

PC NVR for Recording

Quick Guide

PRO-7310B6
PRO-7510B4
PRO-7511B4



PC NVR for Recording

Quick Guide

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Overview

Before reading the user manual

Be sure to read the following before reading the user manual.

- This manual is copyrighted by the manufacturer.
- This manual cannot be reproduced without permission.
- We are not responsible for any damage caused by using products other than the standard product or using the product for the purpose other than mentioned in the manual.
- If you need to open the case and touch the inside of the case for troubleshooting, always contact the dealer where you purchased the product for professional help.
- Do not allow water or liquid to come into contact with the connections of the product.
- Do not apply excessive force or shock.
- Do not pull the power cord by force.
- Do not disassemble the product.
- Use only within the rated input/output power range.
- Use only approved power cords.
- For products with an input ground, be sure to use it with a grounded power plug.
- If a wrong battery is used, there is a risk of an explosion. Never replace the batteries with ones that aren't the same model or equivalent product.
- Be cautious so that the batteries are not exposed to excessive heat, such as sunlight or fire.
- Place the power plug where it can be easily operated. If there is a problem with the product, you should unplug the power plug to completely terminate the power. The power will not be completely terminated by only turning off the main body's power button.

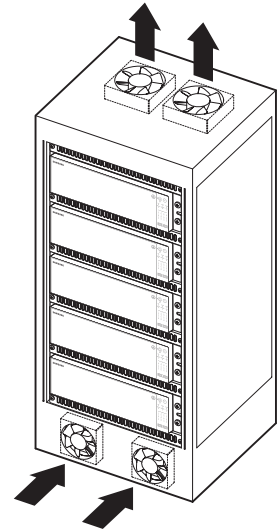
Checking the Installation Environment

This product is a state-of-the-art security equipment with a high capacity hard disk and important circuitry inside.

When the temperature inside the product is too high, its life cycle might be shortened, or it might be broken. Therefore, install it so that it is well-ventilated, and refer to the following recommendations before installation.

When installing this product in a rack, observe the following recommendations.

1. Make sure that the inside of the rack where the product is installed is not sealed.
2. As shown in the figure, make air circulation smooth through the intake and exhaust ports.
3. If you are stacking the product together with other rack-mounted products as shown in the figure, secure a certain amount of space or install a vent for air circulation.
4. For natural convection of air, install the intake port at the bottom of the rack and the exhaust port at the top.
5. It is highly recommended to install a fan motor for air circulation in each intake and exhaust port. (Install a filter that filters dust or foreign matter in the intake fan.)
6. Keep the temperature inside the rack or around the product between 5 °C and 40 °C as shown.



Overview

Configuration and Tips of User Manual

The manual of this product is composed as follows.

- Quick Guide
- SSM User Manual
- System User Manual

This User Manual is the default setting for user's guide. The User Manual contains the following in order:

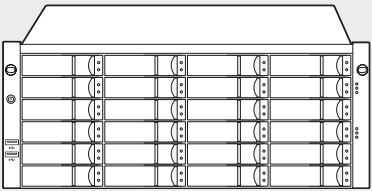
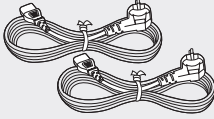
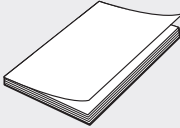
If you want to apply the modification to the actual operating environment, refer to the SSM User Manual and the System User Manual.

- Checking components
- Product name and functions
- How to install a hard disk
- How to create a logical drive
- How to set up a network
- Guide to SSM operation and installation start



- The operating system and application software installed on this product are optimized for the hardware of this equipment.
Do not add or remove any hardware, or update the operating system, or install any other software.
Or it may cause the risk of electric shock and product performance degradation.

Package Contents of PRO-7310B6

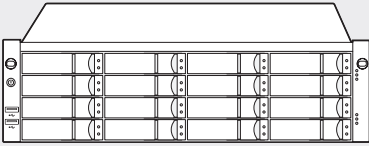
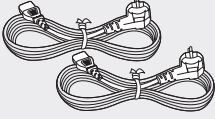
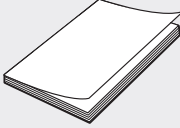
		
NVR	Mouse	Power cord
		
Quick Guide	HDD mounting screws	Hard disk tray label



- Accessories other than the NVR body are consumables and are excluded from the warranty.
- All manuals can be downloaded from our homepage (www.hanwhaVision.com).
- Rack mounting brackets for mounting in the server rack are sold separately.

Overview

Package Contents of PRO-7510B4/PRO-7511B4

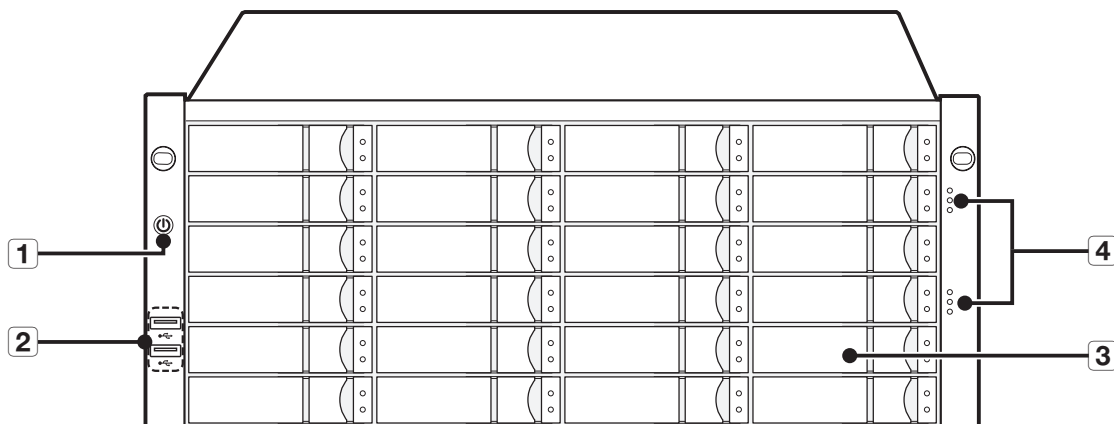
		
NVR	Mouse	Power cord
		
Quick Guide	HDD mounting screws	Hard disk tray label



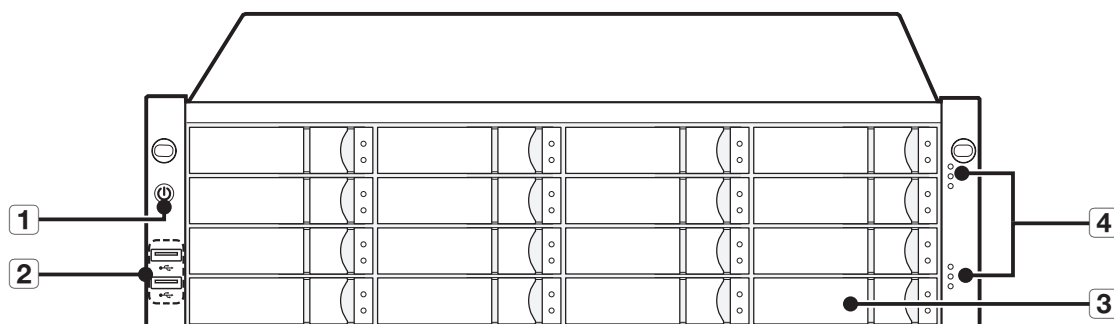
- Accessories other than the NVR body are consumables and are excluded from the warranty.
- All manuals can be downloaded from our homepage (www.hanwhaVision.com).
- Rack mounting brackets for mounting in the server rack are sold separately.

Part Names and Functions

Front (PRO-7310B6)



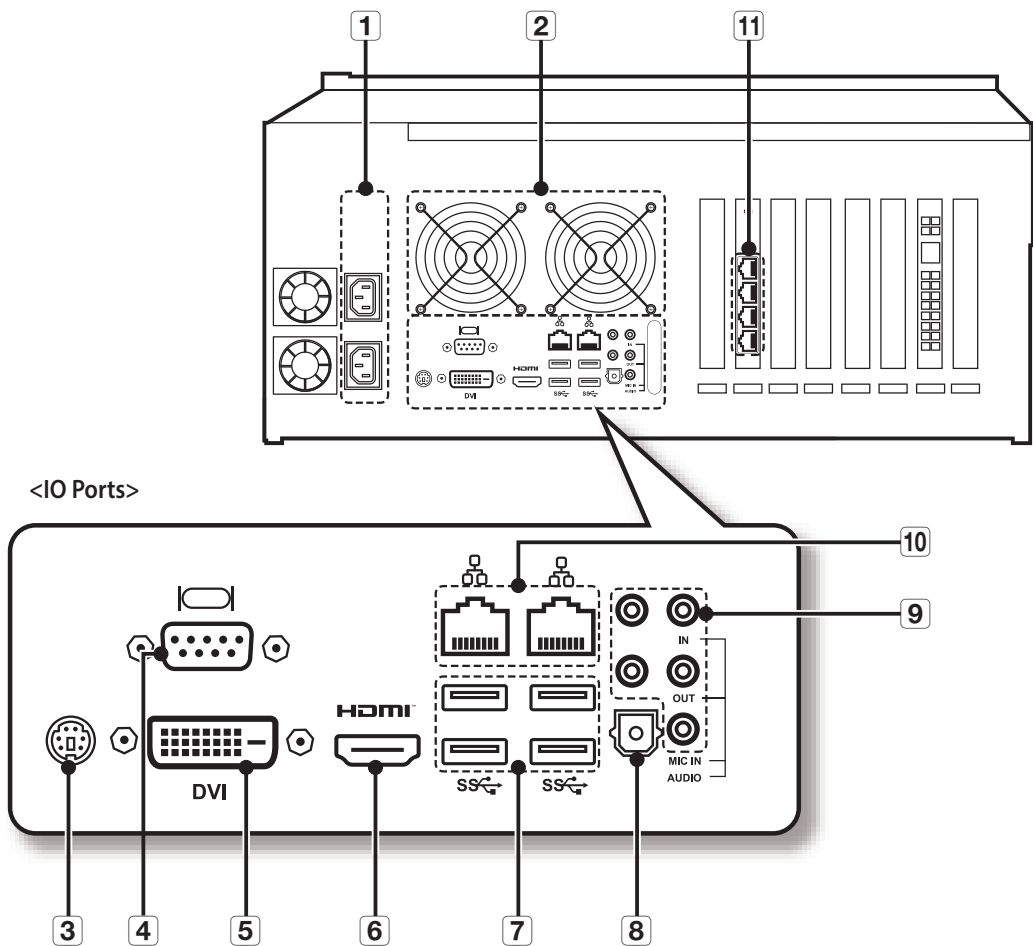
Front (PRO-7510B4/PRO-7511B4)



No	Name
1	Power button
2	USB Port
3	Hard disk tray
4	Power and status LEDs

Overview

Rear



No	Name
1	Power input
2	System fan
3	PS/2 Mouse/Keyboard port
4	VGA port
5	DVI port
6	HDMI port

No	Name
7	USB 3.0 (4 ports)
8	Optical SPDIF output port
9	Audio IO port
10	1000BASE-T RJ-45 (Internal 2 ports)
11	1000BASE-T RJ-45 (External 4 ports)

HDD Installation

How to Install HDD

- HDD installation method is as follows.

1. There are many factors inside the product that can cause electric shock, accident, or product failure. So unplug the power and install it.



- Disconnect both power cords of PRO-7310B6/PRO-7510B4/PRO-7511B4.

2. Remove the hard disk tray from the enclosure.
3. Place the HDD in the hard disk tray so that it aligns with the screw holes on each side.
4. Secure the HDD with the included screws. Do not over-tighten it.
5. Reattach the hard disk tray to the enclosure.
6. Repeat steps 2 to 5 until all HDDs are installed.



- Use HDDs as recommended by the Company.
(Please refer to the HDD compatibility list in www.HanwhaVision.com.)
- When replacing HDD or installing additional HDD, contact the dealer where you purchased the product or service center.
- Precautions on Data Loss (HDD Management)
Be careful not to damage the HDD data.
If you add a HDD, please check if it is compatible HDD product first of all.
Be careful not to damage the HDD because it is a sensitive product that may cause defects due to external environment or shock during use.
Even if the HDD is damaged due to user's carelessness or external environment, the manufacturer will not be held responsible for any damage caused by the user.
- If HDD and data may be damaged
Make frequent backups (duplication) to minimize loss from HDD damage.
Data may be damaged if the product is removed or an external shock is applied during installation.
The HDD may be damaged if the product is suddenly stopped, such as a power outage or turning off the power during HDD operation.
Moving the main computer or applying a shock during HDD operation may damage the files or the HDD.

HDD Installation

How to Attach HDD

How to remove or attach hard disk tray to/from the enclosure

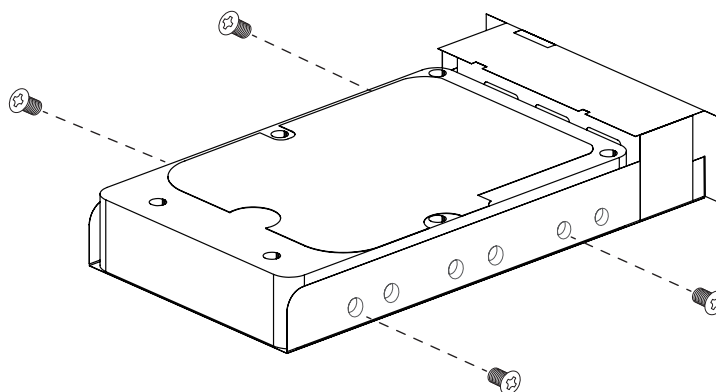
1. Pull the handle to release the latch, then grasp the handle and pull straight out.
2. Place the other hand under the hard disk tray so that it will not fall when you remove or mount it.



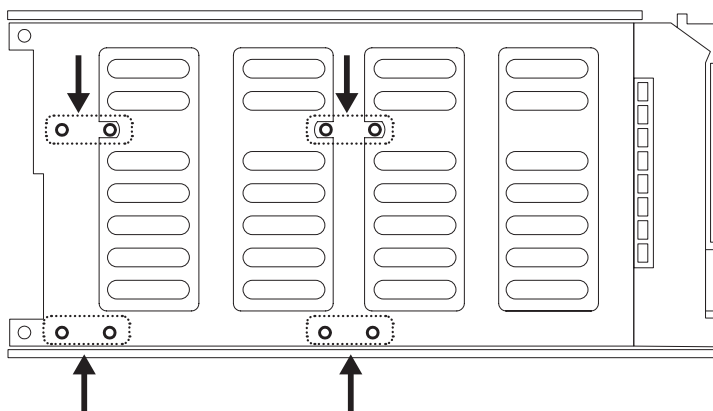
When mounting, push the center to insert HDD into the enclosure.

How to attach HDD to hard disk tray

1. Attach the 3.5" HDD to the hard disk tray using the four screws as shown.



2. Align the 2.5" HDD with the four holes on the bottom of the hard disk tray as shown and tighten the screws.

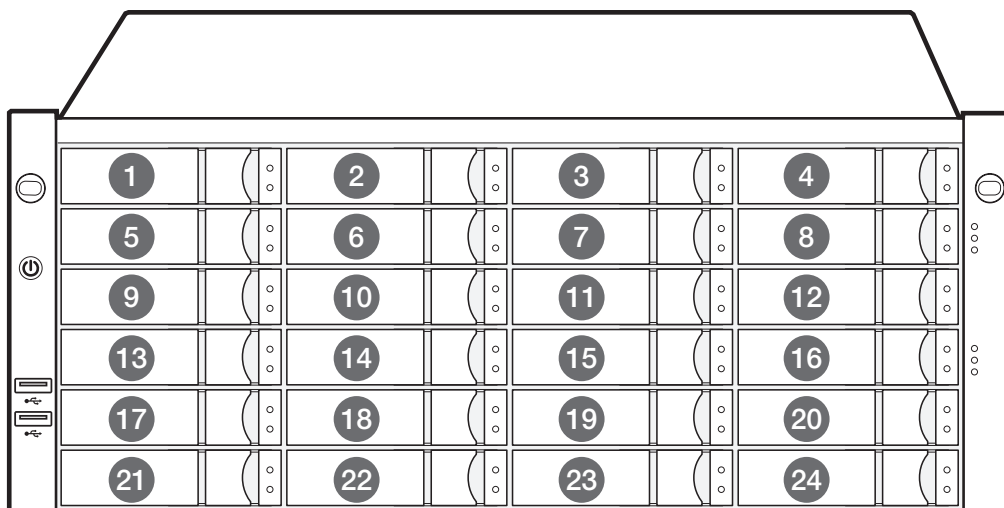


HDD Installation

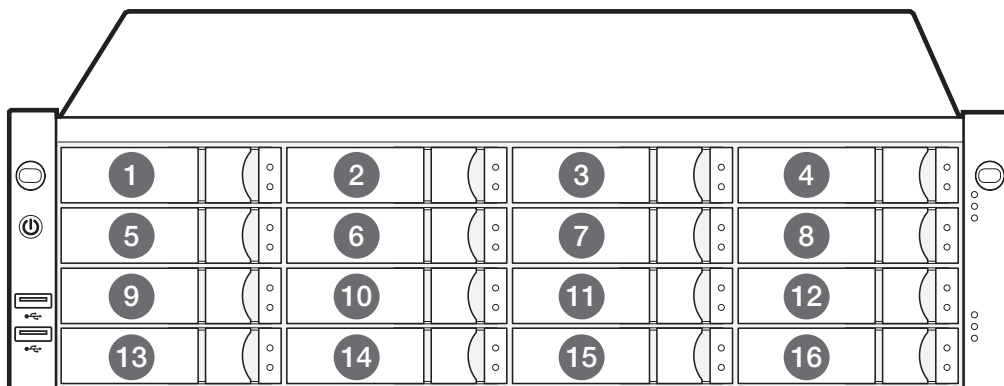
Hard disk tray number

Each hard disk tray of the enclosure is numbered as follows.

PRO-7310B6 hard disk tray numbers



PRO-7510B4/PRO-7511B4 hard disk tray numbers



Execution

Power Supply

Plug all of the power cords into the back of the product, and press the power button.

If the product does not turn on, check the following.

1. Make sure that all the power cords have been plugged in firmly, and that they meet the required power specifications.
2. If you are using a power strip, make sure that the power strip is turned on.



- If all the power cords are plugged in firmly but the power does not turn on even after you have pressed the power button, follow the procedure described below.

This product can be operated in power protection mode to protect it in the event of a power outage or instability in the power supply.

This is similar to the operation of the fuse of the earth leakage circuit breaker. It is not a malfunction of the product.

Follow the steps described below.

- 1) Unplug all of the power cords from the back of the product.
 - If you are using a power strip, turn off the power strip.
- 2) Wait 10 seconds after the cords have been removed.
 - The protection circuit is now initialized, as the current inside the power supply has been discharged.
- 3) Plug in the power cords again.
 - If you are using a power strip, turn it on again.
- 4) Press the power button on the product.

Execution

How to create a logical drive

This chapter describes how to configure logical drives.

1. Click the SSM Service Manager icon on the desktop to launch it.
2. After you click the Stop Service button, check if the service status has changed to Stopped, and exit.



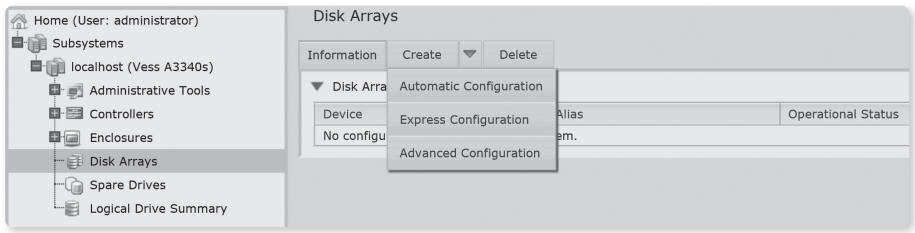
▪ If the service status is shown as Stopped, just exit.

3. Click on the WebPAM ProE icon on your desktop to launch it.
4. When the login screen appears, select your language at the top of the screen.
5. The initial username and password for the login are 'administrator' and 'password'.
6. If no array is configured, go to the disk array menu.
7. The array configuration has three options: automatic configuration, quick configuration, and advanced configuration.
 - Automatic configuration automatically configures the logical drive based on the number of hard disks installed and the selection options. However, it is convenient but does not guarantee optimal storage performance.
 - Quick configuration automatically configures logical drives based on the number of hard disks installed, the number of logical drives you want, and your selection options.
 - Advanced configuration allows you to configure logical drives manually at your own discretion.



▪ Advanced configuration is recommended for logical drive creation optimized for this product. Refer to Advanced Settings in Advanced Configuration on the next page.

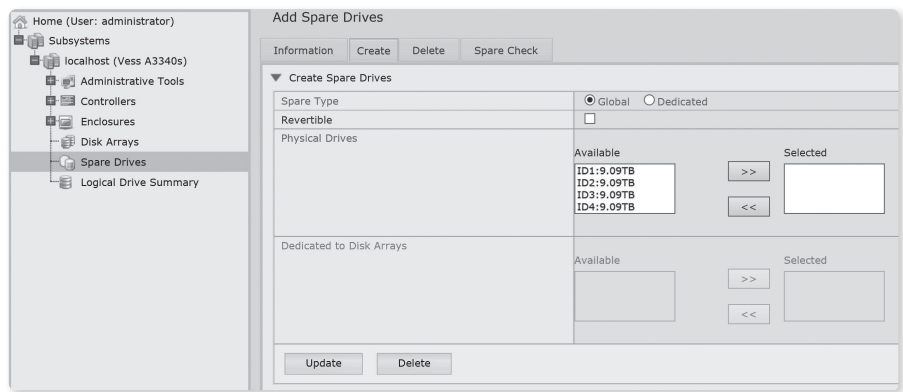
8. A list of generated disk arrays and logical drives can be found in the logical drive summary.



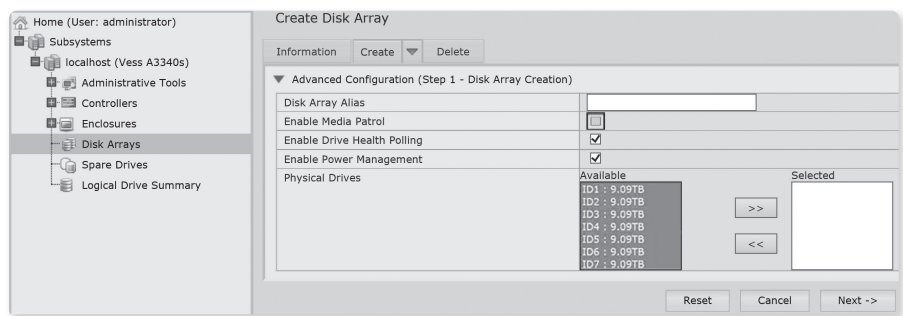
How to configure advanced logical drives

This is a method of configuring a logical drive to maximize the performance of this equipment.

- 1. To ensure disk availability, select the Spare Drive menu to create a spare drive.

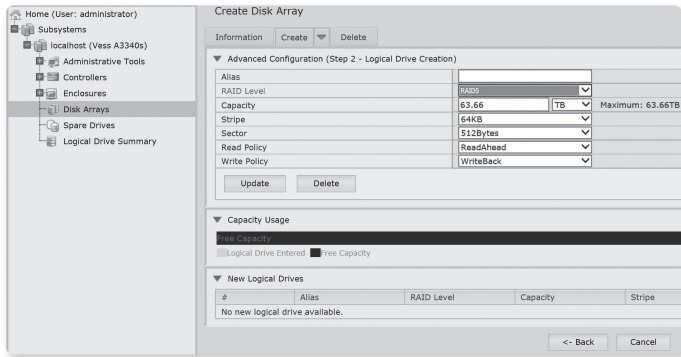


- 2. From the Create Disk Array menu, choose Advanced Configuration. Disable the Use Media Traversal option in the Create Disk Array menu that appears after selecting, select the number of physical drives, and go to the next step. Disable the Enable Media Patrol option, select the number of physical drives, and go to the next step. For optimal storage performance, we recommend the following configuration for one logical drive.
 - For a 16-bay NVR, allocate 15-16 physical drives to configure a logical drive.
 - For a 24-bay NVR, allocate 23-24 physical drives to configure a logical drive.



Execution

3. After selecting and updating the RAID level, go to the next step.
- For optimal product performance, we recommend RAID5.
 - For optimal product performance, select 64 KB for Stripe.
 - For optimal product performance, select 512 Bytes for Sector.
 - When rebuilding a RAID, the performance of retransmission, recording, or backup may decrease.

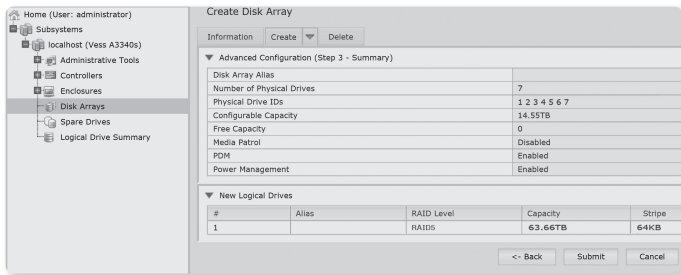


※ PRO-7510B4 only :

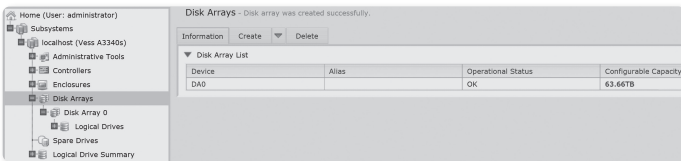
Max. input channels are 360 CH and it can be reduced depending on Camera Bandwidth.

If the camera bandwidth is 1.5 Mbps, the Max. input channel is 336 CH (=500 Mbps/1.5 Mbps) for Raid-5/6.

4. If the configured disk array is correct, click Submit to complete the logical drive configuration.



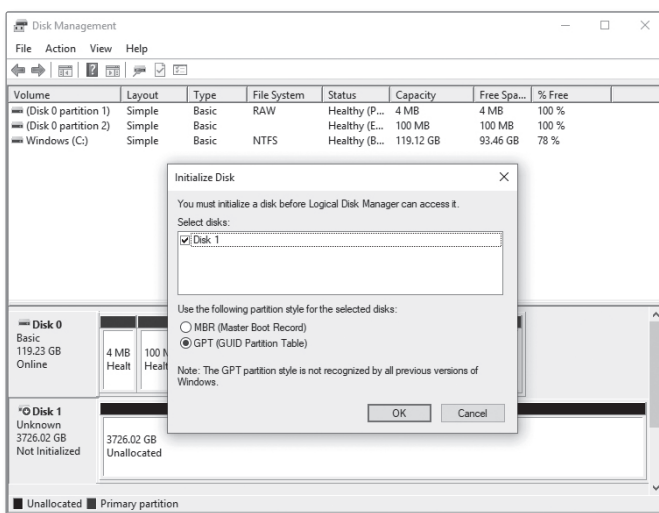
5. When the disk array configuration is completed, the list of completed arrays appears. Configure the other disk array in the same way.



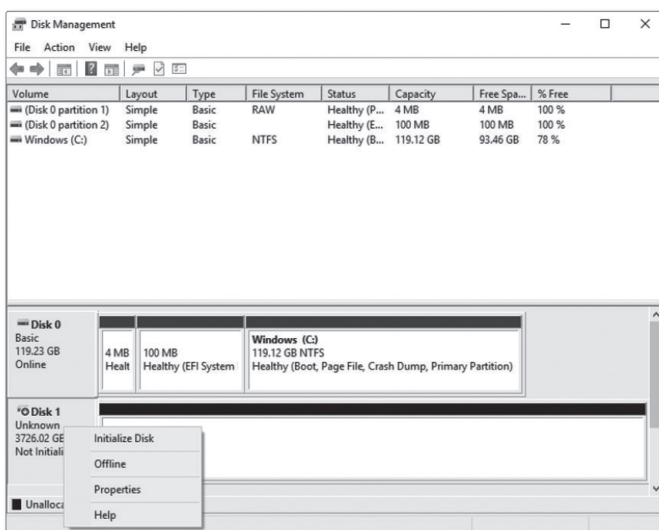
6. In Windows Disk Management, check the disks configured for RAID.

- ❗ It is recommended to complete the Virtual Disk configuration for all disks being used before checking.
- Disks that have not been configured for Virtual Disk will also be displayed in the Disk Management screen. For an optimal recording performance, create a new simple volume only for disks that have been configured for Virtual Disk.

7. When you run Windows Disk Management, the Initialize Disk screen appears. Select GPT (GUID Partition Table) to initialize the disk at the Initialize Disk screen.

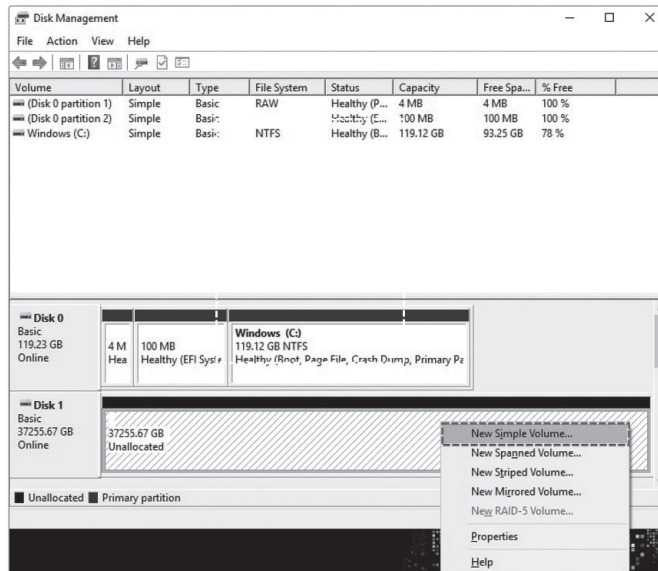


- ❗ If the Initialize Disk screen does not appear, right-click on the Disk 1 area and select Initialize Disk.



Execution

8. Right click on the partition that has not been allocated and select New Simple Volume.

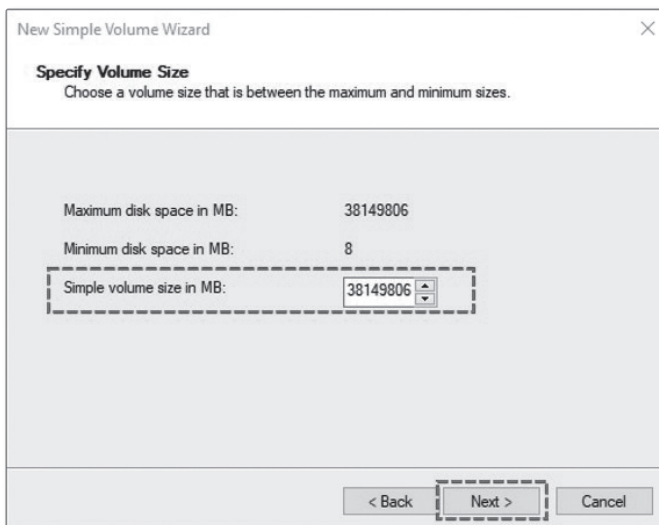


9. Click Next in the New Simple Volume Wizard.



10. After checking the Simple Volume Size, click Next.

The Simple Volume Size may differ depending on the HDD capacity and RAID Level.



New Simple Volume Wizard

Specify Volume Size
Choose a volume size that is between the maximum and minimum sizes.

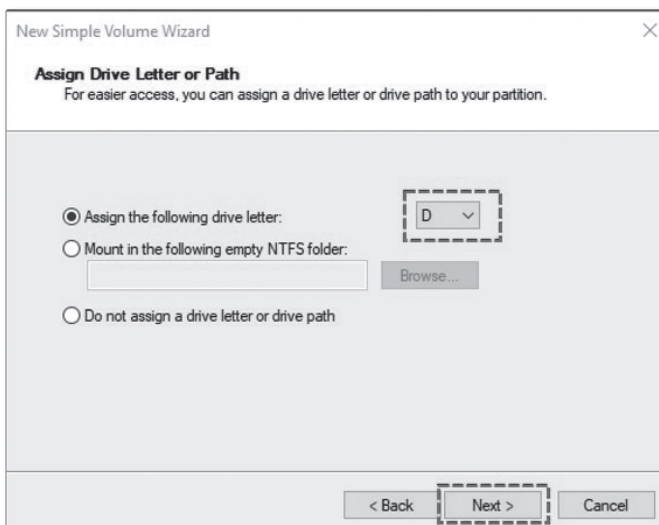
Maximum disk space in MB: 38149806

Minimum disk space in MB: 8

Simple volume size in MB: 38149806

< Back Next > Cancel

11. After checking the drive letter, click Next.



New Simple Volume Wizard

Assign Drive Letter or Path
For easier access, you can assign a drive letter or drive path to your partition.

☒ Assign the following drive letter: D

☐ Mount in the following empty NTFS folder: Browse...

☐ Do not assign a drive letter or drive path

< Back Next > Cancel

Execution

12. After changing the allocation unit size to 256K or 64K, click Next.



- Select 256K for the allocation unit size for optimal product performance.(Select 64K for PRO-7511B4)

New Simple Volume Wizard

Format Partition
To store data on this partition, you must format it first.

Choose whether you want to format this volume, and if so, what settings you want to use.

☐ Do not format this volume

☒ Format this volume with the following settings:

File system: NTFS

Allocation unit size: 256K

Volume label: New Volume

☒ Perform a quick format

☐ Enable file and folder compression

< Back Next > Cancel

13. Click Finish to complete the New Simple Volume Wizard.

New Simple Volume Wizard

Completing the New Simple Volume Wizard

You have successfully completed the New Simple Volume Wizard.

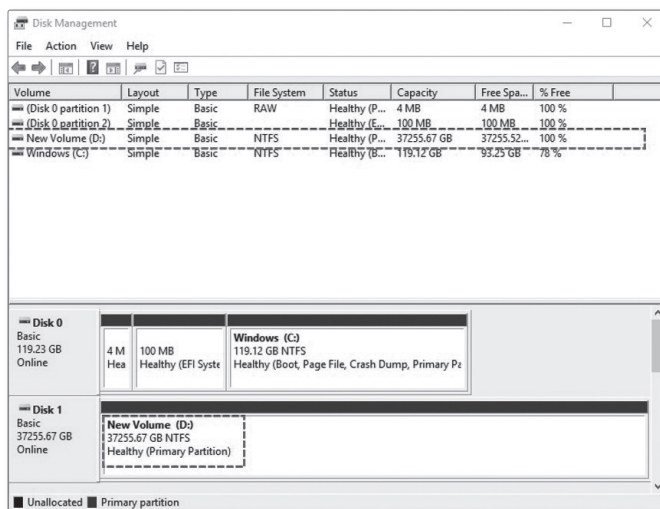
You selected the following settings:

Volume type: Simple Volume
Disk selected: Disk 1
Volume size: 47687262 MB
Drive letter or path: D:
File system: NTFS
Allocation unit size: 262144
Volume label: New Volume
Quick format: Yes

To close this wizard, click Finish.

< Back Finish Cancel

14. Check that the disk is recognized normally.

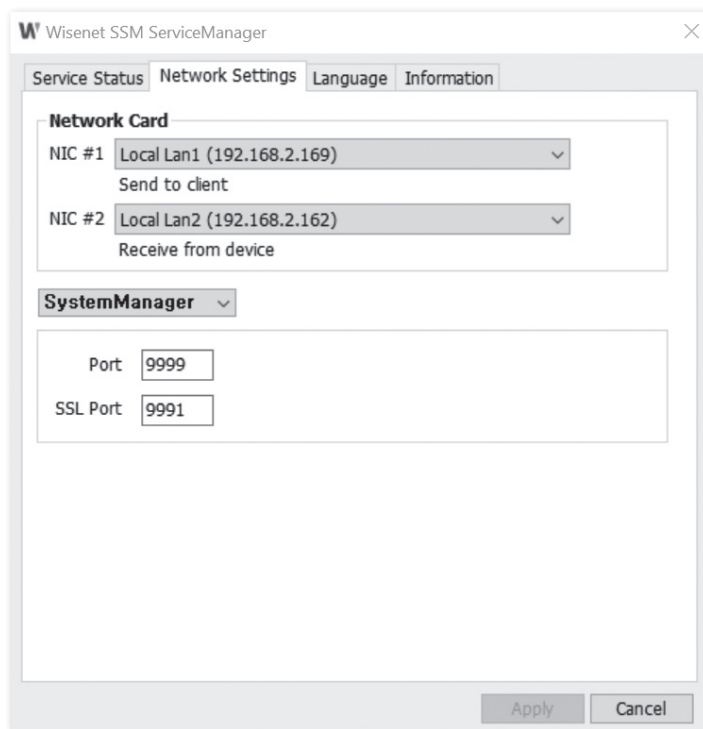


Execution

Network settings

This chapter explains how to set up a network.

1. Click the SSM Service Manager icon on the main screen to launch it.
2. Move to the network settings.
3. Select the Ethernet IP address configured in the network cards NIC #1 and NIC #2.

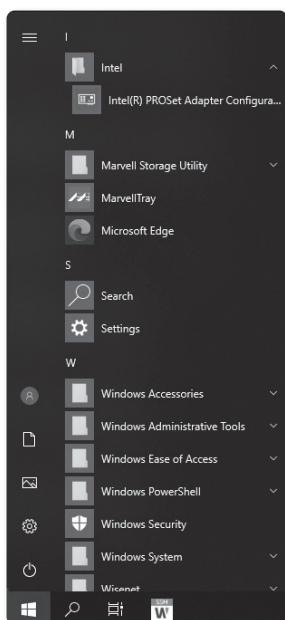


- When the network environment changes, the network card settings will also be changed.

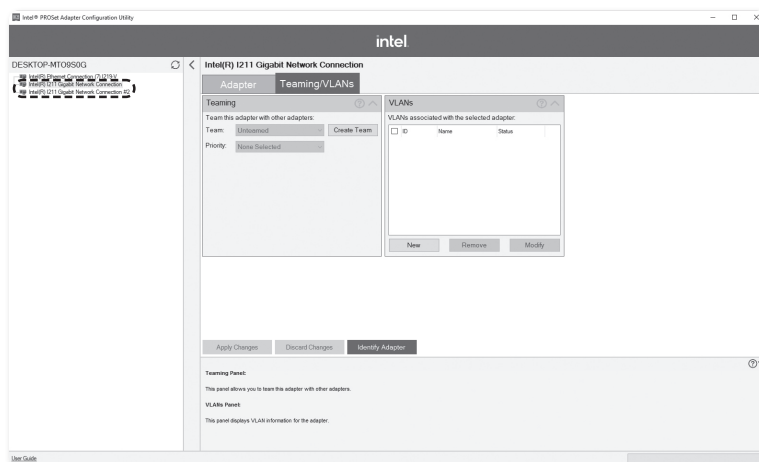
How to create network teaming

This section will explain how to configure Teaming to create network redundancy.

1. Connect the NETWORK 2 and NETWORK 3 ports to the network switch and LAN line, respectively.
2. Run Intel® PROSet Adapter Configuration Utility via [Start] → All Programs → Intel → Intel® PROSet Adapter Configuration Utility.

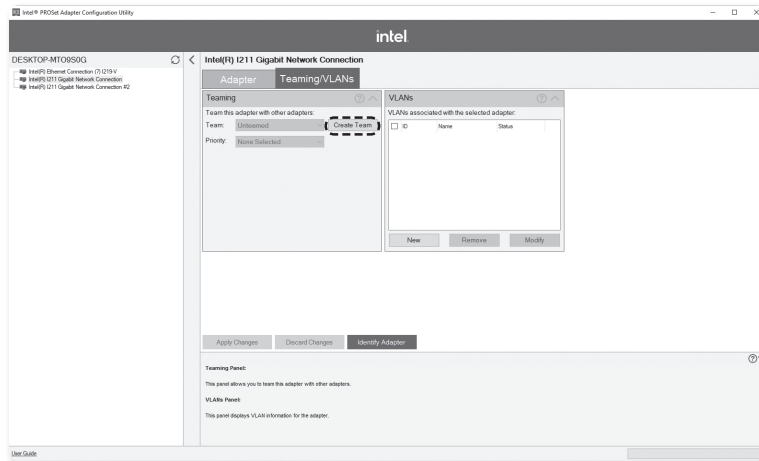


3. Select Intel(R) I211 Gigabit Network Connection.

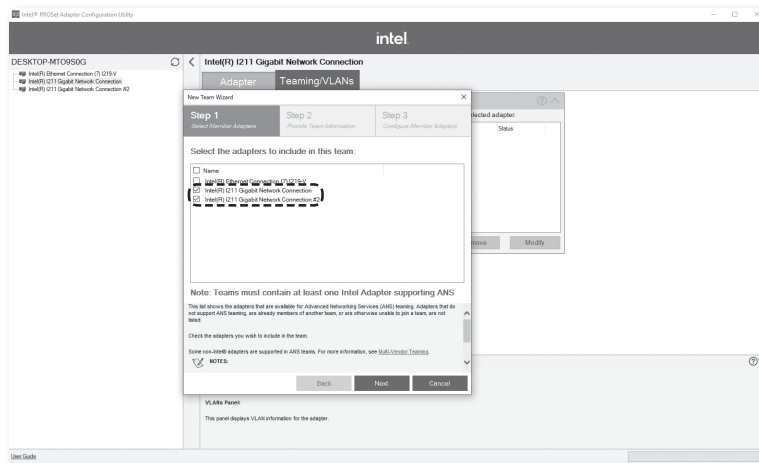


Execution

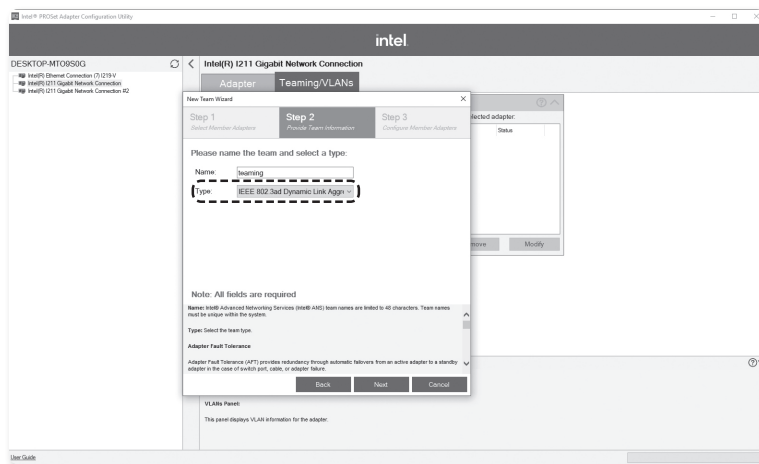
4. Select Create Team.



5. Select the adapters to be included in the team.



6. Enter a team name and select a type.
 - Teaming type
 - a. IEEE802.3ad Dynamic Link Aggregation
 - b. Switch Fault Tolerance
 - c. Adapter Fault Tolerance
 - d. Adaptive Load Balancing
 - e. Static Link Aggregation

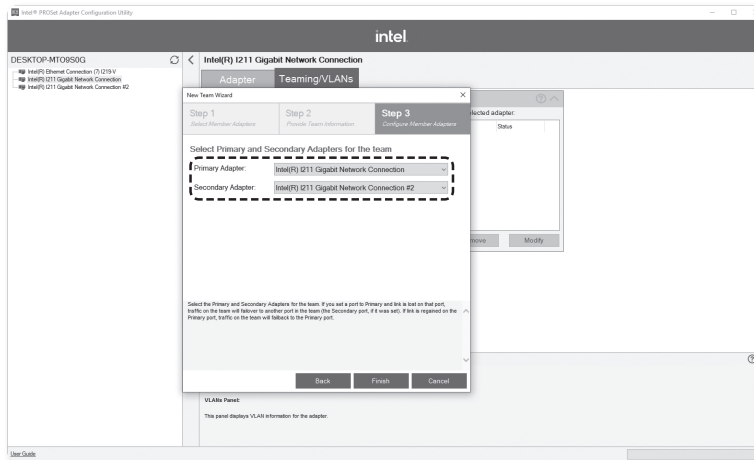


■ Precautions by Team Type

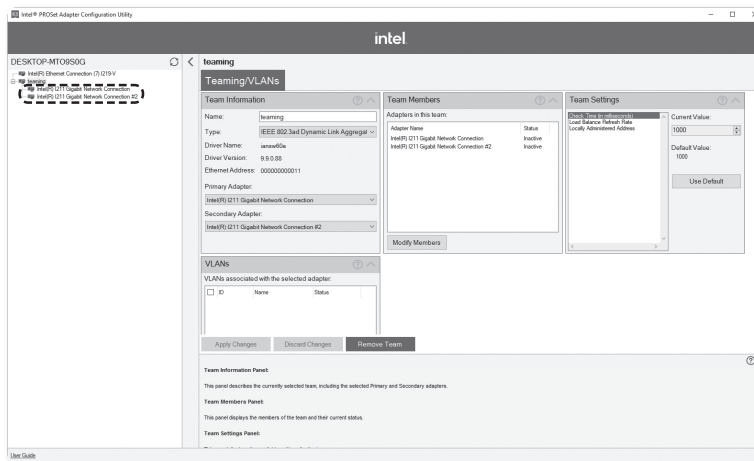
- When using the IEEE802.3ad Dynamic Link Aggregation type, you must use a switch that supports the IEEE 802.3ad Standard.
- When using the Switch Fault Tolerance or Adapter Fault Tolerance types, all team members must be connected to the same subnet.
- When using the Static Link Aggregation type, you must use a switch with Intel® Link Aggregation, Cisco* FEC, GEC, or IEEE 802.3ad Static Link Aggregation capabilities.

Execution

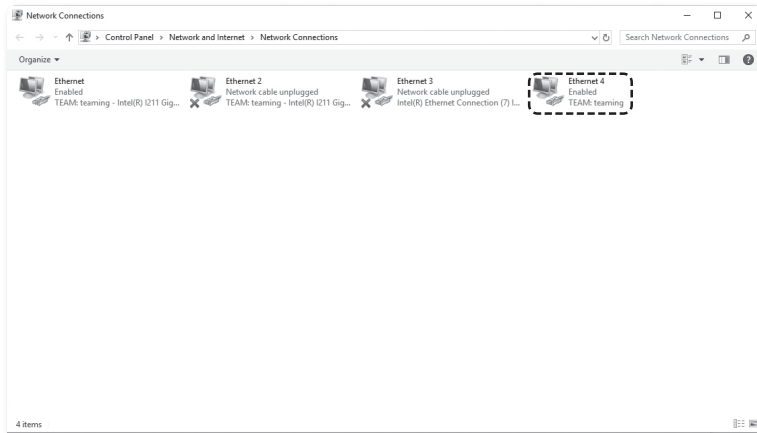
7. Select the primary and secondary adapters for the team.



8. Check that the team has been configured.
 - To remove the teaming configuration, click the Remove Team button.



9. Set an IP for the created team to use it.



Execution

How to Launch SSM

This chapter describes how to launch SSM.

For more information on how to use SSM, refer to the additional manual on the desktop.

1. Click the SSM Service Manager icon on the desktop to launch it.
2. After you click the Launch Service button, check if the service status has changed to Started.

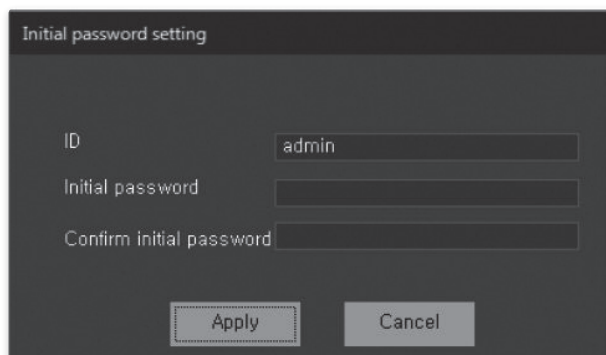


▪ If the status of the service is shown as Started, this step is skipped.

3. Select 'Launch SSM service automatically when Windows starts' and apply it, then exit
4. Run the SSM console program from the desktop.
Alternatively, select [Start] → Wisenet → SSM Console.
5. On the login screen, click the Login button.



6. In the initial password setup screen, enter the initial password and click Apply.

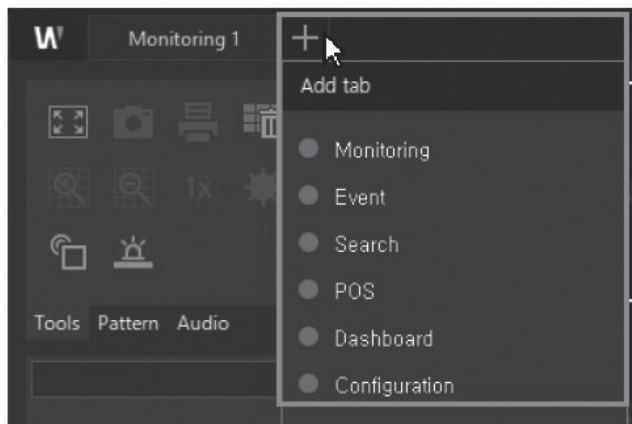


Menu Description

The menus in the SSM Console client program consist of tabs.

You can freely move on the menu tabs to select the desired menu item.

1. To open a menu page, click the '+' in the upper left corner of the program and select the desired menu.



2. The functions of each menu are as follows.

Device registration, such as cameras, can be managed from Configuration Manager.

Monitoring	You can monitor videos that are taken by cameras in real time. You can also search and play back videos stored on servers and network storage devices.
Event	You can monitor real-time events that occur on devices or retrieve event logs.
Search	You can search thumbnails when a motion detection event occurs in the recorded video. You can also search for a person passing through the virtual line set on the recorded video, or search for a person who is breaking or roaming into a specific area.
POS	You can monitor the data and camera videos of the POS device connected to the NVR in real time. You can also search stored POS data, or play back a video from a specific camera.
Dashboard	You can monitor the status of the SSM core server or monitor the status of registered devices.
Configuration Manager	You can configure and manage SSM core server systems.

3. Refer to the SSM manual on the desktop for the function of each menu and detailed usage of SSM.

Important

Please check 'Manuals' from our website, before connecting to the Supply,
<https://www.hanwhavision.com/en/download-data/>

Warranty

Please check "Product warranty information" from our website.
<https://www.hanwhavision.com/en/support/warranty/>



Hanwha Vision cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.
The Eco mark represents Hanwha Vision's devotion to creating environmentally friendly products, and indicates that the product satisfies the EU RoHS Directive.



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

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them 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 these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.



Correct disposal of batteries in this product

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

