

DEU1000 Series
Network Storage Disk Enclosure Units
Quick Guide

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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 requirements on environmental protection. For the proper storage, use and disposal of this product, national laws and regulations must be observed.

Preface

Audience

This manual is intended for:

- Surveillance system planners
- Field technical support and servicing engineers
- Software installation, configuration, and servicing administrators
- Product users

Precautions

- If this equipment is used in a domestic environment, radio disturbance may arise. When such trouble occurs, you might be required to take corrective actions.
- Do not remove the dismantlement-preventive seal from the chassis cover of the device without permission. If you want to open the




chassis, contact the local agent of our company for help. Otherwise, we shall not be held liable for any consequence caused thereby.

- Make sure the device is sturdy and well grounded and meets heat dissipation and lightning protection requirements. Avoid vibration when using the device.
- Provide a stable and compliant power supply before powering on the device.
- Before performing the verification (refer to section “Check Before Power-On”), make sure that the power is disconnected, for fear of bodily injury or equipment damage caused by incorrect cable connection.
- Power interruption may cause hard disk damage or abnormal functions. To shut down the device, strictly follow the instructions. If power interruption often occurs, configure an uninterrupted power supply (UPS).

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.

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1 Overview

DEU1000 Series ("DEU1000") is a new generation network storage enclosures developed by Uniview Technologies, Co., Ltd (hereafter referred to as Uniview). DEU1000 uses a mini-SAS cable to connect to the host and features high expandability and stability, superior performance, and easy management.

2 Mounting

Installation Check

Open the packing box and check the equipment model, accessory types and quantities to ensure all the components are available. For equipment model, accessory types and quantities, please refer to the packing list.

Installing Hard Disks



WARNING!

Make sure the equipment is disconnected from the power supply before installation. Please wear anti-static gloves when installing the device.

The following tools are required for installation: flat-head and Phillips screwdrivers.

The hard drive interface is located inside the device. You need to remove the front panel to install the hard disk. The hard disks are hot-swappable and support mixed insertion. The disks can be powered on in order to minimize the impulse current produced during the power-on process.

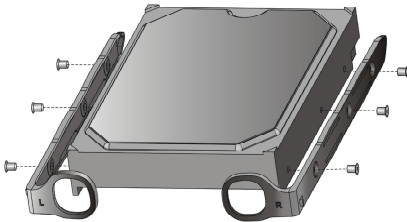


WARNING!

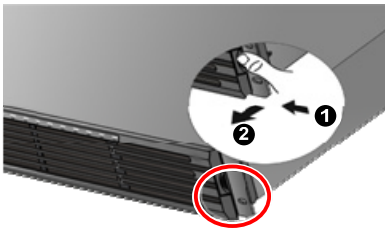
- The hard disk can be hot-plugged only when no data is read or written. The indicator of hard disk is not blinking when no data is processed.
 - Wear anti-static gloves when installing a hard disk.
 - Insert hard disks into the slots of a running device at an interval of at least six seconds.
-

Install a hard disk as follows:

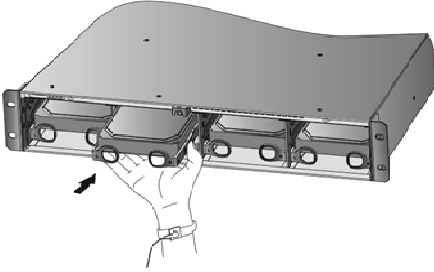
1. Fix the hard disk to with screws to the handle bar on the correct side.



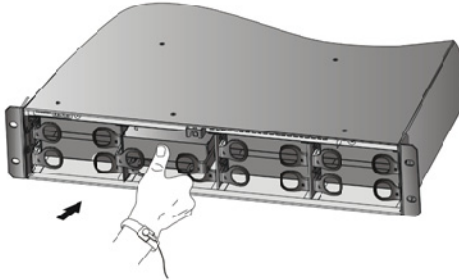
2. Press the buckles on both sides of the front panel and remove the panel.



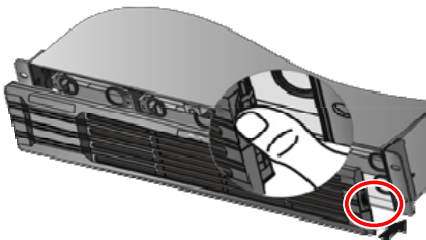
3. Align the hard disk with the slot and push in the hard disk gently and steadily.



4. Push the hard disk in position with your thumb until the buckles click. Repeat the above steps to install all the hard disks.



5. Hold the buckles on both sides of the front panel and push in the front panel into position in the direction as indicated by the arrow.



Installing the Equipment

The equipment provides front, side and back ventilation channels. Leave room of at least 30cm to the front and back and 10cm to the left and right sides of the equipment for ventilation.

Mounting to the Workbench

1. Get the stickers from the foot pads delivered with the equipment, and attach the pads to the bottom of the equipment where appropriate.
2. Place the equipment on a clean workbench. Now the installation process is complete.

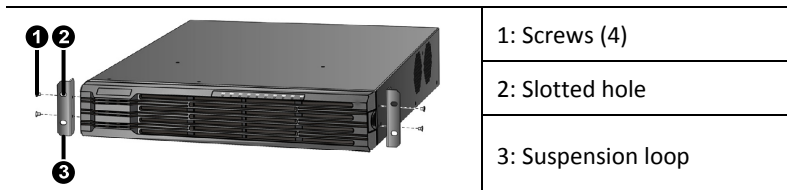
Mounting into a Cabinet



WARNING!

Ensure that the cabinet is equipped with a tray or slide rail before installing the equipment in a cabinet. The equipment must be supported on a tray or slide rail instead of a suspension loop.

1. As shown in the following figure, place the suspension loop with a screw hole close to the chassis. Align the suspension loop with the screw hole, and use two M4*8 screws to fasten the suspension loop to the chassis.
2. Perform the same procedure to mount the suspension loop on the other side of the chassis.



- Place the equipment on the cabinet support, and slid it into the cabinet. Fix the suspension loop to the floating nut to the front mounting bar of the cabinet with screws led through the slotted hole.

3 Appearance

The photos herein are for illustration only and may vary according to actual conditions.

Front View



Indicators

As shown in the front view, the following table describes the indicators on the front panel. The LED color may vary with the equipment model.

Table 3-1 Status Indicators

Indicators	Color	Status	Description
HD (Hard disk indicator)	Green	Blinking	Running properly with data access.
		Constantly on	Running properly without data access.
	Red	Constantly on	One hard disk at fault.

Indicators	Color	Status	Description
		Blinking	Several hard disks at fault or array rebuilt.
		Off	Hard disk is not installed or the system shuts down, or the indicator turns red.
ALM (Alarm indicator)	Red	Constantly on	Equipment alarms.
		Off	The system runs normally without alarms.
RUN (Running indicator)	Green	Constantly on	Running normally.
		Blinking	Starting.
		Off	Shut down.
LINK (Network indicator)	Green	Constantly on	Network properly connected.

Rear View



Interfaces

As shown in the rear view, the following table describes interfaces on the rear panel.

Table 3-2 Interfaces

No	Item	Description	Function and Instructions
①	Ground	Equipment grounding	Ground cable
②	AC 100V - 240V	AC power, 100V-240V AC	For connection to power
③	Power	Power switch	Turn on/off device when connected to power
④	Mini-SAS	Mini-SAS interface	For connection to the host

4 Connecting Cables

Connecting the Mini-SAS Cable

Insert one end of the mini-SAS cable into the mini-SAS interface on the device, as shown in the figure below, and then connect the other end of the mini-SAS cable to the host.



Connecting a Ground Cable

To ensure personal and equipment safety (lightning protection and resistance against interference), ground the device properly.

The ground cable must not exceed 30 m long and provides a grounding resistance of less than 5 Ω . For specific requirements, refer to the standards for the IEC61024 series.

As shown in the following figure, connect one end of the ground cable to the ground terminal of the device and the other end to a reliable grounding point.



Connecting a Power Cable

Before connecting a power cable, ensure that the device's power switch is turned off, so as to avoid causing bodily injury or damaging components during the connection.

It is recommended that you use a single-phase three-wire power outlet with a neutral point or a multi-functional microcomputer power outlet. The neutral point must be reliably grounded in the building.

5 Switching On/Off the Device

Check Before Power-On

To avoid bodily injury or damage to components, check the following items before turning off the power.

- The device is firmly and securely installed without any screw left unscrewed.
- Do not place anything on the device.
- All the installed cables are connected correctly.
- Use a power supply approved for the device.

Turning on the Device

After the device is properly connected to the host, connect the device to power and then turn on the power to start the device.

6 Specifications

For more information about technical specifications of the device, refer to the datasheets.

Item	Description
Hard disk interface	8 SATA interfaces
Power Supply	AC power supply, 90V-230VAC, with power switch
Consumption	100W (fully equipped with hard disks)
Working temperature	-10°C to 55°C
Working humidity	5% to 95% (noncondensing)
Working altitude	-60m to 5000m
Weight	Bare device <9kg Fully equipped with hard disks < 16kg
Dimensions (W × D × H)	2U high 86.1mm × 523.0mm × 442.0mm (with front panel)

7 HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for 24 hours at a fixed bit rate.

Table 7-1 Storage Calculation

Bit Rate (Kbps)	Storage Used (GB)
256	2.900

Bit Rate (Kbps)	Storage Used (GB)
512	5.801
768	8.701
1024	11.602
1536	17.402
2048	23.203
3072	34.805
4096	46.406



NOTE!

Please note that supplied values for storage space used is just for reference. The storage values in the chart are estimated by formulas and may have some deviation from actual value.

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