IDIS®

Network Video Recorder

Installation Manual

DR-1204P

Powered by **Direct IP**™

Before reading this manual

This manual contains basic instructions on installing and using DirectIP™ Network Video Recorder, an IDIS product. Users who are using this product for the first time, as well as users with experience using comparable products, must read this manual carefully before use and heed to the warnings and precautions contained herein while using the product. Safety warnings and precautions contained in this manual are intended to promote proper use of the product and thereby prevent accidents and property damage and must be followed at all times.

Once you have read this manual, keep it at an easily accessible location for future reference.

- • The manufacturer will not be held responsible for any product damage resulting from the use of unauthorized parts and accessories or from the user's failure to comply with the instructions contained in this manual.

- • It is recommended that first-time users of DirectIP™ Network Video Recorder and individuals who are not familiar with its use seek technical assistance from their retailer regarding product installation and use.

- • If you need to disassemble the product for functionality expansion or repair purposes, you must contact your retailer and seek professional assistance.

- • Both retailers and users should be aware that this product has been certified as being electromagnetically compatible for commercial use. If you have sold or purchased this product unintentionally, please replace with a consumer version.

Safety Precautions

⚡	**CAUTION**	⚠
	RISK OF ELECTRIC SHOCK	
	DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

⚡ The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

⚠ The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Symbol	Publication	Description
∼	**IEC60417, No.5032**	Alternating current
▬	**IEC60417, No.5031**	Direct current

Important Safeguards

1. Read Instructions

All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions

The safety and operating instructions should be retained for future reference.

3. Cleaning

Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

4. Attachments

Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. Water and/or Moisture

Do not use this equipment near water or in contact with water.

6. Ventilation

Place this equipment only in an upright position. This equipment has an open-frame Switching Mode Power Supply (SMPS), which can cause a fire or electric shock if anything is inserted through the ventilation holes on the side of the equipment.

7. Accessories

Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

This equipment and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

8. Power Sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer or local power company.

You may want to install a UPS (Uninterruptible Power Supply) system for safe operation in order to prevent damage caused by an unexpected power stoppage. Any questions concerning UPS, consult your UPS retailer.

This equipment should be remain readily operable.

9. Power Cords

Operator or installer must remove power and TNT connections before handling the equipment.

10. Lightning

For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.

11. Overloading

Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.

12. Objects and Liquids

Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the equipment.

13. Servicing

Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

14. Damage requiring Service

Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power-supply cord or the plug has been damaged.

B. If liquid is spilled, or objects have fallen into the equipment.

C. If the equipment has been exposed to rain or water.

D. If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.

E. If the equipment has been dropped, or the cabinet damaged.

F. When the equipment exhibits a distinct change in performance — this indicates a need for service.

15. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

16. Safety Check

Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

17. Field Installation

This installation should be made by a qualified service person and should conform to all local codes.

18. Correct Batteries

Warning: Risk of explosion if battery is replaced by an incorrect type. Replace only with the same or equivalent type. Dispose of used batteries according to the instructions. The battery shall not be exposed to excessive heat such as sunshine, fire or the like.

19. Tmra

A manufacturer's maximum recommended ambient temperature (Tmra) for the equipment must be specified so that the customer and installer may determine a suitable maximum operating environment for the equipment.

20. Elevated Operating Ambient Temperature

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 manufacturer's maximum rated ambient temperature (Tmra).

21. Reduced Air Flow

Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

22. Mechanical Loading

Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

23. Circuit Overloading

Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

24. Reliable Earthing (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

HDMI Port Precautions

- Use a certified cable marked with an HDMI logo when using HDMI. The screen may not display or a connection error may occur if you do not use a certified HDMI cable.

- It is recommended that you use the following HDMI cable type.
  – High-speed HDMI Cable
  – High-speed HDMI Cable with Ethernet

In-Text

Symbol	Type	Description
⚠	**Caution**	Important information concerning a specific function.
✓	**Note**	Useful information concerning a specific function.

User's Caution Statement

Caution: Any changes or modifications to the equipment not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC Compliance Statement

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 COMMUNICATIONS. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE, IN WHICH CASE USERS WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT THEIR OWN EXPENSE.

WARNING: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS OF DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE CAUSING EQUIPMENT REGULATIONS.

WEEE (Waste Electrical & Electronic Equipment)

Correct Disposal of This Product

(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.

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The software included in this product contains some Open Sources. You may obtain the complete corresponding source code depending on whether or not the source is publicly available under a license policy. Go to System Setup - About page for more information. This product includes software developed by the University of California, Berkeley and its contributors, and software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.oepnssl.org/). Also, this product includes cryptographic software written by Eric Young (eay@cryptsoft.com), and software written by Tim Hudson (tjh@cryptsoft.com).

Table of Contents

Part 1 – Introduction

Product Features

This is a DirectIP™-enabled video recorder that supports surveillance, recording, and playback of video from network cameras (or video encoders).

This NVR (Network Video Recorder) unit offers the following features:

• Real-time 4 channel DirectIP™ network surveillance

• Network camera zero configuration

• Configuration-free network camera access

• Supports up to Full HD 120ips video recording

• HDMI out (1) and VGA out (1) ports

• Fast and easy search feature (Time-Lapse, Event log, Thumbnail, Motion, Text-In)

• Simultaneously survey, record, play back, and transmit data in real-time

• Graphic User Interface(GUI) and multilingual

• Multiple recording modes (Schedule, Event, Pre-Event, and Panic)

• PoE-enabled Camera Connection

• 2 x USB 2.0 (for connecting peripherals, upgrading software, and saving recording data)

• 1 internal SATA2 HDD bay

• Network camera audio recording

• Self-diagnosis and automated system event alerts (industry standard S.M.A.R.T. protocol for HDD status alerts)
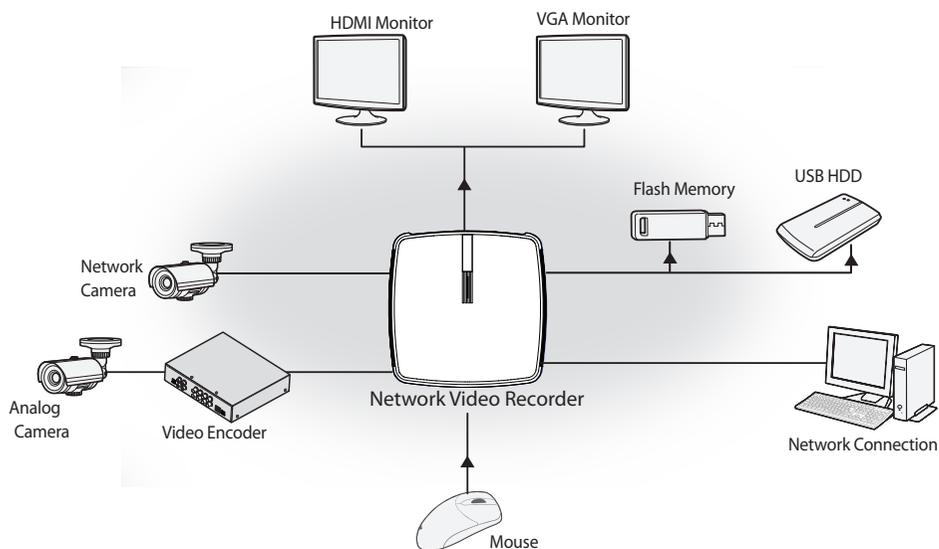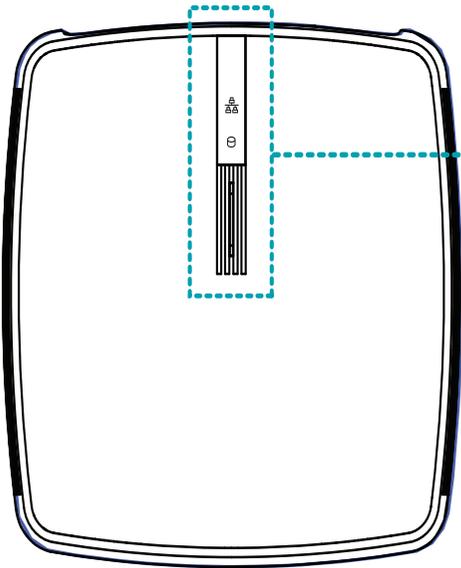
Accessories

Upon unpackaging the product, check the contents inside to ensure that all the following accessories are included.
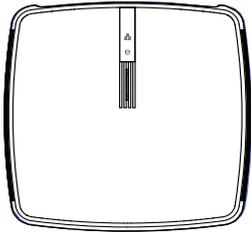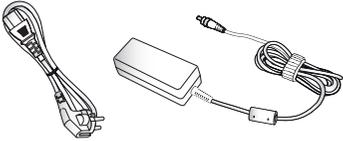
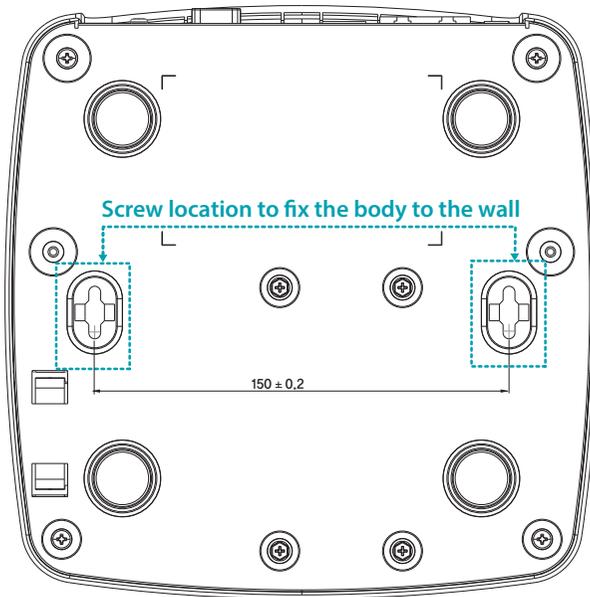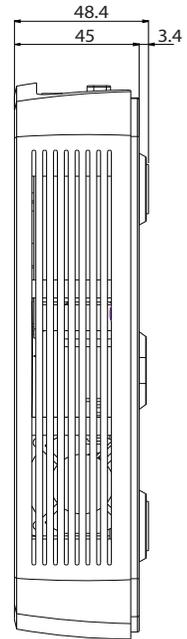|		
Network Video Recorder	Power Cable / DC Adapter(56V)	Quick Guide
Manual and IDIS Center Program CD	Optical USB Mouse	

Overview

Front Panel

LEDs

- ⛓ **Network LED**: Flashes when the main unit is linked to an ethernet.
- ▢ **HDD LED**: Flashes when data is being written on the HDD or a video search is in progress.
- **Power LED**: Lights up while the main unit is in operation.

✓ • Access various windows and menus using a USB mouse as you would on a personal computer.
  • For easier system configuration, a USB mouse is recommended.

Dimensions

(Unit - mm)
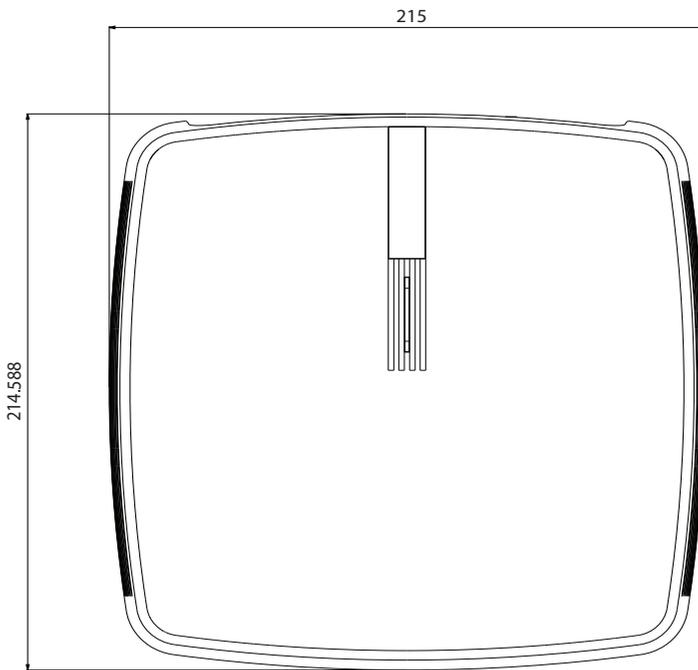
215

214.588

48.4
45   3.4

Screw location to fix the body to the wall

150 ± 0,2
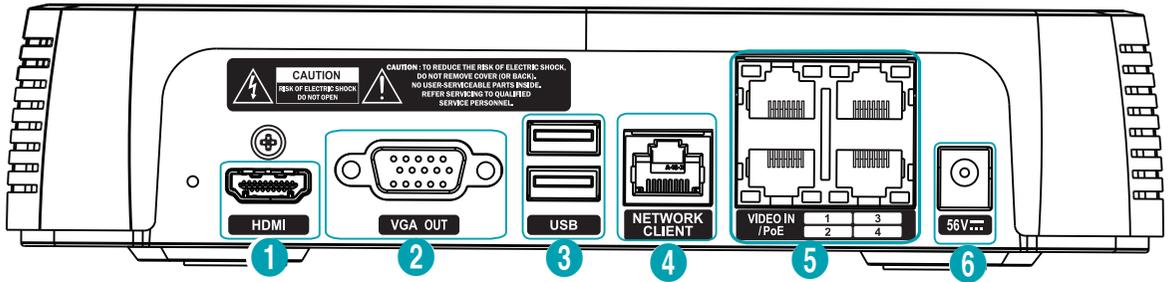
Rear Panel

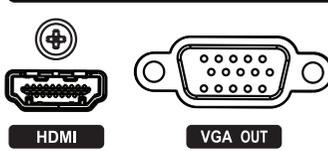|					
❶	HDMI Out Port	❷	VGA Out Port	❸	USB Port
❹	Network Port	❺	Video In / PoE Ports	❻	Power In Port (56V)

Rear Panel Connections

Monitor Connection

Connect to the **VGA OUT** or **HDMI** port.
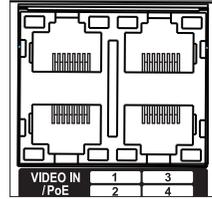

Network Connection

This NVR is capable of connecting to networks via an ethernet connector. Connect an RJ-45 cable (Cat5, Cat5e, or Cat6) to the NVR's network port. It's possible to operate and upgrade the NVR remotely over a network. Fore more information on ethernet connection setup, refer to **Network Setup in the operation manual**.

> Green LED on the right will begin to turn on if connected a 100Mbps network. Also, orange LED on the left will begin to turn on if connected a 10Mbps network. Orange LED on the left will then flash once a link has been established.

Video Connection

- **Video In/PoE Port**

Connect network cameras or video encoders to the NVR using RJ-45 cable (Cat5, Cat5e, or Cat6). The NVR recognizes DirectIP™ network cameras automatically.

> - Green LED on the right will turn on when PoE comes on line. Orange LED on the left will then flash once a link has been established.

Power Cable Connection

This NVR does not feature a separate power on/off button and will turn on the moment power is supplied. Connect the connector(56V) of adapter to the NVR and then connect the AC power cable of adapter to the power outlet.

- Organize the power cable so that it will not cause people to trip over or become damaged from chairs, cabinets, desks, and other objects in the vicinity. Do not run the power cable underneath a rug or carpet.
- Do not connect multiple devices to a single power outlet.

Connections on the Rear Panel

HDMI Monitor

VGA Monitor

USB HDD

Network

IDIS Center Remote Monitoring

Keyboard

Camera

Power (56V)
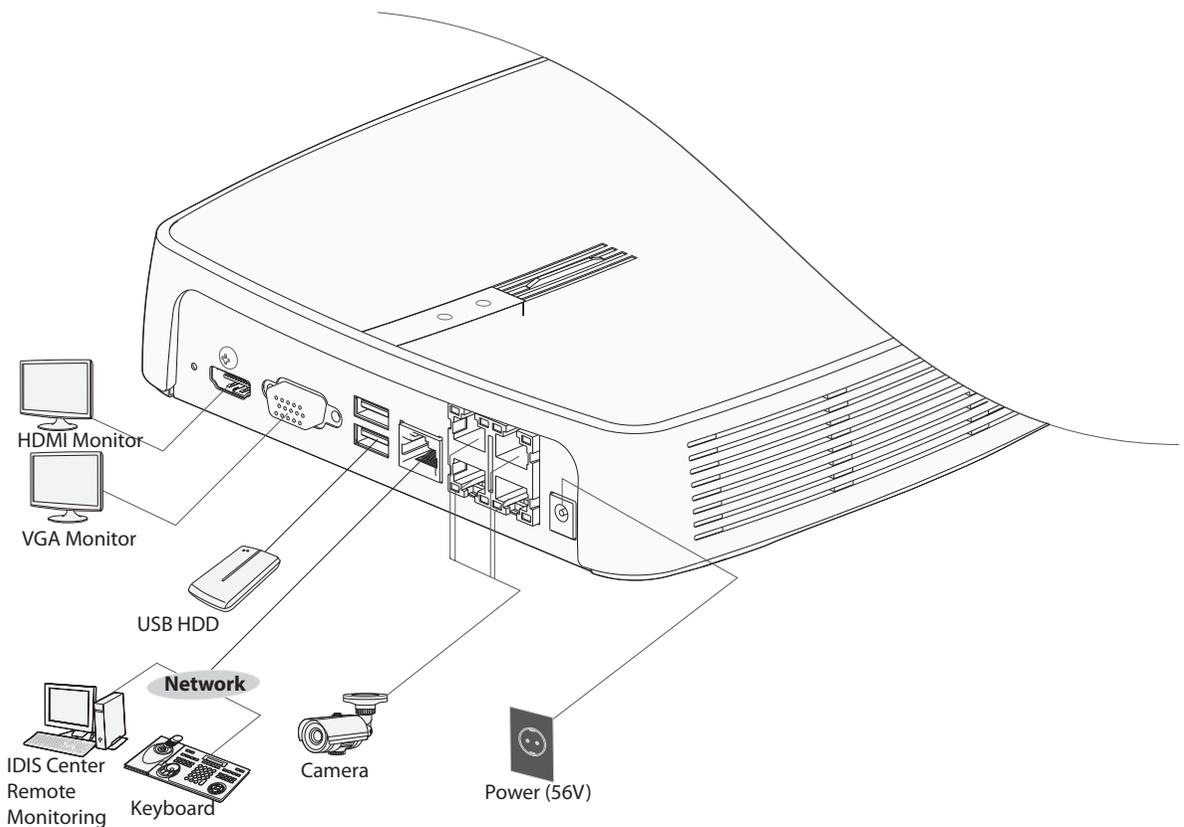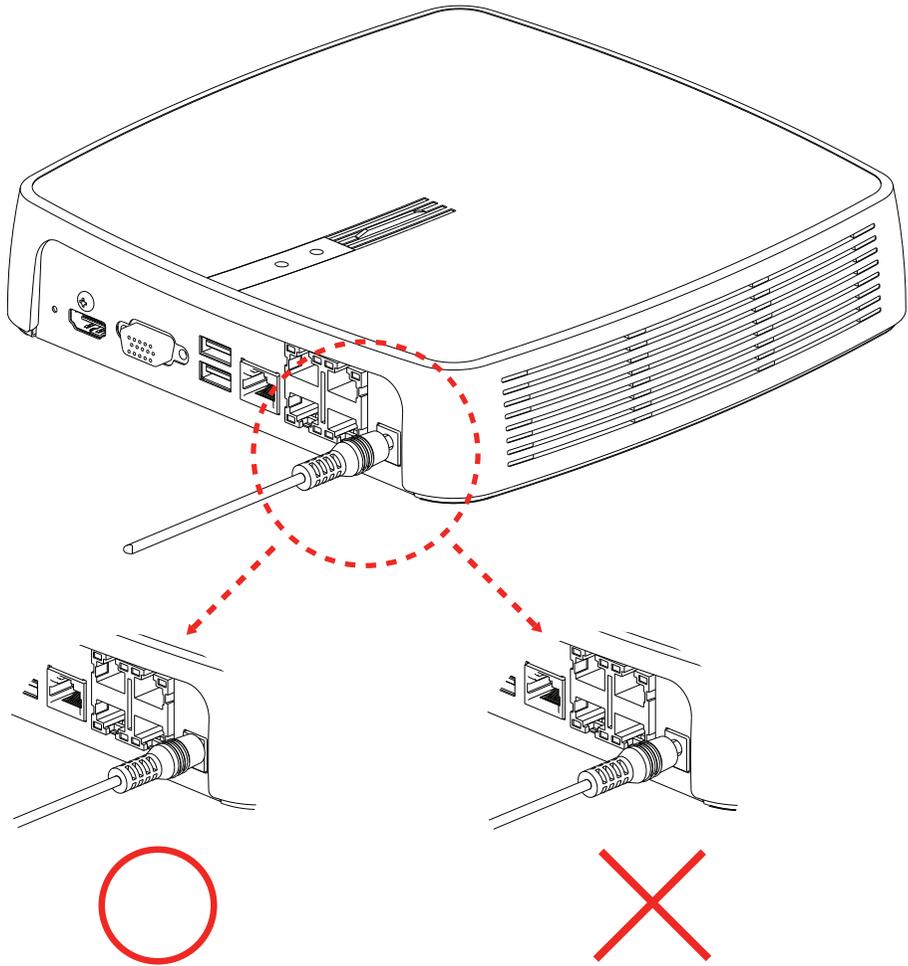
Part 2 - Appendix

System Log Types

Boot Up	Panic On
System Shutdown	Panic Off
Restart	Clear All Data
Upgrade Success	Clear Disk
Upgrade Error	Format Disk
Power Failure	Disk Full
Time Changed	Auto Deletion
Time Zone Change	Search Begin
Time Sync.	Search End
Time Sync. Failed	Clip-Copy Begin
Disk Bad	Clip-Copy End
Login	Clip-Copy Cancel
Logout	Clip-Copy Failure
Setup Begin	Clip Copy User
Setup End	Clip-Copy Begin
Remote Setup Change	Clip-Copy Finished
Remote Setup Failure	Clip Copy Duration of Video
Setup Import	Clip Copy Camera
Setup Import Failure	Callback Failed
Setup Export	Factory Reset
Setup Export Failure	Camera Upgrade Begin
Setup Export Canceled	Camera Upgrade End
SNS Failure	Camera Upgrade Failure
Schedule On	Camera Upgrade User
Schedule Off	Camera Upgrade Camera

Error Code Types

Upgrade Error Codes			
No.	Type	No.	Type
0	Unknown Error	301	Remote Network Error
1	Incorrect File Version	302	No Remote Upgrade Permission
2	Incorrect OS Version	303	Remote Upgrade File Save Failure
3	Incorrect Software Version	304	Remote Upgrade Cancelled by User
4	Incorrect Kernel Version	400	USB Storage Device Mount Failure
100	Storage Device Mount Failure	401	USB Storage Device File Read Failure
101	File Not Found	402	USB Storage Device File Copy Failure
102	File Decompression Failure	403	USB Device Not Connected
103	LILO Execution Failure	404	USB Storage Device in Use
104	Reboot Failure	405	Unsupported File System
105	Improper File	500	Clip Copy in Progress: Upgrade Not Available
300	Remote Connection Failure		

Clip Copy Error Codes				
No.	Type	No.	Type	
0	Unknown Error	12	Disk Error	
1	Device Error	13	Clip Player Execution File Not Found	
2	Device Connection Failure	14	Clip Player Execution File Access Failure	
3	CD Media Not Found	15	Clip Player Execution File Save Failure	
4	Incorrect Media	16	Image Generation Failure	
5	File Name Taken	17	Burn Failure	
6	Insufficient Space	18	Burn Time Overrun	
7	Temporary File Generation Failure	19	Device Connection Failure	
8	Disk Access Failure	20	Device in Use	
9	Disk Format Failure	21	Unsupported File System	
10	Database Changed	22	Data Validation Failure	
11	Save Failure	23	No Saved Data within Range	

Network Error Codes			
No.	Type	No.	Type
0	Cause of Failure Unknown	20	Connection Cancelled by User
1	Normal Logout	21	No Response from Network Device Host
2	All Channels in Use - Connection Denied	22	High Network Noise Level
3	Incorrect Product Version Info	23	Transmission Queue Full
4	Incorrect User Name or Password	24	Incorrect OEM Info
5	Forced Disconnection by Admin	25	No Search Permission
6	Timeout	26	Port in Use
7	Network Device Terminated	27	SSL Connection Failure
8	Unable to Connect: No Available Port	28	Network Timeout
9	Server Not in Operation: Unable to Connect	29	Network Device Host Timeout
11	Network Unavailable	30	RTP via TCP Not Supported by Network Device Host
12	Different Network Zone: Unable to Access	31	Socket Error
13	Connection Timeout	100	Unknown CODEC
14	Forced Disconnection by Network Device	101	.jpeg CODEC (not supported)
15	Network Device Host Terminated	103	.mpeg4 CODEC (not supported)
16	Unable to Route to Network Device Host	400	Unsupported Resolution
17	Connection Severed	-1	Normal Access

Troubleshooting

Problem	Solution
The main unit won't turn on.	• Check the power cable connection status. • Check the power outlet.
Unable to display Live video.	• Check the camera's video cable connection status. • Check the monitor's video cable connection status. • Check the camera's power setting. • Check the camera lens settings.
PoE-enabled camera will not turn on.	• Verify that the camera is actually PoE-enabled. • Check the network cable, replace it, and try again. • Check the PoE adapter is not defective and power adapter is properly connected.
NVR stopped working in the middle of a recording.	• Hard disk may be full. Delete video recordings to free up space. • Set the NVR to Recycle mode. For more information, refer to the **General in the operation manual**.
● icon is shown, but video is not being recorded.	If the Pre-Event is enabled, the 🏃 and ● icons appears when recording is not inprogress, or the 🔧 and ● icons appear when an event occurs and recording is in progress. For more information, refer to the **Schedule in the operation manual**.

Specifications

These product specifications may change without prior notice.

VIDEO	
Video Inputs	4 IP channels
Video Outputs	1 HDMI, 1 VGA
Display Resolution	1920 x 1200 , 1920 x 1080, 1680 x 1050, 1600 x 1200
Display Speed	Up to 120ips

RECORDING	
Max. Throughput	32Mbps, 120ips @ Full HD
Compression	H.264, H.264+
Recording Mode	Time-Lapse, Event, Pre-Event, Panic

PLAYBACK	
Performance	4ch Full HD synchronous playback
Search Mode	Time-lapse, Event log,Thumbnail, Motion, Text-in

STORAGE	
HDD	SATA x1 (Up to 4TB capacity for each disk)
Total Capacity	4TB=4TB x 1
Data Export Device	USB HDD, USB Stick

NETWORK	
Video in Connection	Fast Ethernet(IP Camera) x4
Client Connection	Fast Ethernet(Client) x1
Transmission Speed	20Mbps / 50Mbps(BRP Mode)
Camera Power	PoE(IEEE 802.3at class 4) supported 4 ports, 30W
Event Notification	Email (attach clip (.cbf) .MP4), Callback to Remote S/W, Push notification (IDIS Mobile), SNS (Twitter)

INTERFACE	
Audio In / Out	Local(NVR) : - / 1 HDMI IP Camera : 4 / 4 (Depending on IP Camera)
Internal Buzzer	No
USB	USB 2.0 x 2

GENERAL	
Operating System	Embedded Linux
Unit Dimensions (W x H x D)	215mm x 214.5mm x 48.5 mm (8.5" x 8.5" x 1.9")
Unit Weight	1.21Kg(with 1HDD)
Working Temperature	0℃ – 40℃ (32℉ ~ 104℉)
Operating Humidity	0% – 90%
Power	NVR Adaptor (Input : 100-240V~, 50/60Hz, 1.4A, Output : 56V⎓, 1.17A)
Power Consumption	*NVR: 56V⎓, 0.7A, Max. 39.2W *PD: Max. 30W
Approvals	FCC, CE, KC

* When one HDD(4TB) is installed, the value above was measured.

✓ Some hard disks may not function properly when mounted on to this product. Refer to the compatibility chart below before mounting any additional hard disk on to the product. Hard disk compatibility chart is subject to change without notice. Contact your retailer for the latest compatibility chart.

Storage	Manufacturer	Model	Note
1.0TB	Western Digital	WD10PURX-64E5EY0	
	TOSHIBA	DT01ABA100V	
2.0TB	Western Digital	WD20PURX-64P6ZY0	
	Seagate	ST2000VX003	
3.0TB	Western Digital	WD30PURX-64P6ZY0	
	Seagate	ST3000VX006	
4.0TB	Western Digital	WD40PURX-64GVNY0	
	Seagate	ST4000VX000	