ZTE中兴

ZXHN H168M

User Manual

Version 1.0

Revision History

Revision No.	Revision Date	Revision Reason
R1.0	20110425	First Edition

1 Safety Precautions

Installation

- Please use the power adapter supplied. Other power adapters may damage the device or cause device exception.

- Pay attention to the capacity of the power socket or power cable. Overloaded power socket or damaged power cable and socket can cause shock or fire. Check the corresponding power cable regularly and replace it should there be any damage on it.

- Do not disassemble the device. Prevent children from using the device without adult supervision lest they swallow small parts.

- Do not place the product close to heat source or high temperature place. Avoid direct exposure to the sun.

- Do not place the product in damp places or close to water sources. Do not spill any liquid onto the product.

- It is recommended to perform installation and configuration with the installation CD.

Usage

- Wait for at least 15 seconds after power off before powering on the device again.

- Please keep the heat dissipation holes uncongested. Do not block the holes with any article.

- Maintain good device ventilation and keep the power plug dry and clean. Please unplug the device immediately should there be any exception (e.g., smoke/noise/smell).

Service

To protect your repair right, do not disassemble or repair the product on your own. Please contact your service provider in time should any problem (especially the following problems) occur to the product:

- The power cable or power plug is damaged.

- Liquid gets into the shell of the product.

- The product is soaked in rain or other liquid.

- The product cannot run normally when being operated according to the instructions.

- The shell is damaged due to dropping or strike.

- There is exceptional indication during product running.

Safety Sign Conventions

This manual contains the following safety signs:

Safety Sign	Meaning
⚠️ Danger	Indicates major accident of possible equipment damage or bodily injury should the safety caution be ignored.
⚠️ Warning	Indicates minor accident of possible equipment damage or bodily injury should the safety caution be ignored.
⚠️ Caution	Indicates possible equipment damage, data loss, equipment performance deterioration and other unexpected results should the safety caution be ignored.
Tip: Tip	Indicates special tip.
NOTE Note	Indicates additional information to the text.

2 Overview

Product Introduction

ZXHN H168M is an xDSL BONDING uplink wireless user terminal that is oriented to home and SOHO users and provides AP and LAN Switch.

Home and SOHO networks can be set up with H168M being the center to provide users with shared Internet connections to multiple network devices to provide safe wired or wireless communication, IPTV access and abundant multimedia services.

For different service needs such as high-speed Internet access, live video access and controlled network access, H168M

- Provides comprehensive IP-based QoS and PPPoE account management to satisfy requirements for different service access bandwidths.

- Provides PPPoE proxy account management to implement network access control on different accounts, thus achieving green Internet access, providing safer wireless encryption mode and powerful network security, and preventing network access of unauthorized users and ensuring user security.

- Provides TR-069 management protocol to realize comprehensive remote network management.

Packing List

Ensure the following components are included after unpacking the H168M product. Models of the components shall be in accordance with the actual delivery.

Item Name	Quantity
H168M host	1
Power adapter	1
Splitter	1
RJ-45 network cable	1
RJ-14 telephone line	2
Instructions	1 copy
Installation CD	1

Please contact the vendor immediately should there be any incorrect, missing or damaged components. Try to keep the package and existing components of the product in the case that the product needs to be replaced.

Product Features

Technical Features

- Support for 4 x 10/100 Mbps Ethernet ports.

- Support for GUI (graphic user interface) network configuration.

- Support for the DHCP server function so that a DHCP server can be configured in the network.

- Compatibility with all Internet standard applications and functions.

- Support for standard and compatible DSL interfaces.

- Support for virtual server, IP address filter and DMZ isolation area functions.

- Support for system function configuration in Web pages.

- Support for software upgrade by downloading.

- Support for four types of DSL uplink: ADSL, ADSL2, ADSL2 + ADSL Bonding and VDSL + VDSL Bonding.

- Support for sessions of three equivalent route modes (PPPoE, IPoE and StaticIP), each of which supports up to 8 sessions.

- Support for RIPv1 version, RIPv2 version and NAT protocol.

- Support for WLAN (wireless local area network) IEEE802.11b, 802.11g and 802.11n protocols.

Interfaces

H168M interfaces and buttons are described in the following table.

Table 1 Interface and Button Description

Interface / Button	Description
POWER	Power jack, DC 12 V
LAN1–LAN4	RJ-45 LAN port, connected to the local network by the RJ-45 network cable
DSL	RJ-14 DSL interface
On/Off	Power button
RESET	Reset button. Press the hole with a needle for at least 5 seconds when the device is powered on to reset the device to ex-factory default values

Interface / Button	Description
WLAN	WLAN switch
WPS	WPS switch to enable the WPS function
USB	Connected to storage device with a USB port

Indicators

Indicator meanings are described in the following table.

Table 2 Meanings of Front Panel Indicators

Indicator	Color	Status	Description
Power	Green / red	Off	Power is not connected or fails
		Red solid on	The system is conducting self test or self test fails, or the device is faulty so that it cannot provide uplink data service
		Green solid on	The power is connected and the system passes self test
DSL1	Green	On	Link is established
		Flashing slowly	No signal is detected (flashing frequency 2 Hz, 1:1 duty ratio (discontinuous ratio))
		Flashing fast	The MODEM detects the signal and is attempting training activation (flashing frequency 4 Hz, 1:1 duty ratio (discontinuous ratio))
DSL2	Green	On	Link is established
		Flashing slowly	No signal is detected (flashing frequency 2 Hz, 1:1 duty ratio (discontinuous ratio))
		Flashing fast	The MODEM detects the signal and is attempting training activation (flashing frequency 4 Hz, 1:1 duty ratio (discontinuous ratio))
Internet	Green	Off	No address (no DHCP captured, no manual configuration)
		Solid on	The WAN port obtains the IP address through DHCP or the static address is configured manually

Indicator	Color	Status	Description
LAN 1, LAN 2, LAN 3, LAN 4	Green	Off	LAN connection is not established, no cable is connected, and no active device is connected
		Solid on	LAN connection is established
		Flashing	There is data transmission at the LAN port (flashing frequency 4 Hz, 1:1 duty ratio (discontinuous ratio))
WLAN	Green	Off	Wi-Fi RF (radio frequency) switch is disconnected
		Flashing	There is data transmission at the WLAN port
		Solid on	Wi-Fi RF switch is on
WPS	Green	Off	Connection fails in the wireless protection setting mode
		Flashing slowly	Negotiation is in progress in the wireless protection setting mode
		Solid on	Connection succeeds in the wireless protection setting mode
		Flashing fast	Negotiation fails in the wireless protection setting mode
USB	Green	Off	USB is not enabled
		Solid on	USB is enabled
		Flashing	There is data transmission at the USB port

Technical Specifications

H168M technical indices are described in the following table.

Table 3 Technical Indices

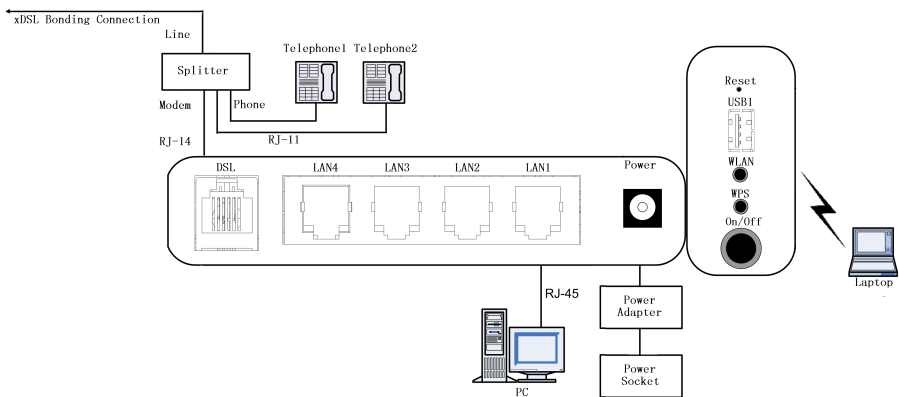| Item	Index
Dimensions (bare device)	200 mm (length) x 166 mm (width) x 37 mm (height)
Current rating	1.5 A
Voltage rating	DC 12 V
Working temperature	0 ℃ ~ 50 ℃
Working humidity	10% ~ 90%
Storage temperature	–40 ℃ ~ 70 ℃
Storage humidity	10% ~ 100%

3 **Configuration Preparation**

Hardware Connection

1. Location: Place H168M with its base on top of flat supports (e.g. office desk). To achieve the best effect, try to put H168M to a place with little interference during communication with wireless terminals (e.g. laptops with wireless network cards). To ensure the quality of WLAN, it is suggested to use wireless terminals in or close to the room where H168M is placed.

2. Hardware connection: H168M is connected to the carrier's network through the DSL uplink mode. The hardware connection is as shown in the following figure.

Figure 1 Hardware Connection

A voice filter must be installed close to the phone if it is necessary to install a phone in front of the splitter.

TCP/IP Configuration

To ensure normal Internet access of the device, users must set the host address and the H168M address in the same sub network segment.

H168M The default network setting is as follows:

- IP address is 192.168.200.1

- Subnet mask is 255.255.255.0

- Default gateway is 192.168.200.1

1. Configure TCP/IP
   i. Choose [**Start→Control Panel**] from the Windows task bar to open the **Control Panel** page.
   ii. Double click **Network Connections**.
   iii. Right click **Local Connections**, and click **Properties** to open the **Local Connection Property** page.
   iv. Double click **Internet Protocol (TCP/IP)**, and then click **Properties** to open the **Internet Protocol (TCP/IP) Properties** page.
   v. Select **Use the following IP address**, and set the local IP address to the same network segment as the LAN port address of the device. For example, 192.168.200.7, subnet mask 255.255.255.0, and default gateway 192.168.200.1.
   vi. Click **OK** to confirm and save the settings.

   Note:

   These settings can be changed according to user's network requirements. However, please use the preceding settings when accessing the Web configuration page of the device for the first time.

2. Check settings

   Users can check the network connection status between the computer and the device with the **Ping** command.

   If the device cannot be pinged, check the following items one by one:

   a) Whether the Ethernet cable between the device and the computer is connected correctly.

   b) Whether the network adapter driver is correctly installed on the computer.

   c) Whether the corresponding indicator at the device LAN port and the network card connection indicator on the computer are on.

   d) Whether TCP/IP is correctly configured on the computer.

4 Login

Prerequisite

The device is connected correctly and the computer is configured correctly.

H168M provides Web page-based configuration tools for users to complete configuration and management through the Web browser. The Web maintenance system provides users with certain Web page configuration rights according to the user level.

1. Start the Web browser.

2. Enter http://192.168.200.1 (default IP address of the device at the LAN side) in the address bar and then press **Enter** to open the H168M Web configuration page.

   Note:

   To exit the Web configuration page, simply close the page.

Postrequisite

Users can perform the following operations after entering the H168M Web configuration page.

- Device status view
- Network configuration
- Security configuration
- Application configuration
- Management configuration

Customer Information

1. This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On bottom of this equipment is a label that contains, among other information, a product identifier of [US: ZTEDL01BZXHNH168M]. If requested, this number must be provided to the telephone company.

2. If this equipment [Network Services Gateway] causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

3. The telephone company may make changes in this facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modification to maintain uninterrupted service.

4. If you experience trouble with this equipment, you disconnect it from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

5. Please follow instructions for repairing if any (e.g. battery replacement section); otherwise do not alternate or repair any parts of device except specified.

6. Connection to party line service is subject to state tariffs. Contact the state public utility commission public service commission or corporation commission for information.

7. If the telephone company requests information on what equipment is connected to their lines, inform them of:
    a) The telephone number that this unit is connected to,

b)   The ringer equivalence number [01B]

c)   The USOC jack required [RJ11C], and

d)

Items (b) and (d) are indicated on the label. The ringer equivalence number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the RENs of all devices on any one line should not exceed five (5.0). If too many devices are attached, they may not ring properly.

Service Requirements

In the event of equipment malfunction, all repairs should be performed by our Company or an authorized agent. It is the responsibility of users requiring service to report the need for service to our Company or to one of our authorized agents. Service can be facilitated through our office at:

U.S. Acadia Solutions, Inc.

130 E. Wilson Bridge Road Suite 320 Worthington United State

Telephone: 614-505-6135   Fax: 614-505-6135

The FCC Registration Number [US: ZTEDL01BZXHNH168M]

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

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, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits for uncontrolled environment .

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