

# TVN-2216P-2T

TruVision™ NVR 22P recorder, 16 IP channels, 2TB, H.265 NVR, 2U

# Overview

TruVision NVR 22P (TVN 22) is a robust high performance H.264/H.265 network video recorder. With a total bandwidth of 256 Mbps (16-channel) or 320Mbps (32and 64 channel) available, the TVN 22P is able to connect up to 16/32/64 IP cameras and provide real time recording (25/30 fps) at Full HD 1080p resolution on all channels simultaneously. With its fully flexible bandwidth allocation, the TVN 22P allows recording resolutions up to 8MPX at various frame rates.

# Ease of use

TVN 22P was designed to make system configuration and overall use easier for both the installer and end-users through features such as: ezDDNS, start-up wizards, plug & play hard drives, auto discovery of natively supported cameras and is fully compatible with TruVision Navigator 6.0SP1 and TVRmobile 2.4.

### H.265

The TVN 22P is supporting both H.264 and H.265 compression techniques. The H.265 compression is the next evolution of video encoding. Using H.265 will result in a reduced file size for the same video content and a reduced transmission bandwidth compared to H.264. This means that for the same storage capacity more video can be stored when using H.265 than H.264 encoding. To use the H.265 encoding in the TVN 22, H.265 cameras need to be used. H.265 will be available in the TruVision S4 IP cameras.

# Ease of use

Thanks to its 2U housing, the maximum on-board storage capacity for the TVN 22P is 48TB, using eight six TB hard drives. The hard drives can be accessed via the lockable front panel door, allowing customers to easily expand storage as their system and/or requirements grow. Additionally, TVN 22P supports RAID 0,1,5,10 for storage redundancy (with FW 1.0 max 16TB of disk space can be used for RAID). Recording options include continuous, event and alarm. The three modes can be combined, to ensure that the most efficient recording is possible.



### Details

- Linux embedded Plug and Play configuration
- Up to 256 Mbps camera recording bandwidth
- Up to 16 IP channels
- Up to 48TB embedded storage (4x 6TB)
- RAID 0, 1, 5, 10 support
- Flip-open front panel for easy HDD access, servicing and expansion
- New icon based front panel
- Real time Full HD recording
- Motion detection, VCA, privacy masking, tamper detection
- TruVision IP camera auto-discovery
- Third party camera support via ONVIF and PSIA
- IP camera configuration import/export
- Custom protocol configuration (RTSP streaming)
- Network redundancy
- Integration of UTC IP intrusion panels via SIA/XSIA reporting
- Recorder failover functionality (one failover unit per 4 operational recorders)
- TVK-800 IP Keypad support (no support for local display of H.265 cameras)
- USB DVD burner support
- Full browser-, OSD- and software-based access for live, recorded & configuration
- TVRmobile app for iOS and Android
- TruVision Navigator license-free client/host or standalone application
- External integration through SDK

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# **Technical Specifications**

#### Video/audio input

Camera channels	16
IP camera channels	16
Max. bandwidth per channel	16
Camera bandwidth (Mbps	)256
Max. IP audio in	16
Supported video compression standards	H.264, H.265, MPEG-4
Supported video streaming standards	Onvif, PSIA, RTSP, RTSP Custom Protocols
Local viewing	
Synchronous playback OSD (channels)	Up to 16 channels
Reverse playback OSD (channels)	1
HDMI output	1
VGA output	1
BNC output	1
HDMI version	2.0
Max. local output resolution	Full HD 1080p
Remote viewing	
Total available viewing bandwidth (Mbps)	256
Max. live viewing streams	128
Max. playback viewing streams	128
Max. playback resolution web browser	8 MPX
Max. simultaneous playback web browser	Max. 16 tiles (4x4)

Domoto viovina		
Remote viewing		Network ports pe
Total available viewing	256	DNS support
bandwidth (Mbps)		HTTPS support
Max. live viewing streams	128	Network interface
Max. playback viewing	128	Network interfact
streams		Network redunda
Max. playback resolution	8 MPX	NIC redundancy
web browser		Multi-address mo
Max. simultaneous playback web browser	Max. 16 tiles (4x4)	ezDDNS:
1.2	Line to O alternational and the sea BO	DDNS:
Reverse playback web browser (channels)	Up to 9 channels, depending on PC performance	no-IP.com:
Browser compatibility	Internet Explorer, Mozilla Firefox, Safari	Total viewing bar
Software compatibility	Advisor Manager, TruVision Navigator,	bandwidth availa
	TVRmobile, Web Browser	Total Live viewing available
		availabit

#### Storage Storage capacity (TB) 2 Max. capacity per SATA 6 HDD (TB) SATA interfaces 8 Maximum recording 8 MPX resolution Recording modes Alarm, Event, Manual, Time-lapse high, Time-lapse low RAID 0, RAID 1, RAID 10, RAID 5 Supported RAID levels External storage eSATA, NAS, SAN SAS extension No Flip-open front panel Yes Hard drive redundancy Yes Hard drive grouping Yes Hot spare recorder Yes Edge failover recording Yes Networking Network interface cards 2 (NIC) RJ-45 10/100/1000 Mbps self-adaptive NIC type Ethernet interface NIC mode Network Redundancy er NIC 1 DDNS, ezDDNS, No-IP Yes 2 RJ-45 10/100/1000 Mbps self-adaptive ce: Ethernet interface Yes lancy: Yes V. node Yes Yes Yes Yes andwidth 256 Mbps able ng streams 128 Total playback viewing 128 streams available HTTPS support: Yes External interfaces

USB interface back	1
USD IIIteriace back	1
USB interface front	2
Max. analog audio output	ts 1
Serial interface	RS-232
Alarm inputs	16
Alarm outputs	4

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# Standards & regulation

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Compliancy	CE, REACH, RoHS, UL
Video/Audio input	
IP camera input:	Up to 16/32/64 channels
Total bandwidth available:	IN: 256/320/320 Mbps/OUT: 256 Mbps for all models
Maximum bandwidth per channel	16 Mbps
Average bandwidth per channel	10 Mbps
Video compression standards supported	H.264, H.265, MPEG-4
Audio input/output	In: 1-ch, RCA ( 2.0 Vp-p, 1 kohm ); Out: 2- ch, RCA ( 2.0 Vp-p, 1 kohm )
RTSP streaming support:	Yes
Onvif support:	Yes

#### Viewing

OSD viewing resolutions:	8MPX/6MPX/5MPX/4MPX/3MPX/Full
	HD1080p/UXGA/HD
	720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Remote viewing	Up to 8 MPX - depending on remote client
resolutions	capabilities
HDMI output resolutions:	HDMI 1: 3840 × 2160/60Hz, 3840 ×
	2160/30Hz, 2560 × 1440/60Hz, 1920 ×
	1080/60Hz, 1600 × 1200/60Hz, 1280 ×
	1024/60Hz, 1280 × 720/60Hz,1024 ×
	768/60Hz HDMI 2: 1920 x1080P/60 Hz,
	1280 x 1024/60 Hz, 1280 x 720/60 Hz,
	1024 x 768/60 Hz
VGA output resolutions	VGA 1: 2560 × 1440/60Hz, 1920 ×
	1080/60Hz, 1600 × 1200/60Hz, 1280 ×
	1024/60Hz, 1280 × 720/60Hz, 1024 ×
	768/60Hz VGA 2:1920 × 1080P/60 Hz,
	1280 × 1024/60 Hz, 1280 × 720/60 Hz,
	1024 × 768/60 Hz
HDMI version:	HDMI 2.0 (compatible with 1.4)
BNC output	Yes - alarm event only, no menu controls
Digital zoom	Up to 16x
Playback	

Playback resolution:	Up to 8 MPX
Synchronous playback OSD	Up to 8/16 channels
Simultaneous playback	max. 16 tiles
browser:	
Reverse playback OSD:	Up to 1 channel
Reverse playback	Up to 9 channels, depending on PC
browser:	performance
Playback transcoding:	Yes, using web browser

# Recording

Recording resolution:	8MPX/6MPX/5MPX/4MPX/3MPX/Full HD
	1080p, UXGA/HD
	720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Internal SATA slots:	8
Maximum capacity per	6TB
SATA drive	
Recording modes:	Time lapse High, Time lapse Low, Event,
	Alarm, Manual
External storage:	eSATA, NAS, SAN
RAID	0,1, 5, 6, 10 (With FW 1.0 max 16 TB can
	be used for RAID)

### External interface

RS-232 interface:	Yes
RS-485 interface	Yes (not used)
USB interface:	2 x USB 2.0 (front), 1 x USB 3.0 (back)
Alarm interface:	16 alarm in (NO/NC), 4 alarm out (NO)

#### Operations

Local:	On screen display - VGA, HDMI or BNC (spot)
	(6666)
Remote:	Browser interface/TruVision
	Navigator/TVRmobile
Browser requirements:	IE 8 9 10 11, Firefox







