4-Channel HD PoE NVR Kit

TV-NVR104K (v1.0R)

- Standalone 4-Channel PoE network video recorder
- Pre-installed 1 TB SATA HDD
- Includes two TRENDnet TV-IP320PI outdoor ready HD cameras
- Plug and play up to 4 PoE cameras*
- Video recording supported up to Full HD 720p
- Over 6.5 days continuous recording**
- List of compatible cameras

TRENDnet's standalone 4-Channel HD PoE NVR Kit, model TV-NVR104K, offers a comprehensive video display, storage, and management solution which features a plug and play PoE camera installation*. The TV-NVR104K comes with a pre-installed 1 TB hard drive and two powerful TV-IP320PI Outdoor 1.3 MP HD PoE IR Network Cameras. The NVR networks and powers up to four PoE cameras*, auto-recognizes TRENDnet cameras, records over 6.5 days of continuous video**, and supports advanced video playback.

All-in-One HD NVR

This HD NVR comes with a pre-installed 1 TB hard drive, two 720p PoE outdoor cameras, network cables, and a mouse. (display sold separately)

Plug, Play, & Power

The NVR auto-recognizes and powers TRENDnet PoE cameras—simply connect the two included 720p cameras and add up to two more TRENDnet PoE cameras.

Intuitive Interface

Users will find the management interface intuitive and easy to use—quickly navigate live view preferences, recording schedules, and advanced playback options.

What's in the Box

Power adapter

Mouse

HDMI cable

CD and Quick Installation Guide

TV-NVR104
2 x TV-IP320PI

Camera mounting hardware

Network cable

2 x 100 ft. network cable

What's Needed

HD display (sold separately) with a HDMI port

Networking Solution
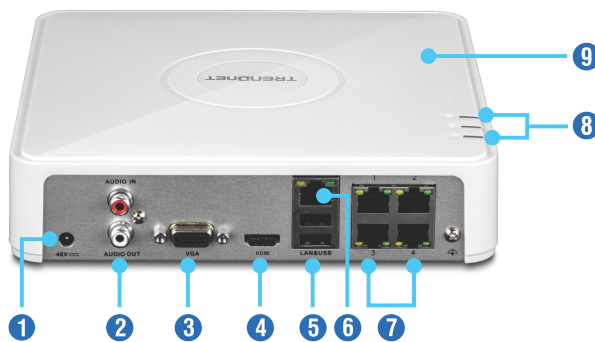
① Power port	⑤ USB ports	⑨ Pre-installed 1 TB HDD	⑬ PoE port
② Analog audio in/out	⑥ Ethernet network port	⑩ Adjustable mounting hardware	⑭ IP66 housing
③ VGA display port	⑦ PoE 10/100 Mbps ports	⑪ Reset button	⑮ IR LEDs
④ HDMI display port	⑧ LED indicators	⑫ Power port	⑯ Sun visor

TV-NVR104 Hardware

PoE Ports
Plug and play PoE network cameras to the four PoE (IEEE 802.3af) ports with a total PoE budget of 35 Watts

Storage Bay
Pre-installed 1 TB SATA hard drive

Network Port
Ethernet network port

Display Ports
HDMI and VGA display ports

Audio Ports
Audio in and out ports

USB Ports
One USB port for the included mouse and one for configuration backup and firmware upgrade

TV-NVR104 Management

Remote Access
Access the NVR over the internet

Camera Setup
Auto-recognizes compatible TRENDnet cameras*

Live View
Single camera and quad-view modes with variable-time auto-scan function

Camera Management
For each camera, manage on screen display, image settings, PTZ functionality, motion detection, privacy masks, tamper detection, and video loss

Video Recording
Record up to Full 720p HD video at 30 fps in H.264 compression (included TV-IP320PI cameras record up to 1280 x 960)

Recording Time
(A) 6.5 days of recording per camera: 4x cameras with continuous recording at 1280 x 960 at 30 fps
(B) 8.5 days of recording per camera: 4x cameras with continuous recording at 720p at 30 fps

Scheduled Recording
Create weekly continuous and motion detection recording schedules for each camera with video overwrite when storage is full

Advanced Playback
Advanced archived video playback with a quick reference timeline and calendar

Video Export
Quickly export specific video types over a specified time

Dynamic DNS Support
Support for dyn.com and NO-IP.org

IPv6
IPv6 support

TV-IP320PI Hardware

Adjustable Bracket
Fully adjustable integrated mounting bracket provides installation flexibility

PoE
Save installation costs with Power over Ethernet (IEEE 802.3af)

Outdoor Ready
Outdoor IP66 weather rated and an operating temperature range of -30 – 60 °C (-22 – 140 °F)

1.3 Megapixel
Record 1280 x 960 pixel HD video at 30 fps in H.264 compression

Night Vision
Night vision up to 30 meters (100 ft.) in complete darkness

Smart IR
Dynamic IR adjustment optimizes night visibility

D-WDR
Digital Wide Dynamic Range improves video quality in high contrast lighting environments

IPv6
IPv6 support

TRENDnet®

Specifications

TV-NVR104 (with 1 TB HDD)

Video Input
- 4 PoE channels

Video Output
- HDMI and VGA display outputs
- Resolution: 1920 x 1080 (1080p), 1280 x 1024, 1280 x 720 (720p), 1024 x 758 @ 60Hz

Audio
- Analog audio in/out (2.0 Vp-p, 1kΩ)

Storage
- Supports one 3.5" SATA I/II HDD
- Comes with a pre-installed 1 TB HDD. Upgradeable to 6 TB SATA I/II HDD)

Network Standards
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3af

Device Interface
- 10/100 Mbps network port
- 4 x 10/100 Mbps PoE camera network ports
- 2 x USB 2.0 ports
- HDMI port
- VGA port
- Analog audio in port
- Analog audio out port
- Power port
- LED indicators (Power, Storage, and Network)
- Grounding point

Network Protocol
- IPv4, IPv6, UDP, TCP, ICMP
- DHCP, NTP, DNS, DDNS, SMTP, FTP
- HTTP, UPnP, RTSP, RTP, RTCP

Power
- Input: 100 – 240 V AC, 50/60 Hz, 1.5 A
- Output: 48 V DC, 1 A
- Consumption: 50 Watts (with HDD and Max. PoE PD
- PoE power budget: 35 Watts

Operating Temperature
- -10 - 55 °C (14 - 131 °F)

Operating Humidity
- Max. 95% non-condensing

Certifications
- CE
- FCC

Dimensions
- 199 x 199 x 47 mm (7.8 x 7.8 x 1.8 in.)

Weight
- 1.2 kg (2.1 lbs.)

Management Interface
- Live view: Single camera or quad-view
- Camera management*:
  - On screen display: camera name, date, week, and date format
  - Image quality: brightness, contrast, saturation, hue, mirror
  - PTZ: pan, tilt, zoom, focus, iris, preset points, pattern, cruise, patrol

  - Motion detection: define custom motion detection areas, motion sensitivity, and triggering channels
  - Privacy masks: define custom privacy mask areas
  - Video tamper detection: trigger actions if the viewing field darkens suddenly
  - Video loss detection: trigger actions if the setup video is lost
- Scheduled recording: continuous and motion detection
- Video recording: Record up to Full 720p HD video
- Recording time**: (A) 6.5 days of recording per camera: 4x cameras with continuous recording at 1280 x 960 at 30 fps; (B) 8.5 days of recording per camera: 4x cameras with continuous recording at 720p at 30 fps
- Holiday scheduling for custom recording schedules during observed holidays
- Advanced playback: playback multiple channels simultaneously and search video recordings with special event or tag
- Video export: tag, cut, and export video clips
- HDD: Encoded disk formatting, S.M.A.R.T. disk health monitoring and testing, bad sector detection, storage quota allocation to each video channel, recycle old recordings or send disk full warning to administrator by email
- USB external storage: firmware upgrade, import/export configuration file and logs, export recorded video files, search and playback videos directly from external storage
- Local live view settings: define screen layout and channel viewing sequence
- Alert messages: storage full, storage error, network disconnected, IP conflict, illegal login, and recording exceptions
- Supported dynamic DNS services: Dyn.com and NO-IP.com
- Management Setting: maximum 32 user accounts
- Traffic chart and statistics for network management
- IPv6 support

Remote Viewing and Management
- User interface compatible with Internet Explorer® 9.0 or higher, Safari® 4.0 or higher

TV-IP320PI

Lens
- Focal length: 4 mm
- Focal depth: 20 cm +
- Aperture: F2.0
- Board lens
- Sensor: 1/3" progressive scan CMOS

Viewing Angle
- Horizontal: 70°
- Vertical: 52°
- Diagonal: 89°

Zoom
- User-defined digital zoom

Minimum Illumination
- IR off: 0.01 lux
- IR on: 0 lux
- 30 meter IR illumination distance
- Smart IR

Video
- D-WDR: 0-100 scale
- Shutter speed: 1/3 - 1/10,000
- H.264: 1280 x 960 up to 30 fps
- MJPEG: 704 x 480 up to 30 fps

Hardware Standards
- IEEE 802.1X
- IEEE 802.3
- IEEE 802.3u
- IEEE 802.3x
- IEEE 802.3af

Device Interface
- 10/100 Mbps PoE port
- Power port (for non-PoE installations, power adapter sold separately (12VDC1A))
- Grounding point
- Integrated articulated mounting base
- Reset button

Housing
- Weather rating: IP66

Network Protocol
- IPv4, IPv6, UDP, TCP, ICMP
- DHCP, NTP, DNS, DDNS, SMTP, FTP, SNMP (v1, v2c, v3)
- NFS, SMB/CIFS
- HTTP, HTTPS
- PPPoE
- UPnP, Bonjour, RTSP, RTP, RTCP, SSL

Operating Temperature
- -30 - 60 °C (-22 - 140 °F)

Operating Humidity
- Max. 95% non-condensing

Certifications
- CE
- FCC
- UL 60950

Dimensions
- 60 x 60 x 152 mm (2.4 x 2.4 x 6.2 in.)

Weight
- 375 g (13.2 oz.)

Power
- Input: PoE (802.3af)
- Consumption: 7 Watts max.

Optional Power Supply (Sold separately)
- Output: 12 V DC 1 A
- 5.5 mm barrel connector
- TRENDnet power adapter, model 12VDC1A, sold separately

Management Interface
- Multi-language support: English, French, German, Russian, and Spanish
- IP address filter
- QoS traffic prioritization
- Time, date, and text overlay
- Image settings: brightness, contrast, saturation, sharpness, smart IR, exposure time (1/3 – 1/100,000), video standard, day/night switch, sensitivity, switch time, mirror, D-WDR, white balance, digital noise reduction
- D-WDR enhances video quality in high contrast daytime lighting
- 3D Digital Noise Reduction enhances night vision quality

- Scheduled recording: continuous and motion detection
- Video storage: to computer, NAS, SMB/CIFS share, or through software
- Motion detection fields: define custom motion detection areas, motion sensitivity, and dynamic motion analysis
- Privacy masks: define custom privacy mask areas
- Video tamper detection: email notification if the viewing field darkens suddenly
- Video playback interface: playback recorded video from remote storage
- Browser video playback: advanced playback functionality with visual timeline displaying detected motion and scheduled recordings

- Alert messages: storage full, storage error, and illegal login
- Snapshot: real time snapshot, motion detection with schedule, video tamper detection with schedule
- Supported dynamic DNS services: Dyn.com and NO-IP.com
- Management Setting: maximum 32 user accounts
- Supports remote management
- Compatibility: Internet Explorer® 9.0 or higher, Safari® 4.0 or higher

Warranty
- TV-NVR104: 2 year limited
- TV-IP320PI: 3 year limited

Package Contents
- TV-NVR104 Network Video Recorder with pre-installed 1 TB HDD
- 2 x TV-IP320PI 720p outdoor camera
- Multi-Language Quick Installation Guide
- CD-ROM (User's Guide)
- 2 x network cable (30 m /100 ft.)
- Network cable (1.8 m / 6 ft.)
- HDMI cable (1.8 m / 6 ft.)
- Optical mouse
- Power adapter (48V DC, 1A)

*Features applies only to integrated cameras. Please see the compatible camera list on http://www.trendnet.com/products/nvr-solutions for more detail.
**6.5 days of continuous video per camera with four cameras recording 1280 x 960 at 30 fps and set to medium VBR