



# Video Encoder

Operation Manual

*DE-1104*

*DE-1108*

Powered by **Direct IP™**



# Before reading this manual

This operation manual contains basic instructions on installing and using DirectIP™ Video Encoder, 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 operation manual carefully before use and heed to the warnings and precautions contained herein while using the product. Safety warnings and precautions contained in this operation 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 operation 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 operation manual.
- It is recommended that first-time users of DirectIP™ Video Encoder 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

	<div><b>CAUTION</b></div> <div>RISK OF ELECTRIC SHOCK</div> <div>DO NOT OPEN</div>	
<p><b>CAUTION:</b> TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		



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.

# Safety Precautions

## 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.

### 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. Dispose of used batteries according to the instructions.

### 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).

In-Text

Symbol	Type	Description
	<b>Caution</b>	Important information concerning a specific function.
	<b>Note</b>	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 information in this manual is believed to be accurate as of the date of publication. We are not responsible for any problems resulting from the use thereof. The information contained herein is subject to change without notice. Revisions or new editions to this publication may be issued to incorporate such changes.

The software included in this product contains some Open Sources. You may obtain the complete corresponding source code from us. See the Open Source Guide on the software CD (OpenSourceGuide\OpenSourceGuide.pdf) or as a printed document included along with the User's Manual.

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# Part 1 - Introduction

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## Product Features

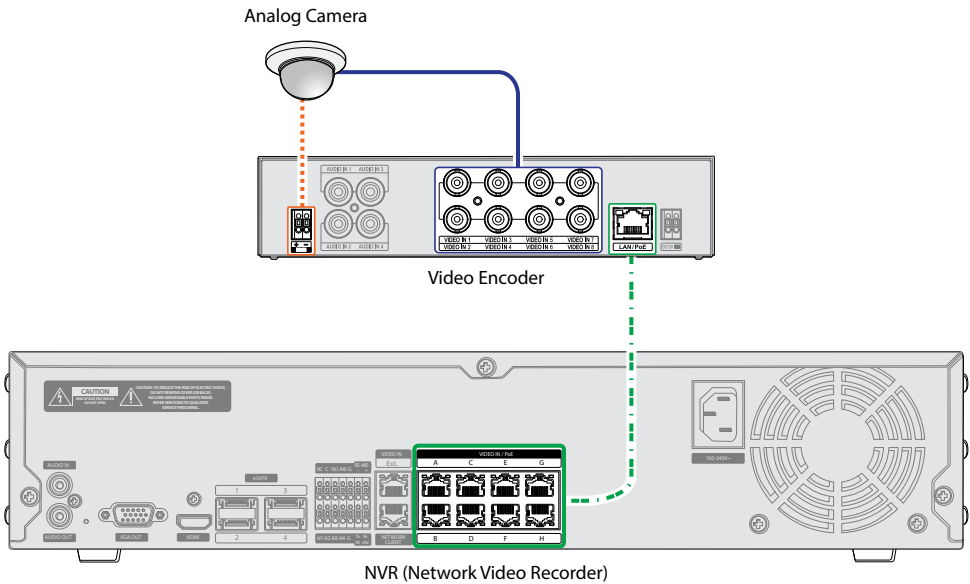
This video encoder compresses live video from analog cameras and transmits the video over Ethernet connections. This encoder offers the following features:




- 4/8 composite video input connectors
- Multi-streaming for monitoring and recording
- H.264 compression algorithm
- Four levels of video compression and various video compression resolutions
- DirectIPTM protocol supported
- Convenient firmware upgrades via network
- Firmware duplication and autorecovery functions to enhance system stability
- Event detection functions: motion, video loss, tampering
- 4-channel audio in
- Support of PTZ camera control via RS485 interface
- Configuration of encoder settings and integrated management of multiple encoders on the NVR (Network Video Recorder)



This manual covers the 4- and 8-channel video encoders. The video encoders are identical except for the number of cameras that can be connected. For simplicity, the illustrations and descriptions in this manual refer to the 8-camera model.

Video Encoder Connection Diagram



Types of Cables	
	RS485 Communication Cable
	Analog BNC Cable
	LAN Cable (Data + DC48V Power)



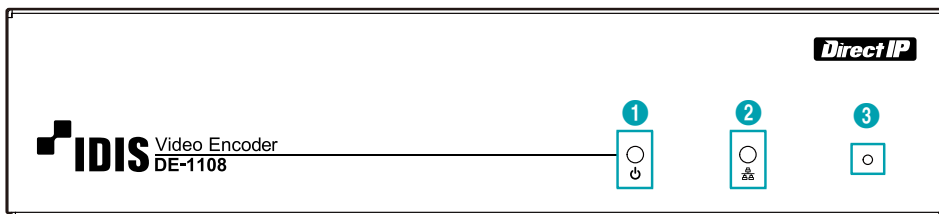
## Accessories

Upon unpacking the product, check the contents inside to ensure that all the following contents are included.

- Video Encoder
- User Guide and Instruction Manual (This document)

## Overview

### Front Panel



①	Power LED	②	Network LED	③	Factory Reset Switch
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#### ① Power LED

Displays system operating status

#### ② Network LED

Displays network connection status

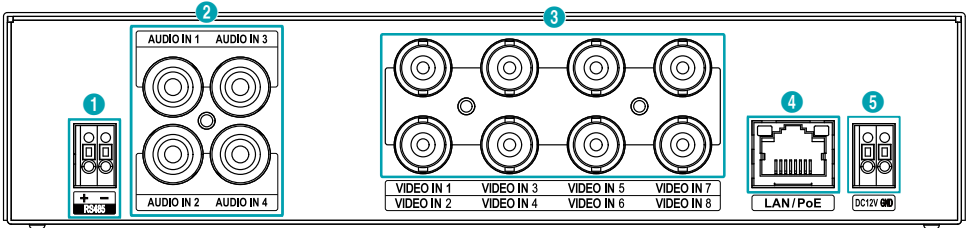
### LED Status Indications

LED	Status	Description
Power LED	Off	No power connection
	Blinking	System booting or upgrading
	On	System operating
Network LED	Blinking	Normal network connection

#### ③ Factory Reset Switch

Use to return all settings to the original factory settings. Connect the power and poke a straightened paperclip into the factory reset switch hole. Hold the reset switch until the encoder's internal buzzer sounds twice. Release the reset switch, and all of the encoder's settings are now at the original settings it had when it left the factory.

# Rear Panel



1	RS485	2	Audio In	3	Video In	4	Network + PoE Power In
5	DC12V In						

- 1 RS485**  
 Connect a PTZ camera. Connect the camera's TX+/RX+ and TX-/RX- to the encoder's + and -. For more information on RS485 connections, refer to the PTZ camera's manufacturer's user's manual.
- 2 Audio In**  
 Connect to an audio source.
- 3 Video In**  
 Connect coaxial cables from the video sources.
- 4 Network + PoE Power In**  
 Connect a Cat5e cable with an RJ-45 jack. The video encoder is capable of connecting to networks via an Ethernet connector and also receives power (DC48V) from the NVR.
- 5 DC12V In**  
 Connect the two wires of the power adapter to these ports. Be careful not to cross the DC12V and ground (GND) wires. Booting will commence once connected to a power supply.

- ☒ • The network connector is not designed to be connected directly with cable or wire intended for outdoor use.
- ☒ • Press down on the button and insert the cable into the opening when you connect the RS485 and power connectors. Release the button and then pull on the cable slightly to ensure it is held securely in place. To disconnect the cable, press down on the button again and pull the cable out.
- ☐ • Ground the power port's ground terminal before use.
- ☐ • 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.

## Part 2 - Miscellaneous

### Troubleshooting

Problem	Check
Power LED will not turn on	<ul style="list-style-type: none"> <li>• Check the LAN cable.</li> <li>• Check that the power cable is connected or the NVR has power.</li> </ul>
The system is unable to recognize network interface	<ul style="list-style-type: none"> <li>• Check the LAN cable.</li> <li>• Check the network LED.</li> </ul>

### Specifications

Model		DE-1104	DE-1108
Video	Input	4 BNC	8 BNC
	Compression	H.264	
	Resolution	720x480(960x480), 640x360, 360x240 (NTSC) 720x576(960x576), 640x360, 360x288 (PAL)	
	Bitrate Control	VBR	
	Frame Rate	120ips @ 720x480(960x480) (Quadruple Stream)	240ips @ 720x480(960x480) (Quadruple Stream)
Inputs/ Outputs	Audio Input	4 RCA	
	RS485	1 Port	
	Ethernet	10M/100M/1Gbps	
	DC12V Input	Terminal Blocks	
	LED	Power(Status), Network	
	Button/Switch	Reset	
Environmental Conditions	Operating Temperature	32°F to 104°F (0°C ~ 40°C)	
	Operating Humidity	0% ~ 90%	
General	Dimensions (W x H x D)	7.9" x 1.7" x 5.7" (200mm x 44mm x 145mm)	
	Shipping Dimensions (W x H x D)	10.1" x 4.1" x 7.4" (258mm x 103mm x 188mm)	
	Unit Weight	1.9 lbs. (0.84kg)	
	Shipping Weight	2.7 lbs. (1.22kg)	
	Power Supply	DC12V or PoE (IEEE802.3af class3)	
	Power Consumption	Max. 12W	
	Approval	FCC, CE	



These product specifications may change without prior notice.



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