

Tiandy TC-R3104

Tiandy TC-R3104 4-Channel H.265 PoE NVR User Manual

Model: TC-R3104 (I/B/P4/C/Eu/L/S)

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1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Tiandy TC-R3104 H.265 1HDD 4-channel Power over Ethernet (PoE) Network Video Recorder (NVR) from the AK Series. The TC-R3104 NVR is designed to manage and record video streams from IP cameras, offering reliable surveillance for various applications. Please read this manual thoroughly before using the product to ensure proper setup and functionality.

Key Features:

- Supports S+265/H.265/S+264/H.264 video formats for efficient compression.
- Connectable to third-party network cameras.
- Up to 4-channel input with 4 PoE ports.
- Supports live view, storage, and playback of connected cameras at up to 5MP resolution.
- HDMI video output up to 1080p resolution.
- 1 SATA interface for HD storage, supporting up to 6TB per hard drive.
- S+265 compression reduces storage space and costs by up to 75%.
- 1x RJ45 self-adaptive 10/100 Mbps network interface.
- Centralized management for IP cameras, including configuration, data import/export, real-time information display, and upgrades.
- Connectable to smart IP cameras from Tiandy for recording, playback, and backup.
- Supports cloud upgrade.

2. SAFETY INFORMATION

Please observe the following safety precautions to prevent injury and damage to the device:

- **Power Supply:** Use only the power adapter provided with the device. Ensure the power voltage is stable and matches the

NVR's requirements.

- **Ventilation:** Do not block ventilation openings. Ensure adequate airflow to prevent overheating.
- **Environment:** Avoid exposing the NVR to extreme temperatures, humidity, dust, or direct sunlight. Do not place heavy objects on the NVR.
- **Installation:** Install the device on a stable surface. Avoid locations prone to vibration or shock.
- **Cleaning:** Disconnect power before cleaning. Use a soft, dry cloth. Do not use liquid or aerosol cleaners.
- **Servicing:** Do not attempt to service the NVR yourself. Refer all servicing to qualified personnel.

3. PACKAGE CONTENTS

Verify that all items are present in your package. If any items are missing or damaged, contact your dealer.

- Tiandy TC-R3104 NVR Unit
- Power Adapter
- USB Mouse
- Screw Pack for HDD Installation
- Quick Start Guide (this manual)

4. PRODUCT OVERVIEW

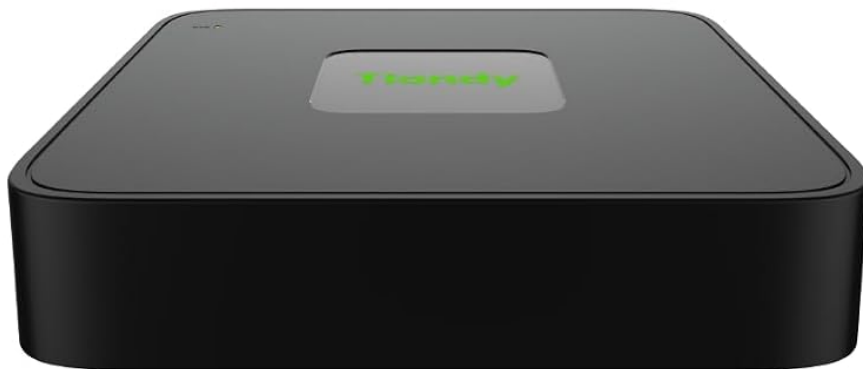
The Tiandy TC-R3104 NVR is a compact and efficient device designed for managing up to 4 IP cameras. Below are images illustrating the NVR unit and its key interfaces.

4.1 NVR Unit



TC-R3104 Spec: I/B/P4/C/Eu/L/S H.265 1HDD 4ch PSE NVR

AK Series



KEY FEATURES

HD Input

- Plug and play
- S+265/H.265/S+264/H.264 video formats
- Connectable to the third-party network cameras
- Up to 4-channel input
- 4 PoE ports
- Supports live view, storage, and playback of the connected camera at up to 5MP resolution

HD Output

- 1×HDMI output
- HDMI Video output at up to 1080P resolution

HD Storage

- 1 SATA interfaces, up to 6TB for each HDD
- S+265 compression effectively reduces the storage space and costs by up to 75%

HD Transmission

- 1×RJ45 self-adaptive 10/100 Mbps network interface
- PoE Port: 4×RJ45 self-adaptive 10/100 Mbps network interfaces

Various Applications

- Centralized management of IP cameras, including configuration, information import/export, real-time information display, upgrade, etc.
- Connectable to smart IP cameras from Tiandy and the recording, playing back, and backing up
- Support cloud upgrade

Figure 4.1: Front view of the Tiandy TC-R3104 NVR. This image shows the compact design of the NVR unit, featuring a sleek black casing with the Tiandy logo prominently displayed on the top surface. The front panel is minimalist, indicating a focus on functionality and discreet placement.

4.2 Rear Panel and Interfaces

SPECIFICATIONS

Video and Audio	
Access Channel	4
Incoming Bandwidth	60Mbps
Outgoing Bandwidth	40Mbps
Resolution	5MP/4MP/3MP/1080P/UXGA/720P/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Preview decoding capability	5MP*1,4MP*1,3MP*1,1080P*2,720P*4,4CIF*4
Playback decoding capability	5MP*1,4MP*1,3MP*1,1080P*2,720P*4
Video Output	1*HDMI
HDMI Output	HDMI:1024*768(60Hz),(720P)1280*720(50Hz/60Hz), 1280*800(60Hz),1440*900(60Hz),(1080P)1920*1080(50Hz/60Hz)
VGA Output	N/A
Multi-screen Display	1/3/4
Third-party Camera Access	ONVIF;RTSP
Audio Input	N/A
Audio Output	N/A
Two-Way Audio	N/A
Liveview display	N/A
Compression	
Video	S+265;H.265;S+264;H.264
Audio	G711A;G711U;AAC;ADPCM_DIV4
Stream Type	Video;Video & Audio
Network	
Network Protocol	ARP;DDNS;DHCP;DNS;HTTP;ICMP;IGMP;IPv4;IPv6;NTP;RTCP;RTP;RTSP;SSH; TCP/IP;UDP;UPnP
Mobile Phone Access	Android;iOS;P2P_A
System Compatibility	CGI;SDK
Web	IE10+;Firefox52+;Edge89+;Safari11+;Chrome57+
Record Playback	
Multi-channel Playback	4
Record Mode	alarm recording;Schedule recording
Storage	Local HDD
Backup	USB storage device
Playback Function	Play/Pause/Stop/Slow/Speed/Backwards 30s/Forwards 30s/Full screen/backup (video Editing)
Alarm	
General Alarm	Motion;Mask Alarm;Video Loss
Alert Alarm	IP Conflict;MAC Conflict;Network Disconnected;No disk;Illegal Access;Disk Full;Disk R/W error;Video Abnormal;Abnormal found in smart of disk;Abnormal temperature of the disk;POE overloaded;IPC voltage abnormal;RTC failure

Figure 4.2: Rear panel of the Tiandy TC-R3104 NVR, displaying various connectivity ports. This image highlights the input/output interfaces, including the power input, network ports, and video outputs, essential for connecting cameras, monitors, and the network.

The rear panel of the NVR provides the following interfaces:

- **Power Input:** DC 48V 1A

- **HDMI Output:** 1 port for connecting a monitor, supporting up to 1080p resolution.
- **VGA Output:** 1 port for connecting a monitor.
- **Network Interface (LAN):** 1x RJ45 self-adaptive 10/100 Mbps Ethernet port for network connection.
- **PoE Ports:** 4x RJ45 self-adaptive 10/100 Mbps network interfaces for connecting PoE IP cameras.
- **USB Ports:** 2x USB 2.0 ports for mouse, USB storage devices, or other peripherals.

Tiandy

Intelligent Analytics

VCA Detection by Camera Advanced Intelligence

VCA Search N/A

Face Detection by Camera

Performance N/A

Face Attributes N/A

Face Picture Library N/A

Face Picture Comparison N/A

External Port

HDD 1 SATA ports, up to 6TB for a single HDD. The maximum HDD capacity varies with environment temperature

Disk Group N/A

RAID N/A

eSATA N/A

USB 2*USB2.0

HDMI 1*HDMI

VGA N/A

RJ-45 1*RJ-45, 10/100 Mbps self-adaptive Ethernet port

SATA 1 SATA interface

RS232 N/A

RS485 N/A

Alarm I/O N/A

POE

POE Interface 4× RJ45 self-adaptive 10/100 Mbps network interface

POE Gross Power 28W

Power per POE Port 28W

Max Current per POE Port 600mA

General Parameter

UI Language English; Spanish; Italian; French; Dutch; German; Portuguese

Power Supply DC48V 1A

Power Consumption <10W (without HDD & without POE)

NetWeight 0.4kg

GrossWeight 0.85kg

Boundary Dimensions 200(L)200(W)43(H) mm

Package Dimensions 315(L)70(W)235(H) mm

Operating Temperature -10°C ~ +55°C

Operating Humidity 10% ~ 90% RH

Storage Temperature -10°C ~ +55°C

Storage Humidity 10% ~ 90% RH

Package Kit Network Video Recorder; Screw pack; Mouse; Power adapter

Figure 4.3: Side view of the Tiandy TC-R3104 NVR, showing additional details of the casing. This perspective provides a better understanding of the NVR's physical dimensions and potential mounting options, if applicable.

5. SETUP

Follow these steps to set up your Tiandy TC-R3104 NVR.

5.1 Hard Disk Drive (HDD) Installation

The NVR supports one SATA HDD up to 6TB. Ensure the NVR is powered off before installing or removing an HDD.

1. Unscrew and remove the NVR's cover.
2. Connect the SATA data cable and power cable to the HDD.
3. Secure the HDD to the NVR chassis using the provided screws.
4. Replace the NVR cover and secure it with screws.

5.2 Connecting Peripherals

1. **Monitor:** Connect a monitor to the NVR's HDMI or VGA output port.
2. **Mouse:** Connect the USB mouse to one of the NVR's USB ports.
3. **Network:** Connect an Ethernet cable from your router/switch to the NVR's LAN port.
4. **IP Cameras:** Connect your PoE IP cameras directly to the NVR's PoE ports using Ethernet cables. The NVR will provide power and data.
5. **Power:** Connect the power adapter to the NVR's power input and then plug it into a power outlet.

5.3 Initial Configuration

Upon first boot, the NVR will guide you through an initial setup wizard. You will typically configure:

- **Language:** Select your preferred UI language (English, Spanish, Italian, French, Dutch, German, Portuguese).
- **Date and Time:** Set the correct date, time, and time zone.
- **Network Settings:** Configure IP address settings (DHCP or Static IP).
- **Password:** Create a strong password for the administrator account.
- **HDD Initialization:** Format the newly installed HDD for recording.
- **Camera Search:** The NVR will automatically search for and add connected IP cameras.

6. OPERATING THE NVR

This section covers the basic operations of your Tiandy NVR.

6.1 Live View

After successful setup, the NVR will display the live video feeds from your connected cameras on the monitor. You can switch between single-camera view and multi-camera grid views (e.g., 1/3/4 screen display).

6.2 Video Recording

The NVR supports various recording modes:

- **Continuous Recording:** Records video constantly.
- **Motion Detection Recording:** Records only when motion is detected by the camera.
- **Alarm Recording:** Records when an alarm event is triggered.
- **Schedule Recording:** Records according to a predefined schedule.

Configure recording schedules and settings through the NVR's menu interface.

6.3 Playback

To review recorded footage:

1. Access the Playback menu from the NVR interface.

- 2. Select the camera(s) and the date/time range for playback.
- 3. Use the playback controls (Play/Pause, Stop, Slow/Speed, Forwards/Backwards 30s) to navigate through the footage.
- 4. The NVR supports multi-channel playback, allowing you to view recordings from multiple cameras simultaneously.

6.4 Smart Features and Applications

The NVR offers advanced features for managing your surveillance system:

- **Centralized IP Camera Management:** Configure, import/export information, and upgrade IP cameras directly from the NVR.
- **Tiandy Smart IP Camera Connectivity:** Seamlessly integrate with Tiandy's smart IP cameras for enhanced recording and playback capabilities.
- **Cloud Upgrade:** Supports firmware upgrades via cloud services for convenient maintenance.

7. MAINTENANCE

Regular maintenance ensures the optimal performance and longevity of your NVR.

7.1 Firmware Update

Periodically check for firmware updates on the official Tiandy website (<http://en.tiandy.com>) or through the NVR's cloud upgrade feature. Firmware updates can provide new features, bug fixes, and security enhancements. Follow the instructions provided with the firmware update carefully.

7.2 Data Backup

Regularly back up important video footage to an external USB storage device. Access the backup function through the NVR's menu. This helps prevent data loss in case of HDD failure or other unforeseen events.

7.3 System Reset

If you encounter persistent issues, you may perform a factory reset. Be aware that a factory reset will erase all configurations and recordings. Consult the NVR's menu for the reset option.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your NVR.

Problem	Possible Cause	Solution
No video output on monitor	Loose HDMI/VGA cable; Incorrect input selected on monitor; NVR not powered on.	Check cable connections; Select correct input on monitor; Verify NVR power.
Cameras not displaying	Camera not powered; Network cable issue; IP conflict; Camera not added to NVR.	Check PoE connection; Verify network cables; Check IP addresses; Add cameras via NVR interface.
No recording	HDD not installed/formatted; Recording schedule not set; Disk full.	Install/format HDD; Configure recording schedule; Check disk space.
Network Disconnected alert	Ethernet cable disconnected; Router/switch issue; Incorrect network settings.	Check Ethernet cable; Verify router/switch status; Review NVR network settings.
Disk R/W error	HDD failure; Loose SATA connection.	Check SATA cables; Replace HDD if faulty.
PoE Overloaded	Total power consumption of connected cameras exceeds NVR's PoE budget.	Reduce the number of connected cameras or use cameras with lower power consumption.

9. SPECIFICATIONS

Detailed technical specifications for the Tiandy TC-R3104 NVR.

Category	Parameter	Value
Video and Audio	Access Channel	4
	Incoming Bandwidth	60Mbps
	Outgoing Bandwidth	40Mbps
	Resolution	5MP/4MP/3MP/1080P/UXGA/720P/VGA/4CIF/DCIF/2CIF/CIF/QCIF
	Preview decoding capability	5MP*1,4MP*1,3MP*1,1080P*2,720P*4,4CIF*4
	Playback decoding capability	5MP*1,4MP*1,3MP*1,1080P*2,720P*4
	Video Output	1*HDMI
	HDMI Output	1024*768(60Hz),1280*720(50Hz/60Hz),1280*800(60Hz),1440*900(60Hz),1920*1080(50Hz/60Hz)
	VGA Output	N/A
	Multi-screen Display	1/3/4
	Third-party Camera Access	ONVIF, RTSP
	Audio Input	N/A
Audio Output	N/A	
Two-Way Audio	N/A	
Liveview display	N/A	
Compression	Video	S+265; H.265; S+264; H.264
	Audio	G711A; G711U; AAC; ADPCM_DIV4
	Stream Type	Video; Video & Audio
	Network Protocol	ARP; DDNS; DHCP; DNS; HTTP; ICMP; IGMP; IPv4; IPv6; NTP; RTP; RTCP; RTSP; SSH; TCP/IP; UDP; UPnP

Category	Parameter	Value	
Network	Mobile Phone Access	Android; iOS; P2P_A	
	System Compatibility	CGI; SDK	
	Web	IE10+; Firefox52+; Edge89+; Safari11+; Chrome57+	
Record Playback	Multi-channel Playback	4	
	Record Mode	Alarm recording; Schedule recording	
	Storage	Local HDD	
	Backup	USB storage device	
	Playback Function	Play/Pause/Stop/Slow/Speed/Backwards 30s/Forwards 30s/Full screen/backup (Video Editing)	
Alarm	General Alarm	Motion; Mask Alarm; Video Loss	
	Alert Alarm	IP Conflict; MAC Conflict; Network Disconnected; No disk; Illegal Access; Disk Full; Disk R/W error; Video Abnormal; Abnormal found in smart of disk; Abnormal temperature of the disk; POE overloaded; IPC voltage abnormal; RTC failure	
Intelligent Analytics	VCA Detection by Camera	Advanced Intelligence	
	VCA Search	N/A	
	Face Detection by Camera	N/A	
	Performance	N/A	
	Face Attributes	N/A	
	Face Picture Library	N/A	
	HDD	1 SATA ports, up to 6TB for a single HDD. The maximum HDD capacity varies with environment temperature	
	Disk Group	N/A	
	RAID	N/A	
	eSATA	N/A	

Category External Port	Parameter	Value	
	USB	2*USB2.0	
	HDMI	1*HDMI	
	VGA	N/A	
	RJ-45	1*RJ-45,10/100 Mbps self-adaptive Ethernet port	
	SATA	1 SATA interface	
	RS232	N/A	
RS485	N/A		
Alarm I/O	N/A		
POE	POE Interface	4× RJ45 self-adaptive 10/100 Mbps network interface	
	POE Gross Power	28W	
	Power per POE Port	28W	
	Max Current per POE Port	600mA	
General Parameter	UI Language	English; Spanish; Italian; French; Dutch; German; Portuguese	
	Power Supply	DC48V 1A	
	Power Consumption	<10W (without HDD & without POE)	
	Net Weight	0.85kg	
	Gross Weight	0.85kg	
	Boundary Dimensions (L×W×H)	200(L)×200(W)×43(H)mm	
	Package Dimensions (L×W×H)	315(L)×70(W)×235(H)mm	
	Operating Temperature	-10°C +55°C	
	Operating Humidity	10% 90%RH	

Category	Parameter	Value
	Storage Temperature	-10°C +55°C
Storage Humidity	10% 90%RH	
Package Kit	Network Video Recorder; Screw pack; Mouse; Power adapter	

10. WARRANTY AND SUPPORT

For warranty information, technical support, and further assistance, please refer to the official Tiandy website or contact your local distributor.

Official Website: <http://en.tiandy.com>

Tiandy Technologies Co.,Ltd. is committed to providing high-quality products and customer service. Please retain your purchase receipt for warranty purposes.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details.](#)

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

