

TruVision TVN 71 A&E Specifications, Division 28 00 00 Electronic Safety and Security



P/N 1073210-EN • REV B • ISS 27NOV17

This A&E Specification conforms to CSI MasterFormat 2016 guidelines.

28 01 00 Operation and Maintenance of Electronic Safety and Security

28 01 20 Operation and Maintenance of Video Surveillance

# Operations

## The recorder shall use an easy-to-read, browser based menu structure.

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

## Live view

### The live viewing of the recorder cameras will contain:

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

#### Capability to switch between Main stream and Substream on individual cameras and all cameras at once.

#### PTZ functionality with Preset call up.

#### Control the recorder relay outputs.

## Playback

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

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

### The recorder will allow for reverse playback.

### The recorder will allow the user to select which resolution, frame rate, and bandwidth will be streamed to the browser interface when in playback.

## Search

### During investigations, it shall be possible to search and retrieve stored video data by date, time, camera, alarm, and transaction text.

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

### 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, inserted text, and camera number.

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

### The recorder will provide the ability to search based on motion metadata in-screen.

## Configuration

### The recorder browser pages will contain full configuration capability of the recorder and all of its features.

### The recorder will be configurable using standard available free-of-charge software or through SDK implementation in custom software.

### The recorder browser interface shall include a start-up wizard, configuring the basic and required elements of the system.

### The recorder shall prevent unauthorized program tampering through the use of at least 16 users and passwords, with settings including:

#### Remote user privileges

#### Remote play privileges

#### Remote view privileges

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

28 01 20.17 Revisions and Upgrades of Video Surveillance

# Upgrades

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

28 05 00 Common Work Results for Electronic Safety and Security

28 05 07 Power Sources for Electronic Safety and Security

28 05 07.13 Power Sources for Video Surveillance

# The recorder shall be provided with a built-in redundant power supply to prevent susceptibility to power spikes, surges, harmonics, and other common electrical disturbance phenomena associated with the installation environment.

28 05 19 Storage Appliances for Electronic Safety and Security

28 05 19.15 Network Video Recorders

# Hardware:

## Status LEDs

#### Power: A steady green light indicates the recorder is working correctly. A RED light indicates a fault.

#### Event alarm: A flashing red light indicates that there is a sensor Alarm In or another alarm such as motion or tampering. No light indicates no alarm.

#### HDD: HDD indicator blinks red when data is being read from or written to the HDD. A steady red light indicates an HDD exception or error. No light indicates that the unit is in idle state.

#### Tx/Rx: steady green indicates a normal network connection. A blinking RED light indicates a normal network connection when not all of the eight network ports are in multi-address mode. No light indicates that it is not connected to a network.

#### Technical Alarm: A steady red light indicates that there is a technical alarm from the recorder. No light indicates that there is no alarm.

## The recorder shall support a one-button quick archive of the log file of the recorder for all channels (format .txt) of the last 24 hours.. The download file has the log information for the past 24 hours from when the button was pressed. The name format is YYYYMMDDHHMM**SSlogBack**.txt.

## The recorder shall have two USB ports(USB2.0) at the front panel supporting a mouse or memory sticks for archiving video and audio files for evidence and two USB ports(USB3.0) on the back panel.

## 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 support Auto Install to do the following:

### Automatically detect loss of video sync, with onscreen indicators. If video loss is detected during recording, the recorder will warn by onscreen message, sending a message to remote, sounding a buzzer, and switching a relay.

### Automatically control gain per camera, which shall be adjustable by the user.

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

### Remote user priveleges

### Remote play privileges

### Remote view privileges

## The recorder shall be three units of rack space in height (3U) and capable of being rack mounted (EIA 19-inch standard), with rack mount hardware that was designed by the manufacturer to support the units.

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

## The eSATA port shall be configurable either as a Storage Expansion Port or for external video archiving on eSATA media.

## The video player shall be a zero footprint player and export video with an evidence player.

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

# Network Video Recorder Features

## Live view

### There will be a message in case of video loss for each channel

### In live mode, a full screen sequence of different cameras can be defined. It will be possible to set the dwell time between each camera.

## Recording

### 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

#### Event

#### Alarm

### 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 drive 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 drive is filled.

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

#### QCIF, CIF, 2CIF, DCIF, 4CIF, VGA, 720P, UXGA, 1080P, 3MP, 4MP, 5MP, 6MP, 8MPStreaming bandwidth: by User (128-16384 Kb),16 Mb, 8 Mb, 4 Mb, 3 Mb, 2 Mb, 1.75 Mb, 1.5Mb, 1.25 Mb, 1 Mb, 896 Kb, 768 Kb, 640 Kb, 512 Kb, 448 Kb, 384 Kb, 320 Kb, 256 Kb, 224 Kb, 192 Kb, 160 Kb and 128 Kb

### The recorder shall support camera bandwidth of up to 576 Mbps for incoming camera connections

### 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 1-30 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 recorder 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, 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.

## Dual Streaming

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

## Video motion detection

### The recorder shall support the following video motion detection, with on-screen indications when motion is occurring:

### Motion detection, which shall be treated as an event and follow the event encoding settings.

#### The recorder shall support an onscreen 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 100 levels of sensitivity.

## Masking / Privacy Zones

### The recorder shall support video masking.

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

## Tampering

### The recorder shall support video tampering.

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

## Alarms

### The recorder shall support up to 16 alarm inputs, programmable as normally open or normally closed from within the menus.

### The recorder shall support eight 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, relay number 2, relay number 3, relay number 4 , etc. or all.

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

### 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 drive full

#### Video loss

#### Illegal access

#### IP Address conflict

#### IP camera disconnected

#### Network issues

#### Abnormal recording

#### Hard drive error

## RS-232 communications

### The recorder shall support RS-232 communications and control for:

#### Technical support

## Ethernet communications

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

### The recorder shall have eight network ports: 4 x RJ45 ports and 4x SFP fiber ports.

### The recorder shall support Ethernet bandwidths of 10 Mbps or 100 Mbps or 1000 Mbps. A self-adapting mode is available too.

### 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 7, 8 and 10 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:

#### Working mode

##### Multi address

##### Load balance

##### Net fault tolerance

#### DHCP (enable/disable)

#### DDNS

#### IP address

#### Default gateway

#### Sub-net mask

#### HTTP port

#### Main port

## Hot spare

### A spare recorder shall be able to act as a slave unit for up to four recorder master units. The models with PoE ports built-in will not support this hot spare function.

### The slave unit shall continuously monitor the master units and if one of the master units should fail, it can take over recording until the failed units come back online.

### Once the failed unit is back operating normally again, the slave unit will send its recordings to the HDDs of the recovered unit so that no recordings shall be missed.

### The hot spare unit shall only back up one master unit at a time. If more than one unit should fail, the hot spare unit will only back up the unit that failed first.

### All units must have the same number of channels and must be the same device types.

# Specifications:

## Inputs

### Camera

#### There shall be 128 camera inputs.

#### Inputs shall use Ethernet.

## Audio

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

### One bidirectional audio line input

### The line audio input shall use RCA connectors

#### Signal conditioning

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

## The recorder shall have a RS-232 serial data ports to support the following functionality:

### Technical support

## The recorder shall have four USB ports for:

### USB memory key archiving devices

### USB HDD archiving devices

## eSATA

###  The recorder shall have an eSATA port for eSATA HDD archiving devices

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

### Alarm inputs

### Relay outputs

28 05 27 Archival Systems for Electronic Safety and Security

# Archiving

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

## The recorder shall support archiving of recorded images through eSATA to an external eSATA HDD.

## The recorder shall support archiving of recorded video and audio data through eSATA to an external eSATA HDD

## The recorder shall have an option to select the type of archiving device connected, when interfaced to the devices specified or approved equals.

## The recorder shall support selective archiving.

## 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.

28 05 27.13 Storage Media

# Recorder hard drives

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

## The recorder shall support both internal and external hard drive configurations.

## The recorder shall support RAID and non-RAID configurations. For RAID configurations, the recorder needs to use special dedicated “Enterprise” HDDs

## Internal storage configurations shall be up to multiples of 16 HHDs using 2 TB, 4 TB, 6 TB or 8TB storage capacity per HDD.

## The utilized hard drives shall support the latest SATA technology including SMART reporting.

## The utilized hard drives shall be especially developed for the Digital Video Archiving Industry.

28 05 29 Storage Management Software for Electronic Safety and Security

# Software

## The recorder shall be provided with a Graphical User Interface (GUI) software for remote playback and viewing that shall support the Windows XP and higher 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 be able to be operated with:

### Dedicated free of charge software.

### Dedicated free of charge mobile app.

### Integration software packages for Interlogix intrusion detection.

### Integration software packages for Lenel OnGuard access control.

### MasterMind monitoring station software.

### Other software integration platforms using the SDK.

28 05 45 Systems Integration and Interconnection Requirements

# OH-integration

## The recorder shall integrate the Osborne-Hoffman alarm receiver software module.

## The recorder will be able to receive SIA or XSIA events from Interlogix alarm panels.

### The recorder is able to receive events from a maximum of three alarm panels and a maximum of 32 alarm zones per panel.

### The recorder will display the events in the alarm center via the web page and will register the events in the log file.

### The following events can be received by the recorder:

#### Arming events (“C” events)

#### Disarming events (“O” events)

#### Alarm events (“A” as second character in the SIA/XSIA code)

#### Heartbeat alarms (OH & recorder)

### The following actions can be linked to each event

#### Buzzer

#### Trigger a relay output

#### Trigger recording for one or more cameras (alarm recording)

#### Call a preset, shadow tour, or preset tour

#### Send email

28 05 45.11 Mechanical

# Mechanical

## Dimensions shall be 442 (W) x 494 (D) x146 (H) mm, 19-inch (3U) EIA rack mounting.

## Weight shall be 16 kg maximum without hard drive.

28 05 45.13 Electrical

# Electrical

## Input voltage: 100 to 240 VAC, 50 to 60 Hz.

## Power: 140 W maximum without hard drive.

28 05 45.15 Information

# Environmental

## Operating temperature range 0 o +50°C (32~122℉), Relative humidity 10 to 90%.

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

# Compliance

## FCC

## CE

## UL

28 05 53 Identification for Electronic Safety and Security

# Identification

## The Network Video Recorder with Ethernet connectivity shall be as manufactured by Interlogix or an approved equal.

Contacting Support

North America:

855-286-8889

techsupport@interlogix.com

Latin America:

561-998-6114

latam@interlogix.com

Web site:

[www.interlogix.com/customer-support](http://www.interlogix.com/customer-support)

EMEA:

See specific country listings at:

<https://firesecurityproducts.com/contact>