

TVN-2216S-16T

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

Plug-&-play functionality

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 channel | 16 |
| Camera bandwidth (Mbps) | 160 |
| 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 | 4K |

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) |
| Reverse playback web browser (channels) | Up to 9 channels, depending on PC performance |
| Browser compatibility | Internet Explorer, Mozilla Firefox, Safari |
| Software compatibility | Advisor Manager, TruVision Navigator, TVRmobile, Web Browser |

Storage

| | |
|---------------------------------|---|
| Storage capacity (TB) | 16 |
| Max. capacity per SATA HDD (TB) | 6 |
| SATA interfaces | 4 |
| Maximum recording resolution | 8 MPX |
| 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 | Yes |

Networking

| | |
|---|---|
| Network interface cards (NIC) | 1 |
| 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 bandwidth available | 256 Mbps |
| Total Live viewing streams available | 128 |
| Total playback viewing streams available | 128 |
| 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 (without hard disk) | 20 W (without enabling PoE) |
| 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 |

Electrical

| | |
|-----------------------------------|-----------------------------|
| Power consumption without HDD (W) | 20 W (without enabling PoE) |
| Power supply type | 100 to 240 VAC |

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Standards & regulation

| | |
|------------|---------------------|
| Compliance | 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 channel | 16 Mbps |
| Average bandwidth per channel | 10 Mbps |
| Video compression standards supported | H.264, H.265, MPEG-4 |
| 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 resolutions | Up to 8 MPX - depending on remote client 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 OSD | Up to 8/16 channels |
| Simultaneous playback browser: | Max 16 tiles (4x4) |
| Reverse playback OSD: | Up to 1ch |
| Reverse playback browser: | Up to 9 channels, depending on PC performance |
| Playback transcoding: | Yes, using web browser |

Recording

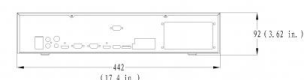
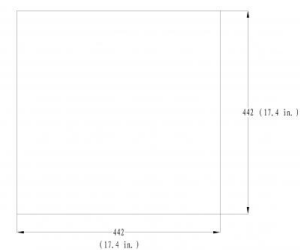
| | |
|---------------------------------|--|
| Recording resolution: | 8MPX/6MPX/5MPX/4MPX/3MPX/Full HD1080p/UXGA/HD 720p/VGA/4CIF/DCIF/2CIF/CIF/QCIF |
| Internal SATA slots: | 4 |
| Maximum capacity per SATA drive | 6TB |
| Recording modes: | Time lapse High, Time lapse Low, Event, Alarm, Manual |
|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



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