

**eSpace IAD208E(M) Integrated Access Device
V300R001C04**

Quick Start

Issue 04

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HUAWEI TECHNOLOGIES CO., LTD.



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1 Packing List

After you unpack the product package, check the items in the following table. If the items in the package are inconsistent with those in the table, contact the sales person.

Name	Quantity
IAD208E(M)	1
Voice-and-data splitter	8
Power supply component (AC/DC power adapter and power cable)	1 (optional)
CD	1
Quick Start	1
Certification	1



NOTE

The AC/DC power adapter is allocated to the IAD according to the actual power supply mode.

- When the IAD208E(M) adopts the local power supply mode, the power supply adapter needs to be used.
- When the IAD208E(M) adopts the remote power supply mode (that is, the remote power supply device provides power for the IAD208E(M) through the network cable), the AC/DC power supply adapter does not need to be used.

2 Safety Precautions

Pay attention to the following precautions when installing and using the device.

Basic Requirements

- Follow the requirements of the manufacturer to install the device.
- Do not disassemble the device. Contact the specified maintenance station if the faults occur on the device.
- Any company or person cannot change the design of the structure, security, or performance without permission.
- Comply with the related laws and regulations, and respect the legal rights of others when using this device.

Usage Notice

- Use the accessories shipped with the product and the recommended accessories, such as the power supply adapters and batteries. The power supply voltage must meet the requirement on the input voltage of the device.
- Keep the power plug clean and dry to avoid the electric shock and other potential risks.
- Keep your hands dry when plugging in or out the device cable.
- Stop the device and turn off the power before plugging in or out the device cable.
- In the lightning weather, turn off the power and remove all the cables from the device, such as the power cable, network cable, and phone cable. Otherwise, the device may be damaged by the lightning.
- If you do not need to use the device for a long time, turn off the power and remove the power plug.
- Keep the water and other liquids away from the device. If the liquid accidentally flows into the device, turn off the power immediately and remove all the cables from the device, such as the power cables and network cables. Contact the specified maintenance station if faults occur.
- Do not use the damaged or aged cables.
- If exceptions occur, for example, the device is smoking, the sound is abnormal, or the device turns smelly, stop using the device and turn off the power immediately. Remove all the cables connected to the device, such as the power cables and network cables. Contact the specified maintenance station when faults occur.
- Prevent the objects (such as the metal) getting into the device from the heat dissipation hole.

- Avoid scratch or wear and tear on the device shell. Otherwise, the dropped paint may cause allergy or device exceptions. For example, short circuit may be caused if the paint drops into the host.
- Keep children away from the device and accessories to avoid the dangerous behaviors such as swallowing.

Cleaning Notice

- Before you clean the device, stop the device and turn off the power. Remove all the cables connected to the device, such as the power cables and network cables.
- When you clean the device, do not use the liquid cleaner or spray cleaner to clean the device shell. Use the soft cloth to wipe and clean the shell.

Environment Requirements

- Keep the device dry when storing, transporting, and using the device.
- Avoid the collision when storing, transporting, and using the device.
- Place the device in the indoor environment with good ventilation and without direct and strong sunlight.
- Keep the device clean to avoid dust.
- Do not place any object on the device to avoid the overheating of the device or damage caused by extrusion.
- Clear the space with the radius of over 10 cm around the device for heat dissipation.
- Keep the device away from the heat sources or exposed fire, such as the electrical heater or candle.
- Keep the device away from the appliance with the strong magnetic field or intensive electric field, such as the microwave oven, fridge, or mobile phone.

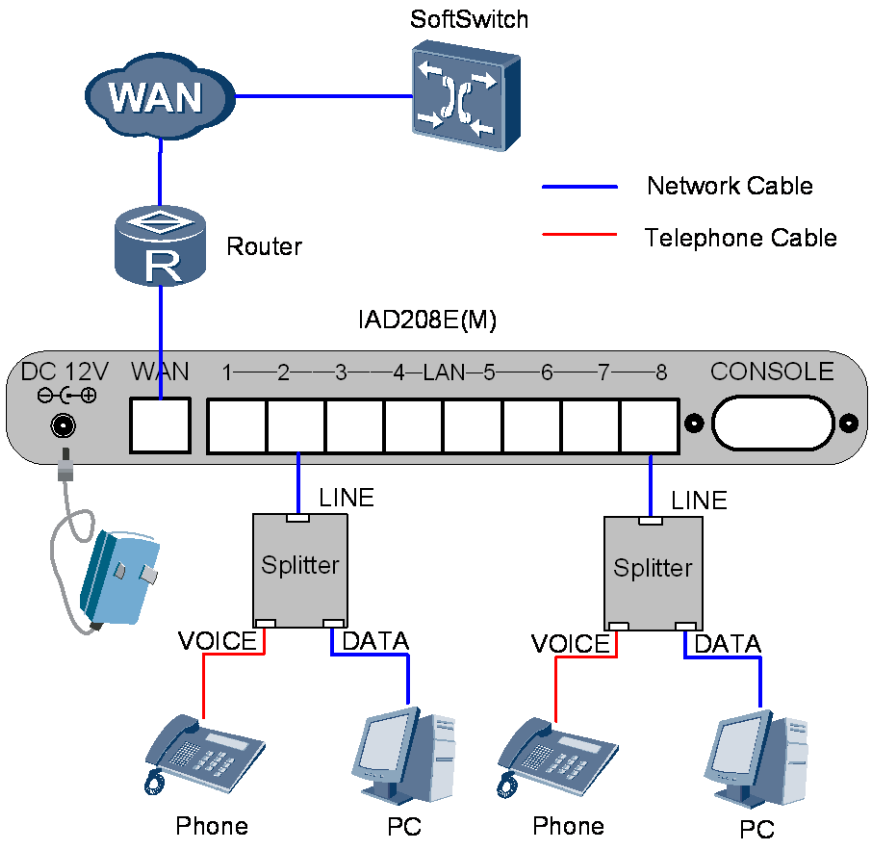
Environment Protection

- Do not discard the obsolete devices or batteries randomly. Discard them at the specified recycle station.
- Comply with the local laws and regulations on processing the device package materials, consumed batteries, and obsolete devices, and support the recycling.

3 Installation

The IAD208E(M) is deployed in a box. You only need to connect the cables during installation.

Installing the IAD208E(M)



Procedure

Step 1 Connect the uplink cable.

Connect the WAN port on the IAD208E(M) panel to the network port of the uplink network device (such as a switch or router) through a network cable.

Step 2 Connect the cables of users.

1. Connect the LAN port on the IAD208E(M) panel to the LINE port of the splitter through a network cable.
2. Connect the VOICE port of the splitter to the POTS port through a telephone cable.
3. Connect the DATA port of the splitter to the network port of the PC through a network cable.
4. (Optional) If you need to connect more devices, you can connect other LAN ports of the IAD208E(M) to the splitters, and then connect the splitters to the PC, IP phone, or POTS phone.



CAUTION

- Do not connect the network port of the PC to the LAN port of the IAD208E(M) through a network cable directly to access the Internet. This is because the extra power is consumed when the power supply is provided for IAD208E(M) remotely and the splitter is not used.
- To avoid the signal attenuation, the network cables between the IAD208E(M) and the splitter and between the splitter and the PC must be shorter than 100 meters.
- The cable, such as twisted pair cable, cannot be longer than 2 km. It is recommended that the cable be shorter than 1 km.

Step 3 Connect the CONSOLE port of the IAD208E(M) to the serial port of the PC through a serial port cable. (Perform this step only when you maintain the IAD208E(M).)

Step 4 Ensure that all the cables are correctly connected. Connect the DC end of the power supply adapter to the power supply port of the IAD208E(M). Connect the plug of the power supply adapter to the socket, and then turn on the power.

----End

4 Manual Configuration (Web)

About This Chapter

The IAD provides users with the Web management system. The system runs the customer page in the Internet Explorer. The page is easy-to-use, reliable, and visual for users. The chapter describes how to configure about typical scenes and advanced parameters in the Web mode. In addition, some titles are marked with (SIP) or (MGCP) to indicate that these service configurations can be implemented over SIP or MGCP.

4.1 Logging In to the Web Management System

The IAD208E(M) supports data configuration and maintenance management in Web mode.

4.2 IAD (SIP) Accessing the NGN/IP PBX Network

Users of the IAD208E(M) register with the SoftSwitch to implement the voice service. After configuring the data on the SoftSwitch, configure the data on the IAD208E(M). Then the IAD208E(M) can register with the SIP server to implement the voice service.

4.3 IAD (MGCP) Accessing the NGN/IP PBX Network

Users of the IAD208E(M) register with the NGN/IP PBX to implement the voice service. After configuring data on the SoftSwitch, configure data on the IAD208E(M) to implement the voice service.

4.4 IAD (SIP) Connecting to the IMS

Users of the IAD208E(M) register with the IMS to implement the voice service. After configuring data in the IMS, configure data on the IAD208E(M) to implement the voice service.

4.5 Setting UCEMS Parameters

On the IAD, you can set basic parameters for the communication with the Unified Communication Element Management System (UCEMS) so that the IAD can be managed by the UCEMS.

4.6 Accessing Network Through the IAD

A PC can use the switch function of an IAD to access the network.

4.1 Logging In to the Web Management System

The IAD208E(M) supports data configuration and maintenance management in Web mode.

Establishing the Web Configuration Environment

The IAD hardware connections are set up and the IAD is powered on.

Use the network cable to connect the network port of the PC to any network port of the IAD208E(M). If the PC network port does not support self-adaptation, you need to use the crossover cable. Set IP addresses of the PC and IAD (the default IP address of the IAD is 192.168.100.1) in the same network segment to ensure that the PC can ping the IAD successfully.

Logging In to the Web Management System

1. Start the Microsoft Internet Explorer. Enter the IP address of the IAD208E(M) (the default IP address is 192.168.100.1) in the address box. The login page is displayed, shown as follows.



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NOTE

If you changed the IP address of the IAD, you can do as follows to obtain the IP address.

- Dial *127 on the phone connected to the IAD, and then the voice announcement plays the IP address.
 - Log in to the IAD through the serial port and run the **display ipaddress** command in the normal user mode to view the IP address of the device. How to log in to the IAD through the serial port, see Logging In Through Local Serial Port.
2. Set the system language to simplified Chinese or English as required. Enter the user name and password and click **Login**. By default, the user name is **root**, the password is **admin** and the protocol is SIP. Take the SIP version as an example, and the page is displayed as follows.

Current Time : 2010-01-01 19:56:19

Home Change Password Exit

- Typical Scenarios +
- Basic Configuration +
- SIP Service Configuration +
- Advanced Configuration +
- System Tool +
- Diagnose +

IAD supports configuration in the different typical scenarios.If you do not need to configure in the typical scenarios, please select from the left from the navigation bar directly, else you can choose a scenario:

- ➔ Accessing the IP PBX/NGN
- ➔ Accessing the IMS
- ➔ Local-Switch

- After you log in to the system, you can click **Change Password** at the upper right corner of the page to set a new password. After the password is set, record related data.



NOTE

The web management system provides inner help information on the Web page. Configure the data according to the help information. And this document does not introduce the help information repeatedly.

4.2 IAD (SIP) Accessing the NGN/IP PBX Network

Users of the IAD208E(M) register with the SoftSwitch to implement the voice service. After configuring the data on the SoftSwitch, configure the data on the IAD208E(M). Then the IAD208E(M) can register with the SIP server to implement the voice service.

Data Planning

Obtain the following data from the administrator before configuring the data.

Item	Example
IP address of the IAD208E(M)	IP address: 192.169.1.62 Subnet mask: 255.255.255.0 Gateway IP address: 192.169.1.1
IP address of the SIP server	IP address: 192.169.1.40
SIP user ID	8900
SIP user password	1234

Procedure

- Step 1** View the current protocol mode. Choose **Advanced Configuration > Protocol Mode** to display the protocol mode setting page.

Current Position: Advanced Configuration > Protocol Mode

Protocol mode	<input checked="" type="radio"/> SIP	<input type="radio"/> MGCP
---------------	--------------------------------------	----------------------------

OK

If the protocol mode is SIP, you do not need to change it. If the protocol mode is MGCP, you need to select **SIP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol can be switched after about two minutes. You need to log in to the IAD again and configure data.

Step 2 Enter the typical scenario. Log in to the Web management system, and click  **Accessing the IP PBX/NGN** to start the guide configuration.

Step 3 (Optional) Set the network parameters for the IAD208E(M).

1. Click **Start**, the page of **Basic Configuration > Network Parameter** is displayed.

Current Position: Basic Configuration > Network Parameter

MAC Address

MAC address	00-25-9e-82-27-49
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WAN

IP obtain mode	<input checked="" type="radio"/> Static	<input type="radio"/> DHCP	<input type="radio"/> PPPoE
IP address	<input type="text" value="192.169.1.62"/>		
Subnet mask	<input type="text" value="255.255.255.0"/>		
Default gateway	<input type="text" value="192.169.1.1"/>		

OK

Domain

DNS obtain mode	<input checked="" type="radio"/> Manually	<input type="radio"/> Automatically
Domain name suffix	<input type="text" value="huawei.com"/>	Help
Primary DNS IP	<input type="text" value="192.169.1.50"/>	Help
Secondary DNS IP	<input type="text"/>	Help

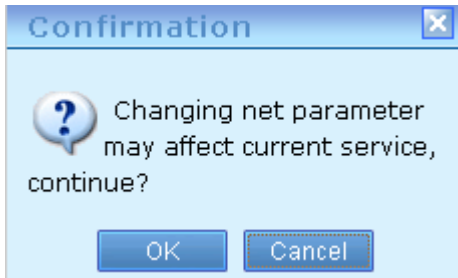
OK

2. Set the parameters in the **WAN** area. As planned, set the IP address for the IAD208E(M) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.

**NOTE**

There are three methods for obtaining the IP address. Select a method according to the actual network and configure with the help information on the Web.

3. A confirm dialog box is displayed, as shown in the following figure. Click **OK**. The IAD restarts automatically. Log in to the system again after about two minutes.

**NOTE**

- If change IP obtain mode, the new IP address may be changed after the IAD restarts automatically. With dialing *127 to listen to the IP address through the telephone connected to the IAD or connecting to the IAD through the serial port cable to view the IP address.
- When DHCP or PPPoE is selected, it takes you about 8 minutes to restart the IAD if the IAD cannot obtain IP address from the DHCP or PPPoE server. And please check the network ensure the DHCP or PPPoE server available and the information of the server is right.

After changed the IP address, log in the system again, and proceed from [Step 2](#).

4. Set the DNS IP address.

If the DNS server exist in the actual networking, set the parameters in the **DNS** area on the IP address setting page of IAD web management to implement connecting to other network devices according to the domain name.

- a. Set **DNS obtain mode** to **Manually** or **Automatically**. If **Static** is selected to obtain the IP address, you can select only **Manually**.
- b. Enter an IP address in Primary DNS IP and enter an IP address in Secondary DNS IP as required.
- c. (Optional) Set Domain name suffix, for example, set it to huawei.com.

Step 4 Configure the SIP server.

1. Click **Next**, and the page of **SIP Service Configuration > SIP Server** is displayed.

Current Position: SIP Service Configuration > SIP Server

Obtain type	<input checked="" type="radio"/> STATIC <input type="radio"/> DNS <input type="radio"/> DHCP	<input type="button" value="OK"/>
Auto switch	<input type="radio"/> On <input checked="" type="radio"/> Off	Help

<input type="checkbox"/>	Index	User Domain Name	Server Domain Name	Server IP Address	Server Port Number	Expiration Time (s)
<input type="checkbox"/>	0				5060	120
<input type="checkbox"/>	1				5060	120
<input type="checkbox"/>	2				5060	120

2. Click **STATIC** and click **OK** to confirm the **Obtain type**.

The IAD208E(M) supports the switch over between active and standby SIP servers. The IAD registers with the active SIP server first. If the registration fails, the IAD registers with the standby SIP server. After the active SIP server is restored, the IAD automatically switches to the active SIP server to register SIP users.

- To enable the IAD to switch between active and standby SIP servers, click **On** for **Auto Switch** on the page of **SIP Service Configuration > SIP Server**.
 - By default, the IAD registers with servers 0, 1, and 2 in sequence.
3. Select the record corresponding to index 0. Then click **Modify** to display the SIP server modification page.

Current Position: SIP Service Configuration > SIP Server > Modify

Index	0
User domain name	<input type="text"/> Help
Configuration	<input checked="" type="radio"/> IP address mode <input type="radio"/> DNS mode
Server IP address	<input type="text" value="192.169.1.40"/>
Server port number	<input type="text" value="5060"/> (1-65534)
Expiration time(s)	<input type="text" value="120"/> (5-31536000) Help

According to the provided data, click **IP address mode** and enter the IP address of the SIP server in the **Server IP address** textbox. You do not need to configure **User domain name**. For other parameters, use default values. Then click **OK**.

 **NOTE**

If you select DNS mode or set the domain name for the SIP server in static mode, make sure the DNS has been configured. For detail, see [Step 3.4](#); If you select DHCP mode, make sure obtain the IP address of the SIP server in DHCP mode.

Step 5 (Optional) Set the port number of the SIP signaling.

Click **Next**, the page of **SIP Service Configuration > Local Port** is displayed. The default port number of the SIP signaling is **5060**. You are not advised to change the port number. If change the port and then click **OK**.

Current Position: SIP Service Configuration > Local Port

Local port	5060	(1-65534)
------------	------	-----------

OK

Step 6 Configure the SIP user.

1. Click **Next**, and the page of **SIP Service Configuration > FXS User** is displayed.

Current Position: SIP Service Configuration > FXS User

<input type="checkbox"/>	SN	User ID	User name	Password	Group ID	Registration status
<input checked="" type="checkbox"/>	0	8900 <small>Batch Set</small>	<small>Batch Set</small>	•••• <small>Batch Set</small>	<small>Batch Set</small>	
<input type="checkbox"/>	1					
<input type="checkbox"/>	2					

2. Select the checkboxes of the items to be configured. Enter the values of **User ID** and **Password** according to the provided data. The parameters of **User name**, **Password** and **Group ID** are optional, which are decided by the carrier. Then click **OK**.

Step 7 (Optional) Configure the SIP digitmap.

1. Click **Next**, and the page of **SIP Service Configuration > SIP Digitmap** is displayed.

Current Position: SIP Service Configuration > SIP Digitmap

<input type="checkbox"/>	Index	Digitmap Value
<input type="checkbox"/>	0	[XABCD*#].T

2. Click **Add**. Add the digitmap value on the displayed page.
3. Click **OK** to finish the digitmap configuration.

Step 8 Save the data.

1. Click **Next**, and the page of **System Tool > Save Data** is displayed.

Current Position: System Tool > Save Data

Save as ordinary setting
 Save as carrier setting

2. Click **OK** to save the data.
3. Click **Finish** to end the configuration.

----End

Verifying Configuration Result

After the preceding configuration is complete, the IAD is running normally. You can use the following method to verify the configuration:

- If the IAD is running normally, the PWR indicator is steady on, the RUN indicator blinks one second on and one second off, the uplink WAN indicator is steady on, and indicators from 1 to 8 are on when a user picks up the phone.
- Choose **SIP Service Configuration > FXS User**. The FXS configuration page is displayed. View the user registration status. If the state is **Registered**, it indicates that the user is registered successfully.
- Make calls to verify the correctness of the configuration. If calls can be made or received successfully, it indicates that the data is configured correctly.

If a fault exists, check whether the data is correctly configured. If the data is correct but the fault persists, see the *Troubleshooting Guide* in the CD-ROM to locate the fault.

4.3 IAD (MGCP) Accessing the NGN/IP PBX Network

Users of the IAD208E(M) register with the NGN/IP PBX to implement the voice service. After configuring data on the SoftSwitch, configure data on the IAD208E(M) to implement the voice service.

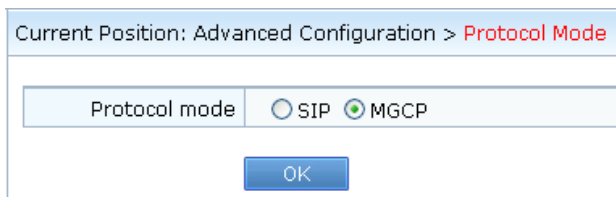
Data Planning

Obtain the following data from the administrator before configuring the data.

Item	Example
IP address of the IAD208E(M)	192.169.1.62
IP address of the default uplink gateway of the IAD208E(M)	192.169.1.1
IP address of the media gateway controller (MGC)	192.169.1.70
Domain name (MG domain name) of the IAD208E(M)	shenzhen
Authentication Mode	HW-Mode
Authentication Key	12345678

Procedure

Step 1 View the current protocol mode. Choose **Advanced Configuration > Protocol Mode** to display the protocol mode setting page.



If the protocol mode is MGCP, you do not need to change it. If the protocol mode is SIP, you need to click **MGCP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol can be switched after about two minutes. You need to log in to the IAD again and configure data.

Step 2 Enter the typical scenario. Log in to the Web management system, and click  **Accessing the IP PBX/NGN** to start the guide configuration.

Step 3 (Optional) Set the network parameters for the IAD208E(M).

1. Click **Start**, the page of **Basic Configuration > Network Parameter** is displayed.

Current Position: Basic Configuration > Network Parameter

MAC Address

MAC address	00-25-9e-82-27-49
-------------	-------------------

WAN

IP obtain mode	<input checked="" type="radio"/> Static <input type="radio"/> DHCP <input type="radio"/> PPPoE
IP address	<input type="text" value="192.169.1.62"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Default gateway	<input type="text" value="192.169.1.1"/>
<input type="button" value="OK"/>	

Domain

DNS obtain mode	<input checked="" type="radio"/> Manually <input type="radio"/> Automatically
Domain name suffix	<input type="text" value="huawei.com"/> Help
Primary DNS IP	<input type="text" value="192.169.1.50"/> Help
Secondary DNS IP	<input type="text"/> Help
<input type="button" value="OK"/>	

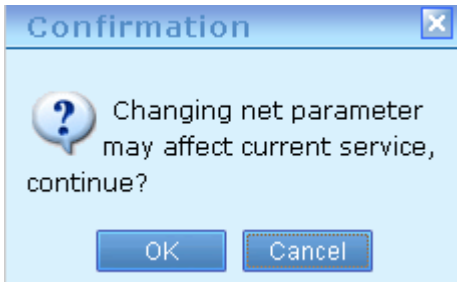
- Set the parameters in the **WAN** area. As planned, set the IP address for the IAD208E(M) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.



NOTE

There are three methods for obtaining the IP address. Select a method according to the actual network and configure with the help information on the Web.

- A confirm dialog box is displayed, as shown in the following figure. Click **OK**. The IAD restarts automatically. Log in to the system again after about two minutes.



 **NOTE**

- If change IP obtain mode, the new IP address may be changed after the IAD restarts automatically. With dialing *127 to listen to the IP address through the telephone connected to the IAD or connecting to the IAD through the serial port cable to view the IP address.
- When DHCP or PPPoE is selected, it takes you about 8 minutes to restart the IAD if the IAD cannot obtain IP address from the DHCP or PPPoE server. And please check the network ensure the DHCP or PPPoE server available and the information of the server is right.

After changed the IP address, log in the system again, and proceed from [Step 2](#).

4. Set the DNS IP address.

If the DNS server exist in the actual networking, set the parameters in the **DNS** area on the IP address setting page of IAD web management to implement connecting to other network devices according to the domain name.

- a. Set **DNS obtain mode** to **Manually** or **Automatically**. If **Static** is selected to obtain the IP address, you can select only **Manually**.
- b. Enter an IP address in Primary DNS IP and enter an IP address in Secondary DNS IP as required.
- c. (Optional) Set Domain name suffix, for example, set it to huawei.com.

Step 4 Configure the MG data. Click **Next**, and the page of **MGCP Service Configuration** > **MG** is displayed.

Current Position: MGCP Service Configuration > MG

MG domain	<input type="text" value="shenzhen"/>	Help
MG port	<input type="text" value="2427"/>	(1-65534 Default:2427)
Auth-Mode	<input checked="" type="radio"/> HW-Mode <input type="radio"/> GB-Mode	
KEY	<input type="text" value="••••••••"/>	
Registration status	Unregistered	

OK

Enter values in the **MG Domain**, **MG port**, **Auth-Mode** and **KEY** text boxes. Click **OK** to complete the settings. **MG Domain** and **MG port** must be configured and **Auth-Mode** and **KEY** are optional. All the parameters must be the same as the settings on the MGC.

Step 5 Configure the MGC data. Click **Next**, and the page of **MGCP Service Configuration > MGC** is displayed.

Current Position: MGCP Service Configuration > MGC

MGC1

Config model	<input checked="" type="radio"/> IP address mode <input type="radio"/> DNS mode	
MGC IP	<input type="text" value="192.169.1.70"/>	
MGC port	<input type="text" value="2727"/>	(1-65534 Default:2727)

MGC2

Config model	<input checked="" type="radio"/> IP address mode <input type="radio"/> DNS mode	
MGC IP	<input type="text"/>	
MGC port	<input type="text" value="2727"/>	(1-65534 Default:2727)

OK

Click **IP address mode** in the **MGC1** area and enter the MGC IP address. The MGC port normally uses the default value 2727. Click **OK** to complete the settings.

**NOTE**

If the DNS is configured, you can select the **DNS mode** to configure the domain name of the MGCs.

Step 6 (Optional) Configure the MGCP Soft Parameter.**CAUTION**

If the IAD connects to the SoftCo, configure the **Register mode** as **individual**.

Click **Next**, and the page of **MGCP Service Configuration > Soft Parameter** is displayed. For the following parameters, keep the default values.

Current Position: MGCP Service Configuration > **Soft Parameter**

Fax mode	t38v3 <input type="button" value="v"/>	Help
Register mode	<input checked="" type="radio"/> wildcard <input type="radio"/> individual	Help
Mgc type	softx <input type="button" value="v"/>	Help

Step 7 Save the data.

1. Click **Next**, and the page of **System Tool > Save Data** is displayed.

Current Position: System Tool > **Save Data**

<input checked="" type="radio"/> Save as ordinary setting <input type="radio"/> Save as carrier setting
<input type="button" value="OK"/>

2. Click **OK** to save the data.
3. Click **Finish** to end the configuration.

----End

Verifying Configuration Result

After the preceding configuration is complete, the IAD runs normally. You can verify the configuration results by checking indicators and voice communication.

- If the IAD runs normally, the PWR indicator is steady on, the RUN indicator blinks one second on and one second off, the uplink WAN indicator is steady on, and indicators from 1 to 8 are on when the user picks up the phone.

- Choose **MGCP Service Configuration > MG** to access the MG configuration page to view the user registration status. If the **Registered** state is displayed, it indicates that the corresponding phone is registered successfully.
- You can verify calls. If calls can be performed or received successfully, it indicates that the data is configured correctly.

If a fault occurs, you need to check whether the data is correctly configured. If the fault persists, see Troubleshooting to locate the fault.

4.4 IAD (SIP) Connecting to the IMS

Users of the IAD208E(M) register with the IMS to implement the voice service. After configuring data in the IMS, configure data on the IAD208E(M) to implement the voice service.

Data Preparation

Obtain the following data from the administrator before configuring the data.

Item	Example
IP address of the IAD208E(M)	IP address: 192.169.1.62 Subnet mask: 255.255.255.0 Gateway IP address: 192.169.1.1
IP address of the SIP server	IP address: 192.169.1.40
User domain name	abc.def.com
SIP user(The SIP user belongs to the wild group whose IMPU is +8657143210000 on the IMS)	user ID: +86571402001 user name: +86571402001@abc.def.com password: 123456
Group User	IMPU: +8657143210000 IMPI: +8657143210000@abc.def.com password: 654321

Procedure


- Step 1** View the current protocol mode. Choose **Advanced Configuration > Protocol Mode**. The protocol mode setting page is displayed.

Current Position: Advanced Configuration > Protocol Mode

Protocol mode	<input checked="" type="radio"/> SIP <input type="radio"/> MGCP
---------------	---

OK

If SIP is used, retain the value. If MGCP is used, select **SIP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol can be switched after about two minutes. You need to log in to the IAD again and configure data.

Step 2 Enter the typical scenario. Log in to the Web management system, and click  **Accessing the IMS** to start the guide configuration.

Step 3 (Optional) Set the network parameters for the IAD208E(M).

1. Click **Start**, the page of **Basic Configuration > Network Parameter** is displayed.

Current Position: Basic Configuration > Network Parameter

MAC Address

MAC address	00-25-9e-82-27-49
-------------	-------------------

WAN

IP obtain mode	<input checked="" type="radio"/> Static <input type="radio"/> DHCP <input type="radio"/> PPPoE
IP address	<input type="text" value="192.169.1.62"/>
Subnet mask	<input type="text" value="255.255.255.0"/>
Default gateway	<input type="text" value="192.169.1.1"/>

OK

Domain

DNS obtain mode	<input checked="" type="radio"/> Manually <input type="radio"/> Automatically
Domain name suffix	<input type="text" value="huawei.com"/> Help
Primary DNS IP	<input type="text" value="192.169.1.50"/> Help
Secondary DNS IP	<input type="text"/> Help

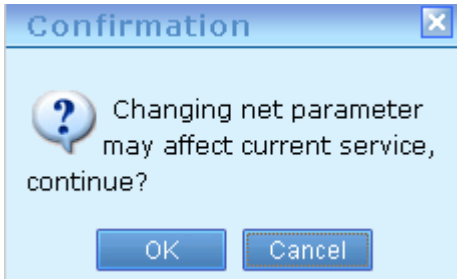
OK

2. Set the parameters in the **WAN** area. As planned, set the IP address for the IAD208E(M) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.

**NOTE**

There are three methods for obtaining the IP address. Select a method according to the actual network and configure with the help information on the Web.

3. A confirm dialog box is displayed, as shown in the following figure. Click **OK**. The IAD restarts automatically. Log in to the system again after about two minutes.

**NOTE**

- If change IP obtain mode, the new IP address may be changed after the IAD restarts automatically. With dialing *127 to listen to the IP address through the telephone connected to the IAD or connecting to the IAD through the serial port cable to view the IP address.
- When DHCP or PPPoE is selected, it takes you about 8 minutes to restart the IAD if the IAD cannot obtain IP address from the DHCP or PPPoE server. And please check the network ensure the DHCP or PPPoE server available and the information of the server is right.

After changed the IP address, log in the system again, and proceed from [Step 2](#).

4. Set the DNS IP address.

If the DNS server exist in the actual networking, set the parameters in the **DNS** area on the IP address setting page of IAD web management to implement connecting to other network devices according to the domain name.

- a. Set **DNS obtain mode** to **Manually** or **Automatically**. If **Static** is selected to obtain the IP address, you can select only **Manually**.
- b. Enter an IP address in Primary DNS IP and enter an IP address in Secondary DNS IP as required.
- c. (Optional) Set Domain name suffix, for example, set it to huawei.com.

Step 4 Configure the SIP server.

1. Click **Next**, and the page of **SIP Service Configuration > SIP Server** is displayed.

Current Position: SIP Service Configuration > SIP Server

Obtain type	<input checked="" type="radio"/> STATIC <input type="radio"/> DNS <input type="radio"/> DHCP	<input type="button" value="OK"/>
Auto switch	<input type="radio"/> On <input checked="" type="radio"/> Off	Help

<input type="checkbox"/> Index	User Domain Name	Server Domain Name	Server IP Address	Server Port Number	Expiration Time (s)
<input type="checkbox"/> 0				5060	120
<input type="checkbox"/> 1				5060	120
<input type="checkbox"/> 2				5060	120

2. Click **STATIC** and click **OK** to confirm the **Obtain type**.

The IAD208E(M) supports the switch over between active and standby SIP servers. The IAD registers with the active SIP server first. If the registration fails, the IAD registers with the standby SIP server. After the active SIP server is restored, the IAD automatically switches to the active SIP server to register SIP users.

- To enable the IAD to switch between active and standby SIP servers, click **On** for **Auto Switch** on the page of **SIP Service Configuration > SIP Server**.
 - By default, the IAD registers with servers 0, 1, and 2 in sequence.
3. Select the record corresponding to index 0. Then click **Modify** to display the SIP server modification page.

Current Position: SIP Service Configuration > SIP Server > Modify

Index	0
User domain name	<input type="text" value="abc.def.com"/> Help
Configuration	<input checked="" type="radio"/> IP address mode <input type="radio"/> DNS mode
Server IP address	<input type="text" value="192.169.1.40"/>
Server port number	<input type="text" value="5060"/> (1-65534)
Expiration time(s)	<input type="text" value="120"/> (5-31536000) Help

According to the provided data, enter **abc.def.com** in the **User domain name**, click **IP address mode** and enter the IP address of the SIP server in the **Server IP address** textbox. For other parameters, use default values. Then click **OK**.

 **NOTE**

If you select DNS mode or set the domain name for the SIP server in static mode, make sure the DNS has been configured. For detail, see [Step 3.4](#); If you select DHCP mode, make sure obtain the IP address of the SIP server in DHCP mode.

Step 5 (Optional) Set the port number of the SIP signaling.

Click **Next**, the page of **SIP Service Configuration > Local Port** is displayed. The default port number of the SIP signaling is **5060**. You are not advised to change the port number. If change the port and then click **OK**.

Current Position: SIP Service Configuration > Local Port

Local port	<input type="text" value="5060"/>	(1-65534)
------------	-----------------------------------	-----------

Step 6 (Optional) Configure the wildcard groups.

The IAD supports the function of registering with the SIP server on the IMS network as the wildcard groups. A wildcard group functions as a substitute for the SIP users belonged to the group on the IMS network.

1. Click **Next**, and the page of **SIP Service Configuration > Wildcard Group** is displayed.

Current Position: SIP Service Configuration > Wildcard Group

<input type="checkbox"/>	Index	IMPU	IMPI	Password	Registration status
<input checked="" type="checkbox"/>	0	3667143210000 <input type="button" value="Batch Set"/>	10000@abc.def <input type="button" value="Batch Set"/>	●●●●● <input type="button" value="Batch Set"/>	
<input type="checkbox"/>	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="checkbox"/>	2	<input type="text"/>	<input type="text"/>	<input type="text"/>	

2. Select the items to be configured. Set **IMPU**, **IMPI**, and **Password** and click **OK**. The parameter of **Password** is optional, which is decided by the carrier.

Step 7 Configure SIP user data.

1. Click **Next**, and the page of **SIP Service Configuration > FXS User** is displayed.

Current Position: SIP Service Configuration > **FXS User**

<input type="checkbox"/>	SN	User ID	User name	Password	Group ID	Registration status
<input checked="" type="checkbox"/>	0	+865714321000 Batch Set	210001@ab Batch Set	***** Batch Set	0 Batch Set	
<input type="checkbox"/>	1					
<input type="checkbox"/>	2					

- Set **User ID**, **User name**, **Password** and **Group ID**, according to the data provided by the carrier. The parameters of **Password** and **Group ID** are optional, which are decided by the carrier. Then click **OK**.

Step 8 Set SIP software parameters.

Click **Next**, and the page of **SIP Service Configuration > Soft Parameter** is displayed.

Current Position: SIP Service Configuration > **Soft Parameter**

Authorization type	<input type="radio"/> ID <input checked="" type="radio"/> Name Help
New service mode	<input type="radio"/> SoftX <input checked="" type="radio"/> Local Help
Support TelURI	<input type="radio"/> Off <input checked="" type="radio"/> On Help
Hold type(Only for IMS)	<input type="radio"/> Auto resume <input checked="" type="radio"/> Always hold Help

The parameters of **Support TelURI** and **Hold type** are optional, which are decided by IMS.

Step 9 (Optional) Configure the SIP digitmap.

- Click **Next**, and the page of **SIP Service Configuration > SIP Digitmap** is displayed.

Current Position: SIP Service Configuration > **SIP Digitmap**

<input type="checkbox"/>	Index	Digitmap Value
<input type="checkbox"/>	0	[XABCD*#].T

2. Click **Add**. Add the digitmap value on the displayed page.
3. Click **OK** to finish the digitmap configuration.

Step 10 Save the data.

1. Click **Next**, and the page of **System Tool > Save Data** is displayed.

Current Position: System Tool > Save Data

Save as ordinary setting Save as carrier setting

OK

2. Click **OK** to save the data.
3. Click **Finish** to end the configuration.

----End

Verifying Configuration Result

After the preceding configuration is complete, the IAD is running normally. You can use the following method to verify the configuration:

- If the IAD is running normally, the PWR indicator is steady on, the RUN indicator blinks one second on and one second off, the uplink WAN indicator is steady on, and indicators from 1 to 8 are on when a user picks up the phone.
- Choose **SIP Service Configuration > FXS User**. The FXS configuration page is displayed. View the user registration status. If the state is **Registered**, it indicates that the user is registered successfully.
- Make calls to verify the correctness of the configuration. If calls can be made or received successfully, it indicates that the data is configured correctly.

If a fault exists, check whether the data is correctly configured. If the data is correct but the fault persists, see the *Troubleshooting Guide* in the CD-ROM to locate the fault.

4.5 Setting UCEMS Parameters

On the IAD, you can set basic parameters for the communication with the Unified Communication Element Management System (UCEMS) so that the IAD can be managed by the UCEMS.

Procedure

- Step 1** Choose **Advanced Configuration > UCEMS Configuration**. The UCEMS configuration page is displayed.

Current Position: Advanced Configuration > UCEMS Configuration

Physical serial number	<input type="text" value="00-e0-fc-47-23-0b"/> Help
Configuration mode	<input type="radio"/> IP address mode <input checked="" type="radio"/> DNS mode
Domain name	<input type="text" value="ucems.com"/> Help
Read community	<input type="text" value="*****"/> Help
Write community	<input type="text" value="*****"/> Help
Notice report community	<input type="text" value="*****"/> Help
Notice report port	<input type="text" value="162"/> (1-65535) Help
Allow UCEMS access	<input checked="" type="radio"/> Yes <input type="radio"/> No Help
Registered UCEMS	255.255.255.255
Registration status	Unregistered
Scheduled handshake	<input checked="" type="radio"/> Yes <input type="radio"/> No Help
Handshake interval(s)	<input type="text" value="30"/> (10-600) Help

OK

Step 2 Select **IP address mode** or **DNS mode** for **Configuration mode**. If **DNS mode** is selected, enter the UCEMS domain name in the **Domain name** textbox. If **IP address mode** is selected, enter the UCEMS IP address in the **IP address** textbox. For other parameters, keep the default values. Then click **OK**.

 **NOTE**

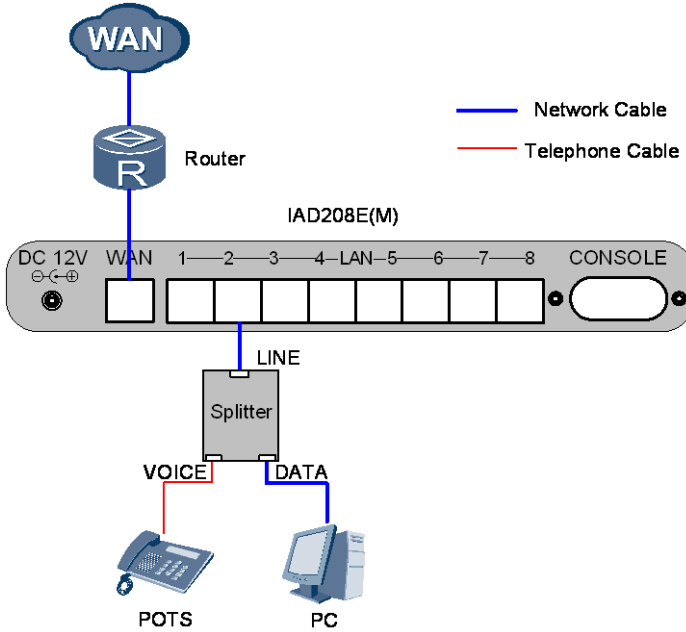
If select **DNS mode**, make sure the DNS has been configured.

----End

4.6 Accessing Network Through the IAD

A PC can use the switch function of an IAD to access the network.
Connect the PC to the IAD according to the following figure.

Figure 4-1 Accessing Network Through the IAD



The IAD208E(M) provides eight downlink ports. Use a network cable to connect a LAN port on the IAD to the separator LINE port, and then use a network cable to connect the separator DATA port to the PC network port.

Method for obtaining the IP address of the PC varies according to the actual network situation. Obtain the related information from the network provider.

5 FAQs

1. Q: How do I log in to the IAD management system?
A: You can log in to the IAD management system in the following modes:
 - Web mode: Open Internet Explorer, enter **http://IP address of the IAD (192.168.100.1** by default) in the address box, and enter the user name **root** and password (**admin** by default).
 - Telnet mode: Enter **telnet IP address of the IAD (192.168.100.1** by default) in the **Run** dialog box, and enter the user name **root** and password (**admin** by default).
 - Local serial port mode: For details, see the product document.
2. Q: What are the default IP address, user name, and password used to log in to the IAD?
A: The default IP address is **192.168.100.1**. The default user name is **root**, and the default password is **admin**.
3. Q: How do I log in to the IAD if I forget the password?
A: Log in to the IAD using the user name **restore-config** and password **restore-config** to restore the default settings of the device and restart the device. After the device restart, use the default IP address 192.168.100.1, user name **root**, and password **admin** to log in.
4. Q: How do I restore the IAD to factory settings?
A: You can restore the IAD to factory settings in either of the following ways:
 - Log in to the web management system, and choose **System Tool > Maintenance > Restore Default**. On the page that is displayed, select **Factory setting**, and click **OK**. Restart the IAD for the settings to take effect.
 - Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **restore vendor-config** command. Restart the IAD for the settings to take effect.
5. Q: How to restart the IAD?
A: You can restart the IAD in either of the following ways:
 - Log in to the web management system, and choose **System Tool > Maintenance > Restart Device**. On the page that is displayed, click **Restart Device**.
 - Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **reboot** command.

6. Q: How do I view the IP address of the IAD?
A: Connect a phone to the IAD, and dials *127. The IAD automatically plays an announcement indicating the IP address. For details, see the product document.
7. Q: How do I change the IP address of the IAD?
A: For details, see **Maintenance > Changing IP address** in the product document.
8. Q: How do I view the MAC address of the IAD?
A: You can view the MAC address in either of the following ways:
- Log in to the web management system, and choose **Basic Configuration > Network Parameter**.
 - Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **display mac-address** command.
9. Q: How do I view the physical sequence number of the IAD?
A: Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **display physical-serial-num** command.
10. Q: How do I view the elabel of the IAD?
A: Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **display elabel** command.
11. Q: How do I set the upper and lower limits of the hookflash duration?
A: Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **dev parameter set 3** command to set the upper limit, and run the **dev parameter set 4** command to set the lower limit.
12. Q: How do I view the software version of the IAD?
A: You can view the software version in either of the following ways:
- Log in to the web management system, and choose **Basic Configuration > Version Information**.
 - Log in to the CLI, and run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode. Then run the **display version** command.
13. Q: How do I change the protocol?
– A: To change to the SIP mode, log in to the web management system, choose **Advanced Configuration > Protocol Mode**, and select **SIP**; or log in to the CLI, run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode, and run the **protocol-mode sip** command.
- To change to the MGCP mode, log in to the web management system, choose **Advanced Configuration > Protocol Mode**, and select **MGCP**; or log in to the CLI, run the **enable** and **configure terminal** commands in sequence to enter the global configuration mode, and run the **protocol-mode mgcp** command.
14. Q: How do I view the system information?

A: For details, see **Maintenance > Viewing the System Information** in the product document.

15. Q: How do I set the VLAN priority on the IAD?

A: For details, see **Configuring the VLAN** in the product document.

A: You can set the VLAN priority in either of the following ways:

- Use the web management system. For details, see **Configuration > Manual Configuration (Web) > Advanced Configuration > Configuring the VLAN** in the product document.
- Use the CLI. For details, see **Configuration > Manual Configuration (CLI) > Advanced Configuration > Configuring the VLAN** in the product document.

16. Q: How do I set the fax function on the IAD?

A: You can set the fax function in either of the following ways:

- Use the web management system. For details, see **Configuration > Manual Configuration (Web) > Advanced Configuration > Setting the Fax Parameters** in the product document.
- Use the CLI. For details, see **Configuration > Manual Configuration (CLI) > Advanced Configuration > Setting the Fax Parameters** in the product document.

17. Q: How do I enable the pulse dialing function?

A: Log in to the web management system, and choose **Advanced Configuration > PSTN Port Attribute Configuration > User Port Attribute**. The page for setting the PSTN port attributes is displayed. Select a port and click **Modify**. On the page that is displayed, enable the pulse dialing function and click **OK**.

6 Technical Specifications and Environment Requirements

To ensure that the IAD208E(M) runs normally, the IAD208E(M) must meet conditions such as the power supply, temperature and humidity.

Specification	Index
Max. power consumption in full configuration	36 W
Power supply	Input: 100 V to 240 V AC Output: 12V DC, 2A
Feeder voltage	-42V
Virtual value of ringing voltage	45Vrms
Long-term operating temperature	0 °C-55 °C
Long-term operating humidity	5% to 85% (no condensing)
Dimension	234mm(width) × 170mm(depth) × 42mm(height)
Weight	500g
Max. channels for remote power supply	6 voice channels and 8 data channels
Subscriber line distance (the subscriber line diameter is 0.4 mm and the phone is not paralleled)	≤ 2.0 km
Number of paralleled phones (subscriber line distance is smaller than or equal to 2.0 km and the subscriber line diameter is 0.4 mm)	≤3



NOTE

If the remote power supply is used, the IAD208E(M) supports up to six channels for POTS and eight channels for Ethernet. In this case, the power source equipment (PSE) provides the power of about 16 W for the device.