

TruVision NVR 10 A&E Specifications



# Network Video Recorder

## The TruVision NVR 10 (recorder) shall be as manufactured by Interlogix or an approved equal. The recorder shall require minimal training for the end user. When using the embedded PoE ports, the unit shall be operated like a conventional DVR with local display monitors for live and playback viewing while the system continues to record new images. When not using its PoE ports, It shall be an integrated security system, capable of time division multiplexing and real time recording of multiple cameras, and storing their digitized and compressed images on embedded hard disk drives for fast search and retrieval either locally at the unit, or from a remote workstation using a Graphical User Interface (GUI).

## Additionally, the system shall provide automated alarm handling. Upon receipt of an alarm, the system shall be able to automatically change display and record speed, provide relay output operation, and provide serial data transfer to a host. The system shall be able to determine alarm change of state (COS) conditions from integral motion detection, hard-wired alarm inputs, or serial data transfer from a host. During investigations, it shall be possible to search and retrieve stored video data by date, time, camera, alarm, and transaction text.

## The recorder shall include, but not be limited to the following:

### The recorder shall function as a standalone unit. It shall not require the use of a personal computer, special monitors, or other peripheral devices for either programming or operation. Live and recorded playback of video images shall display on conventional LCD monitors.

### The recorder shall be capable of displaying on-screen text and menus in more than one language. This shall be user selectable via the menu system.

### The recorder shall have robust buttons integrated into the front panel of the unit, used for menu navigation, setup, and control of the unit, with no need for an external control device.

### The recorder shall have robust buttons integrated into the front panel of the unit for each camera, display, sequence, live, playback, pause, alarm, and multifunctional navigation.

#### An alarm button shall be lit if an alarm occurs.

#### An alarm indication bar shall visualize an alarm, additionally the causing criterion shall be shown by alarm indication lights for

##### Alarm

##### Network

##### HDD

##### Internal

### The comprehensive search function shall be activated by using the search button,

### The recorder shall support one button quick archive, auto detecting the storage media inserted and the maximal storage capacity.

### The recorder shall have a USB port at the front panel supporting a mouse or memory sticks for archiving video and audio files for evidence.

### The recorder shall use an easy-to-read, on-screen menu consisting of icons and pop-up selections.

### The recorder shall use a battery to back up memory that stores the time, date, and all internal programming functions.

### The recorder shall have log view screens to show the entire system status at a glance.

### The recorder shall prevent unauthorized program tampering through the use of at least sixteen users and passwords, with settings including:

#### Local user priveleges

#### Remote user priveleges

#### Local play priveleges

#### Remote play priveleges

#### Remote view priveleges

### The 4 channel recorder shall be a small form factor which is desk based.

### The 8 and 16 channel recorders shall be 1.5 U in height and rack space and capable of being rack mounted (EIA 19-inch standard), with rack mount hardware included with the product which was designed by the manufacturer to support the units.

### The recorder shall support Digital Zoom in a user defined area.

### The video player shall be zero footprint player and exported with the video as evidence player

### A Windows Media Player filter shall be available in order to allow the playback of evidence video using default Windows Player

### The recorder shall support an easy to use Internet Explorer based Web Browser. The supported features shall be:

#### Camera live view with up to 16 cameras simultaneously

#### Capability to switch between Main stream and Substream per camera individual and all cameras at once

#### PTZ functionality with Preset call up

#### Playback of recorded video

#### Archiving of recorded video

#### Comprehensive remote configuration

## The digital recorder shall have the following operational features:

### Recording

#### The recorder shall record video on a hard disk drive. No videotape or videotape recorders shall be required.

#### The recorder shall support internal hard disk configurations.

#### Internal storage configurations for the 4 channel unit shall be up to 2TB, using up to one 2TB SATA HDD.

#### Internal storage configurations for the 8 channel unit shall be up to 4TB, using up to two 2TB SATA HDDs.

#### Internal storage configurations for the 16 channel unit shall be up to 6TB, using up to two 3TB SATA HDDs.

#### The utilized Hard Drives shall support latest SATA technology including SMART reporting

#### The utilized Hard Drives shall be especially developed for the Digital Video Archiving Industry

#### The recorder shall support user programmable stored video frame rates that can be programmed on a per-camera basis. All cameras shall be programmable to capture images in one of the following operating modes:

##### Constant

##### TimeLapse (high & low)

##### Event

##### Alarm

##### Manual

#### At a minimum, the recorder shall support the following stored video frame rates per camera:

##### Real-time (NTSC/PAL)

##### 22 fps

##### 20 fps

##### 18 fps

##### 16 fps

##### 15 fps

##### 12 fps

##### 10 fps

##### 8 fps

##### 6 fps

##### 5 fps

##### 4 fps

##### 3 fps

##### 2 fps

##### 1 fps

#### The recorder shall support an alarm record mode that is user programmable. At a minimum, the recorder shall support the following alarm mode stored video frame rates:

##### Real-time (NTSC/PAL)

##### 22 fps

##### 20 fps

##### 18 fps

##### 16 fps

##### 15 fps

##### 12 fps

##### 10 fps

##### 8 fps

##### 6 fps

##### 5 fps

##### 4 fps

##### 3 fps

##### 2 fps

##### 1 fps

#### The recorder shall allow the user to select whether the hard disk recording should automatically overwrite data (starting with the oldest data first) or if the user must confirm overwriting before recording will continue when the hard disk is filled.

#### The recorder shall have image quality settings, which are adjustable on a per camera basis by the user, including the following:

##### QCIF, CIF, 2CIF, 4CIF, VGA, SVGA, 720P, 900P, XVGA (960P), UXGA, 1080P, 2048x1536 and 2560x1920

Streaming bandwidth: by User (32-8192Kb), 2Mb, 1.75Mb, 1.5Mb, 1.25Mb, 1Mb, 896Kb, 768Kb, 640Kb, 512Kb, 448Kb, 384Kb, 320Kb, 256Kb, 224Kb, 192Kb, 160Kb, 128Kb, 96Kb, 80Kb and 64Kb.

#### The recorder shall support from one to thirty seconds of pre alarm recording, maintained in a buffer, and shall append this buffer to the beginning of all recorded alarms. The recorder shall continue to record at the alarm rate until the alarm is reset, times out, or is acknowledged as determined by the alarm menu programming.

#### The recorder shall support from one to thirty seconds of pre‑event recording, maintained in a buffer, and shall append this buffer to the beginning of all recorded events. The recorder shall continue to record at the event rate until the programmed event duration (from 5 seconds to 10 minutes) expires.

#### The recorder shall allow the user to manually or automatically customize the record rates per camera for events and motion detection.

#### The user shall be able to play back images smoothly at normal or fast speeds and in forward modes, without distortion.

#### The unit shall provide full media search capabilities for archiving, restoring, and playback operations. Search capabilities shall include filters for start/stop times, start/stop dates, alarm and event occurrences, overlayed text, and camera number.

#### The recorder shall support the recording of all images with a digital watermark. The verification of watermarked images shall reside solely with the manufacturer using the manufacturer video player.

### PoE functionality

#### PoE ports

##### The 4 channel recorder shall include 4 PoE ports for camera connectivity

##### The 8 and 16 channel recorder shall include 8 PoE ports for camera connectivity

#### PoE budget

##### The 4 channel recorder shall have a maximum PoE budget of 50W to be distributed over its 4 ports

##### The 8 and 16 channel recorder shall have a maximum PoE budget of 120W to be distributed over its 8 ports

#### PoE settings

##### The recorder interface will allow the setting of different PoE budgets per port. For 4 channel this is 12.5W, PoE-af and PoE-at. For 8 and 16 channel this is 15W, PoE-af, PoE-at.

##### The recorder interface will provide a graphical overview of total available PoE budget, allocated PoE budget, current PoE consumption, and available PoE budget.

#### Plug and Play functionality

##### TruVision cameras connected to the PoE ports will be automatically assigned IP addresses and connected to the recorder

##### TruVision cameras will automatically be set up at default settings.

### Dual Streaming

#### The recorder shall allow the installer to setup a Substream for streaming Video and Audio over Network without affecting the record rate, quality and resolution of recorded video.

### Archiving

#### The recorder shall support archiving of recorded images through USB memory stick.

#### The recorder shall support selective archiving.

#### The recorder shall have an on-screen progress indicator when selective archiving or restoration operations are accessing the archive device.

#### The recorder shall have an Automatic Delete Mode (ADM) that may be enabled or disabled, preventing any video that is older than a user-defined period from being viewed or archived, when the unit is used in jurisdictions that mandate a finite storage time. Automatic Delete Mode shall be programmable from 0 to 60 days.

### Multiscreen

#### The recorder shall provide the following displays in live mode: full screen, sequencing, 4-way, 6-way, 8-way, 9-way, or 16-way.

#### The recorder shall allow the user to rearrange cameras in any Multiscreen display in live mode.

#### The recorder shall incorporate the following display options:

##### Camera titling with a minimum of up to 16 alphanumeric characters

##### Title display enable/disable, per channel

##### Time/date formatting

##### Time/date enable/disable, per channel

#### The recorder shall provide image update rates for live and record modes of up to 30fps for NTSC or up to 25 fps for PAL per channel

##### The recorder shall have two monitor outputs as follows:

###### One digital multiscreen monitor-A output

HDMI connector

Shall be able to display all cameras live, playback, in sequence mode, or programming mode

###### One analog Multiscreen monitor-A output

VGA connector

Shall be able to display all cameras live, playback, in sequence mode, or programming mode

### Video motion detection

#### The recorder shall support the following video motion detection:

#### Motion detection, which shall be treated as an alarm.

##### The recorder shall support an on-screen setup scale to determine the optimum sensitivity setting for each camera input.

##### The recorder shall have 396 zones per camera, arranged in a 22 by 18 grid.

##### The recorder shall have 7 levels of sensitivity.

##### The recorder shall have 255 levels for size discrimination.

### Masking / Privacy Zones

#### The recorder shall support video masking

#### The recorder shall have be able to have 4 mask areas per camera

### Tampering

#### The recorder shall support video tampering

#### The recorder shall have 3 levels of sensitivity

### Alarms

#### The recorder shall support up to 4 alarm inputs, programmable as normally open or normally closed from within the menus.

#### The recorder shall support four form-C relays as alarm outputs, and rated for 0.5 A continuous, 1.0 A momentary. Upon alarm, the system shall be able to execute a change of state (COS) to relay number 1 or relay number 2.

#### The recorder shall have a fully programmable additional audible device to alert the user to alarms, motion detection, and video loss occurrences or operation failure.

#### The recorder shall support alarm latching with two settings, which shall be manually set or programmable from the menus as follows:

##### Manual acknowledge - When an alarm is activated, the recorder shall be manually acknowledged to reset the COS back to normal condition.

##### Timed out – the alarm shall automatically reset after a user-defined elapsed time.

#### The recorder shall have automatic full screen associated alarm display that shall change as incoming alarms continue to arrive. As additional alarms arrive, the display monitor shall sequence between the cameras in alarm. It shall be possible, using the telemetry preset control described elsewhere in this specification, to utilize presets with associated alarm display to show the alarmed scene and surrounding escape paths during a high level alarm condition.

#### The recorder shall provide status relays that shall link to alarms, motion detection, and video loss.

#### The recorder shall have an alarm history display capable of showing the last 100 alarms received by the system.

#### The recorder shall be supplied with push-in wire terminal connections to facilitate easy connection of alarms and other input/output signals.

#### The recorder shall support notification on alarm to user accounts. The recorder shall allow the user to program notification in response to any of the following conditions:

##### Hard disk full

##### NTSC/PAL mismatch

##### Illegal Access

##### IP Address conflict

##### Network issues

##### Network access

##### Hard disk error

### Ethernet communications

#### The recorder shall support LAN/WAN Ethernet access.

#### The recorder shall support Ethernet bandwidths of 10 Mbps or 100 Mbps or 1000 Mbps.

#### The recorder shall support simultaneous Ethernet access by not less than 16 workstations connected to the LAN/WAN.

#### The recorder shall be provided with a Graphical User Interface (GUI) software for remote playback and viewing that shall support the Windows 8, 7, Vista and XP operating systems and full searching capabilities. It shall be possible to remotely set up the recorder unit using the remote viewing software.

#### The recorder shall not stop recording during any Ethernet access.

#### The recorder shall allow the user full programming of Ethernet parameters, including the following:

##### Ethernet (enable/disable)

##### DHCP (enable/disable)

##### DDNS

##### IP address

##### Default gateway

##### Sub-net mask

##### HTTP port

##### Main Port

### The system shall be upgraded through flash programming upgrades of software, using either an USB drive or TCP/IP.

## The recorder shall have the following additional specifications:

### Inputs

#### Camera

##### There shall be up to 4/8/16 camera inputs, depending on selected model.

##### Inputs shall use Ethernet.

##### Inputs shall be NTSC/EIA or PAL/CCIR compatible.

##### Available bandwidth shall be 20/40/80 Mbps, depending on selected model.

##### There shall be per camera one associated and synchronized IP audio input

##### 1 bidirectional audio line input

##### The line audio input shall use RCA connectors

###### Signal conditioning

###### All inputs shall have automatic gain control.

### Remote management and use of the unit

#### Using browser

#### Using SDK (TruVision Navigator, TVRmobile, or other software head-end)

#### Shall stream out video data up to 80/160/160 Mbps depending on model

### The recorder shall have 2 USB ports for:

#### USB memory key archiving devices

#### USB HDD archiving devices

#### Mouse control functions

#### One USB 2.0 port will be located at the front panel

#### One USB 3.0 port will be located at the back panel

### The recorder shall have a removable strip for input/output connector to support the following functionality:

#### Alarm inputs

#### Relay outputs

### Remote control

#### The recorder shall have an IR-remote that will emulate the front panel keys

### Mouse: The recorder shall provide Mouse control support for

#### All menu settings and navigation functions

#### Control functions live, playback, PTZ and archive

### Electrical

#### Input voltage for 4 channel version: DC12V for non PoE model, DC48V for PoE model

#### Input voltage for 8/16 channel version without PoE: DC48V

#### Input voltage for 8/16 channel version with PoE: 100 to 240 VAC, 50 to 60 Hz for the 8 and 16 channel recorder

#### Power consumption: between 10W and 180W, depending on amount of channels and PoE ports used

### Environmental

#### Operating temperature range -10 to +55°C (14℉~131℉), Relative humidity 10% to 90%

#### Relative humidity: 10% to 90% non-condensing

### Mechanical

#### Dimensions of the 4 channel variant shall be 1U 315x236.5x47.5mm (WxDxH) desk based.

#### Dimensions of the 4 channel variant shall be 1.5U 362x332x79 mm (WxDxH) rack mountable.

#### Weight shall be 8 kg maximum without hard drive.

### Compliance

#### FCC

#### CE

#### UL

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