



Enhanced Video Recorder

**iSentinel Plus**

**EVR-4000 Series**

**Installation Manual**

**1<sup>st</sup> Edition**

**November 2010**

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## Precautions

### **WARNING!**

This manual is intended for qualified service personnel only. To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

### **ATTENTION!**

Keep the equipment away from liquids and flammable products.

Use proper brackets when equipment is installed in racks.

Ensure there is sufficient space for audio and video cables.

Ensure that the bend radius of cables is not less than five times its diameters.

For proper exhaust and heat radiation, keep the equipment at least 2 cm between racks and wall mounted device.

Ensure that the equipment is suitably grounded.

Install the equipment in a well ventilated area.

The air ambient temperature must be within the range of -10°C to 55°C, 14°F to 131°F, ambient humidity must be within the range of 10% to 90%.

Use manufacturer-approved hard disks

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## Related Manuals

In addition to this Installation Manual, the following manuals are available for the EVR unit.

- **Quick Start Guide** (PDF – Supplied with EVR unit)  
This guide describes the basic steps required to configure and operate this EVR unit
- **User Manual** (PDF – Supplied with EVR unit)  
This manual is necessary for the installation and operation of this EVR unit. It explains the uses and functions for all product features available on this EVR unit.

Please contact your local Certis distributor if these manuals are required.

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## Box Contents

### The box comes complete with:

- iSentinel Plus EVR-4000 Series
- CD containing software, Quick Start Guide, User Manual and Installation Manual
- Power cable
- HDD cable
- EVR installation brackets
- Screws
- IR Remote Control
- USB Mouse
- BNC 1 to 8 convertor
- Case brace

Please contact your dealer for damaged or missing items.

# Installation

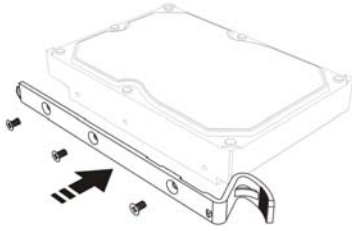
## 1-1 HDD Installation

Before installing a hard disk drive (HDD), please ensure the power is disconnected from the EVR. A manufacturer recommended HDD should be used for this installation.

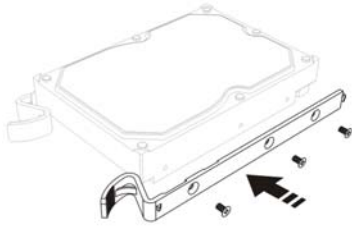
**Tools Required:** Phillips screwdriver.

To install a HDD on your EVR:

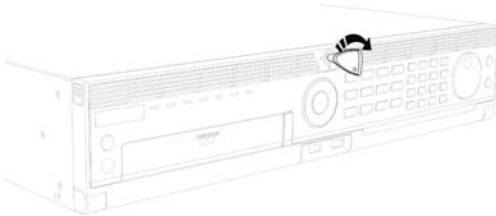
1. Fasten a hard disk handle to one side of the hard disk with the screws provided.



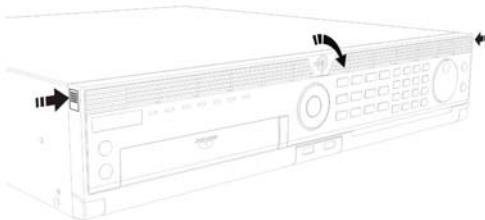
2. Fasten the other hard disk handle to the other side of the hard disk with the screws provided.



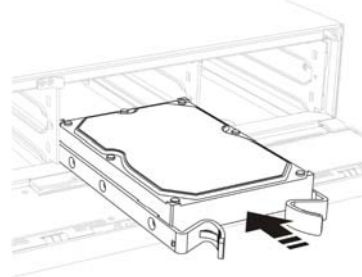
3. Insert and turn the key clockwise to unlock the panel. Remove the key.



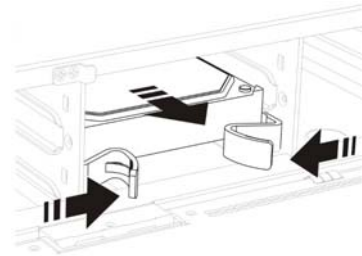
4. Press the release buttons on both sides of the panel as indicated. Flip the front panel down to open.



5. With the hard disk facing up, insert the hard disk as indicated. Ensure the hard disk is inserted securely.



6. If required, the hard disk can be removed by pressing the hard disk handles together to slide the hard disk out.



**Note:** Hard disks can be easily damaged. They must be handled with care to avoid accidental damage.

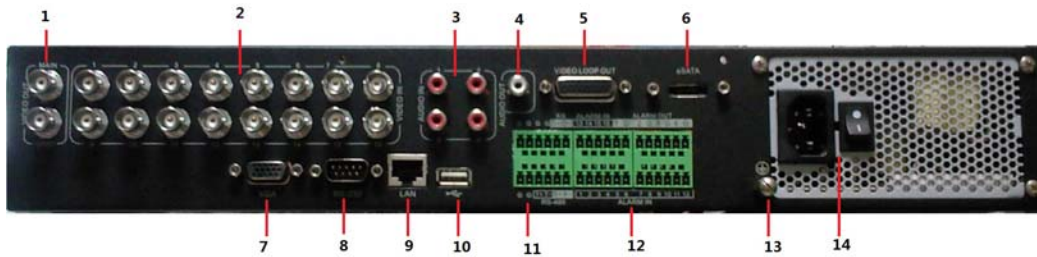
## 1-2 HDD Storage Calculator

Estimated storage space can be calculated based on the table for 1 channel, per hour at a fixed bit rate.

Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	83M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M

**Note:** Supplied values for storage space are based on estimates. Actual storage space may deviate from the calculation.

## 2-1 Rear Panel Wiring Connections

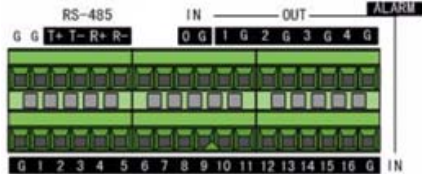


No.	Item	Description
1	Video Out	BNC connector for video output
	Video Spot Out	BNC connector for monitor. Single window view.
2	Video In	BNC connectors for analog video input
3	Audio In	RCA connectors for analog audio input
4	Audio Out	RCA connector for audio output
5	Video Loop Out	16-ch DB26 connector for video loop out
6	eSATA	eSATA port for backup
7	VGA	VGA output. Display local video output and menu.
8	RS232	DB9 connector for RS232
9	LAN Interface	Connector for LAN (Local Area Network)
10	USB Interface	Connector for USB device
11	RS-485 Interface	Connector for RS-485 devices. T+, T- pin for PTZ connection. Connector for KB devices. D+, D- pin connects to special keyboards
12	Alarm In	Connector for alarm input
	Alarm Out	Connector for alarm output
13	Ground	Ground (must be connected when EVR starts up)
14	Power	AC 100~240V

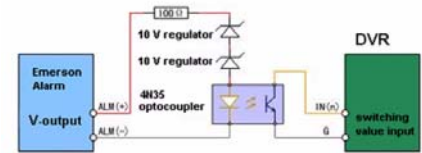
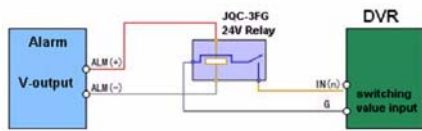
### 3-1 Peripheral Connections

#### 3-2 Connecting Alarm Input/Output Devices

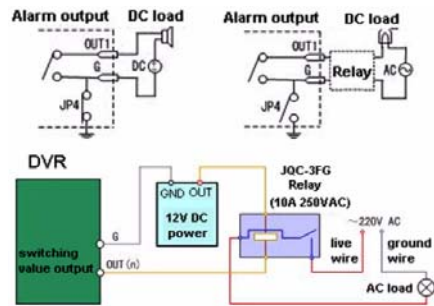
The alarm input/output interface is as shown



The alarm input is an open/close relay. If the device input is not an open/closed relay, follow the connection diagram below:



To connect to an AC/DC load, use the following diagram:



For DC load, JP4 can be safely used within the limit of 12V/1A. If the interface is connected to an AC load, JP4 should be left open. Use an external relay for safety (as shown in the diagram above).

There are 4 jumpers (JP4, JP5, JP6, and JP7) on the motherboard. Each jumper corresponds to one alarm output. By default, jumpers are connected. To connect an AC load, jumpers should be removed.

**Note:** An external relay is needed to prevent electric shocks when connecting to an AC load.

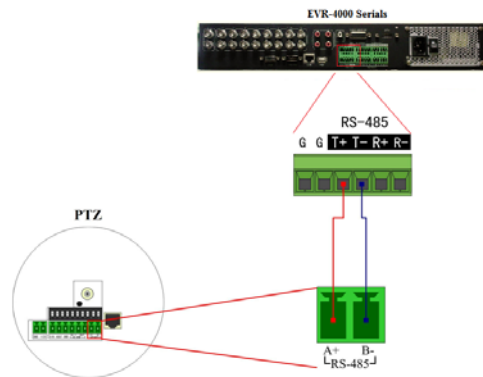
#### 3-3 Connecting Alarm Devices to the EVR

To connect alarm devices to the EVR:

1. Disconnect *pluggable block* from the ALARM IN /ALARM OUT terminal block.
2. Unfasten stop screws from the *pluggable block*. Insert signal cables into slots and tighten stop screws. Ensure signal cables are secured.
3. Reattach *pluggable block* back terminal block.

#### 3-4 RS-485 Connections

To connect RS-485 devices to the EVR:



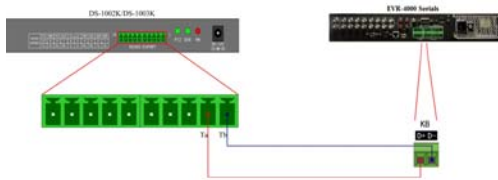
1. Disconnect *pluggable block* from the RS-485 terminal block.
2. Unfasten stop screws from the *pluggable block*. Insert signal cables into slots and tighten stop screws. Ensure signal cables are secured.
3. Reattach *pluggable block* back into terminal block.

**Note:** The RS-485 PTZ control should be connected with the T+ and T- pin on the RS-485 terminal block.

### 3-5 Controller Connections

To connect a controller to the EVR:

1. Disconnect *pluggable block* from the KB terminal block.
2. Unfasten stop screws from the KB D+, D- *pluggable block*. Insert signal cables into slots and tighten stop screws. Ensure signal cables are secured.
3. Connect Ta on controller to D+ on terminal block and Tb on controller to D- on terminal block. Fasten stop screws.
4. Reattach *pluggable block* to terminal block.



- End -