	0 °C~40 °C (32 °F~104 °F)
Storage temperature	-40 °C~70 °C (-40 °F~158 °F)
Operation humidity/ Storage humidity	5%~95% (non-condensing)
Power adapter	Input: AC 100 V~240 V, 50 Hz/60 Hz
	Output: DC 12 V, 2 A

Package Check

After unpacking the ZXHN H268A product, check that the following items are complete.

Name	Quantity
------	----------

Name	Quantity
ZXHN H268A	1
Splitter	1
Power Adapter	1
RJ-45 Ethernet cable	1
RJ-11 telephone cable	2
User Manual	1

ⓘ **Notes:**

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.

ⓘ **Notes:** Please use a power adapter that matches the ZXHN H268A package.

System Requirement

Before installing the ZXHN H268A, 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/1000M 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.

Chapter 3

Installation Preparation

Hardware Description

Front panel

Figure 1 shows the indicators on the front panel of the ZXHN H268A

Figure 1 The Front Panel

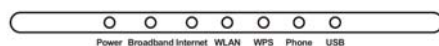


Table 1 describes the indicators on the front panel of the ZXHN H268A unit.

Table 1 Descriptions of Indicators

LED Indicator	Status	Description
Power	Solid Green	ZXHN H268A is powered on.
	Solid Red	ZXHN H268A self-check failed.
	Off	ZXHN H268A is powered off.
Broadband (The DSL link is established.)	Solid Green	DSL synchronization is normal and the link connection is normal.
	Fast Flashing Green	ZXHN H268A is in the handshaking process to establish the link connection.
	Slowly Flashing Green	Physical link exists, however carrier wave has not been detected.
	Off	ZXHN H268A is not powered on or link has not been established.
Broadband (The WAN link is established.)	Solid Green	The link is activated.
	Flashing Green	Data is being transmitted.
	Off	The equipment is not powered on or the WAN port is disabled.
Internet	Solid Green	The connection is established and a correct IP address is obtained.
	Solid Red	Internet connection failed.
	Flashing Green	Data is being transmitted.
WLAN	Solid Green	The WLAN RF switch is on.
	Flashing Green	Data is being transmitted.
	Off	ZXHN H268A is not powered on or the WLAN

LED Indicator	Status	Description
		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	No WPS access or the WPS access of the terminal exceeds 5 minutes
Phone	Solid Green	ZXHN H268A has registered on the VoIP network.
	Flashing Green	Indicates when the associated telephone is off-hook.
	Off	ZXHN H268A is not powered on or ZXHN H268A has not been registered on the VoIP network.
USB	Solid Green	The USB interface is connected and operating in host mode, but no data is being transmitted.
	Flashing Green	Data is being transmitted on the interface.
	Off	ZXHN H268A is not powered on or the USB interface is not connected.

Rear panel

Figure 2 shows the buttons on the side panel of the ZXHN H268A.

Figure 2 The Side Panel

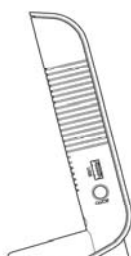


Table 2 describes the buttons on the side panel of the ZXHN H268A.

Table 2 The Side Panel

Button	Function
USB	USB2.0 host port in right panel: Used for the USB storage device, printer or 3G/LTE Dongle connection.
On/Off	Power switch. Power on or power off the device.

Figure 3 shows the interfaces and buttons on the back panel of the ZXHN H268A.

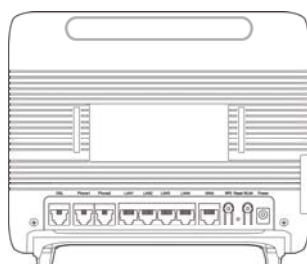
Figure 3 The Back Panel

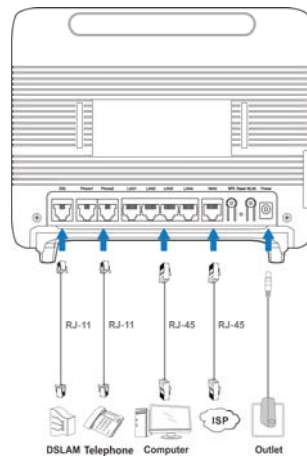
Table 3 describes the interfaces and buttons on the back panel of the ZXHN H268A.

Table 3 The Back Panel

Interface/Button	Function
DSL	RJ-11 port: It is used to connect to the VDSL2, or ADSL2+ uplink access network.
Phone1~Phone2	RJ-11 port. It is used to connect to the phone through the telephone line.
LAN1~LAN4	RJ-45 port. It is used to connect the modem to computer, STBs or other network devices.
WAN	RJ-45 port. It is used to connect to the network provided by the ISP.
WPS	WLAN Protected Setup
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.
WLAN	WLAN switch. Turn on or turn off the WLAN.
Power	Power supply port. It is connected to the power adapter.

Hardware Connection

Figure 4 shows the devices that are connected to interfaces of the ZXHN H268A

Figure 4 Cable Connection

After the devices are connected to the ZXHN H268A 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.

☞ **Notes:**

The 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:

1.1. Reduce the number of walls and ceilings between the ZXHN H268A and other network devices.

Each wall or ceiling reduces the wireless network scope by 1 to 30 meters. Properly place the ZXHN H268A to reduce the number of walls and ceilings.

2.2. 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.

3.3. 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.

4.4. Make sure that the ZXHN H268A 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 2.4 GHz wireless mobile or X-10, for example, a microwave oven, home security system, blue tooth device, or icebox.



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

Chapter 4

Troubleshooting

- **All indicators are Off when the ZXHN H268A equipment is powered On.**

First make sure that you have inserted the power adapter of the ZXHN H268A into a working power socket and that the ZXHN H268A 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 H268A 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 H268A 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 H268A 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 H268A 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 H268A 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 H268A 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 H268A is connected to the incoming user cable end, contact the operators to check whether it is due to external line failure or ZXHN H268A 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 H268A may cause poor anti-interference performance and synchronization difficulty. Therefore, the connection cable should not be too long.

Chapter 5

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and consider removing the no-collocation statement.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: \

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Caution!:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC - PART 68

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the bottom of this equipment is a label that contains, among other information, a product identifier in the format US: ZTEDL01BHNH268A. If requested, this number must be provided to the telephone company.

This equipment uses the following USOC jacks: RJ-11, RJ-45, USB Jack, Power Jack.

REN (RINGER EQUIVALENT NUMBERS) STATEMENT

Notice: The Ringer Equivalence Number (REN:0.11) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

ATTACHMENT LIMITATIONS STATEMENT

Notice: This equipment meets telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). This is confirmed by marking the equipment with the Industry Canada certification number. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together.

This precaution may be particularly important in rural areas. Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Chapter 6

Canada Statement

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference;
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés
Confidential and Proprietary Information of ZTE CORPORATION 14

uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

This product meets the applicable Industry Canada technical specifications.

Le présent matériel est conforme aux spécifications techniques applicables d'Industrie Canada.

The Ringer Equivalence Number (REN:0.11) is an indication of the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the RENs of all the devices not exceed five.

L'indice d'équivalence de la sonnerie (IES: 0.11) sert à indiquer le nombre maximal de terminaux qui peuvent être raccordés à une interface téléphonique. La terminaison d'une interface peut consister en une combinaison quelconque de dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas cinq.