

Wisenet TMS Appliance

Quick Guide

TAW-4000H16

Wisenet TMS Appliance

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.
- Do not expose the internal battery to excessive heat such as direct sunlight or fire. If a wrong type of battery is inserted, it may cause explosion. Only use the same type of battery.
- Install the power plug in an easily accessible place. In case of fire or any other accident, it needs to be plugged off immediately.
- Plug it only into an outlet that is grounded in order to avoid electric shock or any other physical injuries.

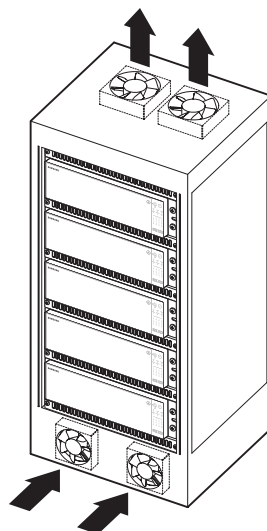
Checking the Installation Environment

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

If the internal temperature of the product is too high, the life span may shorten or failure may occur. 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

Wisenet TMS (Transport Monitoring System) Appliance is a solution for managing the flow of traffic (GPS information) while transportation such as train or bus is operating, in order to manage the events occurring during such operation and to back up the video recorded inside a vehicle. You can also search and play data stored in the TMS Server at a remote place to build a convenient, efficient surveillance environment.

The manual of this product is composed as follows.

- Quick Guide
- Wisenet TMS User Manual
- System User Manual

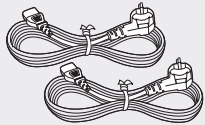
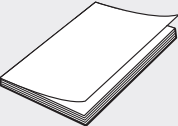
This User Manual is the default setting for user's guide. The User Manual contains the following in order: If you want to apply the modification to the actual operating environment, refer to the Wisenet TMS User Manual and the System User Manual.

- Checking components
- Product name and functions
- How to install a hard disk
- How to create a logical drive
- Guide to Wisenet TMS 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 (TAW-4000H16)

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

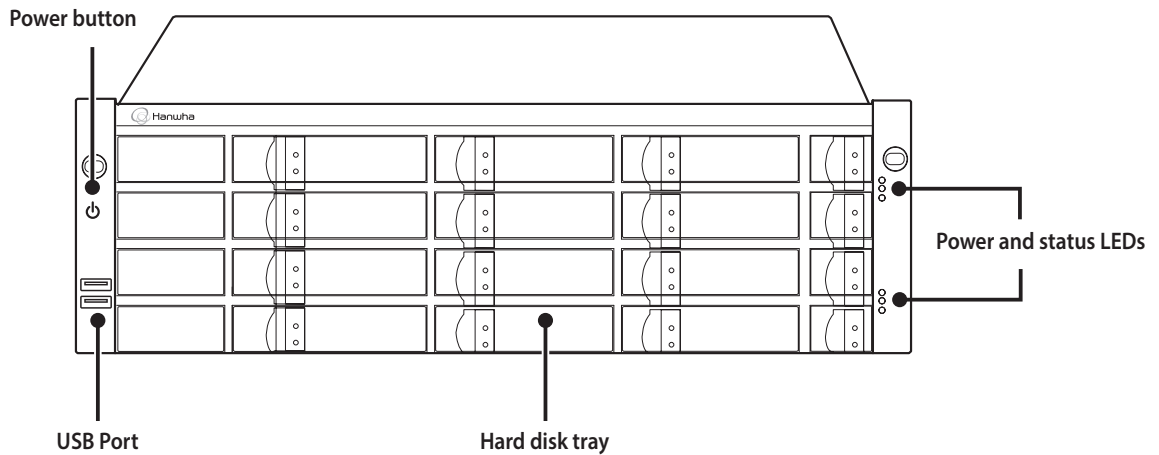


- Accessories other than the NVR body are consumables and are excluded from the warranty.
- All manuals can be downloaded from our homepage (www.HanwhaVision.com).
- Rack mounting brackets for mounting in the server rack are sold separately.

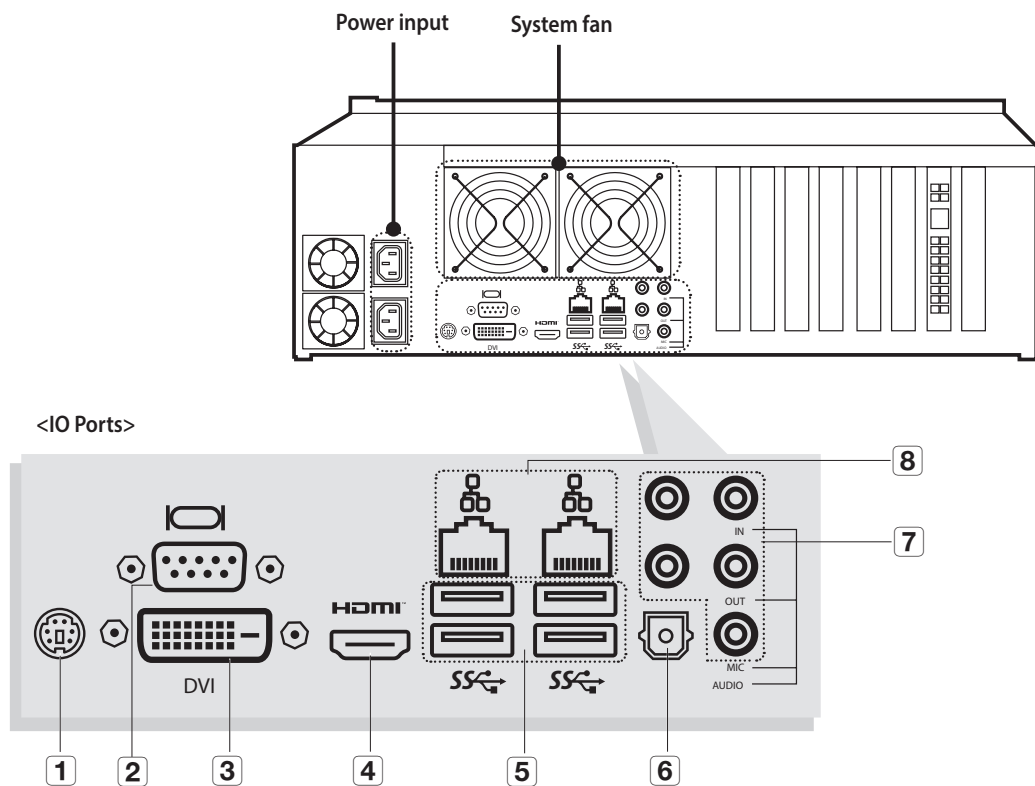
Overview

Part Names and Functions (TAW-4000H16)

Front



Rear



Name	
1	PS/2 Mouse/Keyboard port
2	VGA port
3	DVI port
4	HDMI port
5	USB 3.0 (4 ports)
6	Optical SPDIF output port
7	Audio IO port
8	1000BASE-T RJ-45 (2 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.

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.

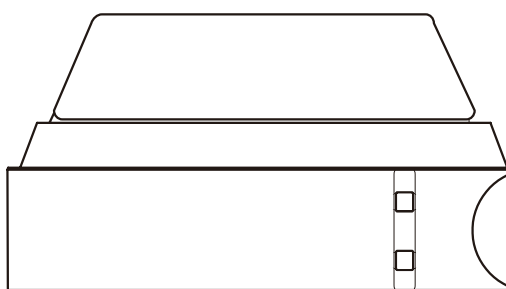


- Use HDDs as recommended by the Company.
 - 6TB : SPZ-6301TS/DO, 10TB : SPZ-10300TS/DO
- When replacing HDD or installing additional HDD, contact the dealer where you purchased the product or service center.
- Precautions on Data Loss (HDD Management)
 - Be careful not to damage the HDD data.
 - If 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.

How to Attach HDD

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

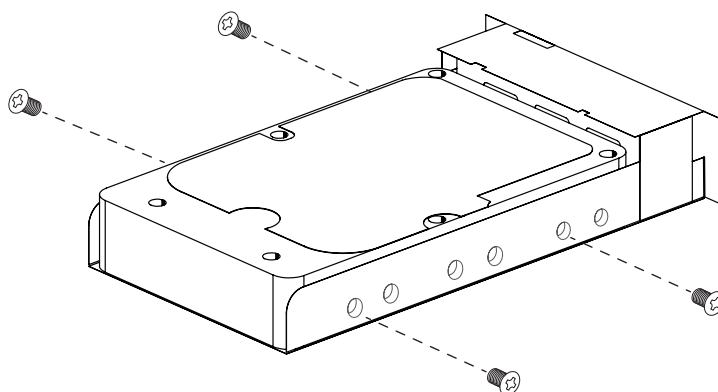
1. Pull the handle to release the latch, then grasp the handle and pull straight out.
2. Place the other hand under the hard disk tray so that it will not fall when you remove or mount it.



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

How to attach HDD to hard disk tray

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

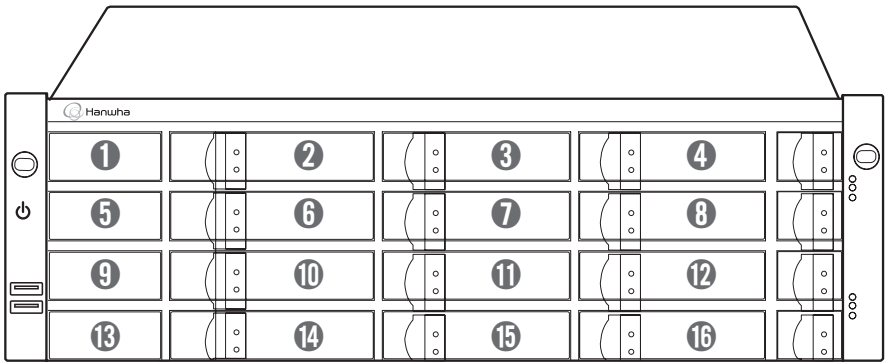


HDD Installation

Hard disk tray number

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

TAW-4000H16 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.

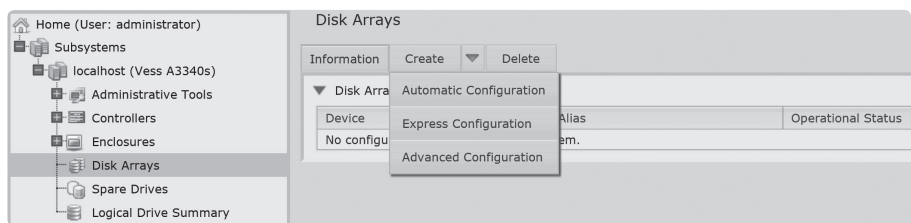
1. Click the TMS Service Manager icon on the desktop to launch it.
2. After you click the Stop Service button, check if the service status has changed to Stopped, and exit.

 ■ 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.

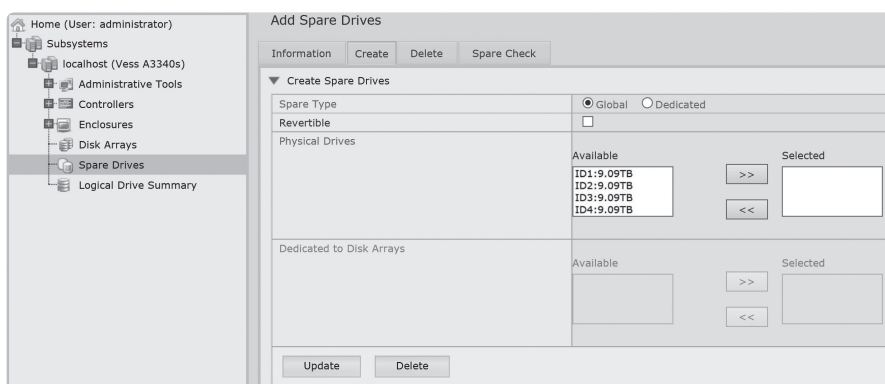
8. A list of generated disk arrays and logical drives can be found in the logical drive summary.



How to configure advanced logical drives

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

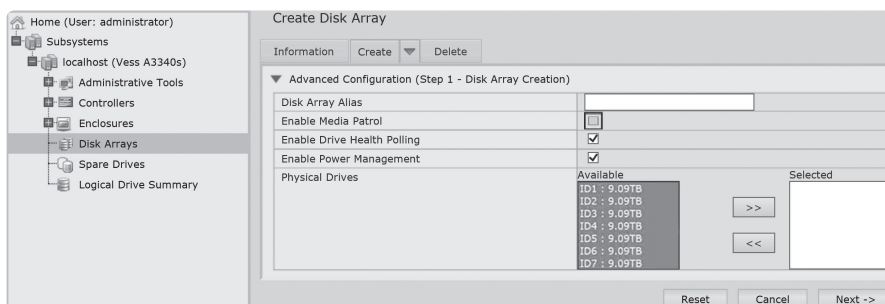
1. To ensure disk availability, select the Spare Drive menu to create a spare drive.



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.

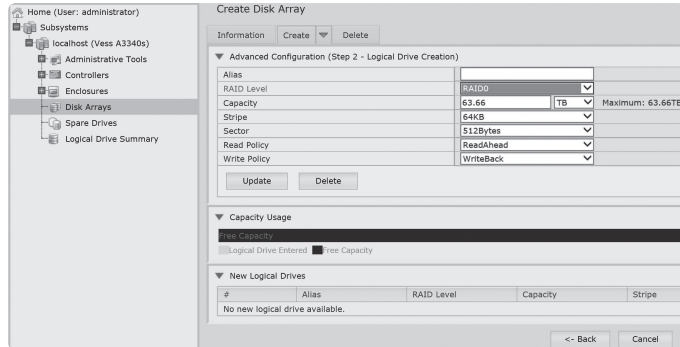


- For optimal storage performance, ensure that there are no more than eight physical drives in a logical drive. Configuration example) When you install 16 physical drives, you should configure two logical drives by assigning 7 to 8 logical drives to one logical drive.

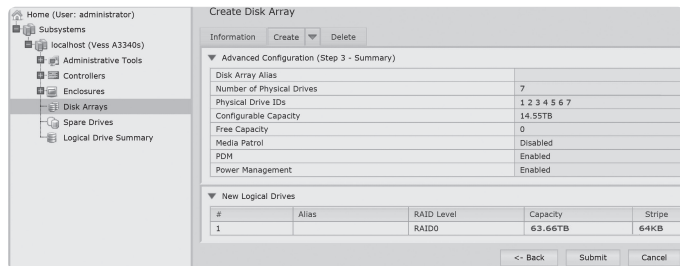


Execution

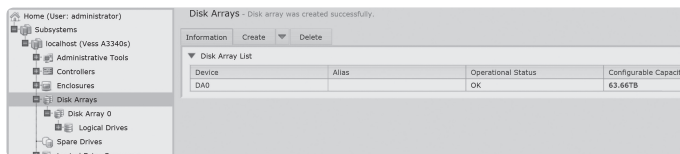
3. After selecting and updating the RAID level, go to the next step.



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. Check RAID-configured disks in Windows Disk Management.



- Format the configured disks only after confirming Wisenet TMS Service Manager has been stopped. If you formatted disks while running the service, boot the device.

How to Launch Wisenet TMS

This chapter describes how to launch Wisenet TMS.

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

1. Click the TMS 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.



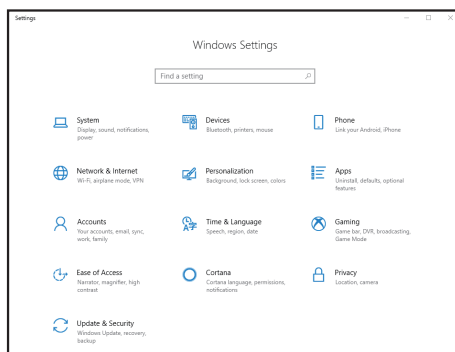
■ If the status of the service is shown as Started, this step is skipped.

3. Select 'Launch Wisenet TMS service automatically when Windows starts' and apply it, then exit
4. Run the Wisenet TMS Console program from the desktop.
Alternatively, select [Start] → Wisenet → Wisenet TMS Console.

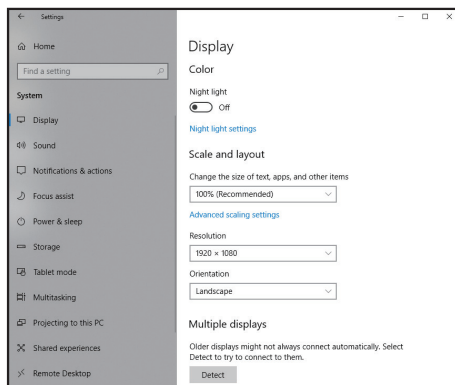


■ To run TMS Console in optimal condition, change the display scale to 100%.

- ① In the Search window at the bottom left of Windows, search Settings and run it.
- ② In 'Settings', select 'System-Display'.



- ③ In 'Display', set 'Change the size of text, apps, and other items' to '100%'.



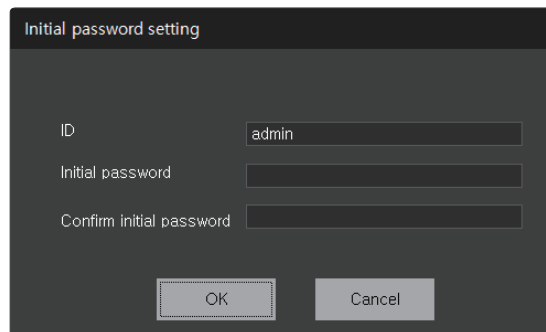
Execution

5. On the login screen, click the Login button.



The image shows the WiseNET TMS login screen. It has a dark background with the 'wiseNET TMS' logo at the top. Below the logo, there are three input fields: 'Server' with a dropdown menu showing 'localhost', 'ID' with the text 'admin', and 'Password' which is empty. To the right of the 'Server' field is a gear icon. To the right of the 'ID' and 'Password' fields is a 'Login' button. Below the input fields, there are two checkboxes: 'Save ID' which is checked, and 'Auto login' which is unchecked.

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

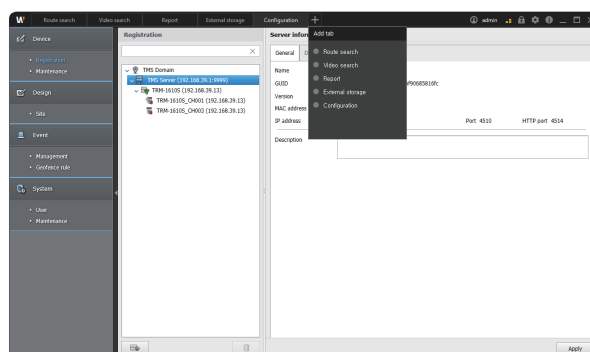


The image shows the 'Initial password setting' dialog box. It has a dark background with the title 'Initial password setting' at the top. Below the title, there are three input fields: 'ID' with the text 'admin', 'Initial password' which is empty, and 'Confirm initial password' which is empty. At the bottom of the dialog, there are two buttons: 'OK' and 'Cancel'.

Menu Description

The menu of TMS Console consists of tabs. You can freely move between the menu tabs and select a desired menu item, or form a separate page to operate it like a separate program.

1. Run the **TMS Console** program.
2. To open the menu page, click the **+** button and select a desired menu in the Add tab dialog box.
 - To close the menu page, click **x**, which appears when you click the Menu tab.
 - To separate a menu page, drag and drop the Menu tab.



Route search	You can search the moving route of a vehicle on a map or select a specific area to search a moving route. You can check out the recorded video of the point of time when an event has occurred via Instant viewer.
Video search	You can watch the video recorded by the camera and play the recorded video at the point of time when an event has occurred. You can also search recorded videos stored in the server and those of the Mobile NVR connected to Wi-Fi.
Report	You can search events such as Overspeed, Geofence, Emergency bell, and Impact detection and other events that have occurred on the device and the TMS Server system.
External storage	You can directly connect a disk mounted on the Mobile NVR to TMS Server and search or export the desired data.
Configuration	You can configure and manage the TMS Server system.



- This device needs to be connected to internet to use the map services of Route search and Video search.
- You can download the User Manual from the product's webpage (<http://www.HanwhaVision.com>).

Product Specification

Product Specification

Category			TAW-4000H16
Display			
Display	Split screens		1/4/9/16/25/36/49/64/Auto Mode
	Compression method		H.264, H.265, MPEG-4, MJPEG
Performance			
System	Operating System		Windows 10 IoT Enterprise
	Software		Wisenet TMS preinstalled
	Archive		Max. 128 Device/Server
	Clustering		Max. 28 Server(Max. 10,000 ch)
	Remote user		Max. 35/Server
	Protocol		Wisenet
	Language		Korean, English, Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese, Romanian, Russian, Serbian, Spanish, Swedish, Taiwanese, Thai, Turkish
	Map		Google, Open street Map
Function	Archive (wifi)	Compression method	H.265, H.264, MJPEG, WiseStream(H.264, H.265)
		Bandwidth	Max. 520 Mbps
		Resolution	CIF ~ 12 MP
		Backup Mode	All data, Event data
		Event types	Continuous, Manual, Camera event(Sensor, MD, Passing, Entering, Exiting, Disappearing (Appearing)),Tampering, Tracking, Face Detection, Audio Detection, Emergency, Overspeed, Impact)
	GPS backup (wifi)	Types	Recorder based data
	Event backup (wifi)	Types	Overspeed, Emergency bell, Impact, Video loss, Camera event, Recorder log

Category			TAW-4000H16
Function	Video search	Playback bandwidth	Max. 150 Mbps
		Resolution	CIF ~ 12 MP
		Simultaneous playback	Max. 16 ch
		Fisheye dewarping	Console
		Playback control	Start/stop, Pause, Faster/Slower forward/backward, Step Forward/Backward, Skip Forward/Backward
		Display	Video, Map, Search result, Time line
		Export file format	AVI, SEC
		Audio compression method	G.711 u-law(PCM), G723, G726(ADPCM), AAC
	Route search	Selected destination	Max. 5 EA
		Route display	Max. 5 EA
		Search type	Device route Search, Route search of specific area
		Playback control	Start/stop, Pause, Faster/Slower forward/backward
		Video playback	Instant playback video and route
		Export file format	CSV(GPS)
		Speed display	Velocity graph, Control (time zone, guide line)
	Report	GPS	Overspeed, Geofence, Emergency bell, Impact detection
		Device	Video loss, HDD Fail, Fan Fail
		System	Server log, Archive status
		Export file format	CSV
	External storage	Types	GPS/Video/All
		Image transfer file format	SEC

Product Specification

Hardware	Operating System	Windows 10 IoT Enterprise
	Processor	Xeon E3 v5 (3.6 GHz)
	Memory	Unbuffered ECC DDR4 8 GB x2
	OS disk	M.2 SSD 128 G
	Hard disk	3.5" 16 EA Hot Swap (Max. 160 TB)
	RAID	0/1/5/6
	Monitor output	VGA, DVI, HDMI
	Network	1000 Base-T (RJ-45)x2, IPMI
	Power input	100 ~ 240 VAC, 50 ~ 60 Hz
	Power rating	Redundant 550W x2
	Operating temperature/humidity	+5 °C to +40 °C / 80% or less
	Form factor	3U, 19" rack mount
	Dimensions (WxHxD)	447 x 131 x 503 mm
	Weight	17.6 kg (HDD excluded)



- Specifications of this product may be changed for performance improvement and user's convenience. Visit our website (www.HanwhaVision.com) for the latest specifications and helpful materials.



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.

