VM8500-E
Video Management Server
Quick Guide

Manual Version: P100-20140307

Notice

The information in this manual is subject to change without notice. Every effort has been made in the preparation of this manual to ensure accuracy of the contents, but all statements, information, and recommendations in this manual do not constitute the warranty of any kind, express or implied.

Environmental Protection

This product has been designed to comply with the environmental protection requirements. The storage, use, and disposal of this product must meet the applicable national laws and regulations.

Safety and Compliance Information

Conventions Used Symbol

The symbols in this chapter are shown in the following table. They are used to remind the reader of the safety precautions during equipment installation and maintenance.

Safety Symbol	Description
	Generic alarm symbol: To suggest a general safety concern.
	ESD protection symbol: To suggest electrostatic-sensitive equipment.
	Electric shock symbol: To suggest a danger of high voltage.

Safety Information

WARNING!

Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.

Warnings:

- If the product does not work properly, please contact your dealer or the nearest service center. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- The separate earthing terminal must be permanently connected to earth.
- For AC supplied model: The plug-socket combination must be accessible at all times as it serves as the main disconnecting device.
- Before the power cable is installed or removed, the power must be turned off.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

Caution: Fiber optic ports – optical safety.

Never look at the transmit laser while the power is on. Never look directly at the fiber ports and the fiber cable ends when they are powered on.

Caution: Use of controls or adjustments to the performance or procedures other than those specified herein may result in hazardous laser emissions.

Regulatory Compliance

FCC Part 15

This equipment has been tested and found to comply with the limits for 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.

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

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

LVD/EMC Directive

This product complies with the European Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC.

WEEE Directive–2002/96/EC

The product this manual refers to is covered by the Waste Electrical & Electronic Equipment (WEEE) Directive and must be disposed of in a responsible manner.

Contents

1 Overview

The VM8500-E is a video surveillance management server specifically developed for surveillance applications for security protection purposes. With optimized and integrated software and hardware, the VM8500-E includes various functional modules embedded in VM3.0 software, enabling it to meet application requirements of large- and medium-scale video surveillance systems.

Featuring mass storage access, high reliability, high compatibility, and comprehensive support for high definition (HD), the VM8500-E has a wide range of applications in public security, finance, transportation, electric power, education, and medical care.

Appearance

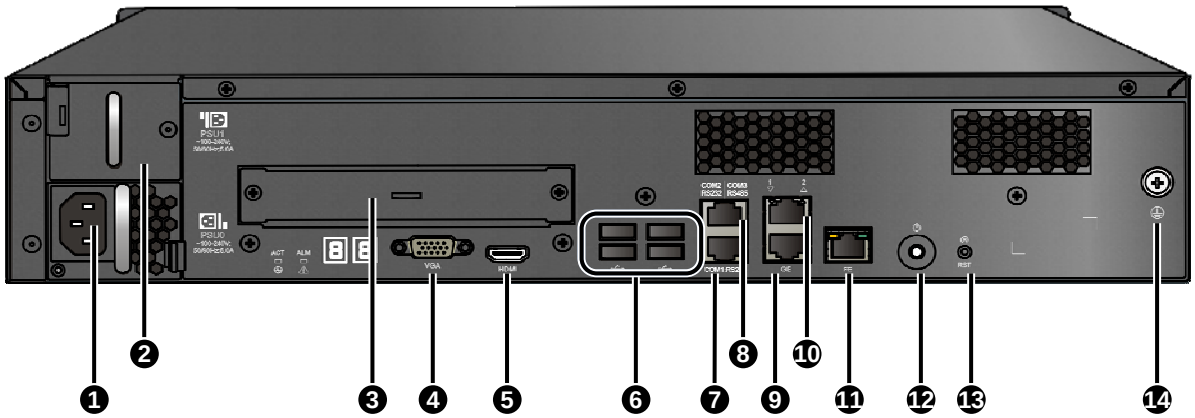
The actual appearance of the device may be different from the illustrations below.

Figure 1-1 Front view

Figure 1-2 Rear view

Ports and Buttons

Figure 1-3 Ports and buttons on the rear panel



1: AC input (for PSU 0)	2: Extended power slot (for PSU 1)
3: Extended Network Interface Card (NIC) slot	4: VGA video output
5: HDMI video output	6: USBs (× 4)
7: Serial port 1 (RS-232)	8: Serial port 2 (RS-232)/Serial port 3 (RS-485)
9: GE port 1	10: GE port 2
11: FE port	12: Power on/off button
13: Reset button	14: Grounding terminal

For detailed descriptions of the ports and buttons, refer to Table 1-1.

Table 1-1 Port and button descriptions

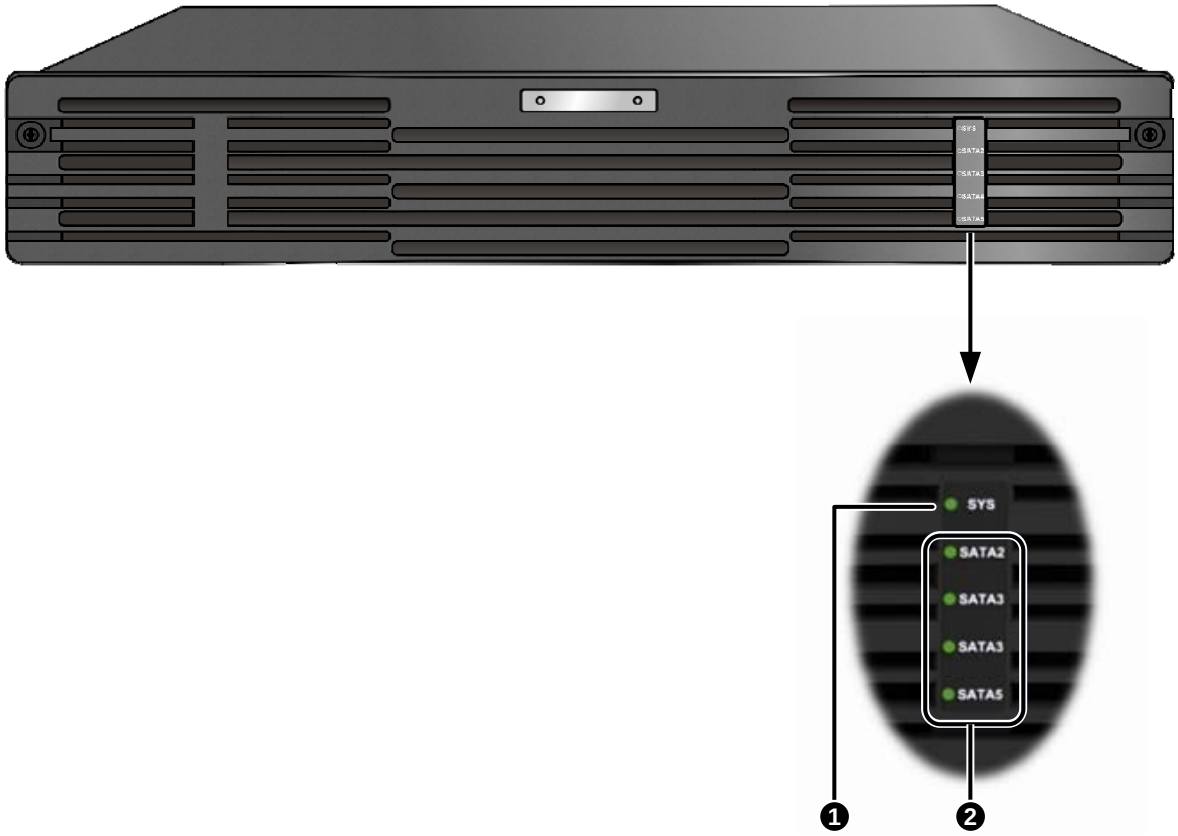
Port	Description
AC input	100 to 240 V AC, 50 Hz/60 Hz.
Extended power slot	Standard: 1 slot. Optional: 2 slots in 1+1 redundancy mode.
Extended NIC	Two options: • NIC with 4 GE ports (RJ-45). • NIC with 2 10GE ports (SFP+).

Port	Description
VGA output	For connection to a VGA display device. Supported resolutions and screen refresh rates: • 1920 × 1080, 50P • 1920 × 1080, 60P • 1280 × 720, 50P • 1280 × 720, 60P • 1280 × 1024, 60 Hz • 1024 × 768, 60 Hz
HDMI video output	For connection to an HDMI display device. Supported resolutions and screen refresh rates: • 1920 × 1080, 50P • 1920 × 1080, 60P • 1280 × 720, 50P • 1280 × 720, 60P • 1280 × 1024, 60 Hz • 1024 × 768, 60 Hz
USBs	For connection to a USB device.
Serial port 1 (RS-232)	RJ-45 port for debugging and maintenance purposes.
Serial port 2 (RS-485/RS-232)	RJ-45 port compatible with RS-485 and RS-232 ports.
GE port	10/100/1000 Mbit/s adaptive Ethernet port for connection to a service network.
FE port	10/100 Mbit/s adaptive Ethernet port for connection to a client computer.
Power on/off	Pressing and holding this button for 3 seconds powers off the device. However, this is not a recommended method to power off the device.
Reset button	Pressing this button once restarts the device.
Grounding terminal	For connection to the grounding cable of the device.

LEDs and Nixie Tubes

Front Panel LEDs

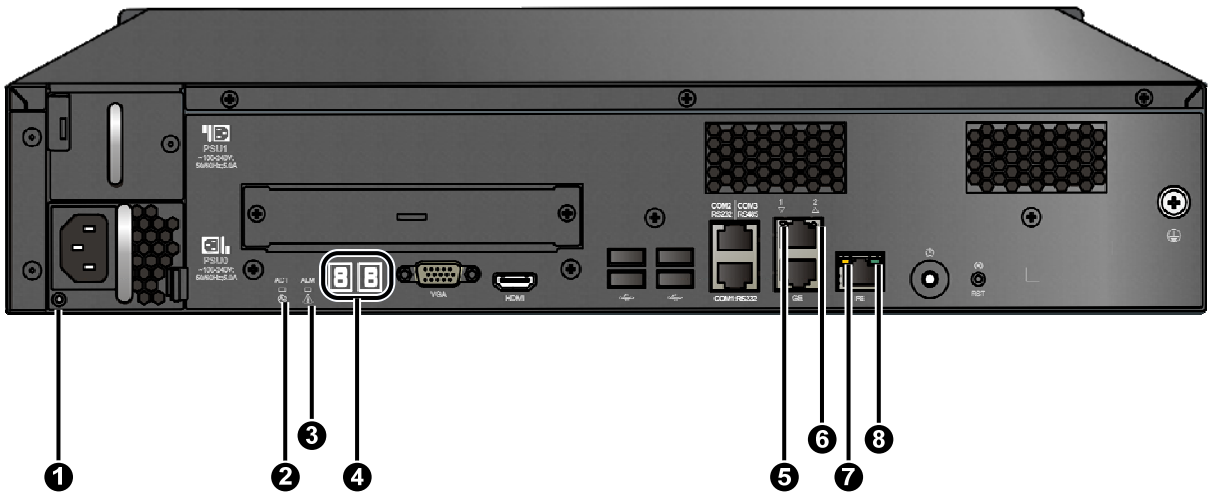
Figure 1-4 Front panel LEDs



1: System LED	2: Hard disk status LEDs

Rear panel LEDs and nixie tubes

Figure 1-5 Rear panel LEDs and nixie tubes



1: Power module LED	2: Heartbeat LED
3: Alarm LED	4: Device status nixie tubes
5: GE port 1 LED	6: GE port 2 LED

7: FE port LINK LED	8: FE port ACT LED

LEDs and nixie tube descriptions

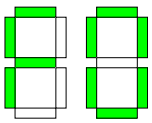
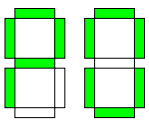
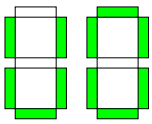
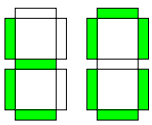
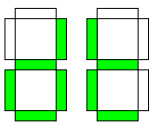
For LED descriptions, refer to Table 1-2. For nixie tube descriptions, see Table 1-3.

Table 1-2 LED descriptions

LED	Color	Indication
System LED	Green/yellow	• Steady green: The system is operating properly. • Steady yellow: At least one hardware component is faulty.
Hard disk status LED	Green	LEDs SATA2-SATA5 indicate status of hard disks in slots 2-5: • Off: The hard disk is powered off or not installed. • Steady green: The hard disk is linked. • Blinking green: The hard disk is reading or writing data.
Power module LED	Green/red	• Off: The power module is not connected to AC power. • Steady green: The power module is connected to AC power, and the device is powered on. • Blinking green: With one power module installed, the power module is connected to AC power, but the device is not powered on. • Blinking red: With two power modules installed, power module A is connected to AC power but B is not, and the device is powered on, then the LED for power module B blinks red. • Steady red: The power module is faulty.
Heartbeat LED	Green	• Off: The device is powered off. • Blinking at 1 Hz: The system is operating properly. ***Note:*** *The Heartbeat LED does not blink until the system is completely started.*
Alarm LED	Yellow	• Off: The device hardware is normal. • Steady on: The device has a faulty hardware component.
GE port LED	Green/yellow	• Off: No network connection. • Steady green: A network connection is established, and the data transfer rate is 1000 Mbit/s. • Blinking green: The data transfer rate is 1000 Mbit/s, and the port is transmitting or receiving data. • Steady yellow: A network connection is established, and the data transfer rate is 100 Mbit/s. • Blinking yellow: The data transfer rate is 100 Mbit/s, and the port is transmitting or receiving data.

LED		Color	Indication
FE port LEDs	LINK (Link status LED)	Yellow	• Off: No network connection. • Steady on: A network connection is established.
	ACT (Data transceiving LED)	Green	• Steady on: A network connection is established, but no data is being transmitted or received. • Blinking: A network connection is established, and data is being transmitted or received.

Table 1-3 Nixie tube descriptions

Status	Indication
Two digits	It shows the main board temperature (in Celsius degrees) during system operation. Blinking digits indicates a temperature alarm.
F0/0F/FF (F blinks) 	Blinking F indicates that the corresponding fan module is faulty. 0 indicates that the corresponding fan module is working properly. The nixie tube on the left represents fan module 0, and that on the right represents fan module 1.
P0/0P/PP (P blinks) 	Blinking P indicates that the corresponding power module is faulty. 0 indicates that the corresponding power module is working properly. The nixie tube on the left represents PSU 0, and that on the right represents PSU 1.
U0/0U/UU (U blinks) 	• U0: The CMOS battery is under voltage. • 0U: The main board voltage is abnormal. • UU: Both the CMOS battery voltage and the main board voltage are abnormal.
t0/0t/tt (t blinks) 	• t0: The fan on the left side of the CPU radiator is faulty. • 0t: The fan on the right side of the CPU radiator is faulty. • tt: The fans on both sides of the CPU radiator are faulty.
dt blinks 	According to S.M.A.R.T, the hard disk temperature is out of the normal range. In this case, you need to check the dust filter.

System Specifications

NOTE!

The specifications are subject to change without prior notice.

Table 1-4 System specifications

Item	Description
Height	2 U (86.1 mm)
Dimensions (H × W × D)	86.1 mm × 446 mm × 500 mm (excluding the mounting brackets and slide rails)
Number of fans	4
Weight	• Standard: < 12 kg • Maximum: < 14 kg
Overall power consumption	Maximum: 200 W
Maximum number of hard disks	4
Hard disk type	SATA II
Working temperature	0°C to 40°C Recommended range: 10°C to 35°C
Working humidity	20% to 80% (non-condensing)
Storage temperature	–20°C to +60°C
Storage humidity	10% to 90% (non-condensing)
Working altitude	–60 m to +5000 m

Factory Default Settings for Network Parameters

Table 1-5 lists the factory default settings for the network parameters. You may change these settings as required.

Table 1-5 Factory default settings for network parameters

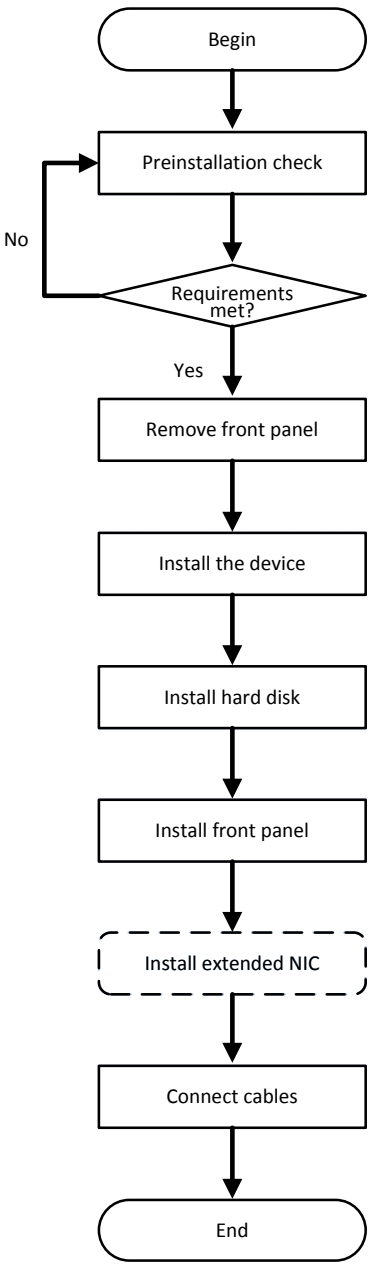
Item	Description
FE port	Obtains an IP address through DHCP.
GE port 1	• IP address/subnet mask: 192.168.0.10/255.255.255.0 • Default gateway: None.
GE port 2	Obtains an IP address through DHCP.
Extended network port (Optional)	Obtains an IP address through DHCP.
Host name	The host name is “Localhost”.

2 Hardware Installation

This chapter describes the hardware installation procedure.

Installation Procedure

Figure 2-1 Hardware installation flowchart



Preinstallation Check

Checking Device Components

Check the device model and accessories delivered with the package to ensure that all the components are complete and intact. For details about the device model, types and quantities of accessories, see the packing list.

Checking Installation Tools

Prepare the following tools:

- Straight screwdriver and cross screwdriver
- Antistatic wrist strap or gloves

Checking the Installation Site

The device must be installed indoors, and the lightning protection and grounding requirements must be met.

- Ensure that the installation site meets lightning protection requirements. If necessary, use appropriate lightning protection apparatuses for the device.
- Ensure that the device is properly grounded through the grounding terminal. For details, refer to "Connecting the Grounding Cable".

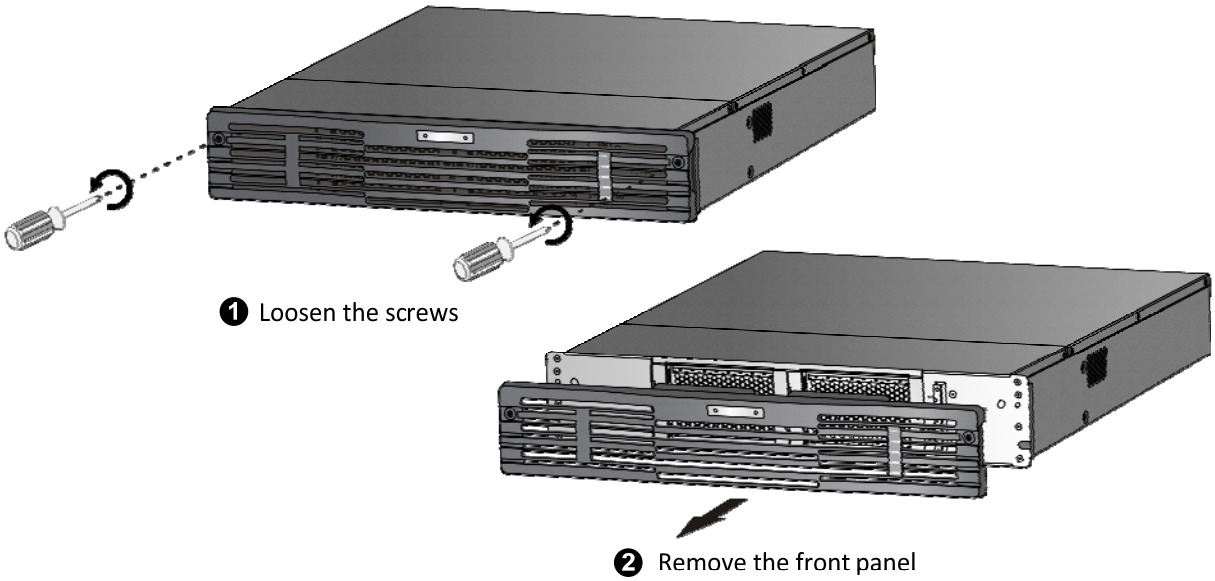
WARNING!

Do not remove the tamper seal (as shown in Figure 2-2) from the device chassis without confirmation from your local dealer.

Figure 2-2 Tamper seal

Removing the Front Panel

Figure 2-3 Removing the front panel



Installing the Device in a 19-Inch Cabinet

Preinstallation Check

Check the grounding and stability of the cabinet. Ensure that the cabinet has sufficient weight-bearing capacity for the device, and no obstacle is affecting the installation inside or around the cabinet.

Before installing the device in a standard 19-inch cabinet, check that:

- The cabinet is properly grounded and stabilized.
- The weight-bearing capacity of the cabinet is sufficient to support the device, and no obstacle inside or around the cabinet will affect the installation.
- The cabinet door is not a glass door.
- The cabinet is supported by a bracket instead of rollers.

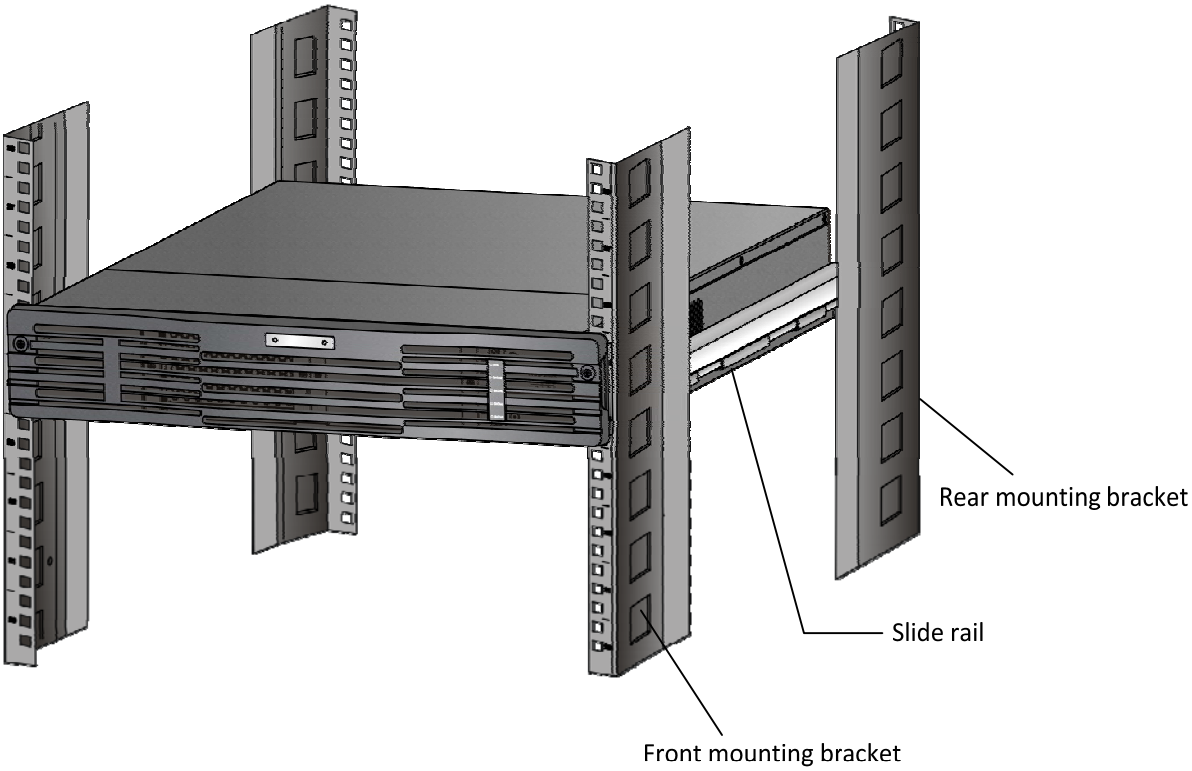
Installation Procedure

Planning the installation position in the cabinet

Plan the space and position according to the height (2 U) of the device and the number of devices you want to install. If the cabinet is equipped with a tray, use the tray for the installation. If no tray is available, use slide rails (see Figure 2-5).

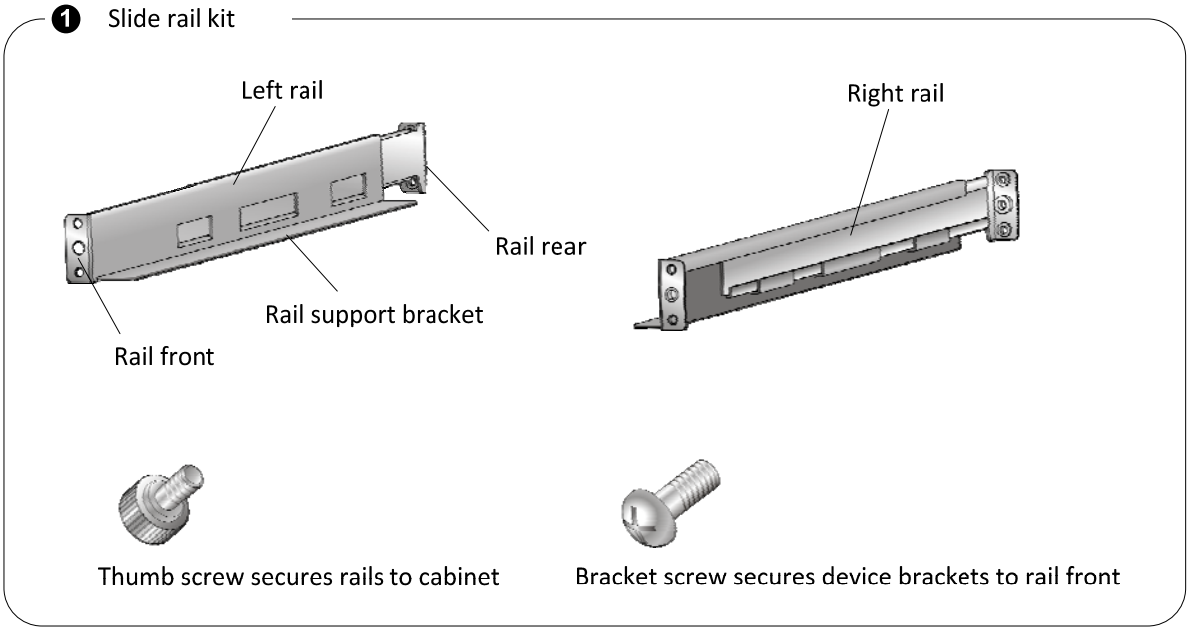
This procedure takes slide rails as an example. Figure 2-4 shows the slide rails and an installed device in the cabinet.

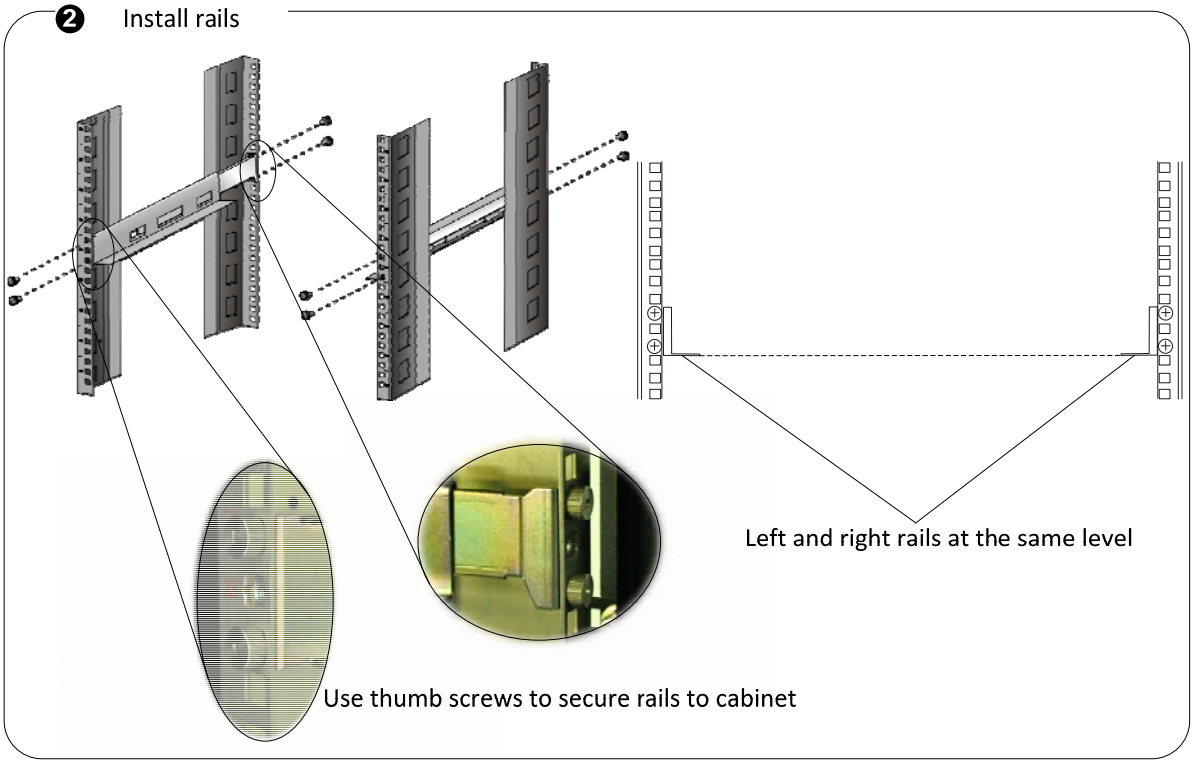
Figure 2-4 Installed device in the cabinet



Attach the slide rails to the cabinet

Figure 2-5 Installing the slide rails





NOTE!

You can extend the slide rails to fit the cabinet.

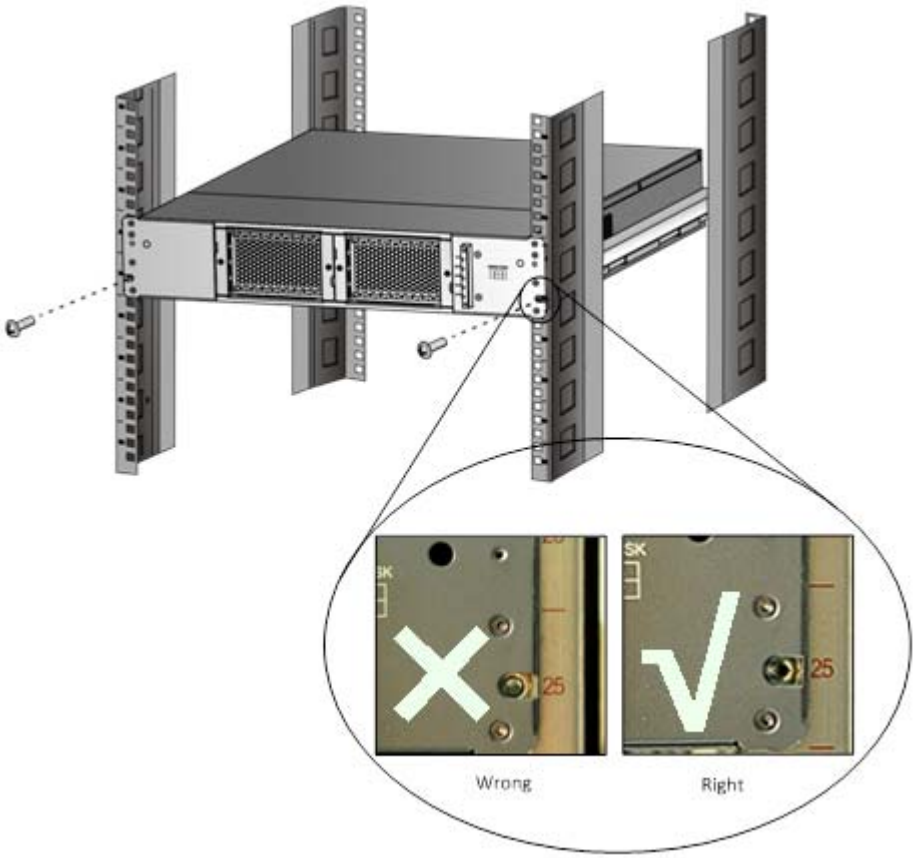
Mounting the device onto the slide rails

CAUTION!

Ensure that the device perfectly aligns with the U marks on the mount bars and is in full contact with the tray or the slide rails. A gap between the device and the tray or the slide rails will cause instability of the device and may affect its operation stability. For hard disks, instability may cause damage and increase read/write errors.

1. Place the device onto the slide rails and then push the device slightly into place.
2. Align the screw slots on the device with the screw holes on the cabinet, insert the screws through the holes and then tighten the screws. Make sure the holes on the device bracket are perfectly aligned with the holes on the cabinet.

Figure 2-6 Securing the device to the cabinet using screws



Installing the Device on a Workbench

If a 19-inch cabinet is not available, you may directly place the device on a clean workbench.

Before installing the device on the workbench, check that:

- The workbench is firm enough to bear the weight of the device and the cables.
- The workbench is stabilized and properly grounded.
- Room of at least 30 cm in the front and at the back, and at least of 10 cm on both sides of the device should be reserved on the workbench for heat dissipation purpose.

- No object is placed on the device.

Installing the Hard Disks

The slots for hard disks are inside the device, so you need to remove the front panel and the dustproof cover first.

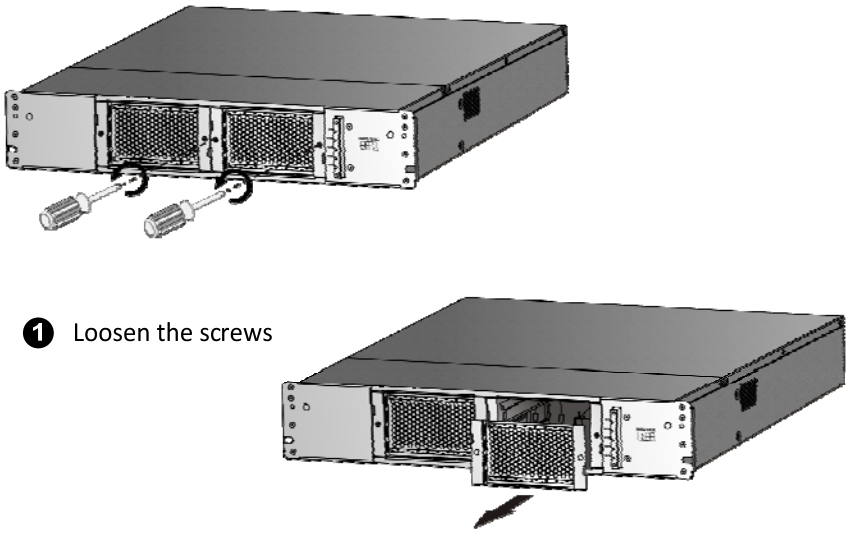
Preinstallation Check

- Carefully read the instructions for the hard disks included in the package.
- Use an antistatic wrist strap or antistatic gloves throughout this procedure.

Installation Procedure

Removing the dust filter

Figure 2-7 Removing the dust filter



❶ Loosen the screws

❷ Remove the dust filter

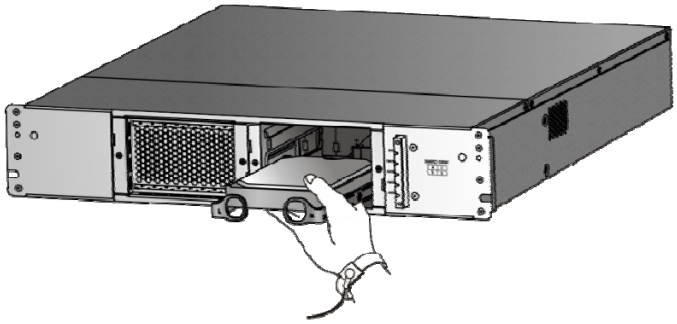
Inserting the hard disk

Unpack the hard disk, and then slowly insert it into the hard disk slot.

CAUTION!

Two hard disks are delivered with the device and should be installed in slots 2 and 3.

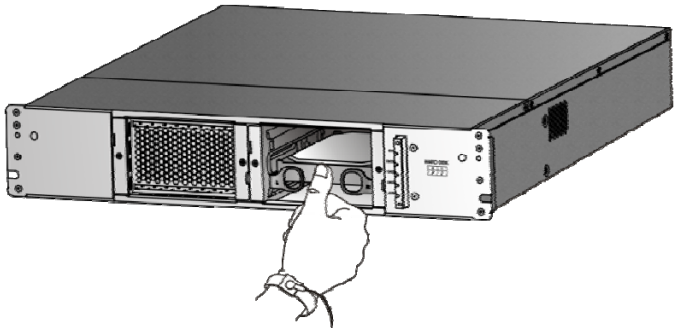
Figure 2-8 Inserting the hard disk



Pushing the hard disk in place with your thumb

When the hard disk is inserted halfway, slowly push the hard disk with your thumb till it clicks into place.

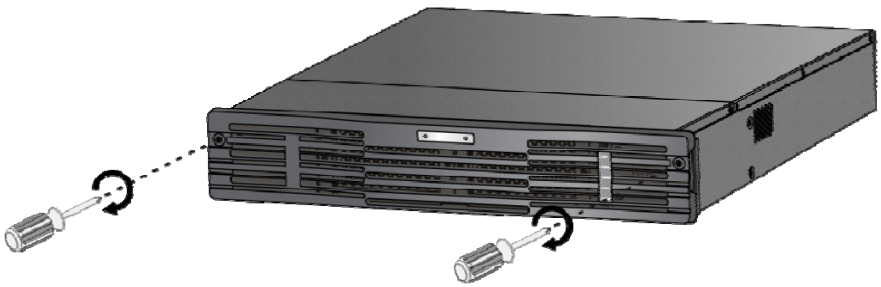
Figure 2-9 Pushing the hard disk in place with your thumb



Installing the Front Panel

Attach the front panel to the front of the device and then tighten the captive screws.

Figure 2-10 Installing the front panel



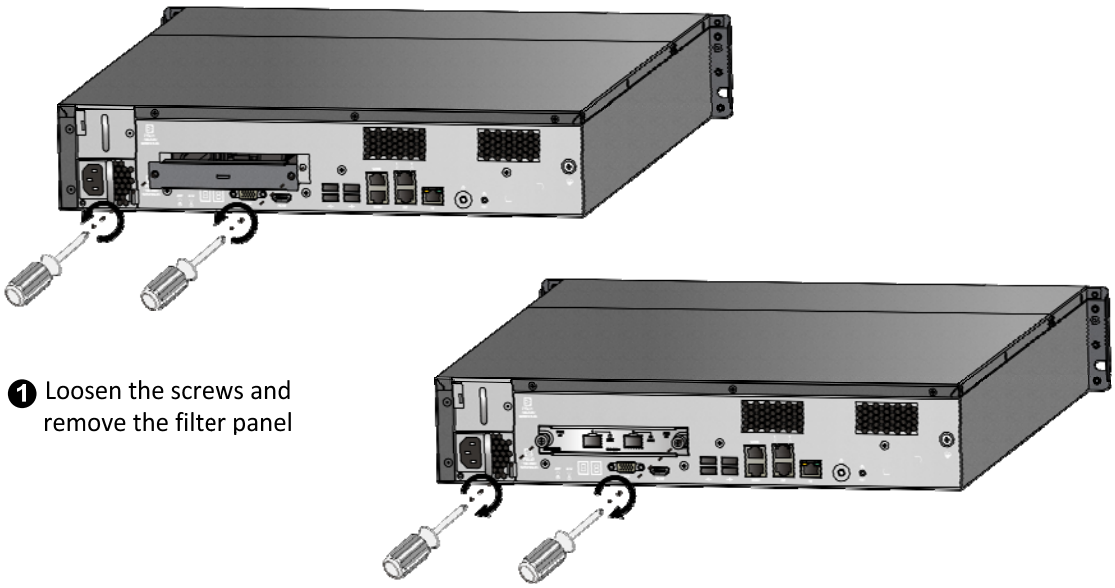
Installing the Extended Network Interface Card (Optional)

Two types of extended network interface cards (NICs) are allowed. You may choose either type as required:

- NIC with 2 10GE ports (SFP+)
- NIC with 4 GE ports (RJ-45)

The following procedure takes an NIC with two 10GE ports as an example: remove the filler panel of the device, and then install the extended NIC.

Figure 2-11 Installing the extended NIC



❶ Loosen the screws and remove the filter panel

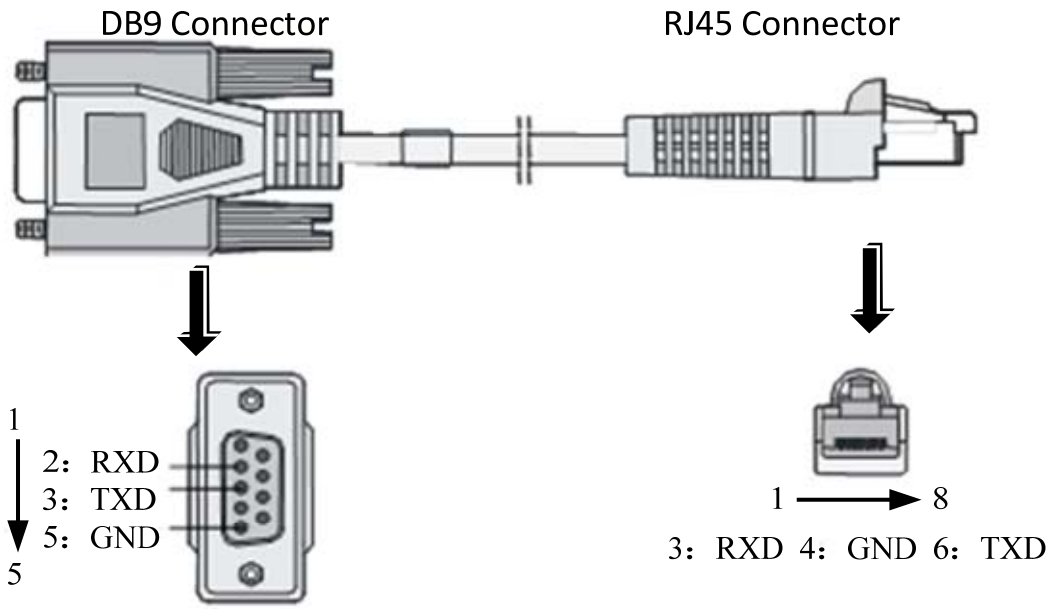
❷ Install the extended NIC

Connecting Cables

Connecting the RS-232 Cable

Figure 2-12 shows cable requirements for device maintenance through serial port 1 (RS-232). The DB9 port is connected to the PC, and the RJ-45 port is connected to serial port 1 on the device.

Figure 2-12 RS-232 cable



Connecting the Grounding Cable

WARNING!

Ensure that the device is properly grounded to prevent personal injury and device damage (due to lightning and interference).

Ensure that the grounding resistance does not exceed 5 ohms, and the grounding cable is not longer than 30 meters. For more information, refer to YD5098 specifications.

Connect one end of the grounding cable to the grounding terminal of the device, and connect the other end to a reliable grounding point, as shown in Figure 2-13.

Figure 2-13 Connecting the grounding cable

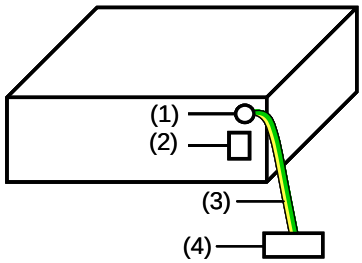
Using a grounding bar in the equipment room

NOTE!

If the cabinet you are using provides a grounding bar, connect the grounding cable of the device to the grounding bar.

If a grounding bar is available in the equipment room, connect the other end of the grounding cable to the grounding bolt on the grounding bar and then tighten the secure nut, as shown in Figure 2-14.

Figure 2-14 Grounding using a grounding bar in the equipment room



(1) Grounding terminal
(2) AC input
(3) Grounding cable
(4) Grounding bar in equipment room

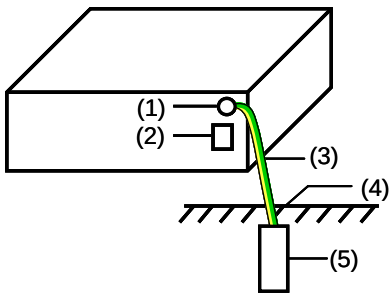
CAUTION!

Do not connect the grounding cable to a fire fighting pipe, heating radiator, or lightning arrester. The grounding cable must be connected to the grounding system of the equipment room.

Using a buried grounding conductor

If the installation environment provides no grounding bar but a mud ground which can be used to bury a grounding conductor, you may bury a angle steel (or pipe) at least 0.5 m long into the ground and use the buried angle steel (or pipe) for grounding purpose. The grounding cable of the device must be connected and soldered to the steel angle (or pipe), and the joint point should be protected with anti-corrosion treatment. Figure 2-15 shows how the grounding cable should be connected.

Figure 2-15 Grounding using a buried grounding conductor

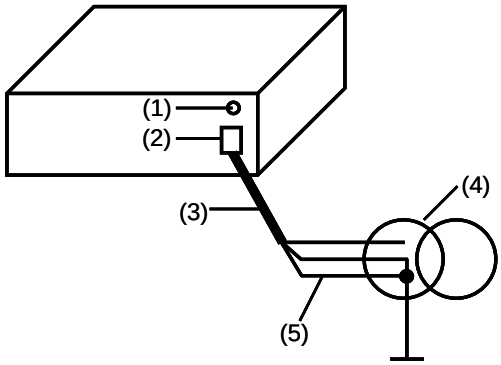


(1) Grounding terminal
(2) AC input
(3) Grounding cable
(4) Earth
(5) Angle steel or steel pipe

Grounding through the protection earthing (PE) cable of AC power

If neither grounding bar nor mud ground is available, connect the grounding cable of the device to the PE cable in the manner as shown in Figure 2-16. In addition, make sure that the PE cable of AC power is properly grounded in the power distribution room or on the AC power transformer side.

Figure 2-16 Grounding using the PE cable of AC power



(1) Grounding terminal
(2) AC input
(3) AC power cable
(4) Power transformer
(5) PE cable

Connecting the Power Cable

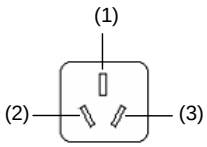
CAUTION!

Before you connect the power cable, ensure that the power switch is OFF.

Unpack the AC power cable and connect it to power.

For the power socket, a three-wire single-phase power socket (as shown in Figure 2-17) or a multifunctional computer power socket is recommended. The neutral point of the power supply must be properly grounded. Generally, the neutral point of the power system for a building is grounded during cabling. Check that the power system of the building is properly grounded.

Figure 2-17 AC power socket



(1) Neutral point	(2) Zero wire	(3) Live wire

3 Device Power On/Off

- To power on the device: Press the Power On/Off button after you have connected the device to power.

CAUTION!

Before you connect the device to power, ensure that the grounding cable has been properly connected.

- To power off the device: Log in to the server through the SSH client and then run the **poweroff** command. You can also power off the device by pressing and holding the Power On/Off button for three seconds.

CAUTION!

To power off the device by pressing and holding the Power On/Off button is not recommended.

4 Basic Configuration

WARNING!

Configuration operations shall be performed by qualified personnel only. Any random configuration operation may cause severe system faults and loss of data.

Configuration Tasks

Table 4-1 Configuration task description

Configuration Task		Description
Configuration through Web	Logging in through the Web	Log in to the Web interface.
	Registering the license	Register the license.

Configuration Task		Description
	Customizing the system interface	Customize the system interface.
	Upgrading patches	Deploy and install patches.
Configuration through command line interface	Checking or modifying configuration parameters	Check or modify configuration parameters.
	Checking or setting the system time	Check or set the time zone, time, and date.
	Performing service operations	Check the service status; start, stop, or restart the service.
	Viewing system logs	View system logs.
	Viewing the system version	View system version information.
	Configuring automatic database backup	Enable or disable the automatic database backup function.

Configuration Through the Web

Client Requirements

Before you log in via Web, ensure that the client computer meets the requirements listed in Table 4-2.

Table 4-2 Client system requirements

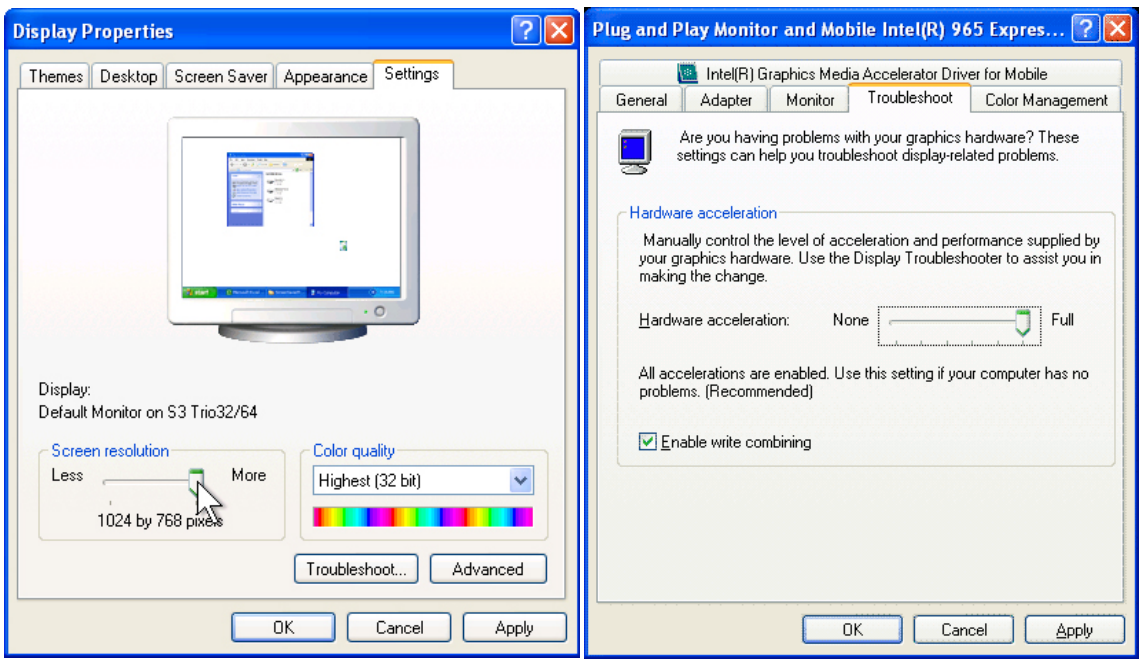
Property	System Requirements
Operating system	Microsoft Windows XP SP2, Microsoft Windows XP SP3 or Microsoft Windows 7 Professional Edition. Microsoft Windows XP SP2 is recommended.
Software requirements	• Web browser: Microsoft Internet Explorer 7.0 or later is recommended, and the Web page scaling is set to 100%. • DirectX 9.0c or a later version has been installed.
CPU	• Intel Core 2 Duo series CPUs are recommended. Minimum frequency: 2.4 GHz. • For Pentium 4 series CPUs, the minimum frequency is 2.8 GHz.
RAM	Minimum: 512 MB. 2 GB or high is recommended.
Hard drive	Minimum: 40 GB. 160 GB or a higher capacity is recommended.

Property	System Requirements
Video adapter	Minimum: 128 MB. NVIDIA GeForce 9800 GT 512 MB (or higher) is recommended, with hardware support for DirectX 9.0c. ***Note:*** *The driver for the video adapter must be the latest. Drivers released later than August 2009 are recommended.*
Audio adapter	Mandatory. ***Note:*** *The driver for the audio adapter must be the latest; otherwise, the voice intercom and audio broadcast functions might be unusable.*
Network adapter	100Mbit/s or higher Ethernet adapters are recommended.
Monitor resolution	1440 × 900 is recommended.

NOTE!

- The recommended client system can simultaneously play up to 16 channels of D1 videos. To enable the client system to support more channels of D1 videos, you need to upgrade the system for better performance, including the CPU, RAM, and graphic card.
- Check that hardware acceleration is enabled on your client computer, as shown in Figure 4-1.

Figure 4-1 Enabling hardware acceleration

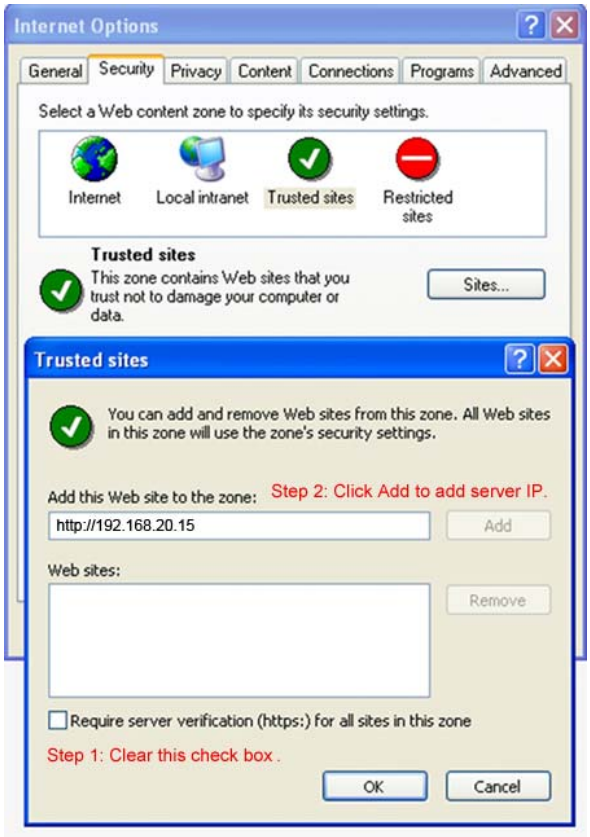


Logging In via the Web

NOTE!

To ensure the normal use of controls, you need to add the IP address of the VM8500-E server in the Internet Explorer as a trusted site first (**Tools** > **Internet Options** > **Security**), as shown in Figure 4-2.

Figure 4-2 Adding the server IP address as a trusted site



The system has two default users: **admin** (default password: **admin**) and **loadmin** (default password: **loadmin**).

- Both users are super administrators and have the maximum rights in the system, including rights to upgrade management, external-domain management, and system backup.
- One **admin** user can log in to the system at a time, whereas multiple **loadmin** users can log in at the same time.
- The **admin** user can cancel the **loadmin** user's rights.
- The **admin** user cannot be deleted; the **loadmin** user can be deleted if its super administrator role has been canceled.

You may choose to log in as **admin** or **loadmin** as required when you log in to the Web interface for the first time.

To log in to the Web interface, perform the following steps:

1. Open the Web browser on the client computer and then enter the IP address of the VM8500-E server in the address bar. If it is the first time you use the client computer to log in, load all the controls as prompted. Preferably install all the controls in the default directory.
2. Type your user name (or user code) and password in the **Login** dialog box, and then click **Log In**. The Web interface is displayed.

NOTE!

- If you select **Save password**, you can click **Login** and log in to the system without the necessity of entering the password manually.
- After all the controls are successfully installed, if you switch to a different operating system user on the client computer, you need to click **Video Player Control** at the bottom of the interface to manually load the controls before you log in. If you do not load the controls, a login failure may occur.

Registering the License

A license is a certificate that authorizes the use of system functions. After you have purchased a license, you need to register at Uniview website first.

To register a license, visit Uniview home page at http://www.uniview.com/en and then click **Service** at the top. The registration page provides two options: first-time registration and upgrade registration. The procedures are similar. The following takes first-time registration as an example.

1. Click **Register the First Time**.
2. Select the product category from the drop-down list. If you are not sure about your product category, type your license key in the **Input the license key** text box and then click **Submit**.
3. Click the **Select** button to locate your host information file and then click **Upload**.
4. Enter your contact information as required, and then enter the verification code displayed.
5. Select **I accept all terms of Uniview Legal Statement**.
6. Click **Get activation key or file**.

Customizing System Interfaces

You can customize the system name, interface style, background color, background image, logo, and other information as necessary.

To customize the system interface, perform the following steps:

1. Open the Web browser on your client computer, and in the address bar, enter the URL in "http://VM8500-E server IP**/config.php**" format, for example, **http://192.168.20.16/config.php**. The **System Customization** window is displayed.
2. Modify the settings as required.

Patch Upgrade

Patch overview

The player and control module installed on the client computer must be upgraded periodically for new patches and error correction. Patches are deployed on the server as package files, and you need to download the patch packages from the server and then install them.

Precautions

- Ensure that the network connection between the server and the client computer is normal.
- The patch packages are properly deployed on the server. Preferably the patch package are deployed on a video management server.
- When you have logged in to the video management server from the client computer for the first time, install all latest controls first, and then install the patches.
- If controls are reinstalled due to a software upgrade, you need to delete the **spversion.xml** file in the control directory on the client computer, and then reinstall the patches for the current version.

Operation steps

In this example, the patch package is deployed on the VM8500-E server.

1. Deploy patches on the patch server.

a. Log in to the VM8500-E by through the SSH client and access the FTP root directory.

```
[root@localhost ~]# cd /mnt/syncdata/resftp
[root@localhost resftp]#
```

b. In the FTP root directory, create an **update** directory, and then create a sub-directory under the **update** directory. Use the version number of the patch package to name the sub-directory, for example, *VM8500-IMOS110-B3139 SP05*.

```
[root@localhost resftp]# mkdir update
[root@localhost update]# mkdir VM8500-IMOS110-B3139SP05
```

c. Change the user and group of the new directory to the current FTP user.

d. Run the **[root@localhost resftp]# chown -R downloadusr:h3cgroup update** command and download the desired patch package to the corresponding sub-directory.

e. In the sub-directory, create a **spversion.xml** file that contains version information about the patch that you have just downloaded.

For each patch package, you need to add descriptions including version information in the following format. The boldface descriptions are explanatory notes.

```
[root@localhost update]cd VM8500-IMOS110-B3139SP05
[root@localhost VM8500-IMOS110-B3139SP05]# vi spversion.xml
<?xml version='1.0'?>
<patchs count='1'>
<item>----Related information for each patch package.
<name>hik_decoder</name>----Unique patch name that is displayed on the patch download page.
<filename>xp_hik_file.zip</filename>---- Name of patch package.
<version>1.0</version>----Patch version number, which is used to differentiate different patch versions. If a patch is upgraded, the version number is incremented.
```

```
<describe>hik</describe>----Patch description.
</item>
<item>
<name>activeX</name>
<filename>activeX.zip</filename>
<version>1.0</version>
<describe>activeX</describe>
</item>
</patchs>
```

2. Download and install patches on the client computer.
   a. Click **Update** at the bottom of the login page. A dialog box appears.
   b. Click **Check Patch Version**. Information about the latest patches is displayed, including the patch names, versions, sizes, and descriptions.
   c. Click **Download Patch** to download all the upgradable patches to a local temporary directory, which will be automatically deleted when the installation of the downloaded patched is completed.
3. Click **Install Patch** to install all downloaded patches.

Configuration Through the Command Line Interface

Viewing and Modifying Parameter Settings

Viewing parameter settings

Use the following commands to view the current parameter settings.

```
[root@localhost ~]# vmcfgtool.sh -q
DeviceID=iccsid
SnmpPort=162
SipPort=5060
ServerIP=192.168.0.10
DBBKUP_SWITCH=on
DBType=PostgreSQL
DBServerName=192.168.0.10:5432:imos
DBUserName=postgres
DBPassword=******
```

In the command output, **DBBKUP_SWITCH** specifies whether to automatically back up the database. The default value of **DBBKUP_SWITCH** is **on**, indicating that automatic database backup is enabled.

Modifying parameter settings

Use the corresponding scripts to modify parameter settings when necessary, for example, when the network configuration has changed. The commands are described as are follows. The boldface descriptions are explanatory notes.

- Modify the IP address of the VM8500-E server:

```
[root@localhost ~]# vmcfgtool.sh serverip 192.168.254.155---192.168.254.155 is the new IP address of the VM8500-E server.
```

CAUTION!

- The IP address of the VM8500-E server must be the IP address of a network port on the VM8500-E server; otherwise, services are unavailable.
- Do not modify the default device ID of the VM8500-E server; otherwise, service may be affected.

- Modify Apache port numbers:

NOTE !

You need to modify the port number only when the default port number is already being used.

Run the following command to modify the Apache port number of VM8500-E server:

```
[root@ localhost ~]# vmcfgtool.sh namehost 890--- 890 is the new port number of VM8500-E Server
```

You can also run the **vmcfgtool.sh -help** command to obtain more commands for modifying parameters. After modifying configuration information, run the **vmserver.sh restart** command to restart the service for configuration changes to take effect.

Checking and Setting the System Time

Except the client computer, the data manager (DM), media server (MS), storage devices, and encoders/decoders will automatically synchronize their time zone and time with those of the VM8500-E server. It is recommended that you keep the time zone and time settings on the client computer consistent with those on the VM8500-E server.

Checking the time and date of the local time zone

```
[root@localhost ~]# date
Tue Apr 14 11:31:38 GMT-8 2013
```

NOTE!

In the Linux operating system, GMT-N indicates the eastern time zone and GMT+N indicates the western time zone. In this example, GMT-8 indicates eastern time zone 8.

Setting the time zone

```
[root@localhost ~]# timeconfig
```

After the command is executed, the system displays a window for you to select a time zone. Select a time zone (such as **Asia/Shanghai**) as required, press the **Tab** key to select **OK**, and then press **Enter** to finish the setting.

Setting the system time and date

```
[root@localhost ~]# date -s "2013-01-26 16:57:40"
Thu Apr 26 16:57:40 GMT-8 2013
```

It is recommended that the RTC hardware time be synchronized after you change the system time by using the **date** command. If you do not perform RTC hardware time synchronization, the clock may be asynchronous when the server obtains time upon restart following power interruption. You can run the **hwclock–systohc** command to synchronize the RTC hardware time with the system time.

```
[root@localhost ~]# hwclock –-systohc
```

Run the following command to check whether the new date and time are correct:

```
[root@localhost ~]# clock;date
```

Performing Service Operations

Viewing service status

```
[root@localhost ~]# vmserver.sh status
Pgsql           is      running
Img is running
Mcserver is running
Vmserver is running
Adapter is running
Sgserver is running
serversnmpd is running
DiskReadOnlyCheck is running
Vmdaemon is running
```

The service status is either **running** or **stopped**.

If the status of a process as shown above is displayed as **stopped**, you need to restart the service manually. For details, refer to "Restarting the service".

If an executable file of the server is deleted, or if its executable permission is modified, a "does not exist" message will be displayed, indicating that the service does not exist. In that case, you need to reinstall the software.

Starting the service

The VM8500-E service automatically starts when the software installation is completed. To start the service manually, use the following command:

```
[root@localhost ~]# vmserver.sh start
```

Stopping the service

To stop the service manually, use the following command:

```
[root@localhost ~]# vmserver.sh stop
```

Restarting the service

CAUTION!

Restarting the service will also restart the database and may cause service exceptions.

To restart the service, use the following command:

```
[root@localhost ~]# vmserver.sh restart
```

Viewing System Logs

System logs are stored in the **/var/log/imoslog** directory. To search the directory for a log file, use the **ls** command.

```
[root@localhost ~]# cd /var/log/imoslog
[root@localhost log]# ls
```

To view the content of a log file, run the **tail** command:

```
[root@localhost ~]# tail adapter_product00.log
```
---adapter_product00.log is the name of a log file.

Checking the System Version

Run the following command to view system version information:

```
[root@localhost ~]# vmcfgtool.sh –v
Interior version : VM8500V300R002B03D019SP05
Exterior version : VM8500-IMOS110-B3139SP05
BUILDTIME        : 2013-03-16 05:49
```

The above is an example. The actual version information may be different.

Configuring Automatic Database Backup

You can enable the automatic database backup function so that the system automatically backs up the database at 03:00 every day.

To enable automatic database backup, run the following command:

```
[root@localhost ~]# vmcfgtool.sh autodbbackup on
```

To disable automatic database backup, run the following command:

```
[root@localhost ~]# vmcfgtool.sh autodbbackup off
```

NOTE!

- When database backup is completed, a backup file is generated in the **/var/autobackup/** directory and named in **database-*Time*.tar.gz** format. For example, database-2013-01-26_0300.tar.gz is a backup file generated at 03:00 on January 26, 2013.
- By default, the system keeps backup files of the latest seven days. It is recommended that you copy backup files to a local disk each time the database is backed up.

5 Software Upgrade, Uninstallation and Reinstallation

WARNING!

Upgrading, uninstalling, and reinstalling the VM8500-E server shall be performed only by qualified personnel. Any inappropriate upgrade, uninstallation or reinstallation operation to the VM8500-E may cause severe system faults and loss of data.

Preparations

Preconditions

- Before you start an upgrade or a reinstallation, verify the network settings for the server, including the IP address, subnet mask, and gateway. If necessary, change the network settings as required. For details, refer to "Viewing and Modifying Parameter Settings".
- The server is properly connected to the client computer through the network.
- The SSH client has been installed on the client computer, and you have logged in to the server through the SSH client. For details, see "Logging In to the Server Using the SSH Client". Do not exit the SSH client until you have completed the upgrade, uninstallation or reinstallation; otherwise, the operation might fail.

NOTE!

When you log in to the VM8500-E through the SSH client for the first time, use 192.168.0.10/24 as the IP address of the GE 1 port, 22 as the port number, and use root/uniview as the default user name and password.

Logging In to the Server Using the SSH Client

Icons as shown in Table 5-1 appear on your desktop when the installation of the SSH Secure Shell Client software is completed.

Table 5-1 SSH Secure Shell Client shortcut icons

Icon	Function
	For connection to the VM8500-E server.
	For uploading the software installation package to the VM8500-E.

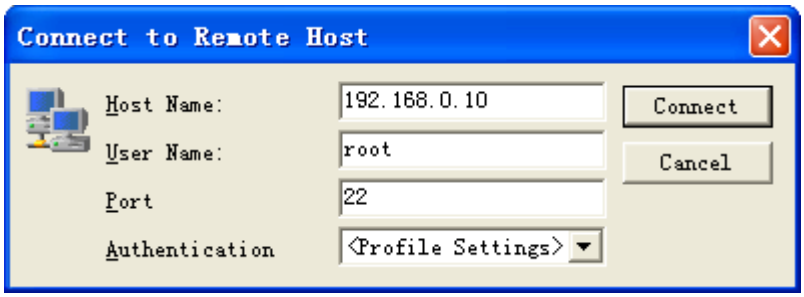
Perform the following steps to log in to the VM8500-E server through the SSH client:

1. Double-click  . The **SSH Secure Shell** window as shown in Figure 5-1 is displayed.

Figure 5-1 SSH Secure Shell Window

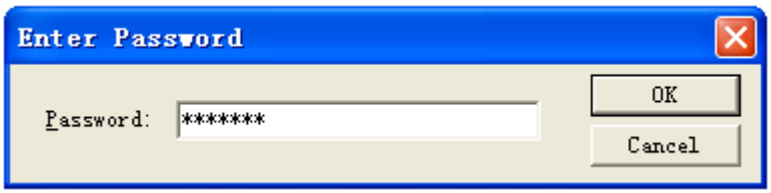
2. Click Quick Connect, and then in the **Connect to Remote Host** dialog box, type the IP address of the VM8500-E server as the host name, type **root** as the user name, and keep the default settings for the rest parameters as shown in Figure 5-2, and then click Connect.

Figure 5-2 Connect to Remote Host dialog box



3. When the **Enter Password** dialog box as shown in Figure 5-3 appears, type **uniview** as the password and then click OK to log in to the server.

Figure 5-3 Enter Password dialog box



Software Upgrade

To guarantee successful software upgrade, follow the steps below strictly:

1. Copy and extract the software package.
2. Run the upgrade script.

Copying and Extracting the Software Package

Use the SSH client to copy the software package of the new version to a working directory (take **/root** as an example) in the current server operating system and then extract the package.

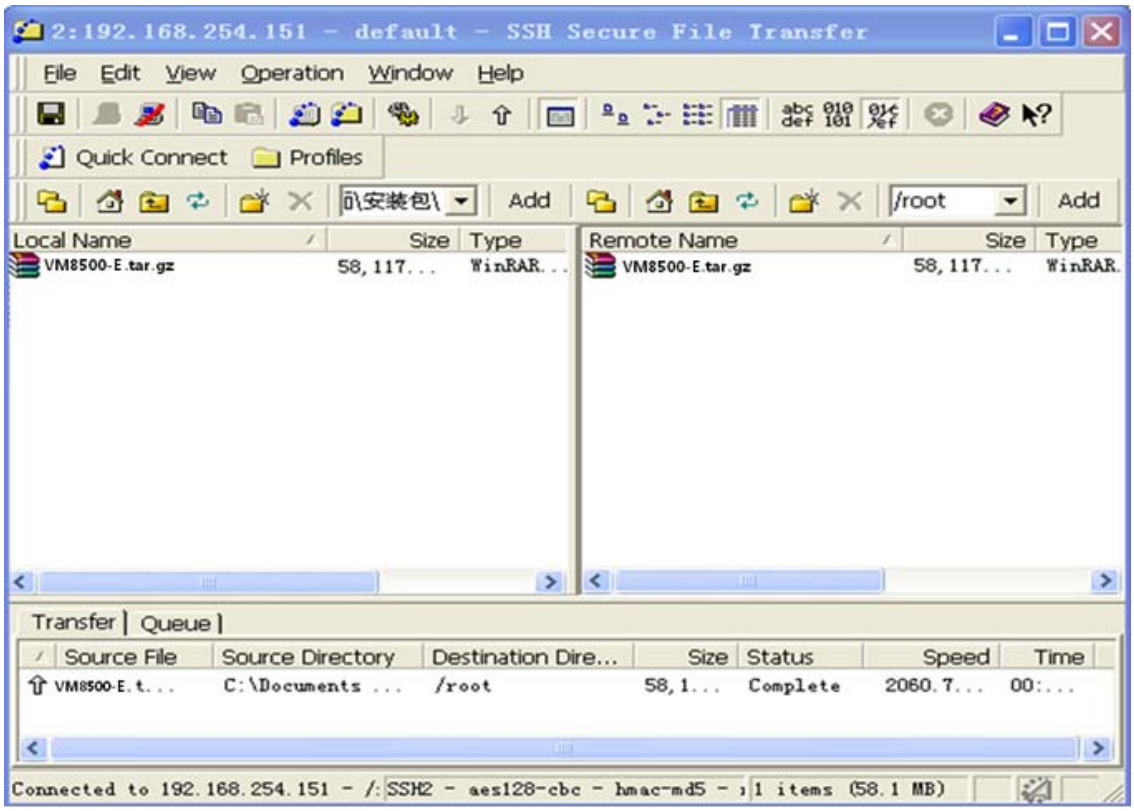
The procedure is as follows:

1. Log in to the server by using the SSH client, and then click . A window appears.
2. In the left pane of the window, select the directory where the package (for example, VM8500-E) is located and then drag the package to the **/root** directory in the right pane. The package is copied to the server, as shown in Figure 5-4.

NOTE!

The working directory must be named in English.

Figure 5-4 Copying the package to the server



3. Access the directory containing the package and then use the **tar** command to extract it.

```
[root@localhost ~]# tar zxvf VM8500-E.tar.gz
```

When the package is extracted, a directory containing upgrade, uninstallation and reinstallation scripts is generated.

Running the Upgrade Script

Access the directory and run the **sh vmupdate.sh** script by using the following commands, and then follow system prompts to complete the upgrade.

```
[root@localhost ~]# cd VM8500-E
[root@localhost VM8500-E]# sh vmupdate.sh
```

Software Uninstallation

WARNING!

Uninstallation will delete all the related data, so back up all the data before you start.

To uninstall the software, perform these steps:

1. Log in to the VM8500-E server through the SSH client.
2. Access the directory containing the **sh vmuninstall.sh** script and run this script by using the following commands, and then follow system prompts to complete the uninstallation.

```
[root@localhost ~]# cd VM8500-E
[root@localhost VM8500-E]# sh vmuninstall.sh
```

Software Reinstallation

By default the VM8500-E is intended for stand-alone installation. This procedure takes stand-alone installation as an example. For information about high-availability installation, contact technical support.

WARNING!

Reinstalling the software will uninstall the current version and delete all the related data, so back up all the data before you start.

To reinstall the software, perform these steps:

1. Copy the software installation package to a work directory in the current server operating system, and then extract the package. For details, refer to "Copying and Extracting the Software Package".
2. Access the **VM8500-E** directory and run the **source vminstall.sh** script by using the following commands. Then follow system prompts to complete the reinstallation.

The following command output is for your reference and may be different in the actual installation process. The boldface descriptions are explanatory notes.

```
[root@localhost ~]# cd VM8500-E
[root@localhost VM8500-E]# source vminstall.sh
2011-04-30 15:46:18 : Do not close the terminal during the installation; otherwise, unknown error might occur.
VM8500-E installation begins...
Please choose the language of VM (default 0.Chinese):---Select a version installation language.
```

0.Chinese
1.English
Please input you choice:0
What version of VM do you want to install[default:1. stand-alone VM]:**---Select the standalone installation mode.**
1. stand-alone
2. high ability (HA)
Please input your choice:1
Please input Video Manager server port[default:5060]:**---Set the port of the VM8500-E server. Press Enter to select the default value.**

Use default Server Port:5060
Please input SNMP port[default:162]:**---Set the SNMP service port. Press Enter to select the default value.**

Use default Snmp Port:162
Please input Video Manager server IP address[such as 192.168.0.10]:**---Set the IP address of the VM8500-E server (to the IP address of a network adapter on the server).**
192.168.254.151
start install database
Installing   pgsql
change installdir
change pgsqllog directory
change pgdata directory
Creating database
Creating table
Init database
Route initialization succeeded
Route initialization succeeded!
Flushing firewall rules: [OK]
Setting chains to policy ACCEPT: filter   [OK]
Unloading iptables modules: [OK]
Begin to install VM8500-E server ...
Begin to install rpm pdt_imos ...
Install rpm pdt_imos finished...
Install rpm pdt_imos succeeded
Begin to install rpm VM8500-E ...
Install rpm VM8500-E finished...
Install rpm VM8500-E succeeded
lineofvmsys.conf:7 sedfileline:7
Install succeeded
Stopping crond: [OK]
Starting crond: [OK]
Creating mailbox file: File exists
Creating mailbox file: File exists
Shutting down vsftpd: [OK]
Starting vsftpd for vsftpd: [OK]
Start vsftpd succeeded!!
setting ftp succeeded
Begin to start VM8500-E server ...

```
Pgsql           already started
Starting IMGSERVER services: starting img
CImfLogTask: logNumber = IMFMaxLogNumber 2
CImfLogTask: logSize = IMFMaxLogSize 1048576
CImfLogTask: logPath = IMFLogPath /var/log/imoslog
start ok 0

Start img succeeded
Starting MCSERVER services: starting mcserver
CImfLogTask: logNumber = IMFMaxLogNumber 2
CImfLogTask: logSize = IMFMaxLogSize 1048576
CImfLogTask: logPath = IMFLogPath /var/log/imoslog
start ok 0

Start mcserver succeeded
Starting VMSERVER services: starting vmserver
start ok 0

CImfLogTask: logNumber = IMFMaxLogNumber 2
CImfLogTask: logSize = IMFMaxLogSize 1048576
CImfLogTask: logPath = IMFLogPath /var/log/imoslog
Start vmserver succeeded
Starting ADAPTERSERVER services: starting adapter
/
start ok 0

CImfLogTask: logNumber = IMFMaxLogNumber 2
CImfLogTask: logSize = IMFMaxLogSize 1048576
CImfLogTask: logPath = IMFLogPath /var/log/imoslog
Start adapter succeeded
Starting HTTPSERVER services: starting apachectl
/usr/local/vmwww/apache/bin/apachectl start: httpd started
start ok 0

Starting SGSERVER services: starting sgserver
start ok 0

CImfLogTask: logNumber = IMFMaxLogNumber 2
CImfLogTask: logSize = IMFMaxLogSize 1048576
CImfLogTask: logPath = IMFLogPath /var/log/imoslog
Start sgserver succeeded
Start vmdaemon succeeded
Start servers succeeded
Install VM8500-E succeeded
```

The VM8500-E service automatically restarts when the installation is completed. You can run the **vmserver.sh status** command to view the service status. For details, refer to "Performing Service Operations".

6 FAQs

How to Replace a Hard Disk

The hard disk slots are inside the device, so you need to remove the front panel and the dust cover first. For details, refer to "Removing the Front Panel".

Preinstallation

- Carefully read the instructions in the hard disk package.
- Use an antistatic wrist strap or a pair of antistatic gloves.

Installation Procedure

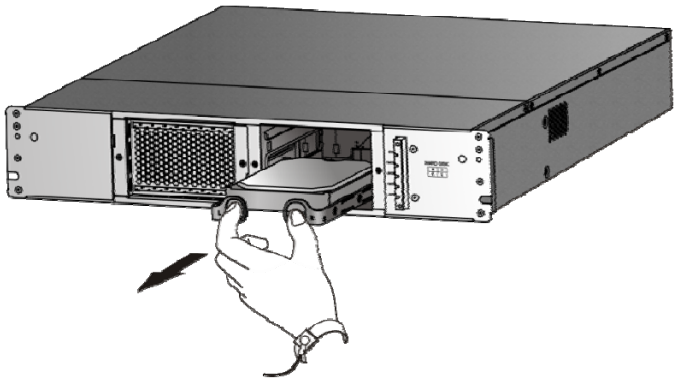
Removing the hard disk

Hold the left and right handle bars in the manner as shown in Figure 6-1 and then pull the handle bars smoothly to disengage the hard disk from the backplane. Wait for at least 30 seconds till the hard disk stops spinning and then fully remove the hard disk from the slot.

CAUTION !

Use your strength appropriately to avoid damaging the handle bars.

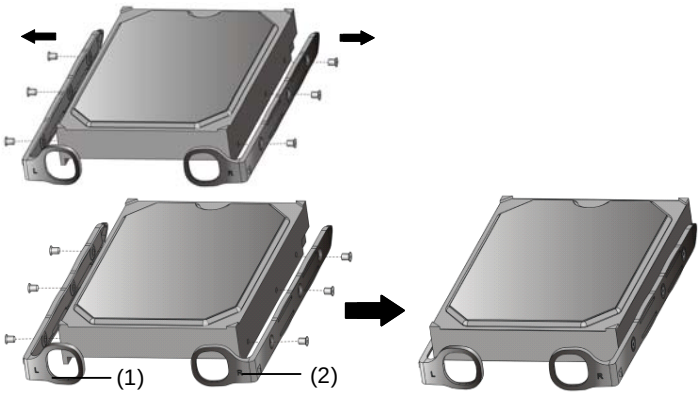
Figure 6-1 Removing the hard disk



Removing and installing the handle bars

Remove the handle bars from the faulty hard disk and then install them on the new hard disk. Make sure that you install the left and right handle bars properly.

Figure 6-2 Removing and installing the handle bars

	(1) Left handle bar, marked with "L". (2) Right handle bar, marked with "R".

Installing the hard disk

For details, refer to "Hardware Installation".

BOM: 3101C03M