

## **Preface**

Thanks for your favor in our product. To derive optimum performance from the product, please read this manual carefully before use.

This manual is applicable to the following product:

DS-6610 VPUC

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## Warning

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 35cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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# Documentation Information

This section describes the conventions and revision history of this document.

## Documentation Conventions

### Icon Conventions

Icon	Description
 <b>Tip</b>	Indicates information that can help you make better use of your product.
 <b>Note</b>	Indicates references that can further describe the related topics.
 <b>Caution</b>	Indicates situations that could cause data loss or equipment damage.
 <b>Warning</b>	Indicates situations that could cause minor personal injury.
 <b>Danger</b>	Indicates situations that could cause major personal injury or even death.

### Notation Conventions

Item	Description
“ ”	The quotation marks enclose the name of a software interface element. For example, click “OK”.
<b>Bold</b>	The text in boldface denotes the name of a hardware button. For example, press the <b>PTT</b> key.
->	The symbol directs you to access a multi-level menu. For example, to select “New” from the “File” menu, we will describe it as follows: “File -> New”.

## Revision History

Version	Release Date	Description
V00	09-2015	Initial release

# 1. Instructions

- Read the manuals of the product carefully before use.
- This product shall be serviced by qualified technicians only.
- Use the accessories specified by the Company only, in order not to damage the product.
- Keep the product clean and dry for optimum performance.

## 2. Introduction

DS-6610 VPUC is a self-developed smart gateway of the Company. It can realize communications between radios with different standards and frequencies and in the same or different networks. The gateway connection is as shown in the following example.

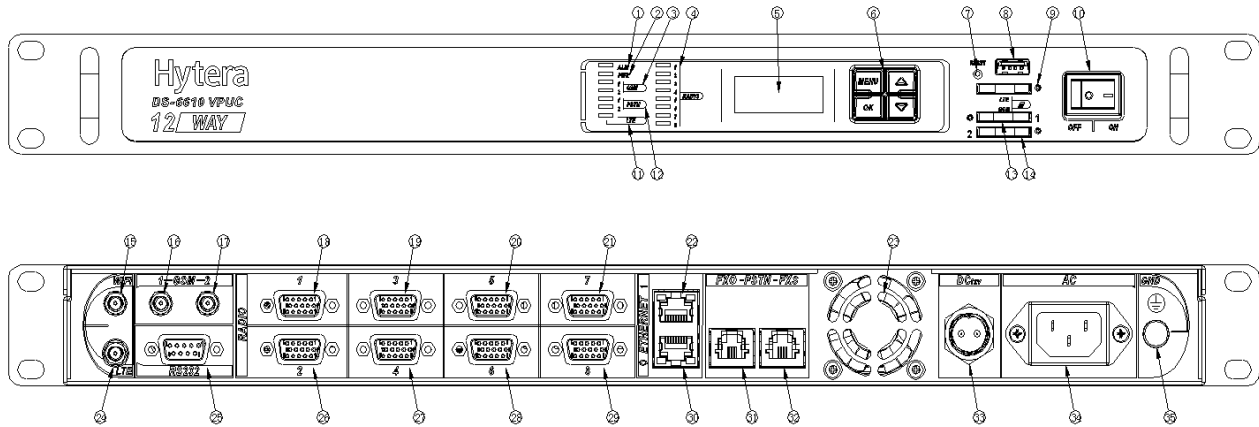


**Caution** Follow the labels on the cables for cable connection between the gateway and the mobile radios, so as to avoid device damage.

- Keep the gateway at least 2 meters away from each sucker antenna, and also keep the sucker antennas at least 2 meters away from each other.
- The frequencies of the two mobile radios must be different, so as to avoid frequency interference.
- DS-6610 VPUC uses installable external antennas for 2G and WLAN wireless communication. The interface type of all the antenna is male and on the devices the interface type to the corresponding SMA sockets is female. The device must be professionally installed. Antennas to the devices can be swapped but the antennas must be provided by the manufacturer for ensuring that the proper antennas are employed.

# 3. Product Overview

## 3.1 Product Controls



No.	Part Name	No.	Part Name
1	Alarm Indicator	9	DC Power Inlet
2	Power Indicator	10	Radio 1 Connector (DB15)
3	Radio 1 Indicator	11	Radio 2 Connector (DB15)
4	Radio 2 Indicator	12	Serial Port (RS232)
5	LCD Display	13	Ethernet Port 0 (RJ45)
6	Function Keys (Menu/OK/Up/Down Key)	14	Ethernet Port 1 (RJ45)
7	Reset Key	15	Ground Screw
8	Power Switch	-	-

## 3.2 LED Indicator

LED Indicator	Gateway Status
Alarm Indicator (ALM)	<ul style="list-style-type: none"> <li>● Glows red: the gateway is in the alarm state (this feature is not available yet).</li> <li>● Off: the gateway works properly.</li> </ul>
Power Indicator (PWR)	<ul style="list-style-type: none"> <li>● Glows green: the gateway is on.</li> </ul>








LED Indicator	Gateway Status
	<ul style="list-style-type: none"> <li>● Off: the gateway is off.</li> </ul>
Radio 1 Indicator (RADIO1)	<ul style="list-style-type: none"> <li>● Off: the channel is idle.</li> <li>● Glows orange: the gateway is transferring voice to Radio 1.</li> <li>● Glows green: the gateway is receiving voice from Radio 1.</li> </ul>
Radio 2 Indicator (RADIO2)	<ul style="list-style-type: none"> <li>● Off: the channel is idle.</li> <li>● Glows orange: the gateway is transferring voice to Radio 2.</li> <li>● Glows green: the gateway is receiving voice from Radio 2.</li> </ul>

### 3.3 LCD Display

The display information on the LCD display is shown below:



No.	Name	Description
1	Status Bar	<p>Displays the connection status of the Ethernet ports and the radios:</p> <ul style="list-style-type: none"> <li>●  : The Ethernet cable is connected successfully.</li> <li>●  : The Ethernet cable is not connected or connected improperly.</li> <li>●  : The connected radio is online.</li> <li>●  : The radio is not connected, or the connected radio is offline.</li> </ul> <p> <b>Note</b></p> <p>The icons from left to right indicate the Ethernet port 0, Ethernet port 1, Radio 1 connector and Radio 2 connector respectively.</p>
2	Menu Pane	Displays the menus.

# 4. Basic Operations

## 4.1 Turning the Gateway On/Off

### Caution

Turn off the connected radio(s) before turning off the gateway.

- To turn on the gateway, toggle the power switch to the “ON” position.
- To turn off the gateway, toggle the power switch to the “OFF” position.

## 4.2 Resetting the Gateway

To reset the gateway, long press the **Reset** key for five seconds. Then the gateway will restart and be reset to factory default settings.

## 4.3 Making the Basic Settings

You can use the function keys beside the LCD display to make basic settings, including the digital signal processing (DSP) settings, IP settings and language settings, and view information about the gateway.

### Note

- To return to the previous menu from a submenu, press the **Up/Down** key to highlight “Back”, and then press the **OK** key.
- To directly return to the main menu from a submenu, press the **Menu** key.

### 5.3.1 DSP Settings

You can set the DSP for voice calls. The DSP settings include the settings of voice activity detection (VAD), sensitivity, call hang time and RX audio delay time. The VAD feature is used to detect if the radio is transmitting, so as to request or release the talk right via the gateway software. Thus the feature can avoid the failure of communications between the radios due to no talk right event (including talk right request and release) or talk right event loss in the system.

After the VAD feature is enabled, the audio may be muted between syllables or during pauses in speech. To avoid this problem, you can set the call hang time to keep the channel occupied within preset time.

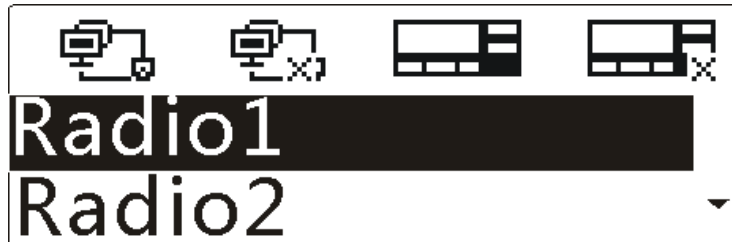
The RX audio delay feature is used to buffer the voice packet for a period of time, so as to prevent the received voice from being lost due to the situation that the server detects the voice event later than the transfer of the voice packet.

### Setting the VAD

**Step 1** Press the **Up** key to highlight “DSP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Radio1” or “Radio2”, and then press the **OK** key to enter the menu.



**Step 4** Press the **OK** key to select “VAD”, and then press the **Up/Down** key to highlight “On” or “Off”.



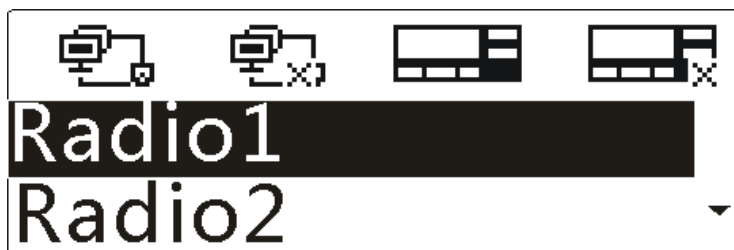
**Step 5** Press the **OK** key to finish.

### Setting the Sensitivity

**Step 1** Press the **Up** key to highlight “DSP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Radio1” or “Radio2”, and then press the **OK** key to enter the menu.



**Step 4** Press the **Down** key to highlight “Sensitivity”, as shown below.



**Step 5** Press the **OK** key, and then press the **Up/Down** key to set the sensitivity level, as shown below.

The smaller value indicates higher sensitivity.



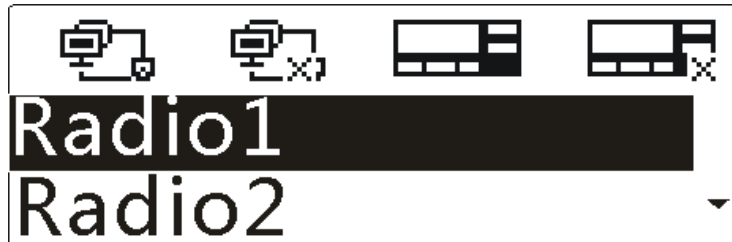
**Step 6** Press the **OK** key to finish.

### Setting the Call Hang Time

**Step 1** Press the **Up** key to highlight “DSP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Radio1” or “Radio2”, and then press the **OK** key to enter the menu.



**Step 4** Press the **Down** key to highlight “Hang Time”, as shown below.



**Step 5** Press the **OK** key, and then press the **Up/Down** key to set the time, as shown below.



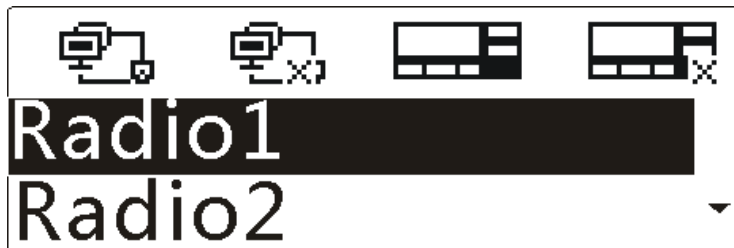
**Step 6** Press the **OK** key to finish.

### Setting the Rx Audio Delay Time

**Step 1** Press the **Up** key to highlight “DSP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight "Radio1" or "Radio2", and then press the **OK** key to enter the menu.



**Step 4** Press the **Down** key to highlight "Delay Time", as shown below.



**Step 5** Press the **OK** key, and then press the **Up/Down** key to set the time, as shown below.



**Step 6** Press the **OK** key to finish.

### 5.3.2 IP Settings

You can set the network card and the local IP address. The gateway has two Ethernet ports, each of

which is with a network card. The network cards can be enabled or disabled as per actual requirements. To enable a network card, you need to set its IP address as the static IP address or a dynamic IP address.

### Setting the Network Card

**Step 1** Press the **Up/Down** key to highlight “IP settings” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Network0” or “Network1”, and then press the **OK** key to enter the menu.



**Step 4** Press the **OK** key to select “Netcard”, and then press the **Up/Down** key to highlight “Enable” or “Disable”.



**Step 5** Press the **OK** key to finish.

### Setting the Local IP Address

- To set the static IP address

**Step 1** Press the **Up/Down** key to highlight “IP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Network0” or “Network1”, and then press the **OK** key to enter the menu.



**Step 4** Press the **Down** key to highlight “Mode”, as shown below.



**Step 5** Press the **OK** key, and then press the **Up/Down** key to highlight “Static”, as shown below.



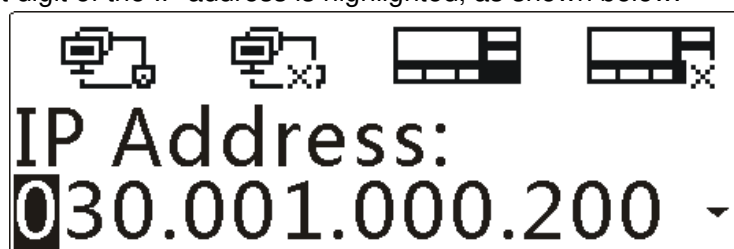
**Step 6** Press the **OK** key to enter the menu, as shown below.





**Step 7** Press the **Up/Down** key to highlight “IP Address”, and then press the **OK** key.

Then the first digit of the IP address is highlighted, as shown below.



**Step 8** Press the **Up/Down** key to change the value, and then press the **OK** key to confirm the value.

Then the next digit will be highlighted. Repeat above-mentioned steps until you finish setting the IP address.



**Note**

Upon wrong settings of the IP address, the corresponding prompt will appear, and then you need to set it again.

**Step 9** Follow the same operations in Step 7 and Step 8 to set the “Subnet Mask” and “Default GW” respectively.

- To set the dynamic IP address

**Step 1** Press the **Up/Down** key to highlight “IP setting” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight “Network0” or “Network1”, and then press the **OK** key to enter the menu.



**Step 4** Press the **Down** key to highlight “Mode”, as shown below.



**Step 5** Press the **OK** key, and then press the **Up/Down** key to highlight “Dhcp”, as shown below.



**Step 6** Press the **OK** key to finish.

### 5.3.3 Language Settings

You can set Chinese or English as the display language.

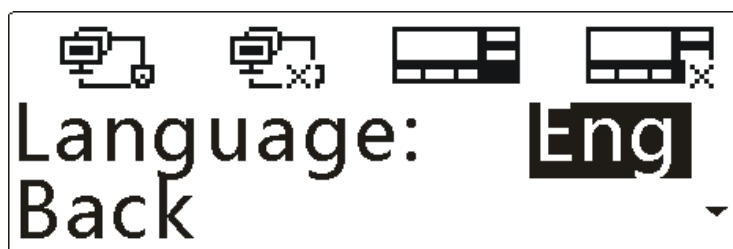
**Step 1** Press the **Up/Down** key to highlight “Language” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **OK** key, and then press the **Up/Down** key to highlight “中文” or “Eng”, as shown below.



**Step 4** Press the **OK** key to finish.

### 5.3.4 Gateway Information Check

You can view the gateway information, such as the software and hardware versions, network and the storage.

#### Viewing the Version

**Step 1** Press the **Down** key to highlight “About” in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **OK** key to enter the menu, as shown below.



**Step 4** Press the **Up/Down** key to view the version of software and hardware.

### Viewing the Network Information

**Step 1** Press the **Down** key to highlight "About" in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Up/Down** key to highlight "Network0 Info" or "Network1 Info", and then press the **OK** key to enter the menu.



**Step 4** Press the **Up/Down** key to view the local IP address, subnet mask, default gateway and MAC address.

### Viewing the Storage Information

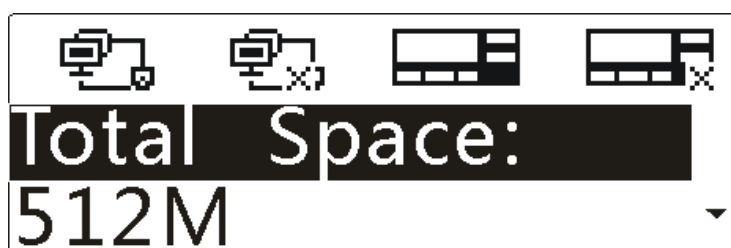
**Step 1** Press the **Down** key to highlight "About" in the main menu, as shown below.



**Step 2** Press the **OK** key to enter the menu, as shown below.



**Step 3** Press the **Down** key to highlight "Storage Info", and then press the **OK** key to enter the menu, as shown below.



**Step 4** Press the **Up/Down** key to view the total space, available space and file system status.

## 5. Product Configuration

Before using the gateway, you need to configure it and the server. For detailed configuration, see the *DS-6610 VPUC Configuration Guide* in the disc.

## 6. Care and Cleaning

To guarantee optimal performance as well as a long service life of the product, please follow the tips below.

### Product Care

- Do not pierce, hit, throw, forcibly shake or scrape the product.
- Keep the product far away from substances that can corrode the circuit.
- Keep the product dry.
- Keep the product away from overheating, which may shorten lifespan of the electronic parts, or even distort or melt the plastic parts.
- Keep the product away from extreme cold; otherwise, the circuit board may be damaged by vapor generated when the product is used at normal temperature.

### Product Cleaning



#### Caution

Turn off the product and remove the power cord before cleaning.

- Clean up the dust and fine particles on the product surface regularly with a clean and dry lint-free cloth or a brush.
- Use neutral cleanser and a non-woven fabric to clean the keys and case after long-time use. Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations, so as to avoid surface and case damage.
- Make sure the product is completely dry before use.