

# TVN-2216S-2T

TruVision™ NVR 22 recorder, 16 IP channels, integrated PoE switch, 2TB, H.265 NVR

#### Overview

TruVision NVR 22S (TVN 22S) is a robust high performance H.264/H.265 network video recorder with 8 or 16 embedded plug & play PoE ports. With a total bandwidth of 80/160 Mbps available, the TVN 22S is able to connect up to 8/16 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 22S allows recording resolutions up to 8MPX at various frame rates.



Setting up TVN 22S is easy. Its embedded PoE ports allow you to connect TruVision IP cameras as they were analog cameras. When plugged in, cameras are automatically assigned IP addresses, added to the recorder and set up at default configuration. Each IP camera can also be set up individually to ensure full flexibility. The fully flexible PoE allocation feature ensures an optimally efficient use of the PoE power available.

#### Ease of use

TVN 22S allows users full flexibility in the way they want to configure, manage and monitor their video surveillance solution. In addition to management of the unit through its browser interface or TruVision Navigator, the TVN 22S allows users to also operate the recorder locally using its front panel controls, local VGA or HDMI outputs and its intuitive on screen display.

#### H.265

The TVN 22S 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 22S, H.265 cameras need to be used. H.265 will be available in the TruVision S4 IP cameras.





#### **Details**

- Linux embedded Plug and Play configuration
- Up to 160 Mbps camera recording bandwidth
- Up to 16 IP channels
- Up to 16 embedded PoE camera ports
- PoE-af & PoE-at support
- Up to 24TB embedded storage (4x 6TB)
- 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-detection
- Third party camera support via ONVIF and PSIA
- IP camera configuration import/export
- Custom protocol configuration (RTSP streaming)
- 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 display of H.265 cameras possible on LCD display)
- 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
- TVRmobile app for Android and iOS

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## **Technical Specifications**

Video/audio input		
Camera channels	16	
IP camera channels	16	
Max. bandwidth per	16	
channel		
Camera bandwidth (Mbps)160		
Max. IP audio in	16	
Supported video	H.264, H.265, MPEG-4	
compression standards		
Supported video	Onvif, PSIA, RTSP, RTSP Custom Protocols	
streaming standards		
Local viewing		
Synchronous playback	Up to 16 channels	
OSD (channels)	•	
Reverse playback OSD	1	
(channels)		
HDMI output	1	
VGA output	1	
BNC output	1	
HDMI version	2.0	
Max. local output	4K	
resolution		
Remote viewing		
Total available viewing	256	
bandwidth (Mbps)		
Max. live viewing streams	128	
Max. playback viewing	128	
streams		
Max. playback resolution	8 MPX	
web browser		
Max. simultaneous	Max. 16 tiles (4x4)	
playback web browser		
Reverse playback web	Up to 9 channels, depending on PC	
browser (channels)	performance	
Browser compatibility	Internet Explorer, Mozilla Firefox, Safari	
Software compatibility	Advisor Manager, TruVision Navigator,	
	TVRmobile, Web Browser	
Storage		
Storage capacity (TB)	2	
Max. capacity per SATA	6	
HDD (TB)		
SATA interfaces	4	
Maximum recording	8 MPX	
resolution		
Recording modes	Alarm, Event, Manual, Time-lapse high, Time-lapse low	
External storage	eSATA, NAS, SAN	
SAS extension	No	
Flip-open front panel	Yes	
Hard drive redundancy	No	
Hard drive grouping	No	
Hot spare recorder	Yes	
Edge failover recording		
Edde fallover recording	Yes	

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Network interface cards	1
(NIC)	
NIC type	RJ-45 10/100/1000 Mbps self-adaptive
	Ethernet interface
Network ports per NIC	1
PoE ports	16
Total PoE budget (W)	200 W
PoE standards supported	PoE-af, PoE-at
DNS support	DDNS, ezDDNS, No-IP
Plug & Play PoE support	Yes
Flexible PoE allocation	Yes
HTTPS support	Yes
Network interface:	1 RJ-45 10/100/1000 Mbps self-adaptive
	Ethernet interface
ezDDNS:	Yes
DDNS:	Yes
no-IP.com:	Yes
Total viewing bandwidth	256 Mbps
bandwidth available	
Total Live viewing streams available	128
Total playback viewing	128
streams available	
HTTPS support:	Yes
External interfaces	
USB interface back	1
USB interface front	2
Max. analog audio outputs	:1
Serial interface	RS-232
Alarm inputs	16
Alarm outputs	4
General	
Rack stacking size	1.5 U
Removable fan	No
Redundant power supply	No
Rack mountable	Yes
Power supply:	AC 100V~240V
Power consumption	20 W (without enabling PoE)

Rack stacking size	1.5 U	
Removable fan	No	
Redundant power supply	No	
Rack mountable	Yes	
Power supply:	AC 100V~240V	
Power consumption	20 W (without enabling PoE)	
(without hard disk)		
Operating temperature:	-10 °C ~ +55°C(14°°F ~131°F)	
Operating humidity	10% - 90%	
Chassis:	1.5U rack mountable or desk-based	
	chassis	
Dimensions (W x D x H):	442 x 371 x 74 mm (17.4 x 14.61 x 2.91")	
Weight (without hard disk): Less than 5 kg		

#### Flectrical

Electrical			
Power cons	umption	20 W (without enabling PoE)	
without HD[	) (W)		
Power supp	lv tvpe	100 to 240 VAC	

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Compliancy	CE, REACH, RoHS, UL
Video/Audio input	
IP camera input:	Up to 8/16 channels
Total bandwidth available:	IN: 80/160 Mbps/OUT: 256 Mbps for all
	models
Maximum bandwidth per	16 Mbps
channel	
Average bandwidth per	10 Mbps
channel	
Video compression	H.264, H.265, MPEG-4
standards supported	
Bi-directional audio:	1-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:	3840 × 2160/60Hz, 3840 × 2160/30Hz,
	1920 × 1080/60Hz, 1600 × 1200/60Hz,
	1280 × 1024/60Hz, 1280 × 720/60Hz, 1024
	× 768/60Hz
VGA output resolutions	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	Up to 8/16 channels
OSD	
Simultaneous playback	Max 16 tiles (4x4)
browser:	
Reverse playback OSD:	Up to 1ch
Reverse playback	Up to 9 channels, depending on PC
browser:	performance
Playback transcoding:	Yes, using web browser
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#### Recording

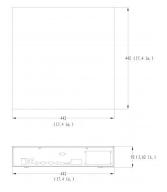
Recording resolution:	8MPX/6MPX/5MPX/4MPX/3MPX/Full
	HD1080p/UXGA/HD
	720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF
Internal SATA slots:	4
Maximum capacity per	6TB
SATA drive	
Recording modes:	Time lapse High, Time lapse Low, Event,
	Alarm, Manual
External storage:	eSATA, NAS, SAN

### External interface

IP camera interface	8/16 PoE IP camera ports
PoE support	PoE-af/PoE-at
PoE budget	200W
Plug-&-Play functionality	Yes, TruVision cameras
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)
Remote:	Browser interface/TruVision
	Navigator/TVRmobile
Browser requirements:	IE 8 9 10 11, Firefox





Climate | Controls | Security