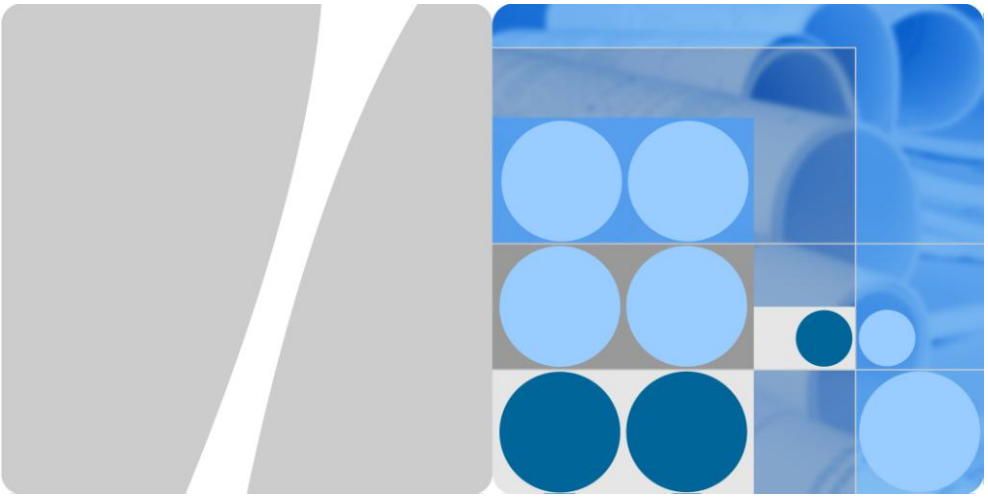

eSpace IAD132E(T) Integrated Access Device
V300R001C04

Quick Start

Issue **05**

Date **2012-06-11**

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 different from those in the table, contact the sales person.

Item	Quantity
IAD132E(T)	1
Serial port cable	1
Chassis ground cable	1
Mount angle	1
CD-ROM	1
Quick Start	1
Certificate	1

NOTE

Power cables and subscriber cables are put in other boxes independently.

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 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

- The power supply voltage must meet the requirement for the input voltage of the device.
- The device and the cabinet where the device is installed must be well grounded.
- Keep the power plug clean and dry to prevent electric shock and other potential risks.
- Wear electrostatic discharge (ESD) wrist gloves or ESD wrist straps before touching the device or taking the board to prevent static electricity from damaging sensitive components. The other end of the ESD wrist strap must be well grounded.
- Stop using the device and turn off the power before installing or removing the device cable.
- Do not wear loose cloths or wear jewelry including rings and necklaces or accessories that may be hitched by the chassis during installation and maintenance.
- Stop using the device and turn off the power immediately if exceptions occur, for example, the device is smoking, the sound is abnormal, or the device turns smelly. Remove all the cables connected to the device, such as power cables and network cables. Contact the specified maintenance station when faults occur.

Cleaning Notice

- Before you clean the device, stop using 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.

3 Installation

About This Chapter

Huawei cabinet is taken as an example to describe how to install the IAD132E(T).

3.1 Preparing Tools and Measures

The installation tools are not delivered with the device. You need to prepare them.

3.2 Fixing the Device

Fixing the device involves installation of the guide rail, floating nuts, and device in the cabinet.

3.3 Connecting Cables

Interfaces on front and rear panels of the IAD132E(T) need to be connected to cables.

3.1 Preparing Tools and Measures

The installation tools are not delivered with the device. You need to prepare them.

Type	Tool
Tool	Cross screwdriver and adjustable wrench Needle-nose pliers, diagonal pliers, mounting bar, wire stripper, crimping tool, RJ11 crimping tool, and impact tool ESD wrist gloves and ESD wrist straps
Meter	Multimeter, 500V Meg-ohmmeter (used to measure the insulation resistance), and earth resistance tester

3.2 Fixing the Device

Fixing the device involves installation of the guide rail, floating nuts, and device in the cabinet.

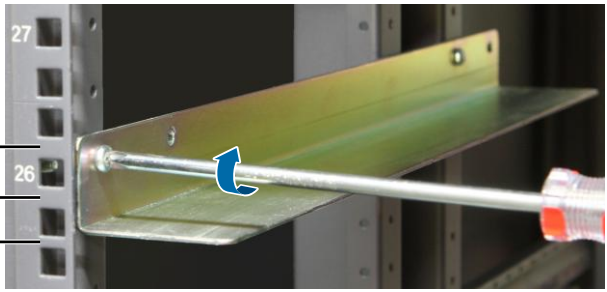
Installing the Guide Rail

Ensure that the space between the IAD132E(T) and other devices is 1 U (1U = 44.45mm) so that heat dissipation can be provided.

Use M4 screws to fix the guide rail on both sides of the cabinet. The guide rail is fixed on the support to install the device. The lower edge of the guide rail must be parallel to the mounting bar of the cabinet.

Guide rail

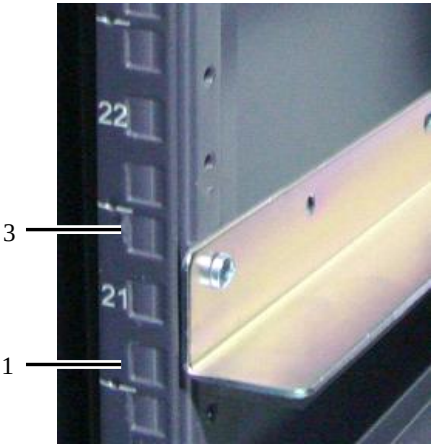
M4 screw



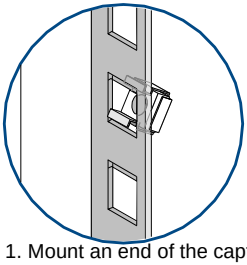
Installing Floating Nuts

Install floating nuts on the mounting bar on both sides of the cabinet.

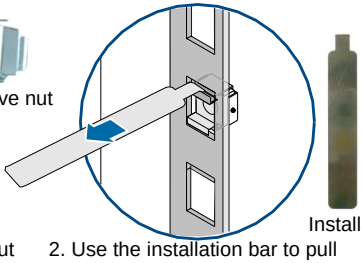
1. Determine the installation position of floating nuts, that is, the first and third square holes starting from the lower edge of the guide rail as follows.



2. Install floating nuts in the first and third square holes as follows.



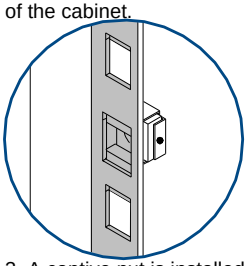
Captive nut



Installation bar

1. Mount an end of the captive nut to the mounting bar from the inside of the cabinet to the outside of the cabinet.

2. Use the installation bar to pull the other end of the captive nut and fix the captive nut to the square hole.



3. A captive nut is installed. Install captive nuts to the other three square holes using the same methods.

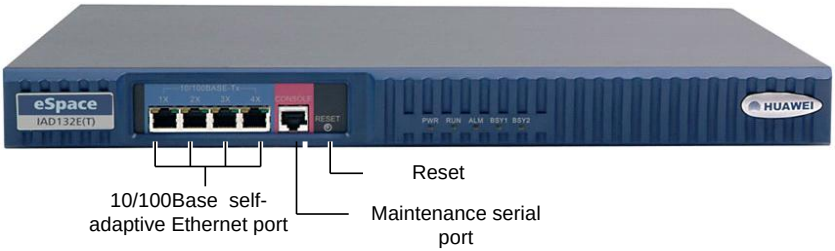
Fixing the Device

1. Use screws to install mount angles on both sides of the device.
2. Place the device in the guide rail, align the left and right edges, and push the device in the proper position along the conduit.
3. Use screws to fix angles in the conduit on both sides of the cabinet.

3.3 Connecting Cables

Interfaces on front and rear panels of the IAD132E(T) need to be connected to cables.

The front panel appearance and ports of the IAD132E(T) are as follows.



Cables connected to the front panel include network cables and serial port cables. The connection methods of different cables are as follows.

Connecting the Network Cable

The IAD132E(T) provides four network ports used to connect uplink network devices or downlink PCs to implement the online service. The procedure is as follows:

1. Connect one end of the network cable to any 10/100 BASE-TX port of the front panel of the device.
2. Connect the other end of the network cable to network ports of uplink network devices or downlink PCs.

Connecting the Serial Port Cable

You need to connect the serial port cable only when you configure the device through the serial port. The procedure for connecting serial port cables is as follows:

1. Connect the DB-9 (or DB-25) end of the serial port cable to the serial port of the PC or terminal.
2. Connect the RJ-45 end of the serial port cable to the console port of the front panel on the device.

The rear panel appearance and ports of the IAD132E(T) are as follows.

The cables connected to the rear panel includes ground cables, subscriber cables, and power cables. The connection method is as follows.

Connecting the Ground Cable

Ground cables are connected to prevent lightning and interference. The IAD132E(T) chassis ground point is a M4 ground screw which is located on the rear panel.

Connect the delivered chassis ground cable to the ground screw of the rear panel and connect the other end of the ground cable to the ground point of the chassis. If the device is installed in the external chassis, the external chassis must be grounded.

Connecting the Subscriber Cable

The IAD132E(T) has two boards, that is, ASID (16-port FXS) and OSU (8-port FXO and 8-port FXS). The two boards correspond to two subscriber cables. For details on the cable sequence, see 7 Pins of the Subscriber Cable.

The end of the subscriber cable is connected to the DB-68 male connector and the other end of the subscriber cable is connected to the external phone line. The procedure for connecting the subscriber cable is as follows:

1. Connect the DB-68 male connector of the subscriber cable to the DB-68 female connector of the ASID board or the OSU.
2. Connect the eight FXS lines to the user phone port and the eight FXO lines to the PSTN according to the subscriber cable sequence if the OSU is used; connect 16 FXS lines to the user phone port according to the subscriber cable sequence if the ASID board is used.

Connecting the Power Cable

Connect one end of the power cable to the power supply port of the IAD132E(T) and connect the other end of the power cable to the external AC power supply socket.

After the power supply is connected, connect the AC power module to power on the device. After the device runs normally, the PWR indicator is steady on, the RUN indicator blinks slowly, and the uplink network port green indicator is steady on.

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 IAD132E(T) 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 IAD132E(T). 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 IAD132E(T) (the default IP address is 192.168.100.1) in the address box. The login page is displayed, shown as follows.

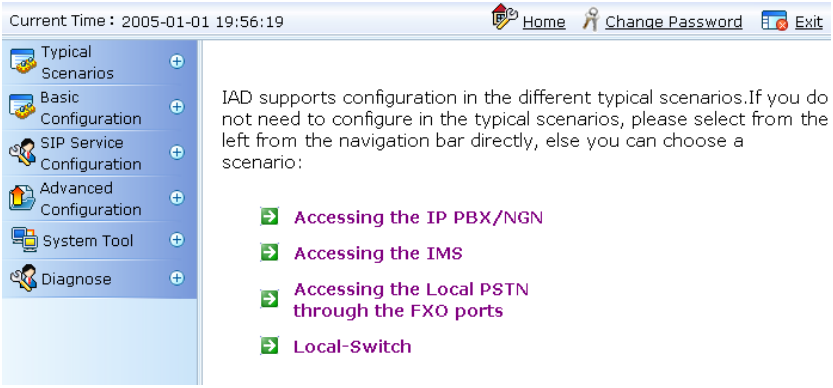
NOTE

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.



3. 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 IAD132E(T) register with the SoftSwitch to implement the voice service. After configuring the data on the SoftSwitch, configure the data on the IAD132E(T). Then the IAD132E(T) can register with the SIP server to implement the voice service.

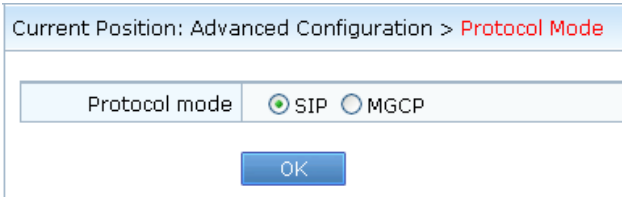
Data Planning

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

Item	Example
IP address of the IAD132E(T)	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.

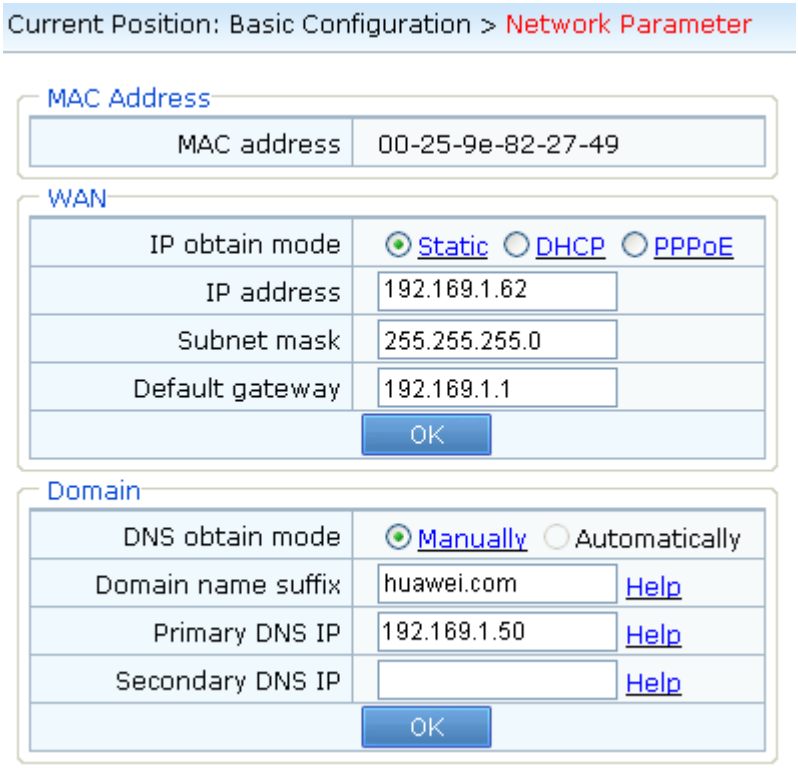


If the protocol mode is SIP, you do not need to change it. If the protocol mode is MGCP, you need to select **SIP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol 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 IAD132E(T).

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

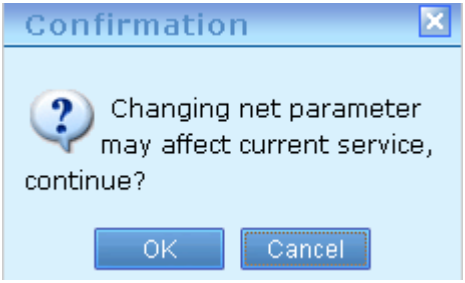


2. Set the parameters in the **WAN** area. As planned, set the IP address for the IAD132E(T) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.

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.

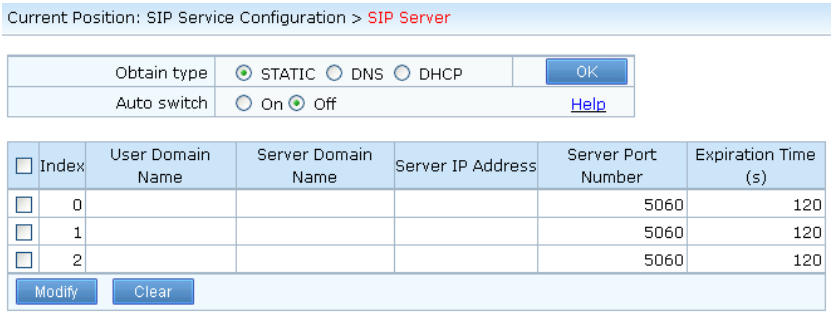
   a. Set **DNS obtain mode** to **Manually** or **Automatically**. If **Static** is selected to obtain the IP address, you can select only **Manually**.

   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.

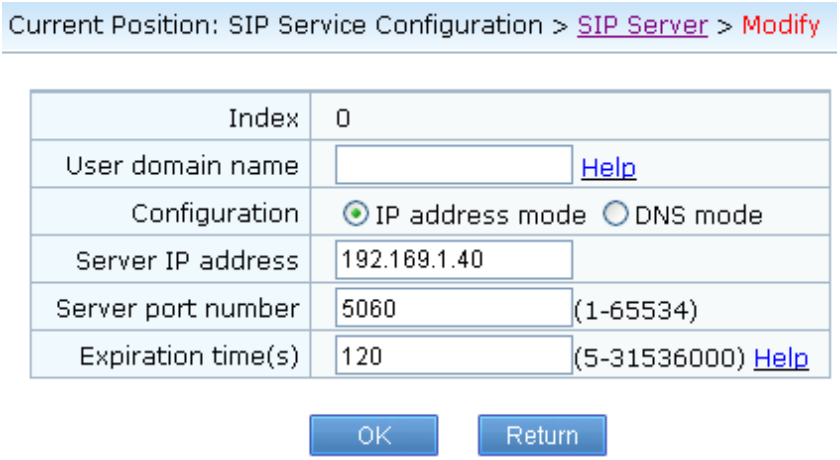


2. Click **STATIC** and click **OK** to confirm the **Obtain type**.

   The IAD132E(T) 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.



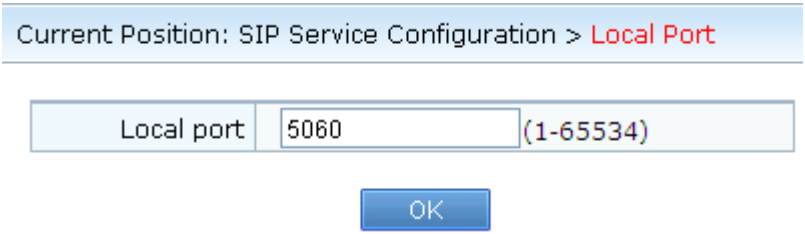
According to the provided data, click **IP address mode** and enter the IP address of the SIP server in the **Server IP address** textbox. You do not need to configure **User domain name**. For other parameters, use default values. Then click **OK**.

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.

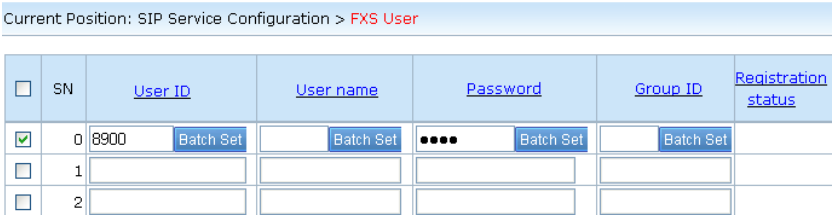
Step 5 (Optional) Set the port number of the SIP signaling.

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**.



Step 6 Configure the SIP user.

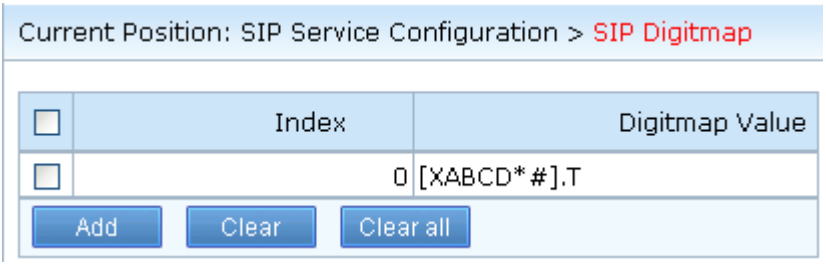
1. Click **Next**, and the page of **SIP Service Configuration** > **FXS User** is displayed.



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.

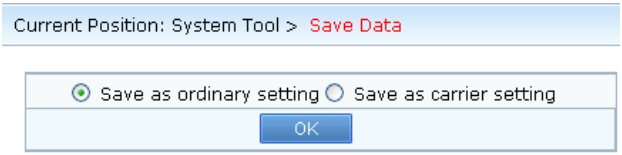
1. Click **Next**, and the page of **SIP Service Configuration** > **SIP Digitmap** is displayed.



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.



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, indicators of the BSY1 and BSY2 are steady on when users located in slot 1 and slot 2 pick up the phones.
- 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 IAD132E(T) register with the NGN/IP PBX to implement the voice service. After configuring data on the SoftSwitch, configure data on the IAD132E(T) to implement the voice service.

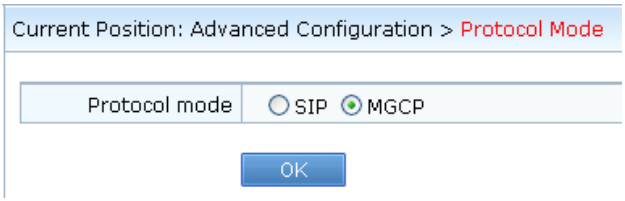
Data Planning

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

Item	Example
IP address of the IAD132E(T)	192.169.1.62
IP address of the default uplink gateway of the IAD132E(T)	192.169.1.1
IP address of the media gateway controller (MGC)	192.169.1.70
Domain name (MG domain name) of the IAD132E(T)	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.

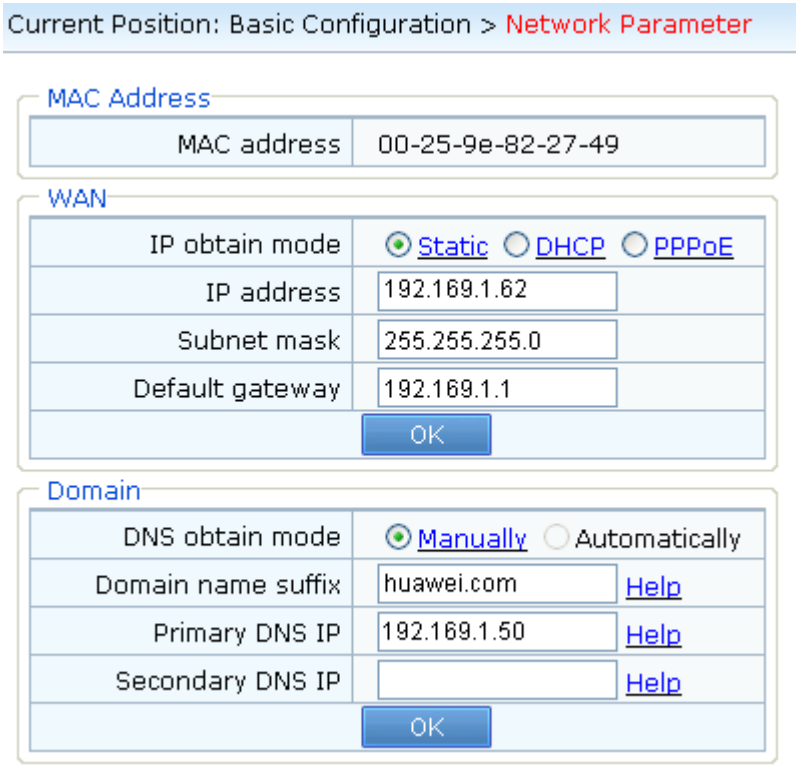


If the protocol mode is MGCP, you do not need to change it. If the protocol mode is SIP, you need to click **MGCP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol 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 IAD132E(T).

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

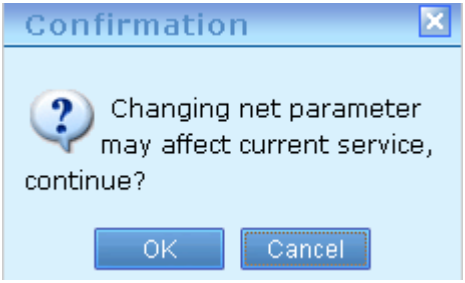


2. Set the parameters in the **WAN** area. As planned, set the IP address for the IAD132E(T) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.

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.

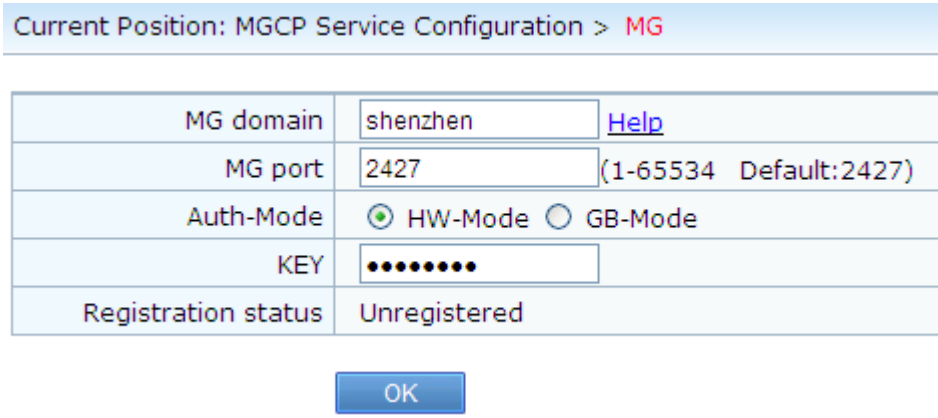
   If the DNS server exist in the actual networking, set the parameters in the **DNS** area on the IP address setting page of IAD web management to implement connecting to other network devices according to the domain name.

   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.

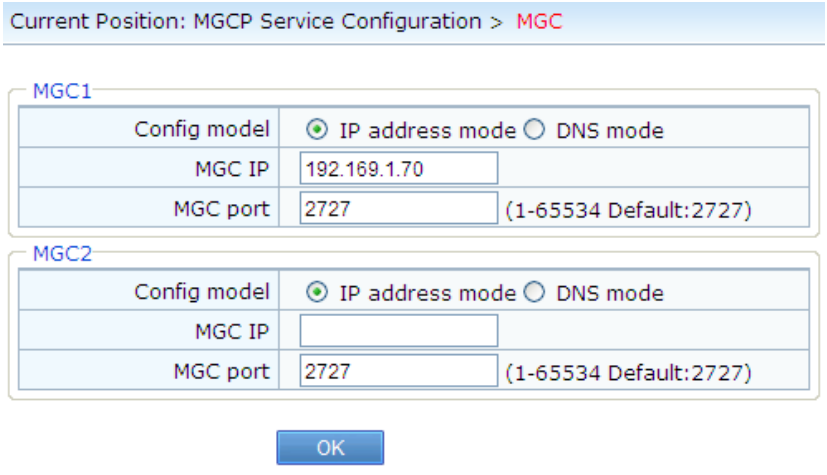
   c. (Optional) Set Domain name suffix, for example, set it to huawei.com.

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



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.



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

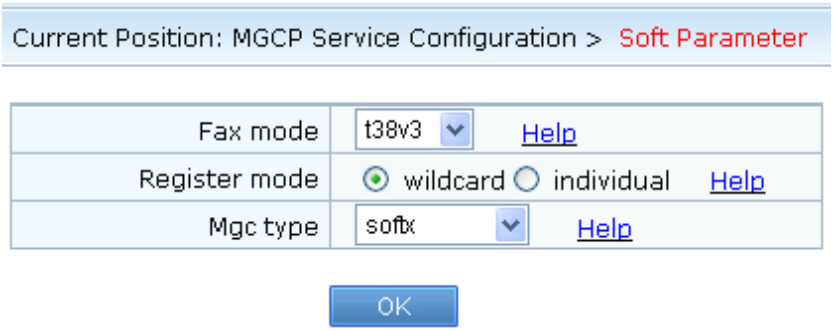
If the DNS is configured, you can select the **DNS mode** to configure the domain name of the MGCs.

Step 6 (Optional) Configure the MGCP Soft Parameter.

CAUTION

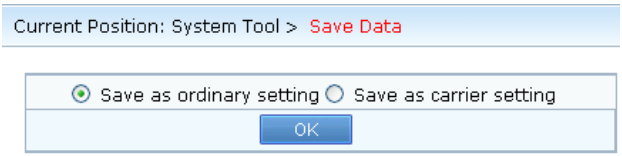
If the IAD connects to the SoftCo, configure the **Register mode** as **individual**.

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



Step 7 Save the data.

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



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, indicators of the BSY1 and BSY2 are steady on when users on slot 1 and slot 2 pick up the phones.

- 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 IAD132E(T) register with the IMS to implement the voice service. After configuring data in the IMS, configure data on the IAD132E(T) to implement the voice service.

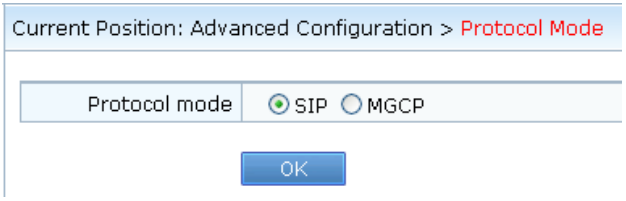
Data Preparation

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

Item	Example
IP address of the IAD132E(T)	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.

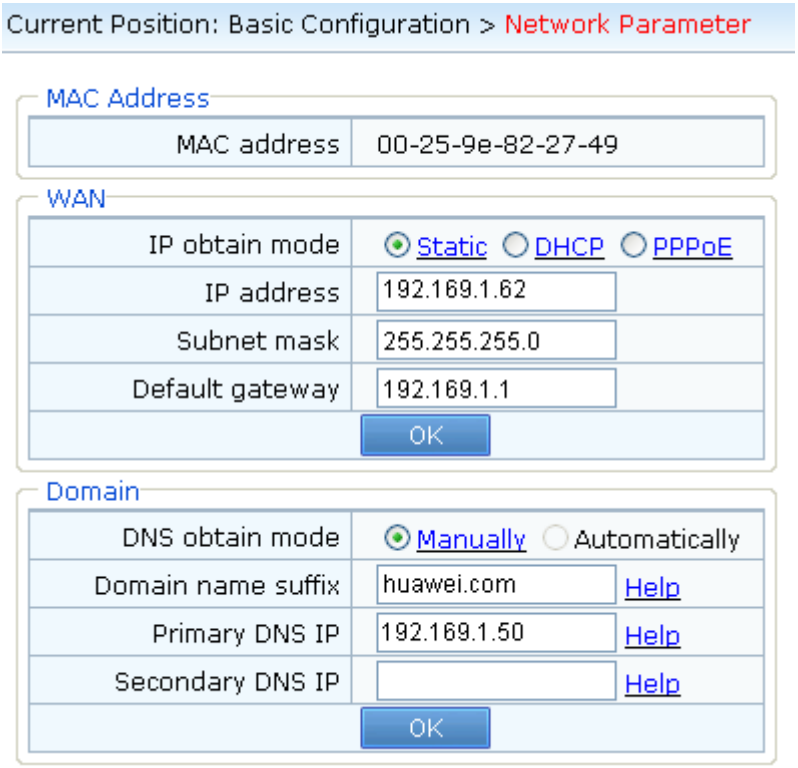


If SIP is used, retain the value. If MGCP is used, select **SIP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol can be switched after about two minutes. You need 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 IAD132E(T).

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

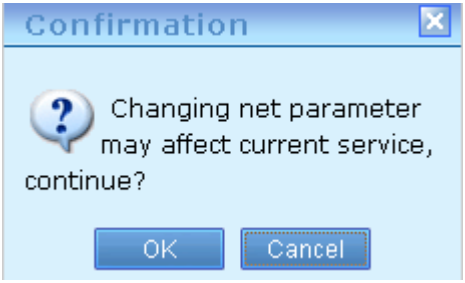


2. Set the parameters in the **WAN** area. As planned, set the IP address for the IAD132E(T) to **192.169.1.62**, subnet mask to **255.255.255.0**, and default gateway to **192.169.1.1**. Click **OK**.

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.

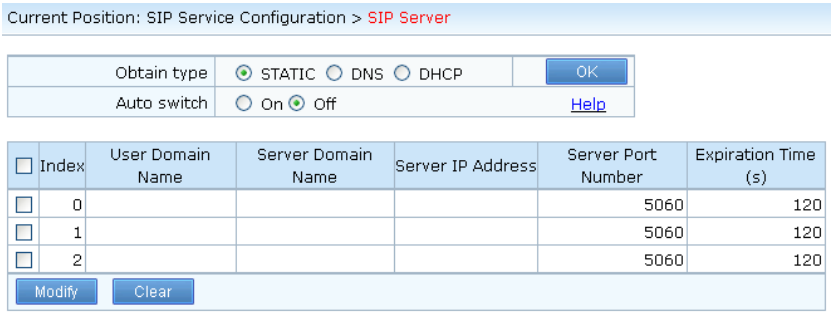
   a. Set **DNS obtain mode** to **Manually** or **Automatically**. If **Static** is selected to obtain the IP address, you can select only **Manually**.

   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.

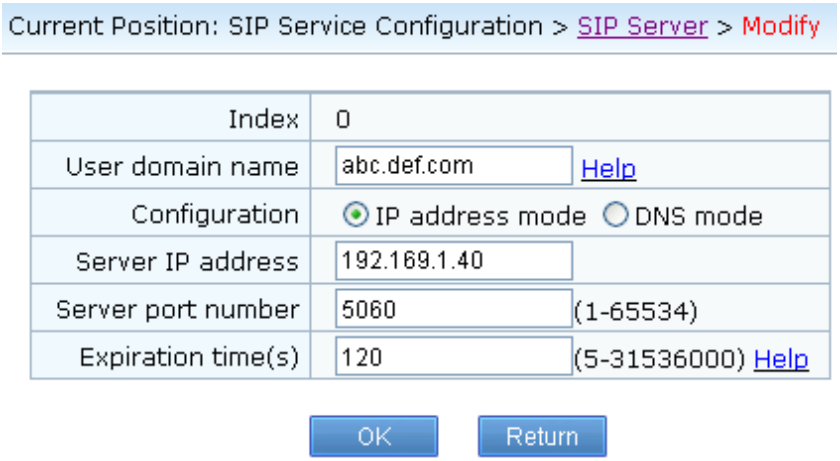


2. Click **STATIC** and click **OK** to confirm the **Obtain type**.

   The IAD132E(T) 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.



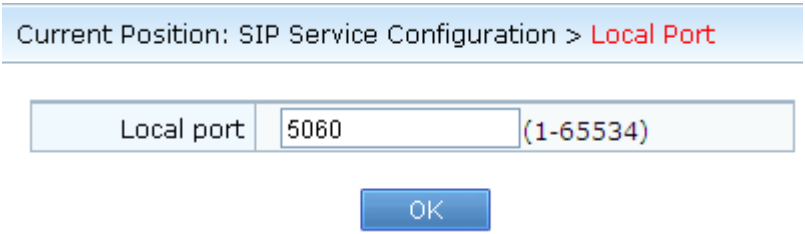
According to the provided data, enter **abc.def.com** in the **User domain name**, click **IP address mode** and enter the IP address of the SIP server in the **Server IP address** textbox. For other parameters, use default values. Then click **OK**.

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.

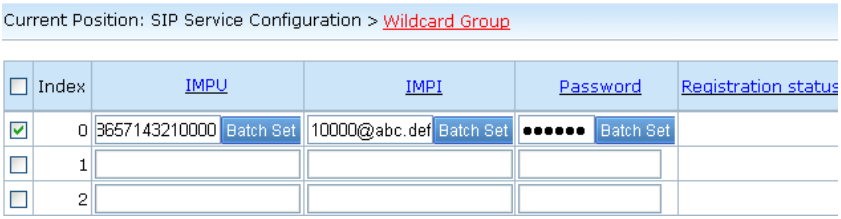
Click **Next**, the page of **SIP Service Configuration** > **Local Port** is displayed. The default port number of the SIP signaling is **5060**. You are not advised to change the port number. If change the port and then click **OK**.



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.

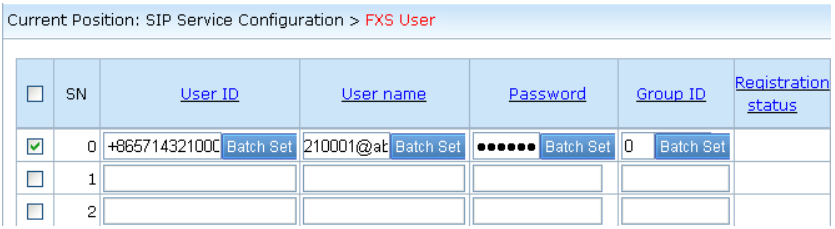
1. Click **Next**, and the page of **SIP Service Configuration** > **Wildcard Group** is displayed.



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.

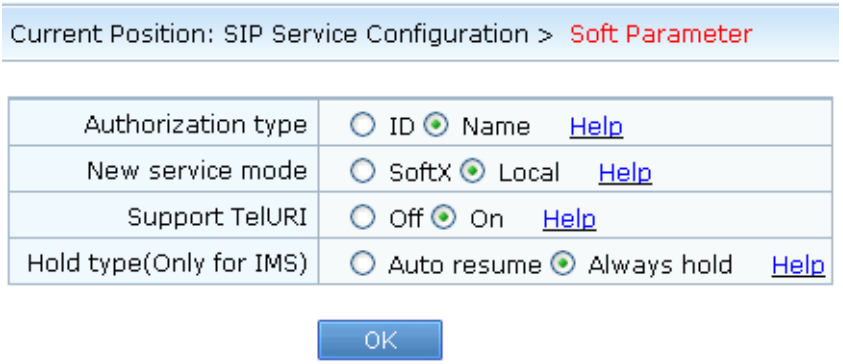
1. Click **Next**, and the page of **SIP Service Configuration** > **FXS User** is displayed.



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.

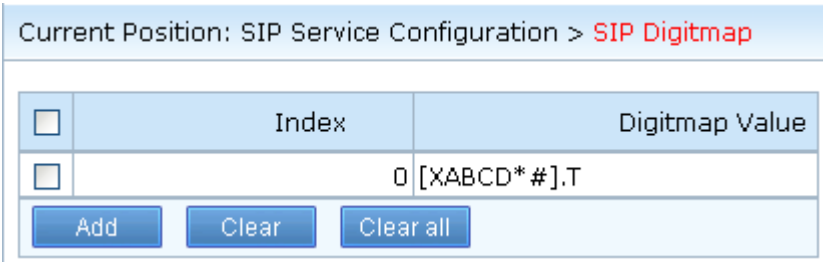
Click **Next**, and the page of **SIP Service Configuration** > **Soft Parameter** is displayed.



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

Step 9 (Optional) Configure the SIP digitmap.

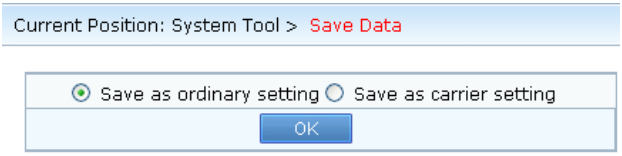
1. Click **Next**, and the page of **SIP Service Configuration** > **SIP Digitmap** is displayed.



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.



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, indicators of the BSY1 and BSY2 are steady on when users located in slot 1 and slot 2 pick up the phones.
- 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 IAD(SIP) Accessing Local PSTN Through FXO Ports

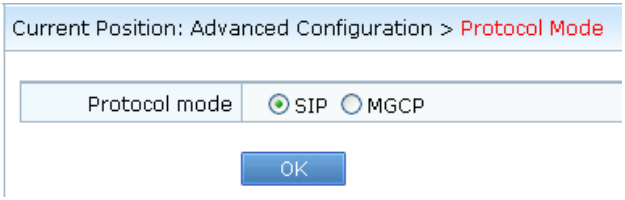
The IAD132E(T) with the OSU can connects to the local PSTN number through FXO ports, so that POTS users of the IAD132E(T) can easily make or receive calls on the local PSTN.

Prerequisites

- The SIP voice users are configured on the IAD, for example, eight FXS users of numbers from 56980000 to 56980007.
- Connect FXO cables to the local PSTN.

Procedure

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



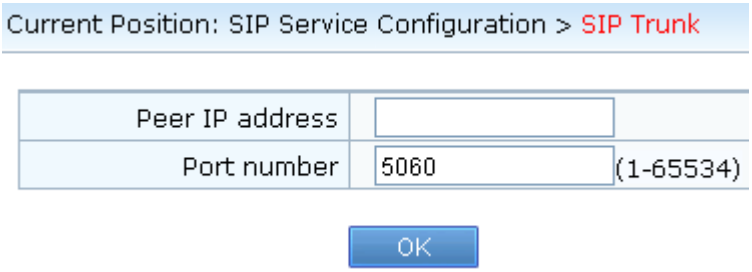
If the protocol mode is SIP, you do not need to change it. If the protocol mode is MGCP, you need to select **SIP** and click **OK**. The IAD needs to be restarted if the protocol is switched. The configured data will be lost after switching; therefore, switch the protocol with caution. The protocol 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 Local PSTN through the FXO ports to start the guide configuration.

Step 3 Configure the basic voice communication function. Click **Start**, and then configure step by step with the help information on the Web. Finished the step of **Configure the SIP users** (there is a step navigation up the page) means the basic voice communication implemented.

Step 4 (If the IAD accesses IMS/NGN, skip this step) When the IAD networks with the SoftCo, you need to configure a SIP trunk pointing to the SoftCo. So that when the IAD receives incoming calls, the call is transferred to the SoftCo that determines the route of incoming calls.

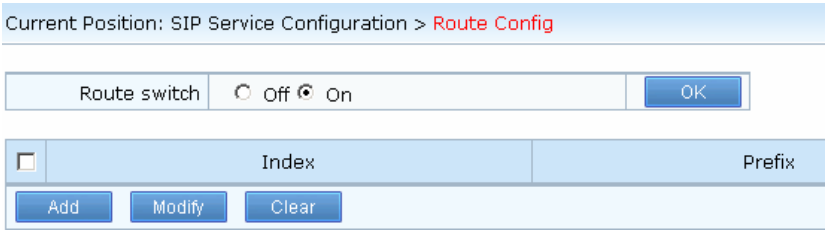
Click **Next**, and the page of **SIP Service Configuration** > **SIP Trunk** is displayed.



Set the value of **Peer IP address** to the IP address of the SoftCo.

Step 5 (If the IAD networks with the SoftCo, skip this step) When the IAD accesses IMS/NGN, start and configure the outgoing route.

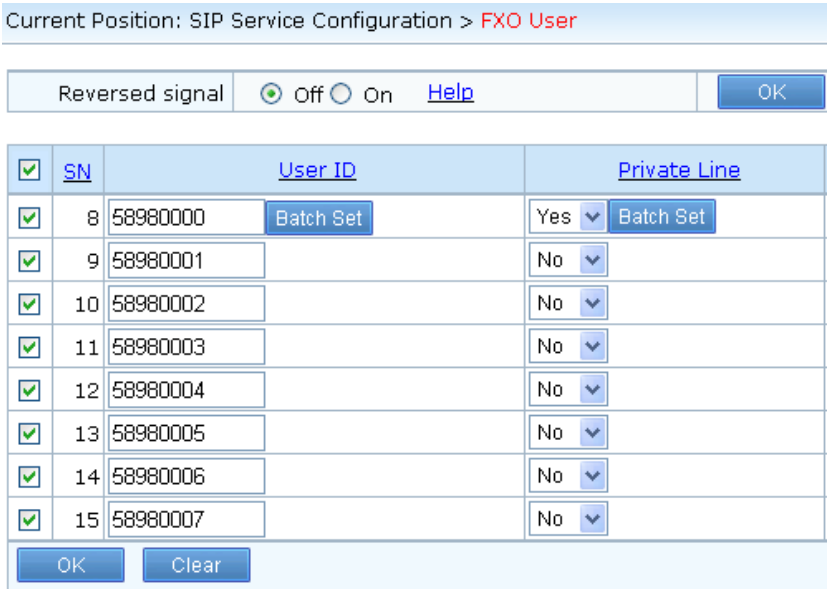
1. Click **Next**, and the page of **SIP Service Configuration** > **Route Config** is displayed.



2. Select **On** next to **Route switch**, and then click **OK**.
3. Click **Add** on the route configuration page and enter a prefix on the displayed page, and then click **OK**. Set the outgoing call prefix, for example, **288**. When the IAD dials a number starting with 288, an outgoing call is made through the FXO port.

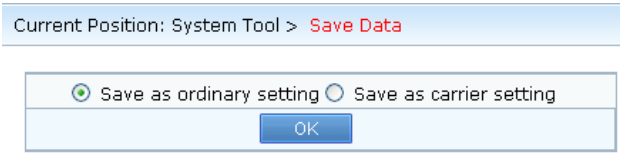
Step 6 On the Web page, bind FXS numbers to FXO ports. If the IAD networks with the SoftCo, presume that the bound FXS number is 58980000. If the IAD accesses IMS/NGN, presume that the bound FXS number is +8658980000.

Click **Next**, and the page of **SIP Service Configuration** > **FXO User** is displayed (assume that the IAD networks with the SoftCo). Set the parameters in the **Reversed signal**, **User ID** and **Private Line** according to the data plan and help information on the Web.



Step 7 Save the data.

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



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

----End

Verifying Configuration Result

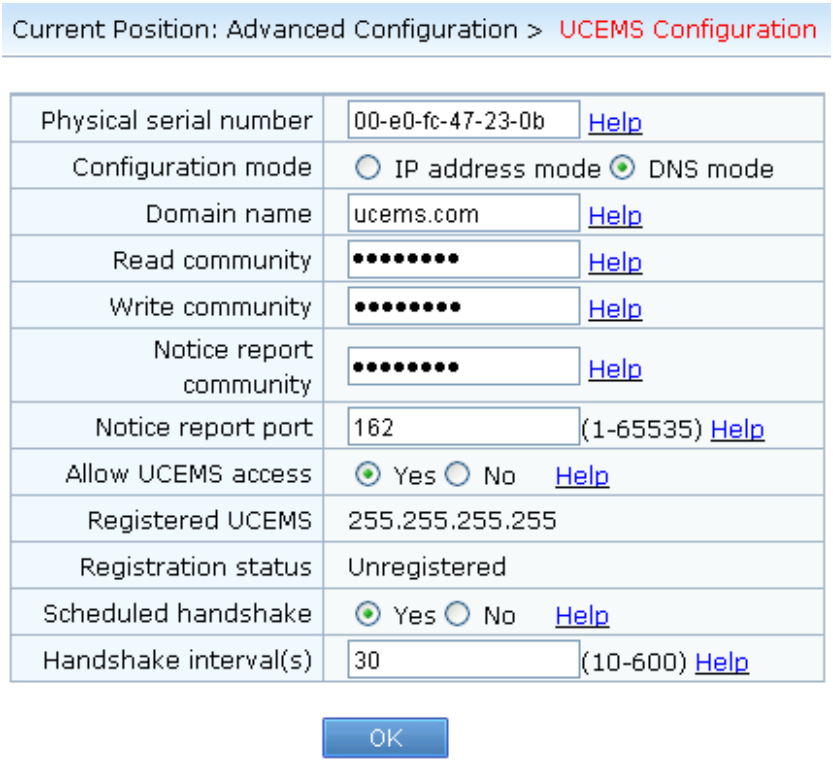
- Verify incoming calls through the FXO port.
  - When the IAD networks with the SoftCo, dial a PSTN number that is bound, for example, 28980000, to an FXS number on the IAD from the PSTN. If the phone of the FXS user whose number on the IAD is 56980000 rings, the IAD stores the PSTN number successfully.
  - When the IAD accesses IMS/NGN, dial a PSTN number that is bound, for example, 28980000, to an FXS number on the IAD from the PSTN. If the phone of the FXS user whose number is +8656980000 rings, it indicates that the IAD stores the PSTN number successfully.
- Verify outgoing calls through the FXO port.
  - When the IAD networks with the SoftCo, a SoftCo or an IAD user can dial a local PSTN number, for example, XXX28989999 (XXX indicates outgoing prefix).
  - When the IAD accesses IMS/NGN, an IAD user can dial a local PSTN number starting with 288, for example, 28889999.

4.6 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.



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.

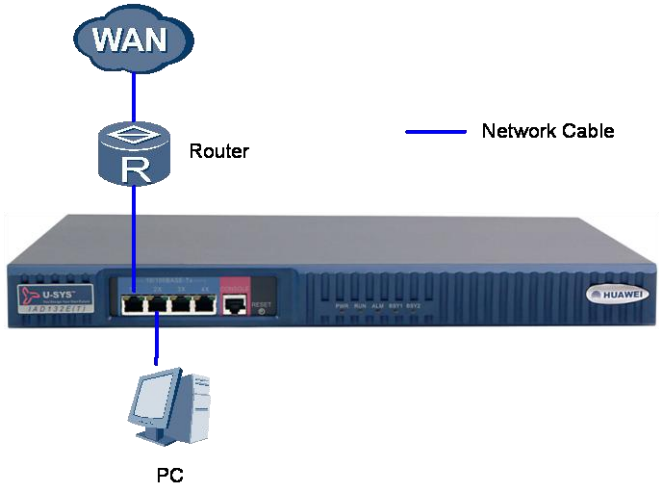
----End

4.7 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 IAD132E(T) provides four network ports. You can use a network port as the uplink port, and connect the other three network ports to the PC network port to perform network services.

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 IAD132E(T) runs normally, the IAD132E(T) must meet conditions such as the power supply, temperature, and humidity.

Parameter	Specification
Maximum capacity of the user and analog trunk	One OSU is configured optionally, which supports eight - port POTS users and provides the 8 - port analog trunk.
	Two OSUs are configured optionally, which support 16 - port POTS subscribers and provide the 16 - port analog trunk.
	One OSU and one ASID board are configured optionally, which support 24 - port POTS subscribers and provide the 8 - port analog trunk.
	Two ASID boards are configured optionally, which support 32 - port POTS subscribers.
Power supply	Input: 100 V to 240 V AC, 50 Hz or 60 Hz, maximum input current 2 A
Feeder voltage	ASID: -38V OSU: -38V
Virtual value of ringing voltage	ASID: 45Vrms OSU: 45Vrms
Maximum power consumption (varies according to board configurations)	One ASID: 66W Two ASIDs: 86W One OSU: 61 W Two OSUs: 76 W One OSU and one ASID board: 81 W
Dimensions	436 mm (width) x 365 mm (depth) x 42 mm (height)
Weight	5 kg
Running temperature	Long-term: 5 ℃ to 55 ℃ Short term: -40 ℃ to +85 ℃

Parameter	Specification
Relative humidity	Long term: 5% to 85% (no condensing) Short term: 0% to 90%
Air pressure	70 kPa to 106 kPa
Altitude	≤ 3000 m
Subscriber line distance (the subscriber line diameter is 0.4 mm and the phone is not paralleled)	≤ 5.0 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

7 Pins of the Subscriber Cable

Pin of the subscriber cable for OSU board

DB-68 Plug	Color/Number of the Core Wire	Wire Pair	User Port Corresponding to the OSU	
			Slot 1	Slot 2
34	Blue/b	FXS wire pair 7	7	23
33	White/a			
32	Orange/b	FXS wire pair 6	6	22
31	White/a			
30	Green/b	FXS wire pair 5	5	21
29	White/a			
28	Brown/b	FXS wire pair 4	4	20
27	White/a			
26	Gray/b	FXS wire pair 3	3	19
25	White/a			
24	Blue/b	FXS wire pair 2	2	18
23	Red/a			
22	Orange/b	FXS wire pair 1	1	17
21	Red/a			
20	Green/b	FXS wire pair 0	0	16
19	Red/a			
16	Brown/b	FXO wire pair 7	15	31
15	Red/a			
14	Gray/b	FXO wire pair 6	14	30
13	Red/a			
12	Blue/b	FXO wire pair 5	13	29
11	Black/a			
10	Orange/b	FXO wire pair 4	12	28

DB-68 Plug	Color/Number of the Core Wire	Wire Pair	User Port Corresponding to the OSU	
			Slot 1	Slot 2
9	Black/a			
8	Green/b	FXO wire pair 3	11	27
7	Black/a			
6	Brown/b	FXO wire pair 2	10	26
5	Black/a			
4	Gray/b	FXO wire pair 1	9	25
3	Black/a			
2	Blue/b	FXO wire pair 0	8	24
1	Yellow/a			

Pin of the subscriber cable for ASID board

DB-68 Plug	Color/Number of the Core Wire	Wire Pair	User Port Corresponding to the ASID Board	
			Slot 1	Slot 2
34	Blue/b	FXS wire pair 0	0	16
33	White/a			
32	Orange/b	FXS wire pair 1	1	17
31	White/a			
30	Green/b	FXS wire pair 2	2	18
29	White/a			
28	Brown/b	FXS wire pair 3	3	19
27	White/a			
26	Gray/b	FXS wire pair 4	4	20
25	White/a			
24	Blue/b	FXS wire pair 5	5	21
23	Red/a			
22	Orange/b	FXS wire pair 6	6	22
21	Red/a			
20	Green/b	FXS wire pair 7	7	23
19	Red/a			

DB-68 Plug	Color/Number of the Core Wire	Wire Pair	User Port Corresponding to the ASID Board	
			Slot 1	Slot 2
16	Brown/b	FXS wire pair 8	8	24
15	Red/a			
14	Gray/b	FXS wire pair 9	9	25
13	Red/a			
12	Blue/b	FXS wire pair 10	10	26
11	Black/a			
10	Orange/b	FXS wire pair 11	11	27
9	Black/a			
8	Green/b	FXS wire pair 12	12	28
7	Black/a			
6	Brown/b	FXS wire pair 13	13	29
5	Black/a			
4	Gray/b	FXS wire pair 14	14	30
3	Black/a			
2	Blue/b	FXS wire pair 15	15	31
1	Yellow/a			