

SAMSUNG

# Space for History



## HDD Extension Unit SVS-5 User's Manual

Thank you for purchasing a Samsung HDD Extension unit.  
Before attempting to connect or operate this product,  
please read these instructions carefully and save this manual for future use.

ENGLISH

---

## FCC Compliance Statement

**Caution** : Any changes or modification in construction of this device which are not expressly approved the party responsible for compliance could void the user's authority to operate the equipment.

**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

## Correct Disposal of This Product (Waste Electrical & Electronic Equipment)



(Applicable in the European Union and other European countries with separate collection systems) This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling. Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.



Samsung Techwin cares for the environment at all product manufacturing stages to preserve the environment, and is taking a number of steps to provide customers with more environment-friendly products. The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

---

---

This is a user manual for the SVS-5 HDD Extension Unit.

The manual will deal mainly with the external dimensions & parts of the SVS-5 HDD Extension Unit, and how to connect it to the SAMSUNG TECHWIN's DVR system.

- SAMSUNG TECHWIN Co., LTD. All rights reserved. Under copyright law this manual may not be copied, in whole or in part, without the consent of SAMSUNG TECHWIN.
- The warranty is rendered invalid in cases where the product has been abused or mishandled, where unauthorized repairs have been attempted or performed, or deterioration of the product is due to normal wear and tear. Please take notice of this warning.

---

## Notices

Resellers and users should keep in mind that this product has been given EMC registration for business purposes.

- Don't install in a humid, dirty, or dusty place.
- Don't use in places exposed to extremes of temperature.  
(Use where normal operation can be guaranteed)
- Avoid placing in direct sunlight or near heating appliances.
- Avoid places subject to vibration, or magnetic fields.
- Don't put anything containing water (e.g. a vase or glass of water) or anything heavy (e.g. a monitor) on top of the SVS-5 HDD extension unit.
- Take care not to allow any objects that conduct electricity to be inserted into the ventilation holes
- Don't drop the product or subject it to shock.  
(If an HDD is installed, the data can be damaged)
- Don't modify or disassemble the product.
- When cleaning the product, don't use water, but polish the surface lightly with a dry cloth.
- If the device malfunctions, contact a dealer or service center immediately.
- This equipment is indoor use and all the communication wiring are limited to inside of the building

**\*Caution**

**If the next articles are not followed, The fatal error can be made. Remember it exactly!!!**

1. When the DVR is connected to SVS-5, power off the DVR certainly.
2. After power on the SVS-5, power on the DVR.
3. Don't draw out the SATA Cable when the DVR is recording the data to the SVS-5. ( When a power failure is happened in normal functioning, the DVR works well with SVS-5 if power is supplied again. )

---

## Rack Mount Instruction

- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature.
- Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit.

---

## Contents

1. Summary	5
1-1 Features	5
1-2 Contents	6
1-3 Parts	7
2. Installation	8
2-1 Method of HDD installation in SVS-5	8
2-2 Method of SATA board installation into DVR	11
2-2-1 Explanation of Composition	11
2-2-2 Method of Assemble and Disassemble	12
3. Connecting to the DVR	17
Appendix (Specifications)	20

---

# 1. Summary

## 1-1 Features

The SVS-5 HDD Extension Unit is a 19" rack-mount type external storage unit using an Serial ATA (SATA) interface, so that it can be installed easily in a cabinet with a DVR (Digital Video Recorder). It affords excellent space saving, because a maximum of 4 SATA HDDs may be fitted to an 1U-height chassis.

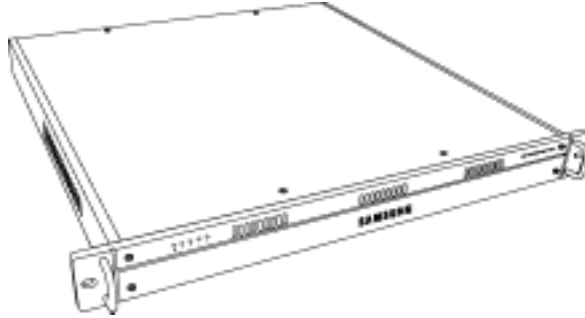
- SVS-5S : SATA board exists / SVS-5E : SATA board doesn't exist  
(SATA board is Board Assy' which expands one DVR to a max. of 4 SVS-5 HDD Extension Units and installed into the DVR.  
- 11P Method of installation)
- 1U 19" rack-mount type chassis
- SATA-to-SATA Port MultiPlier solution
- Max. 3.0Gbps transfer rate (SATA II) – capable of CIF 480fps recording and playback
- Max. 4 SATA HDDs support  
(up to a max. 2TB in case of using 500GB SATA HDD)
- Maximizes space saving and capacity relative to cost
- Easily expandable to a very large storage pool

---

## 1-2 Contents

You should find the following items in the package.

If anything is missing or broken, please inform your dealer



SVS-5 HDD Extension Unit chassis (1 EA)



SATA HDD carriers (4 EA)



SATA cable (1 EA)



AC power cable (1 EA)



User's Manual (1 EA)



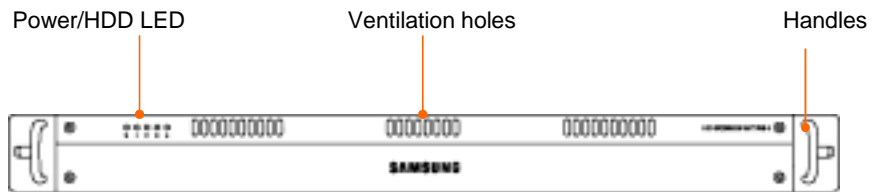
Spare Screws (1 Set)



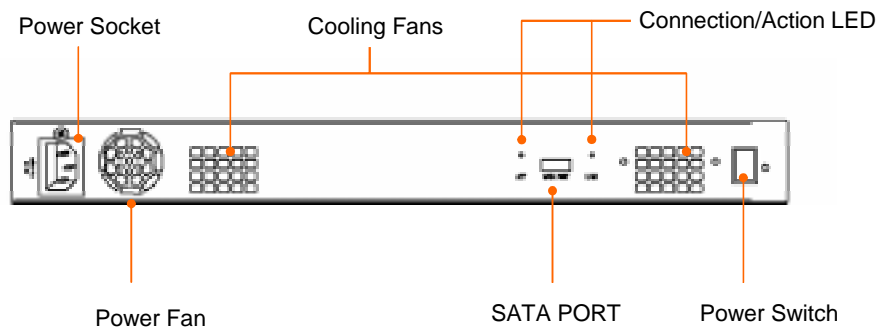
SATA Board (Enclosed in SVS-5S)



## 1-3 Parts



SVS-5 HDD Extension Unit (front)



SVS-5 HDD Extension Unit (rear)

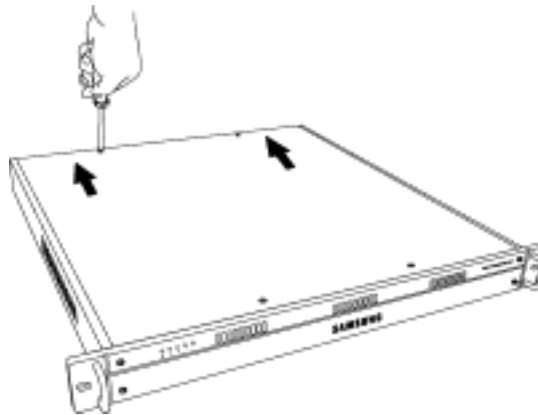
## 2. Installation

### 2-1 Method of HDD installation in SVS-5

SVS-5 HDD Extension Unit can be equipped with a maximum of 4 SATA HDDs. Please install the disks as follows.

Caution : HDDs suitable for use in the SVS-5 HDD Extension Unit are Seagate (ST3250820AS 250GB, ST3500630AS 500GB). No compensation will be made for problems resulting from use of other than the Seagate (ST3250820AS 250GB, ST3500630AS 500GB). The warranty will be invalidated by use of any other make of HDD.

The more HDD capacity is large, the longer the booting time of the DVR for the confirmation of the HDD capacity.



1

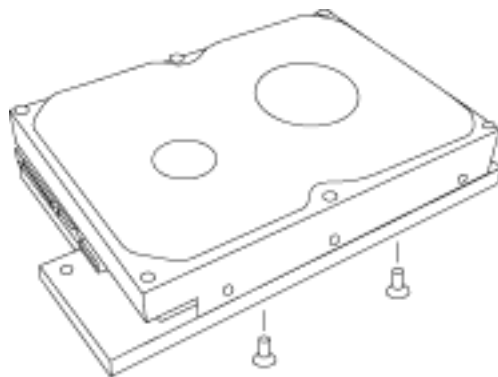
Remove the screws from the top cover and push it back.



2

Prepare the enclosed SATA HDD carriers.

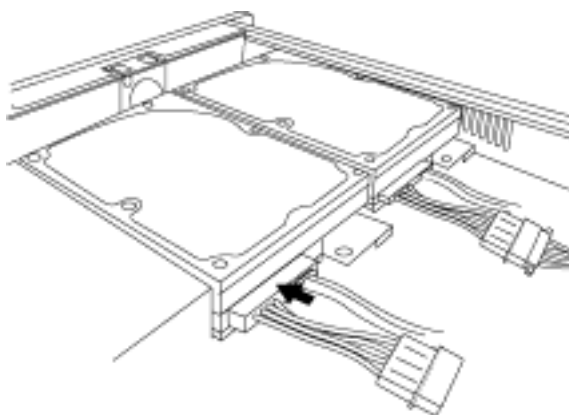
Caution: There is no need to do the setting of Master/Slave in case of SATA HDD.



3

Place the SATA HDD on the SATA HDD carrier and fix it tightly with the screws. Use the HDD screws.

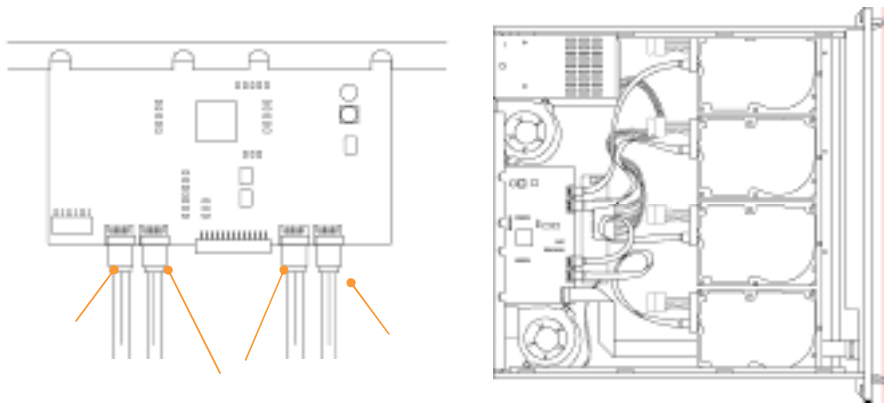
Caution: The front and rear of the carrier are not the same. Place the HDD in the center of the carrier.



4

Fix the SATA HDD carrier with its SATA HDD to the base and screw it down with the pan head screws included. And connect the cable.

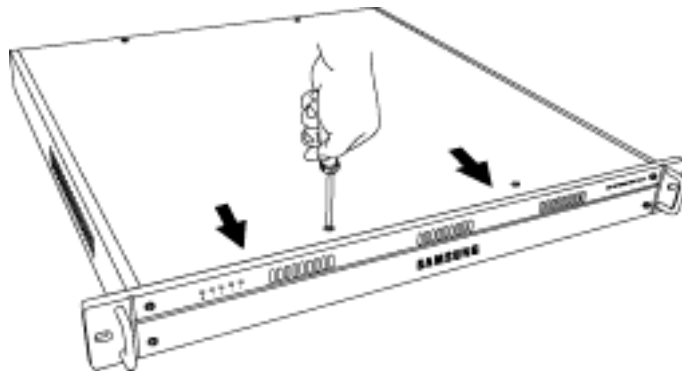
Caution: Connect the cable tightly. Pay attention to the direction of the cable.



5

Connect SATA cables & power connectors to each SATA HDD.

Caution: The controller SATA channel number should correspond to the SATA HDD number as in the above picture.



6

Close the top cover and screw it down.

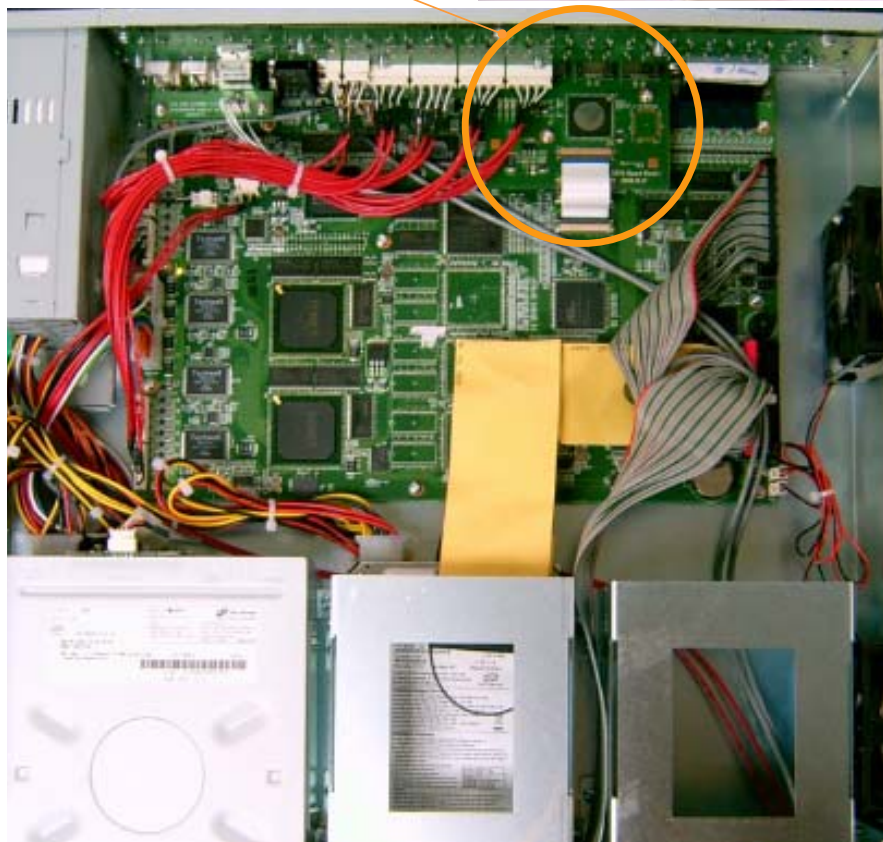
## 2-2 Method of SATA board installation into DVR

### 2-2-1 Explanation of composition

Install the SATA board into the DVR. Please install the SATA board as follows.

Section of SATA board ASS'Y installation

SATA board ASS'Y



Picture of the complete SATA board ASS'Y installation into the DVR

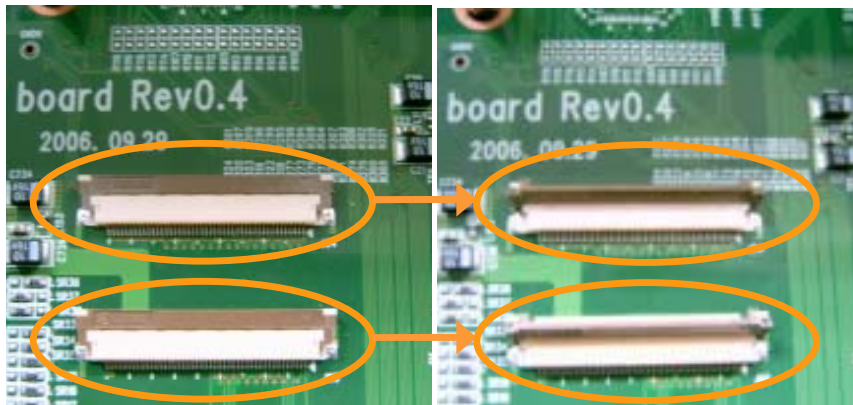
## 2-2-2 Method of Assemble and Disassemble



1

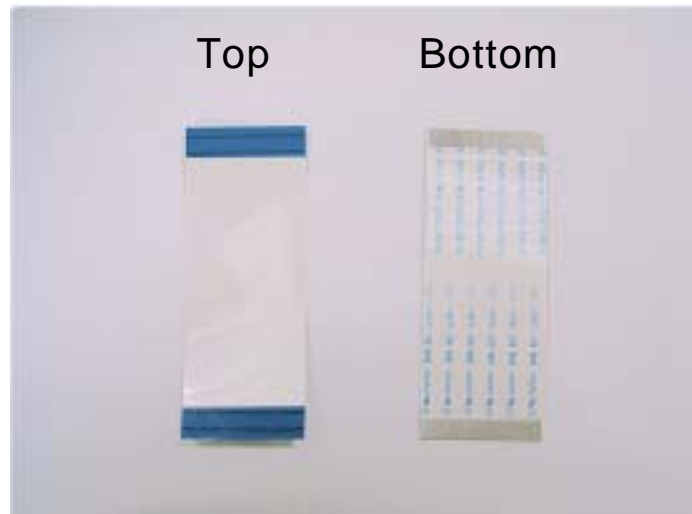
Remove the 13 screws marked in arrows and push it back





2

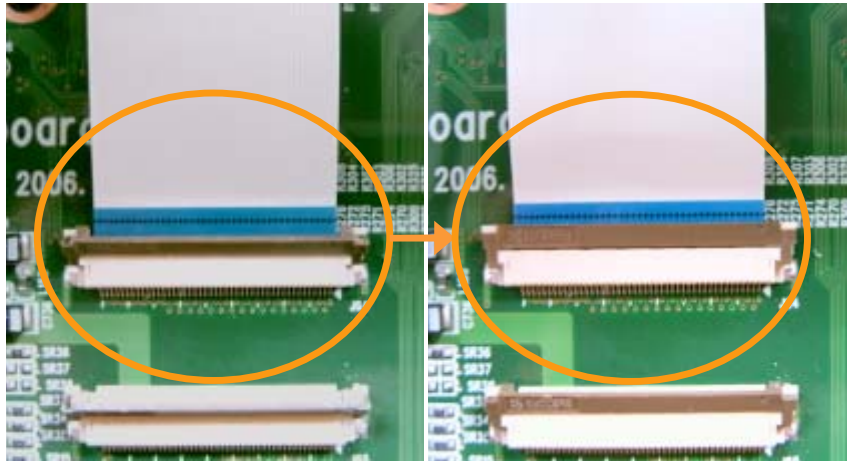
Raise up the connector lock on the DVR board before the SATA board installation. (in the case where two fixing supporters are mounted)



#### Reference

Be careful the direction of the flat cable by reference to the above picture.

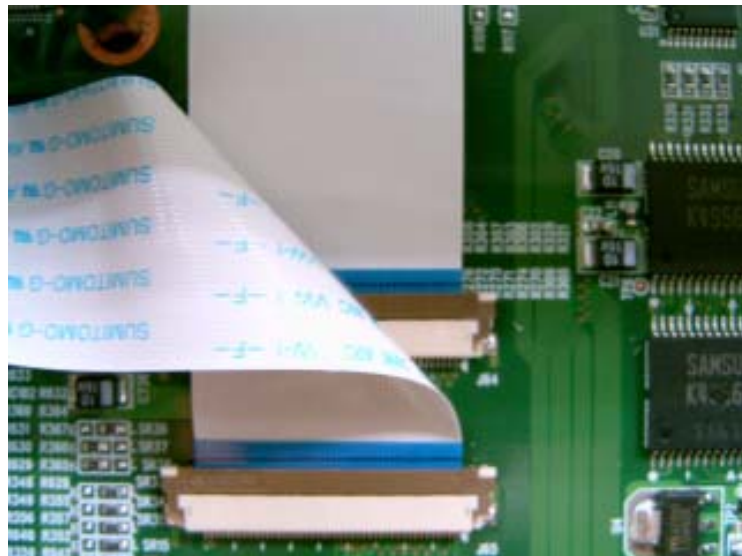
(The top side of the flat cable is blue color and the bottom side of the flat cable has letters .)



3

Push the first flat cable into the connector as the blue section of it is up on the board and put down the connector lock. The dotted line printed on the flat cable must be parallel to the connector.

Caution: Be careful the damage of the connector.

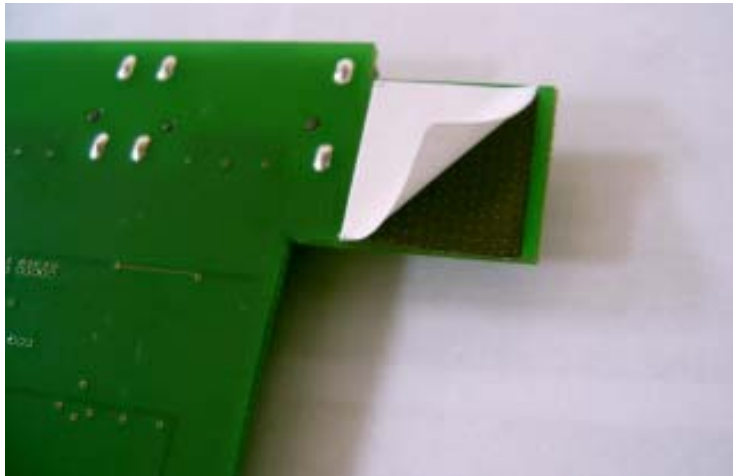


4

Push the second flat cable into the connector in the same way.

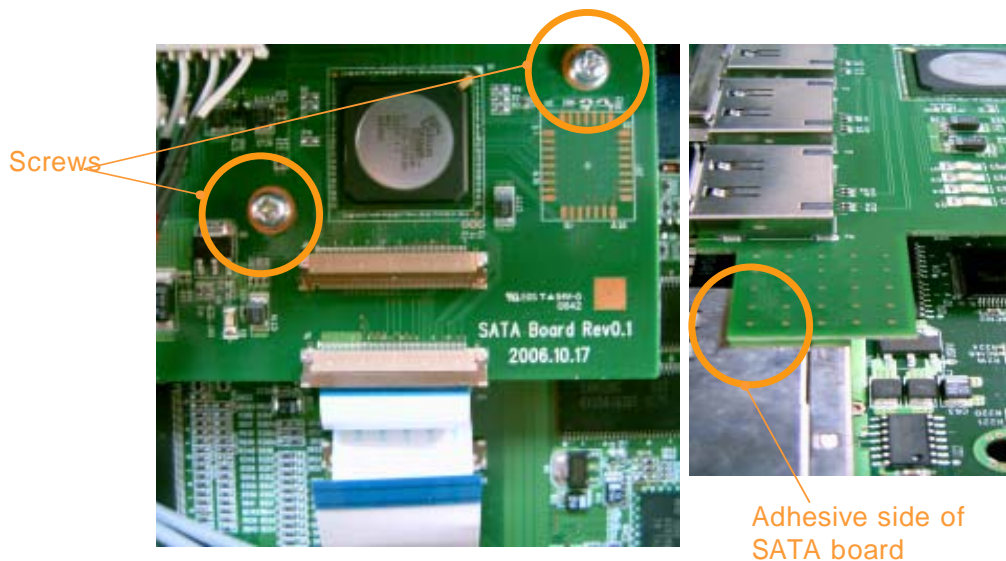
Caution: If the flat cable is connected incorrectly, the DVR cannot be booted.





5

Remove the cover of the both-faces tape on the back side of SATA board



6

Place the SATA board which fixing holes and fixing supporters on the DVR are put in same line and screw it down. Press down both-faces tape lightly to adhere SATA board closely to DVR.



7

Connect two flat cables to the SATA board with reference to 2, 3, 4.  
Caution: connect A to A' and B to B'.



8

Close the top cover and screw it down.

### 3. Connecting to the DVR

The SVS-5 HDD Extension Unit is connected to the SATA port on the DVR system. Please set up the overall system as follows.

Application : SVR-1650E / 1640E / 950E



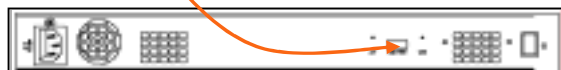
SATA PORT

1

Check the SATA port at the back of the SVS-5 HDD Extension Unit.



DVR(SVR-950)

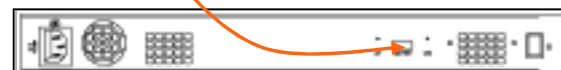


SVS-5

SATA Cable



DVR(SVR-1650/1640)



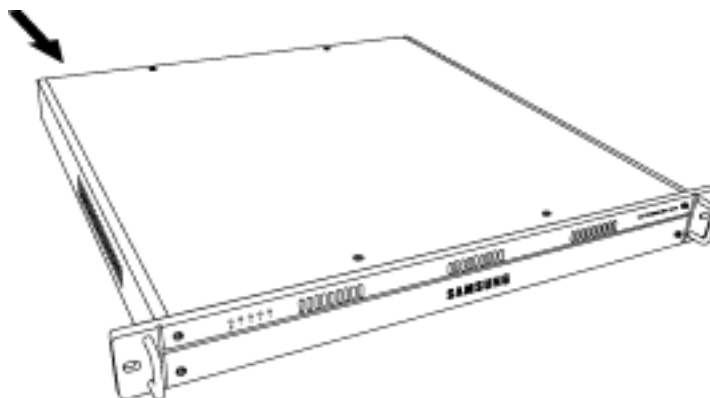
SVS-5

SATA Cable

2

Connect the SATA PORT of SVS-5 HDD Extension Unit to the DVR's SATA port, using an SATA cable as above.

Use the enclosed SATA cable.



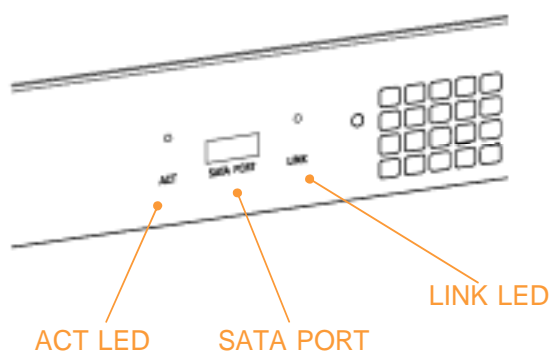
3

Power up using the switch at the rear.

Caution: Note the order of action of the power source

power-on : SVS-5    DVR

power-off : DVR    SVS-5



4

After power on, check out the LINK LED and the ACT LED at the rear of the SVS-5 HDD Extension Unit are lighted in order. The LINK LED is lighted when the SVS-5 HDD Extension Unit is connected to the DVR in order. The ACT LED is lighted when the data are read and written to the SVS-5 HDD Extension Unit.

---

\*Be careful the direction of the SATA cable when use it.

Connecting the DVR with SATA cable

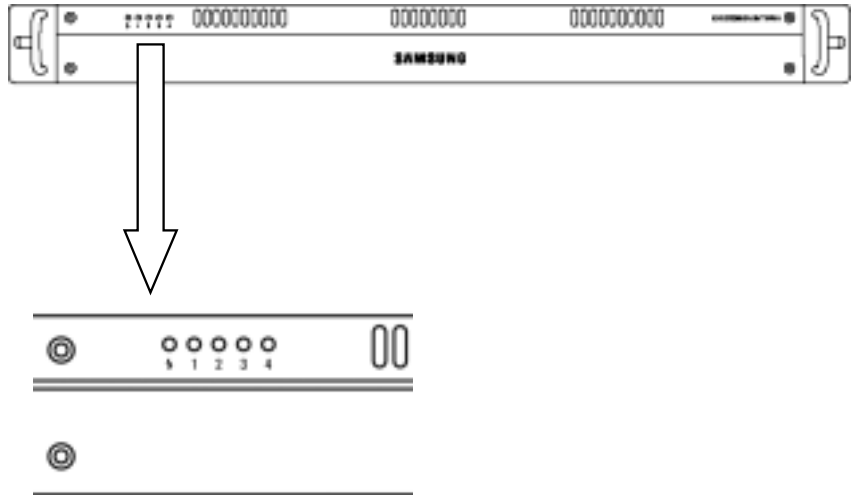


Connecting SVS-5 with SATA cable




Connecting the SATA cable which letters must be bottom side

Connecting the SATA cable which letters must be top side



## 5

Ascertain that 4 LEDs at the front panel are lighted on in order after power on the SVS-5.

 : The blue LED is lighted on when the power is supplied to the SVS-5

**1** : Indicate the state of SATA HDD 1

**2** : Indicate the state of SATA HDD 2

**3** : Indicate the state of SATA HDD 3

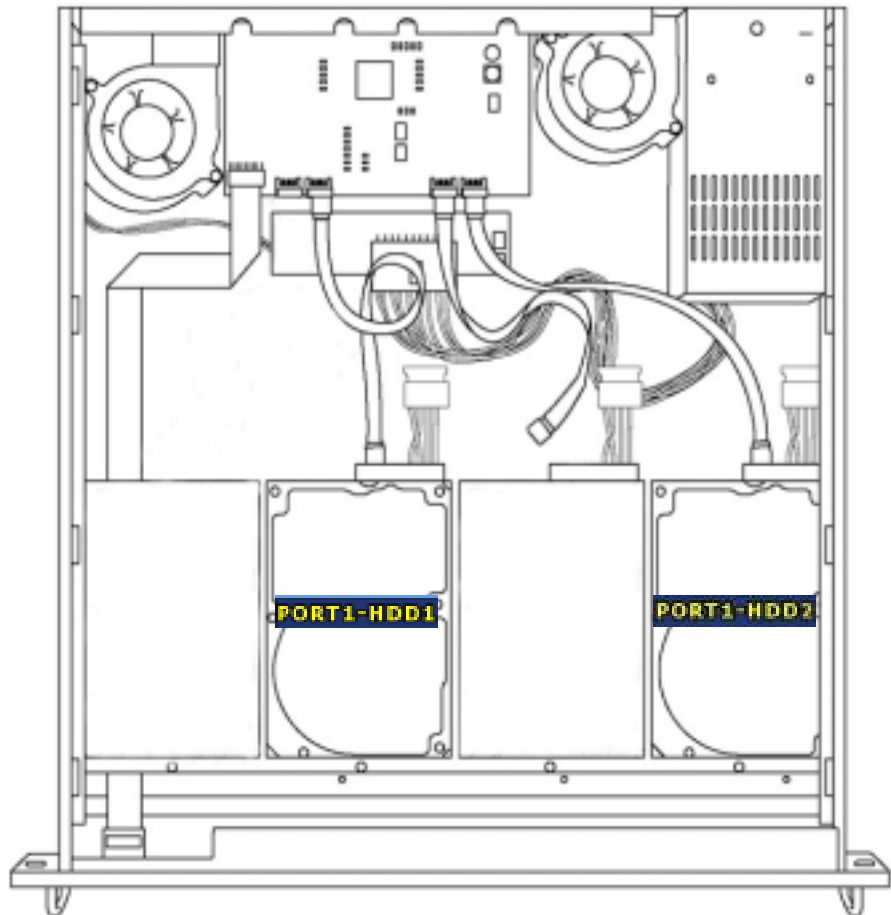
**4** : Indicate the state of SATA HDD 4

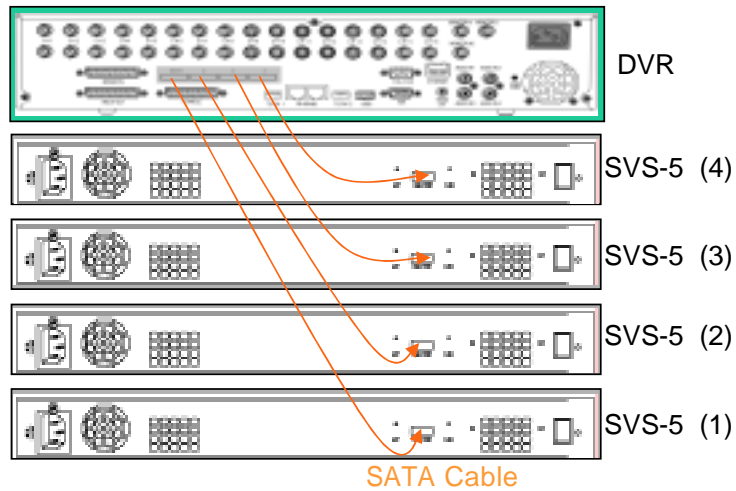
Green LED is lighted : When a SATA HDD is mounted.

RED LED is lighted : When a SATA is used.

Green LED and Red LED blink : Error

\*Explanation the order of HDDs recognized in DVR  
- "The order of HDDs recognized in DVR is decided by the order of connection in the SVS-5.





6

There are 4 SATA ports at the DVR. So, It is possible to expand one DVR to a max. of 4 SVS-5 HDD Extension Units. (The order of recording is decided by the order of SATA port at the DVR.)



Before power on the SVS-5, Check out the power off of the DVR.

After power off the DVR, power off the SVS-5.

\* If the order of action of the power source is not followed, The fatal error can be made.



---

## Specifications

---

### Host Connectivity

One external SATA PORT (for DVR connection)  
Max. 3.0Gbps transfer rate (SATA II)  
Maximum cable length : 2.0m

---

### Disk Connectivity

Max. 4 SATA HDDs support  
Compliant with SATA-2 standard

---

### Dimensions (approximate)

Width(W) × Height(H) × Depth(D) : 48.4cm × 4.4cm × 45.0cm

Weight (without HDD) : 5.6kg

---

### Power

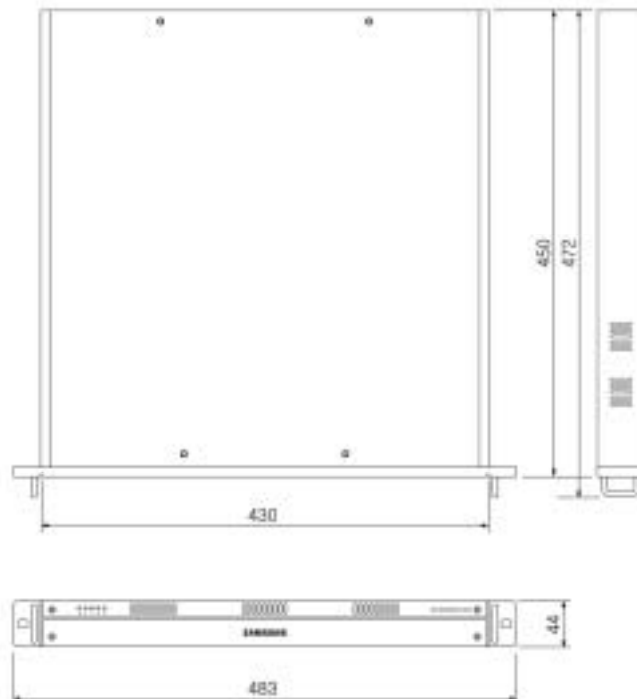
AC 115V~230V (50 / 60Hz) Max. 2A

---

### Operating Environment

Operating Temperature : 5 ~ 45  
Relative Humidity : 20% ~ 70% (non-condensing)

---



# SAMSUNG TECHWIN



## SALES NETWORK

---

• **SAMSUNG TECHWIN CO., LTD.**

333-1, Sangdaewon 1-dong, Jungwon-gu, Seongnam-si,  
Gyeonggi-do 462-807, Korea  
TEL : +82-31-730-8931~3 FAX : +82-31-730-8950

• **SAMSUNG OPTO-ELECTRONICS UK, LTD.**

Samsung House, 1000 Hillswood Drive, Hillswood Business  
Park Chertsey, Surrey KT16 0PS  
TEL : +44-1932-45-5308 FAX : +44-1932-45-5325

• **TIANJIN SAMSUNG OPTO-ELECTRONICS CO., LTD.**

7 Pingchang Rd, Nankai Dist. Tianjin 300190, P.R China  
TEL : +86-22-2761-4724(33821) FAX : +86-22-2761-6514