truVision

TVE-DEC12 User Manual

Manufacturer PLACED ON THE MARKET BY:
Carrier Fire & Security Americas Corporation Inc.
13995 Pasteur Blvd, Palm Beach Gardens, FL 33418, USA

AUTHORIZED EU REPRENSENTATIVE:
Carrier Fire & Security B.V.
Kelvinstraat 7, 6003 DH Weert, Netherlands

FCC compliance **Class A**: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC conditions This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This Device must accept any interference received, including interference that may cause undesired operation.

European Union directives **12004/108/EC (EMC directive):** Hereby, UTC Fire & Security Americas Corporation, Inc., declares that this device is in compliance or with the essential requirements and other relevant provisions of Directive 2004/108/EC

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Product documentation	Please consult the following web link to retrieve the electronic version of the product documentation. The manuals are available in several languages.

Content

Important information

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THE EQUIPMENT SHOULD ONLY BE OPERATED WITH AN APPROVED POWER ADAPTER WITH INSULATED LIVE PINS.

DO NOT CONNECT TO A RECEPTACLE CONTROLLED BY A SWITCH.

THIS UNIT INCLUDES AN ALARM VERIFICATION FEATURE THAT WILL RESULT IN A DELAY OF THE SYSTEM ALARM SIGNAL FROM THE INDICATED CIRCUITS. THE TOTAL DELAY (CONTROL UNIT PLUS SMOKE DETECTORS) SHALL NOT EXCEED 60 SECONDS. NO OTHER SMOKE DETECTOR SHALL BE CONNECTED TO THESE CIRCUITS UNLESS APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

WARNING! The equipment should only be operated with an approved power adapter with insulated live pins.

Caution: Risk of explosion if battery is replaced by an incorrect type. Dispose of batteries according to the instructions. Contact your supplier for replacement batteries.

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Intended Use

Use this product only for the purpose it was designed for; refer to the data sheet and user documentation. For the latest product information, contact your local supplier or visit us online at firesecurityproducts.com.

The system should be checked by a qualified technician at least every 3 years and the backup battery replaced as required.

Advisory messages

Advisory messages alert you to conditions or practices that can cause unwanted results. The advisory messages used in this document are shown and described below.

WARNING: Warning messages advise you of hazards that could result in injury or loss of life. They tell you which actions to take or to avoid in order to prevent the injury or loss of life.

Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.

Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

Introduction

The TruVision TVE-DEC12 is a H.264/H.265 IP video decoder that decodes IP video streams and shows them on the connected monitors.

Based on a powerful DSP and a stable embedded system design, the TVE-DEC12 decoder provides a high-resolution decoding function for live view from TruVision IP cameras, digital video recorders, network video recorders and encoders.

Package contents

The TruVision TVE-DEC12 IP video decoder is shipped with the following items:

- TVE-DEC12 decoder
- Power adaptor
- Power cable
- Quick start guide
- User manual (available from our web sites)

Key features

The following key features are supported by the TVE decoder:

- Supports H.264 and H.265 compression
- Powerful decoding capability:
    - 2-channel video stream at 12MPX resolution, or
    - 4-channel video stream at 8MPX resolution, or
    - 10-channel video stream at 3MPX resolution, or
    - 16-channel video stream at 1080P resolution
- Can simultaneously decode up to a maximum of 16 video streams
- Multiple video display outputs: You can decode different cameras on HDMI, VGA, and BNC outputs
- Compatible with Interlogix TruVision IP cameras, TruVision recorders and TruVision encoders
- Supports ONVIF and RTSP streams
- Can be used as video wall with a HDMI, VGA, and BNC monitors
- Integrated in TruVision Navigator (version 8.1 SP2)

First-time use

The decoder does not have an OSD display. All configuration and control is done via the webpage.

Default network settings

The default network settings are:

- IP address - 192.168.1.70
- Subnet mask - 255.255.255.0
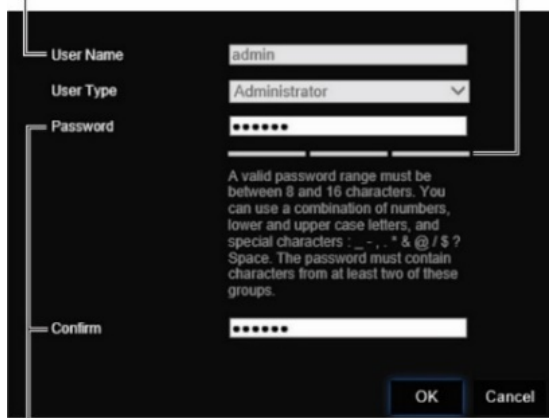- Gateway address - 192.168.1.1
- HTTP port: 80

When you first start up the unit, the Activation window appears. You must define a high security admin password before you can access the unit. There is no default password provided.

Tips on creating a strong password:

- A valid password range must be between 8 and 16 characters. You can use a combination of numbers, lower- and upper-case letters, and special characters: _ - , * & @ / $? Space. The password must contain characters from at least two of these groups.
- The password is case-sensitive so use a mixture of upper- and lower-case letters.
- Do not use personal information or common words as a password

User Name: It is always "admin". It cannot be changed.

The bar showing password strength

Enter the new admin password and confirm it.

Accessing the web browser

The on-screen display menus are available in English and 10 other languages.

To access the web browser: (Internet Explorer only)

1. Open the web browser and select your language.
2. Enter the IP address of the decoder (for example, http://192.168.1.70). Press the **Enter** key on the computer. The system displays the login window.

3. Enter the user name (default: admin) and password to log into the system. The decoder's main page appears, which by default is **Video Wall** (see Figure 3 on page 10).

Device manager network settings

Use TruVision Device Manager to find and configure the IP address and other parameters of the device. This tool automatically identifies TruVision devices that support "auto-discovery" anywhere on the network, even in different subnets.

To use the TruVision Device Manager:

1. Download the tool from our website.

2. Double-click the shortcut icon to open the tool. Click **Device Manager** to begin the discovery process. The list of TruVision devices located on your network appears.
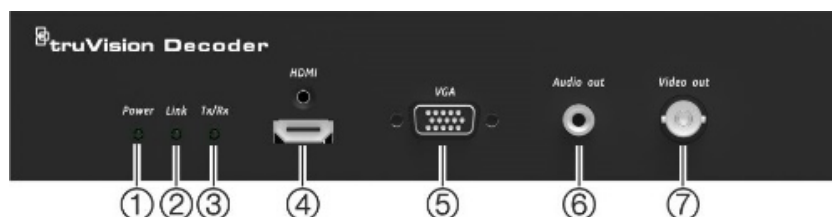
   Note: The TruVision Device Manager can only detect devices that are on the same LAN. The tool cannot detect devices placed on a VLAN.

3. Change the device settings as required. Click **X** *on the top right corner* when completed.
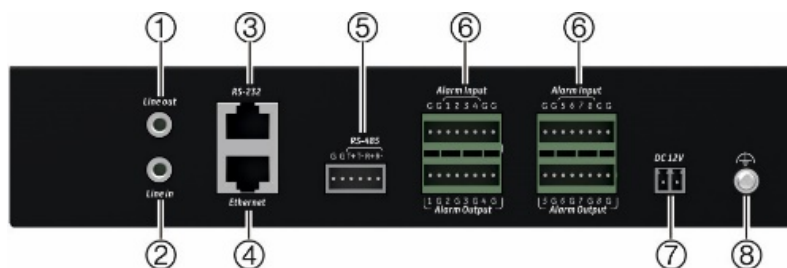
Product description

Hardware

Figure 1: Front panel

LED indicator	Description
1. Power	Power LED
2. Link	Network connection LED
3. Tx/Rx	Data transmitting/receiving status LED
4. HDMI	HDMI output
5. VGA	VGA output
6. Audio out	RCA Audio output
7. Video out	BNC decoding output

Figure 2: Back panel

Name	Description
1. Line out	Audio output, 3.5mm connector.
2. Line in	Audio input, 3.5 mm connector.
3. RS-232	Connect to an RS-232 device, such as a computer.
4. Ethernet	Connect the 10M/100M/1000Mbps self-adaptive UTP Ethernet port to a network.
5. RS-485	Connect to RS-485 serial port.
6. Alarm Input/Output	Not applicable.
7. DC 12V	Connect a 12 V power supply via a PSU.
8. GND	Connect to ground.

Video wall description

Figure 3: Video Wall webpage

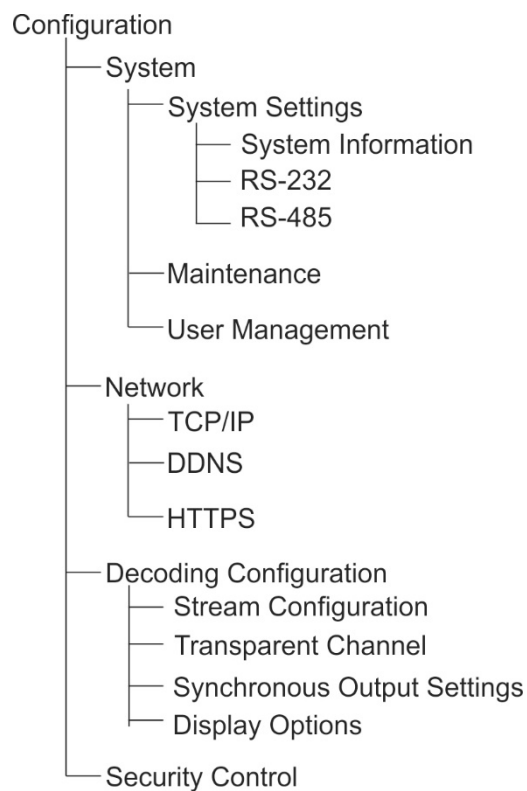|	Name	Description
1.	Video Wall menu	Set up how you want the video wall to appear. Lets you select which device is displayed on which monitor. Drag and drop devices from the device tree to a monitor. **Note**: Video images cannot be seen on the decoder webpage.
2.	Video Wall Configuration menu	Define the monitor resolution and layout (number of rows and columns) on the wall.
3.	Configuration menu	Configure the general settings of the decoder. See Figure 4 on page 11 for a description of its menu tree. For further information on configuring the decoder, see "System configuration" on page 12, "Network configuration" on page 16, "Decoding configuration" on page 20, and "Security control" on page 23.
4.	Device tree	List of devices connected to the decoder.
5.	Monitors	The decoder can be used with HDMI, VGA and BNC monitors simultaneously. Up to three monitors can be used.
6.	Scene list	Create a list of stored predefined layouts with their streams so that they can be quickly called up when needed.
7.	Multiview	Select the desired multiview.
8.	Shortcut toolbar	Save the selected scene.
		Delete all windows.
		Refresh the screen.

Name	Description
▣	The *Send to Back* button lets you switch the positions of overlapping video tiles. Using the mouse, you can position the streaming tiles to overlap. By clicking the 'Send to the back layer' button, the two tiles swap positions: the tile in the front moves to the background and the tile in the background, moves to the front.
	Note: The *Send to Back* function is not available for a scene.

Configuration menu tree

Figure 4 below shows the structure of the Configuration menu tree.

Figure 4: Configuration menu tree

```
Configuration
    ├── System
    │     ├── System Settings
    │     │      ├── System Information
    │     │      ├── RS-232
    │     │      └── RS-485
    │     ├── Maintenance
    │     └── User Management
    ├── Network
    │     ├── TCP/IP
    │     ├── DDNS
    │     └── HTTPS
    ├── Decoding Configuration
    │     ├── Stream Configuration
    │     ├── Transparent Channel
    │     ├── Synchronous Output Settings
    │     └── Display Options
    └── Security Control
```

System configuration

Log in and go to the Configuration menu to configure the general settings of the decoder. The System menu has three main menus:

- System settings
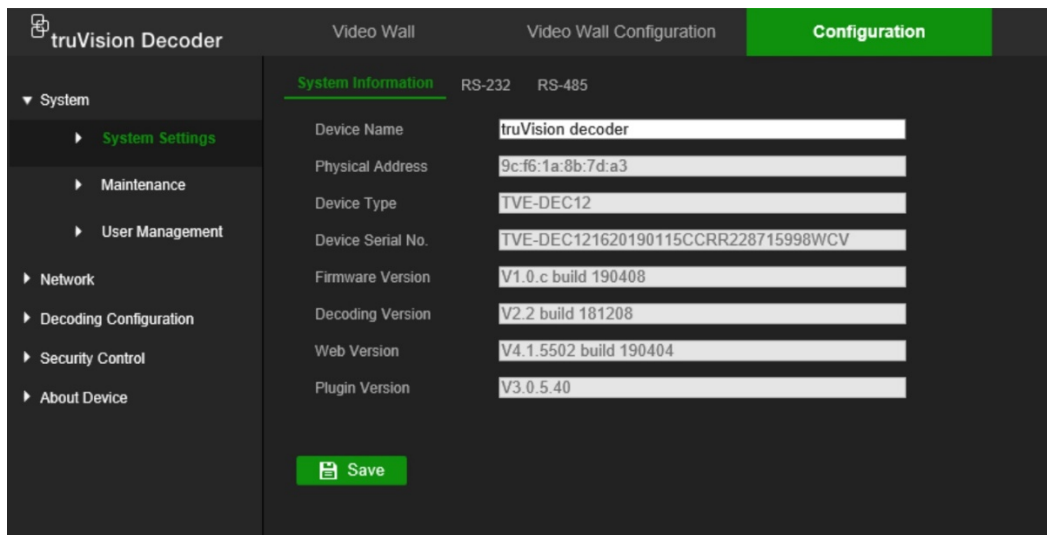- Maintenance
- User management

System settings

Use this menu to:

- Set and view the system Information, such as set the decoder name, and view the version of the firmware and decoder.
- Set the parameters of the RS-232 communication port.
- Set the parameters of the RS-485 communication port.

To set up the system settings of the decoder:

1. Go to **Configuration** > **System** > **System Settings.**

2. To set up the decoder name and view the decoder's system information, click the **System Information** tab. **Enter the** decoder name, if desired.


3. To set up the RS-232 parameters, click the **RS-232** tab. Select the desired RS-232 port, baud rate, data bit, stop bit, parity, flow control, and working mode parameters.

4. To set up the RS-485 parameters, click the **RS-485** tab. Select the desired RS-485 camera number, baud rate, data bit, stop bit, parity, and flow control parameters.

5. Click the **Save** to save the changes.

Maintenance

Use this menu to:

- **Reboot the decoder**: The administrator can reboot the decoder.

- **Restore/Default the decoder**: The administrator can reset the decoder to the factory default settings. Network information such as IP address, subnet mask, and gateway are not restored to factory default settings.

  Note: Only the administrator can restore factory default settings.

- **Import/Export configuration settings**: The administrator can also export and import configuration settings from the decoder. This is useful if you want to copy the configuration settings to another device, or if you want to make a backup of the settings.

- **Update the decoder firmware**: The administrator can update the decoder firmware via the decoder web browser. Non-admin users can also upgrade the firmware if they have upgrade permission. The decoder firmware can be updated using TruVision Navigator (version 8.1 SP2). For further information, refer to the TruVision Navigator user manual. The firmware upgrade file is labeled tvedec12.dav.

Figure 5: Maintenance menu
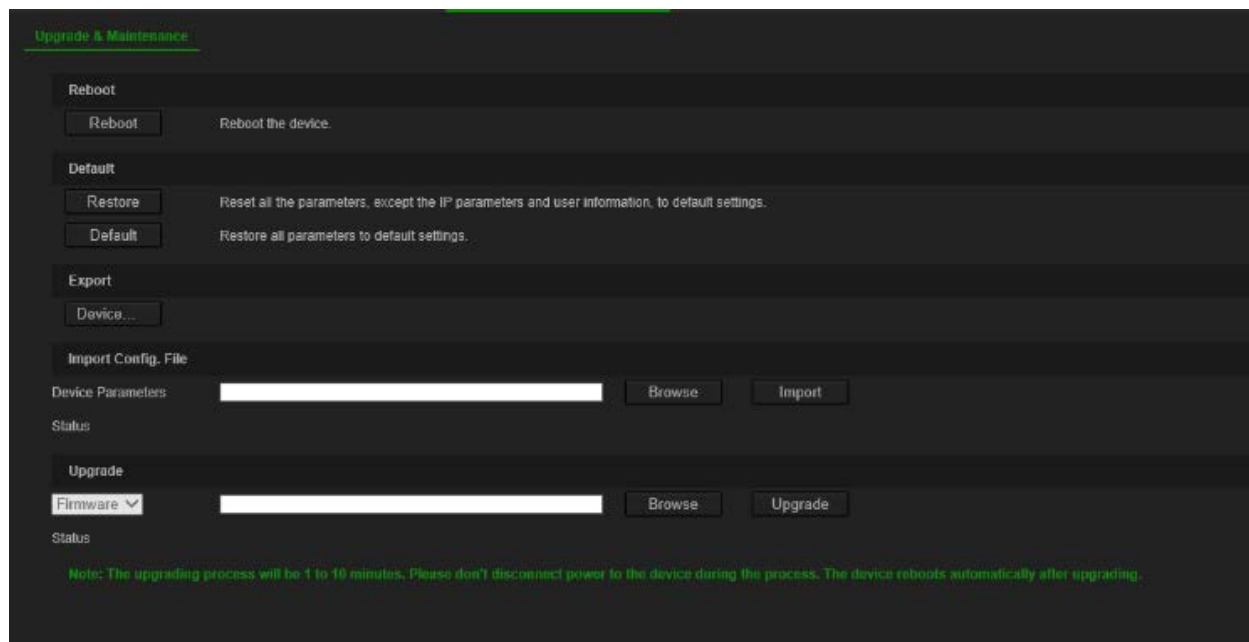
To reboot the decoder:

1. Go to **Configuration** > **System** > **Maintenance.**

2. Click the **Reboot** button.

3. In the pop-up window, enter your admin password and click **OK**.

   The system reboots.

To restore parameters to default factory settings:

1. Go to **Configuration** > **System** > **Maintenance**.

2. **To restore all parameters, except network settings, to default factory settings**: Click the **Restore** button. Enter the Admin password, click **OK**, and then click **Yes** to confirm that you want to restore all parameters except network settings to default.

   -or-

   To restore all parameters to default factory settings: Click the **Default** button. Enter the Admin password, click **OK**, and then click **Yes** to confirm that you want to restore all parameters to default.

   The changes appear immediately.

To import and export files to and from the decoder:

1. Go to **Configuration** > **System** > **Maintenance**

2. To export the decoder's configuration parameters to the PC, click the **Export** button.

   To import configuration parameters from the PC, enter the location of the file to select it and click **Import**.

To update the system firmware using the browser:

1. Download the latest firmware from our web site at:

   EMEA: https://firesecurityproducts.com

   Australian/New Zealand: https://firesecurityproducts.com.au/

2. Go to **Configuration** > **System** > **Maintenance**

3. Select the firmware file and click **Upgrade**. Click **Yes** to begin the upgrade process.

4. When the upgrade process is completed, the decoder will reboot automatically.
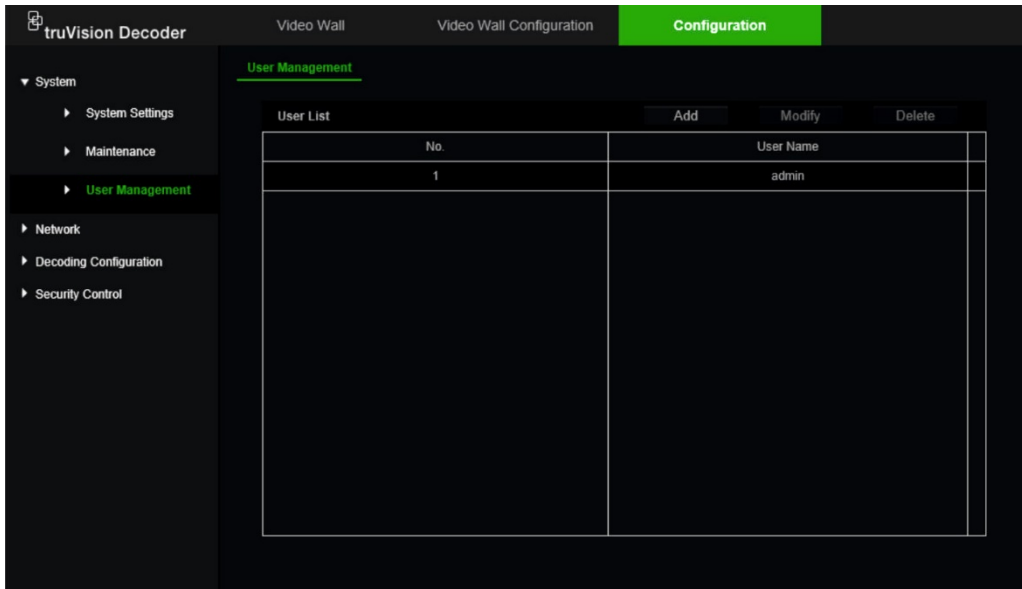
User management

This menu allows you to create extra users and assign user access privileges. The access privileges can be customized for each user's needs.

Only an administrator can create and allocate access privileges to users.

To create a new user:

1. Go to **Configuration** > **System** > **User Management.**

2. Click the **Add** button to add a new user.

3. Enter the user name and the Admin password.

4. Assign the user rights to this user for the operations that they can do remotely. Select one or more of the following rights:

   • **Select All:** Select all the options.

   • **Remote Parameter Settings**: Remotely configure parameters and import configuration.

   • **Remote Upgrade**: Remotely upgrade the decoder firmware.

   • **Remote Reboot**: Remotely reboot the recorder.

   When no options are selected, the user cannot change any configuration setting, but can drag/drop streams from the tree to the monitors in the Video Wall screen.

5. Click **OK**.

To modify a user:

1. Go to **Configuration** > **System** > **User Management.**

2. Click the **Modify** button.

3. Make the desired changes, such as change the password user rights.

4. Click **OK**.

To delete a user:

1. Go to **Configuration** > **System** > **User Management.**

2. Select the desired user and click the **Delete** button.

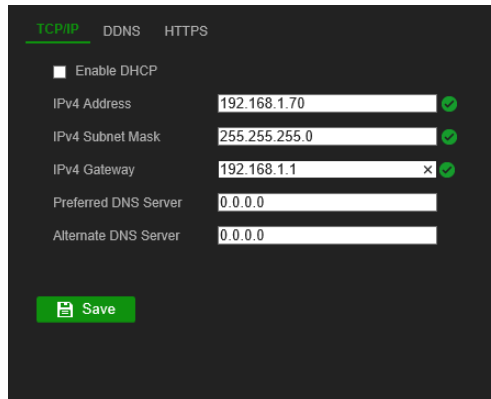3. Confirm your choice and click **OK**.

Network configuration

The Network menu allows you to manage all network related aspects of the decoder including general network settings, DDNS, NTP synchronization, email setup, UPnP settings, FTP server setup, and IP address filter.

TCP/IP settings

To configure the general network settings:

1. Go to **Configuration** > **Network** > **TCP/IP**.

2. Enter the required settings:

   Enable DHCP: DHCP (Dynamic Host Configuration Protocol) is a protocol for assigning an IP address dynamically to a device each time it connects to a network.

   Select this check box if you have a DHCP server running and want your decoder to automatically obtain an IP address and other network settings from that server. The DHCP server is typically available in your router.

   Default value is Disable.

   IPv4 Address: Enter the address of the decoder. This is the LAN IP address of the decoder. Default value is 192.168.1.70

   IPv4 Subnet Mask: Enter the subnet mask for your network so the decoder will be recognized within the network. Default value is 255.255.255.0.

   IPv4 Gateway: Enter the IP address of your network gateway so the decoder will be recognized within the network. This is typically the IP address of your router. Consult your router user manual or contact your ISP to get the required information on your gateway. Default value is 192.168.1.1.

   Preferred DNS server: Enter the preferred domain name server to use with the decoder. It must match the DNS server information of your router. Check your router's browser interface or contact your ISP for the information.

   Alternate DNS server: Enter the alternate domain name server to use with the decoder.

3. Click **Save** to save the settings.

DDNS settings

DDNS servers allow you to connect to your decoder using a dynamic address. This dynamic address needs to be registered with a DNS service. The DDNS setup menu allows you to enable or disable DDNS and to configure it using ezDDNS, No-IP or DynDNS.

Note: Some service providers block the default RTSP streaming port 554 used for video streaming. So if you are not receiving video images over the internet, you may need to change it to another value.
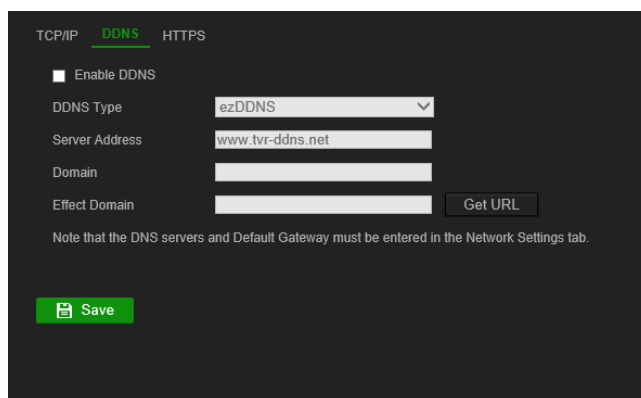
There are three ways to set up a DDNS account:

- **ezDDNS**: A free-of-charge service included with your decoder and fully managed within the decoder interface. It is exclusive to TruVision products.

- **DynDNS**: A third-party service where users need to apply for a DynDNS account on the Dyn.com website.

- **No-IP**: A third-party service where users need to apply for a no-IP account on the no-ip.com website.

Caution: If you use the services of DynDNS or No-IP, your account user name and password for these services will be sent to them in clear text format when you set up your connection in the decoder.

To configure the DDNS settings:

1. Go to **Configuration** > **Network** > **DDNS**.

2. Select the **Enable DDNS** checkbox to enable this feature.

3. Select one of the DDNS types listed:

   ezDDNS: Click the Get URL button. The URL address to access the unit is displayed. If no host name is specified, the DDNS will allocate one automatically.

   The maximum length for the host name field is 64 characters. This limit does not include tvn-ddns.net. An example of a host name could be max64chars.tvn-ddns.net.

   - or –

DynDNS: Select DynDNS and enter the server address for DynDNS. In the decoder domain name field, enter the domain name obtained from the DynDNS web site. Then enter your user name and password registered in the DynDNS network.

For example:

Server address: members.dyndns.org

Domain: mycompanydvr.dyndns.org

User name: myname

Password: mypassword

- or -

NO-IP: Enter server address (for example, dynupdate.no-ip.com). In the host name field, enter the host obtained from the NO-IP web site. Then enter the user name and password that are registered with the No-IP network.

4. Ask your ISP service provider for your DNS server address or look it up in the browser interface settings of your router.

   Go to **Network** and enter the preferred and alternate DNS server addresses as well as the default gateway address.

5. Click **Save** to save the settings.

HTTPS settings

Using HTTPS (Hypertext Transfer Protocol Secure) is a secure protocol that provides authenticated and encrypted communication. It ensures that there is a secure private channel between the decoder and the PC.

You can create self-signed server certificates as well as request certified server certificates to ensure your network security. For larger companies, a corporate certificate might be available with the IT department.

Note: You must run Microsoft Internet Explorer as administrator.

To create a server certificate:

1. Go to **Configuration** > **Network** > **HTTPS**.
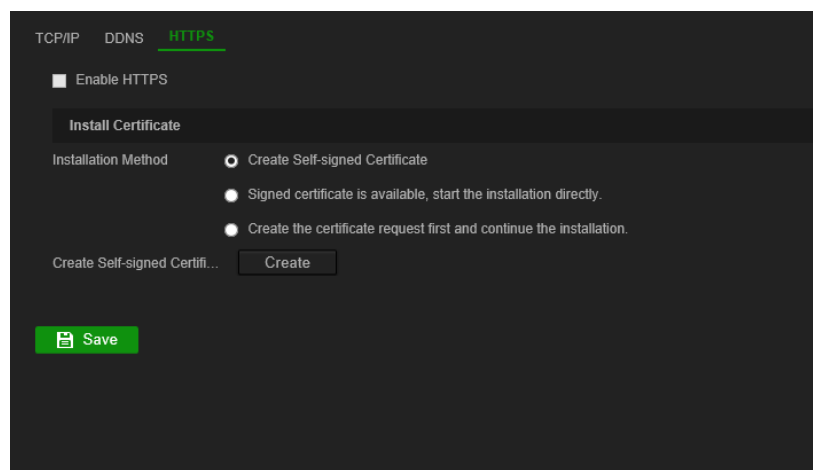
2. Check **Enable HTTPS**.

   Note: This only works if you have entered the address in the browser as HTTPS (as in https://192.168.1.70)

3. Select the type of certificate you want:

   - **Create a self-signed certificate:**

     a) Select **Create Self-Signed certificate**.

     b) Click **Create**. The Create pop-up window appears.

     c) Enter the country, hostname/IP address, and days of validity (there are more parameters, but you do not need to add anything to them) and click **OK**.

     d) A screen appears showing certificate information. Click **Save**.

   - or –

   - **Create a certificate request and continue with the certificate installation:**

     a) Select **Create the certificate** request first and continue the installation.

     b) Click **Create** to create the certificate request and then click **Download**. Click **Save** to save the certificate in the desired folder and then submit it to a trusted certificate authority for signature.

     c) When you receive the signed certificate, upload it to the decoder. Click **Browse** to locate the certificate file and then click **Install**.

   - or –

   - **If you already have a certified certificate:**

     a) Select **Signed certificate is available**, start the installation directly.

     b) Click **Browse** to locate the certificate file and then click **Install**.

4. Click **Save** to save the settings.

Decoding configuration

This menu contains settings that influence the decoding behavior, such as automatically switching between main and substream, configuring transparent channels, synchronizing video outputs, and defining what appears on the monitors when decoding stops.

Stream configuration

The stream configuration setting allows the decoder to switch automatically between main and substream when the resource limit of the decoder is reached.

To set up the stream configuration:

1. Go to **Configuration** > **Decoding Configuration** > **Stream Configuration**
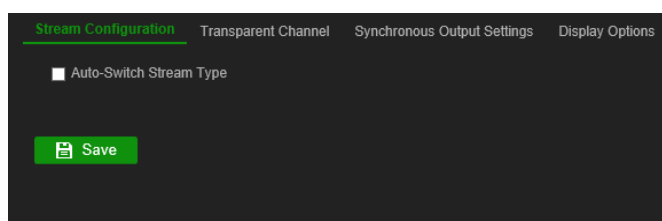
2. Select the checkbox **Auto-Switch Stream Type** to enable auto switching between main stream and substream

3. Click **Save** to save the settings.

Transparent channel

The transparent channel needs to be configured to allow the data to be transmitted between the encoder and decoder.

To configure the transparent channel

1. Go to **Configuration** > **Decoding Configuration** > **Transparent Channel**.

2. Select the desired transparent channel from the list to configure.

3. Click **Modify** to modify the parameters of the selected transparent channel.

4. Under **Local Serial Port** and **Remote Serial Port** select either RS-485 or RS-232.

   **Local Serial Port**: The serial port used as the transparent channel by the decoder.

   Remote Serial Port: The serial port used as the transparent channel by the encoding device.

5. Click **Save** to save the settings.

Synchronous Output Settings

Use this menu to synchronize all video outputs of the decoder.

To configure Synchronous Output Settings

1. Go to **Configuration** > **Decoding Configuration** > **Synchronous Output Settings**.
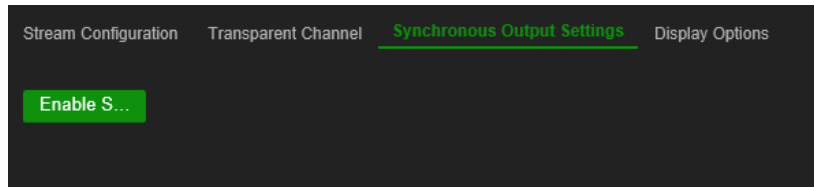
2. Click **Enable Sync Out** to enable the synchronization of all outputs. A message box pops up saying that all outputs will be synchronized after the screen goes black momentarily.

3. Click **OK** to confirm the settings.

Display options

Use the Display Options menu to define what appears on the monitors when decoding stops.

To set up the display options:

1. Go to **Configuration** > **Decoding Configuration** > **Display Options**.
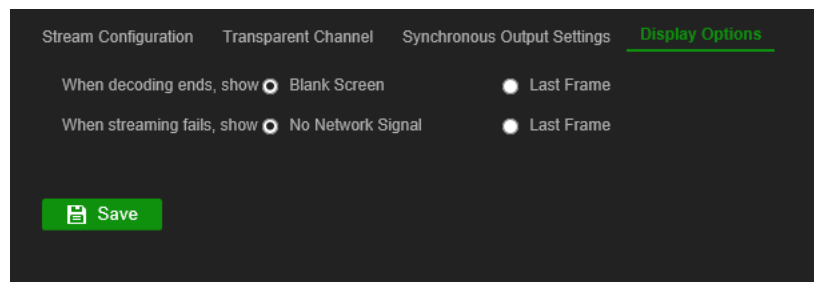
2. Select **Blank Screen** or **Last Frame** to be displayed when decoding ends.

   Blank Screen: If selected, the screen becomes blank when the decoding ends.

   Last Frame: If selected, the screen will show the last frame when the decoding ends.

3. Select **No Network Signal** or **Last Frame** to be displayed when streaming fails.

   No Network Signal: If selected and streaming fails, the screen will show a message stating that there is no network signal.

   Last Frame: If selected, the screen will show the last frame when streaming fails.

4. Click **Save** to save the settings.

Security control

Use the Security Control menu to enable/disable SSH, HTTPS, network discovery and the webpage time out.

To set up the Security Control:

1. Go to **Configuration** > **Decoding Configuration** > **Security Control**.
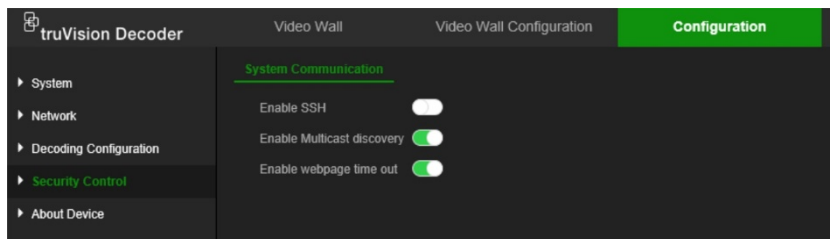
2. Make the necessary changes to the settings:

    SSH: It can be enabled and disabled.

    Multicast discovery: Enable/disable multicast discovery. This feature allows you to enable/disable the discovery of the decoder on the LAN network by TruVision Device Manager.

    Webpage time out: Enable/disable webpage time out. Enabling this feature will automatically log out the user after five minutes of inactivity.

Configuring the video wall

The decoder can be used with HDMI, VGA and BNC monitors simultaneously, allowing you to create a video wall. A video wall allows camera images (video tiles) to be displayed on more than one monitor.

See Figure 3 on page 10 for a description of the video wall.
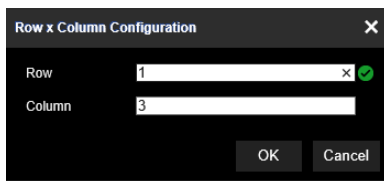
Video wall layout

You need to define the layout of the video wall depending on the physical setup of the three monitors.

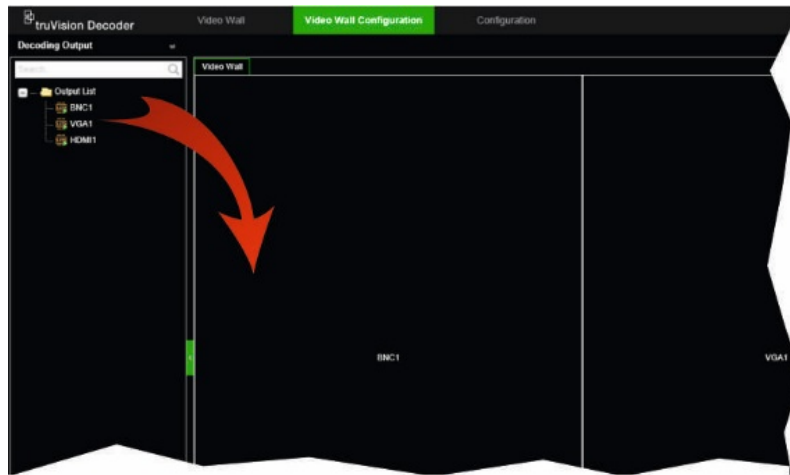**To setup the video wall layout:**

1. Go to **Video Wall Configuration**.
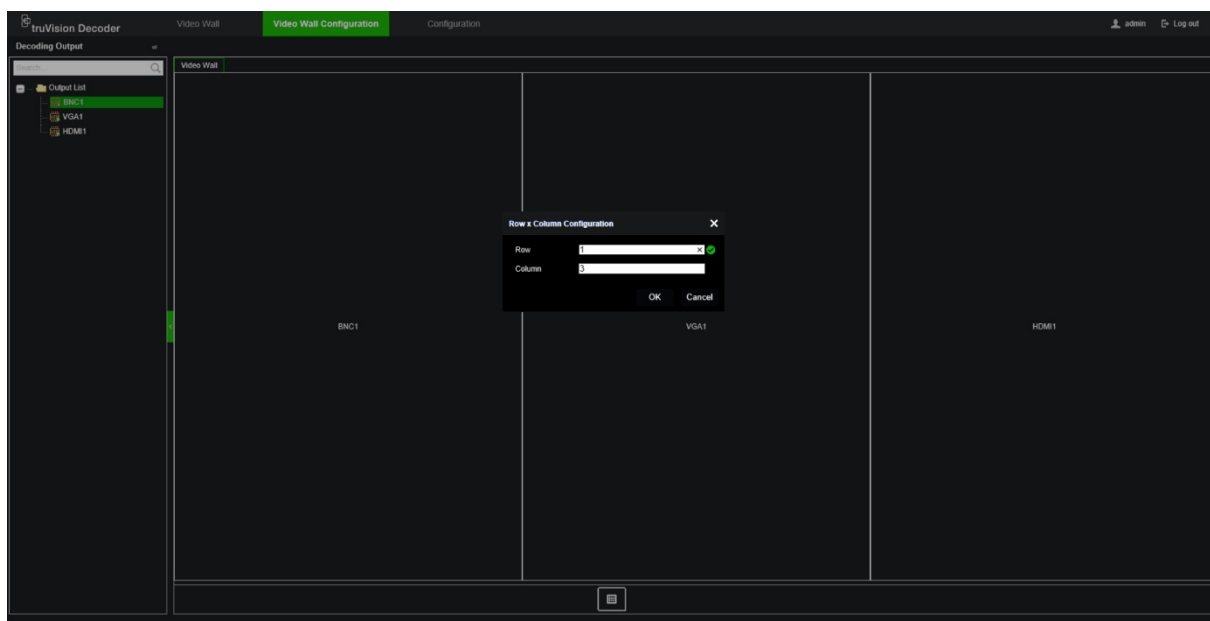
2. Click the layout icon ▣ . The configuration window appears.

   Enter the number of monitors installed horizontally (row) and vertically (column). Click **OK**.

3. Assign each monitor to a position on the video wall layout.

   From the tree on the left of the screen, drag and drop the selected monitor into the desired monitor position.
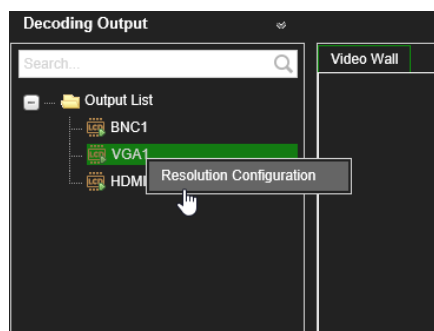
Monitor resolutions

You must define the resolution of every monitor.

Note: Output configuration mode is not used in this version of the decoder.

To setup the resolution for the VGA monitor:

1. Go to **Configuration** > **Video Wall Configuration**.
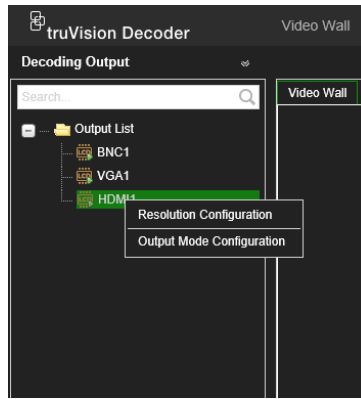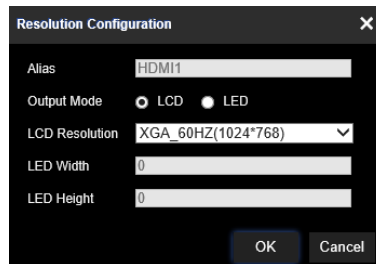2. Right-click the VGA monitor and select **Resolution Configuration**.

Select one of the following VGA resolutions:

1024 x 768 @ 60Hz (XGA)	1920 x 1080@ 60Hz (1080P)
1280 x 1024 @ 60Hz (SXGA)	1920 x 1080@ 50Hz (1080P)
1280 x 720 @ 50Hz (720P)	1690 x 1050 @ 60Hz (WSXGA)

To setup the resolution for the HDMI monitor:

1. Go to **Configuration** > **Video Wall Configuration**.
2. Right-click the HDMI monitor and select **Resolution Configuration**.

Select one the following HDMI resolutions:

1024 x 768 @ 60Hz (XGA)	1920 x 1080 @ 50Hz (1080P)
1280 x 1024 @ 60Hz (SXGA)	1600 x 1200 @ 60 Hz (UXGA)
1280 x 720 @ 50Hz (720P)	1690 x 1050 @ 60Hz (WSXGA)
1280 x 720 @ 60Hz (720P)	3840 x 2160 @ 30Hz (4K)
1920 x 1080 @ 60Hz (1080P)	

If the HDMI monitor is a LED monitor, select LED and the resolution, and define the width and height.

To setup the resolution for the BNC monitor:

1. Go to **Configuration** > **Video Wall Configuration**.

2. Right-click the BNC monitor and select **Resolution Configuration**.

Add, modify or delete video streams

The decoder does not have a discovery tool for finding cameras, encoders, or recorders on the network. The channel information needs to be entered manually.

Note: The decoder can simultaneously decode up to a maximum 16 video streams.

To add a stream to the decoder:

1. Go to **Video Wall**. (See Figure 3 on page 10 for an example of this window.)
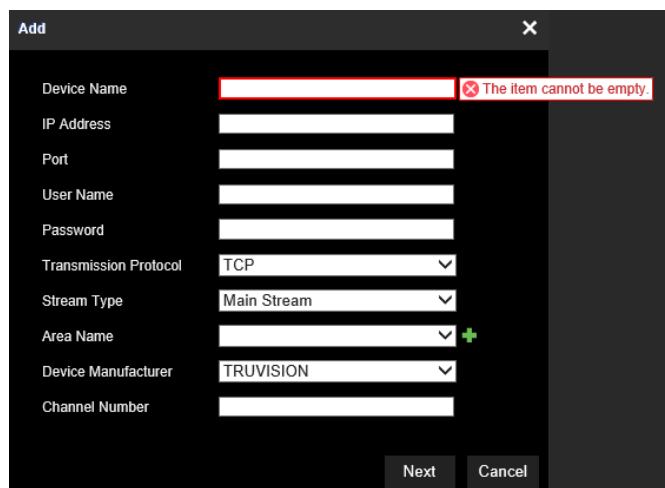

2. Click **+ IP** to add a TruVision IP camera, an ONVIF camera, an encoder channel, or a recorder channel.

3. Click **+ RTSP** to add a RTSP stream of a device.

To add a TruVision IP camera, ONVIF camera, or encoder/recorder channel:

1. Click in the Video Wall window. The *+IP Add* window appears:

2. Enter the information for the device:

   • **Device Name**: Enter a meaningful name for the stream. The text box cannot be left empty.

   • **IP Address**: Enter the IP address for the device.

   • **Port**: Enter the command port the device (default: 8000); for ONVIF devices, enter port 80

   • **User Name**: Enter the user name to access the device

   • **Password**: Enter the password to access the device

   • **Transmission Protocol**: Select the appropriate transmission protocol (TCP or UDP)

   • **Stream Type**: Select the desired stream type (main stream, substream, or third stream (if available)).

   • **Area Name**: Every device needs to be assigned to an area. An area can be the logical group to which this device belongs (For example: a site name, a floor number,…). To create an Area, click the ✚ button, enter the area name, and then click **Save**.

   • **Device Manufacturer**: Select TruVision or ONVIF.

   • **Channel Number**: Enter the highest channel number of the device.
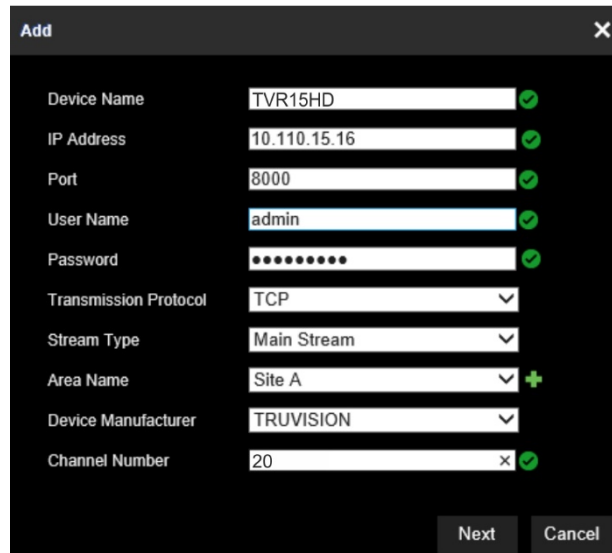
     For a normal camera, the channel number will be 1.

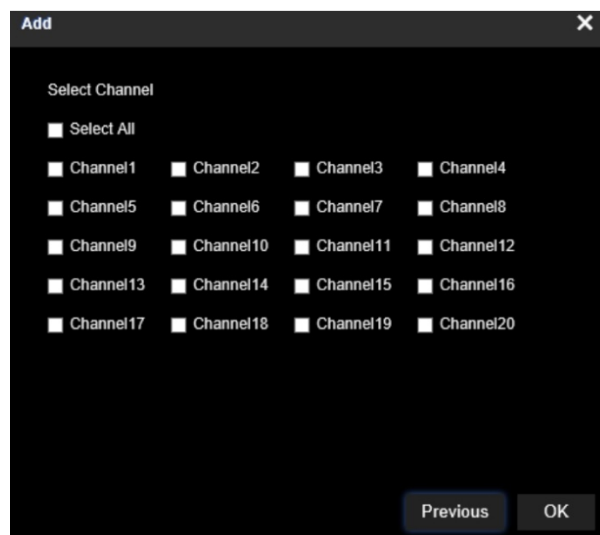   For an encoder or recorder; enter the highest channel number of the device.

     When using a hybrid recorder with both analog and IP cameras: When adding a hybrid recorder, such as TVR 15HD, TVR 45HD or TVR 46, that has both analog and IP cameras connected, the number of channels entered in this field is not the highest channel number of the recorder. You must enter the sum

of the total number of analog cameras that could be connected to the recorder and the actual number of IP cameras connected.

For example, this is the window for adding a 16-channel TVR 15HD recorder with 12 analog cameras and 4 IP cameras to the decoder. The channel number to enter is 20 (16 is the maximum number of analog cameras that could be connected plus 4 IP cameras actually connected):

3. Click **Next** to continue.

4. The available channels window of the device appears. Select the channel numbers that you want to add to the decoder and click **OK**.

The selected channels will then be added to the decoder and show up on the tree.
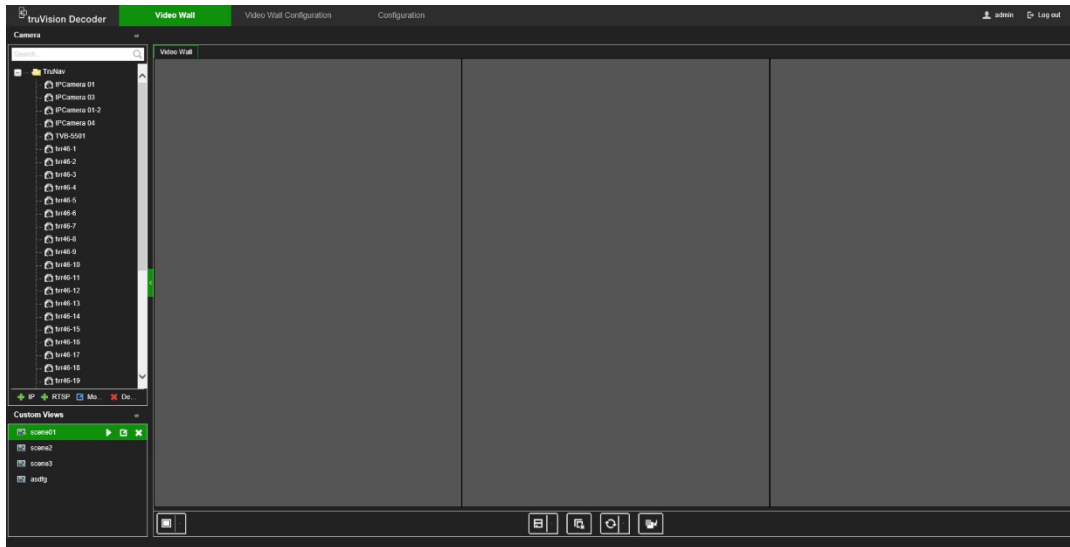
To modify a TruVision IP camera, ONVIF camera, or encoder/recorder channel:

1. Click ⬛ Mo... in the Video Wall webpage. The *+IP Modify* window appears. Change the desired information and click **OK**.

To delete a TruVision IP camera, ONVIF camera, or encoder/recorder channel:

1. Click ❌ De... in the Video Wall webpage. The *+IP Delete* window appears. Confirm that you want to delete the stream and click **OK**.

To add a RTSP stream:

1. Click **+RTSP** in the Video Wall webpage.

2. Enter the information for the stream

   - **Device Name**: use a meaningful name for the stream

   - **URL**: enter the valid RTSP URL stream for the device, including the username and password

   - **Area Name**: select an area name from the drop-down list or create a new area name (see above)

   Check the documentation of the device for the correct RTSP URL.

Using the decoder

Once you have set up the devices/streams on the monitors (see "Configuring the video wall" on page 24), you can then adjust where and how the video tiles appear on screen.

Add device streams in the monitors

You can easily add device streams to the monitors.

To add device streams to the monitors:

1. Go to **Video Wall**.

2. Drag and drop a device from the tree on to the desired monitor. By default, the stream will be displayed in full screen mode.

    Note: You cannot add more than three streams in full screen mode to one monitor. If needed, resize the stream tile to be able to add more streams.
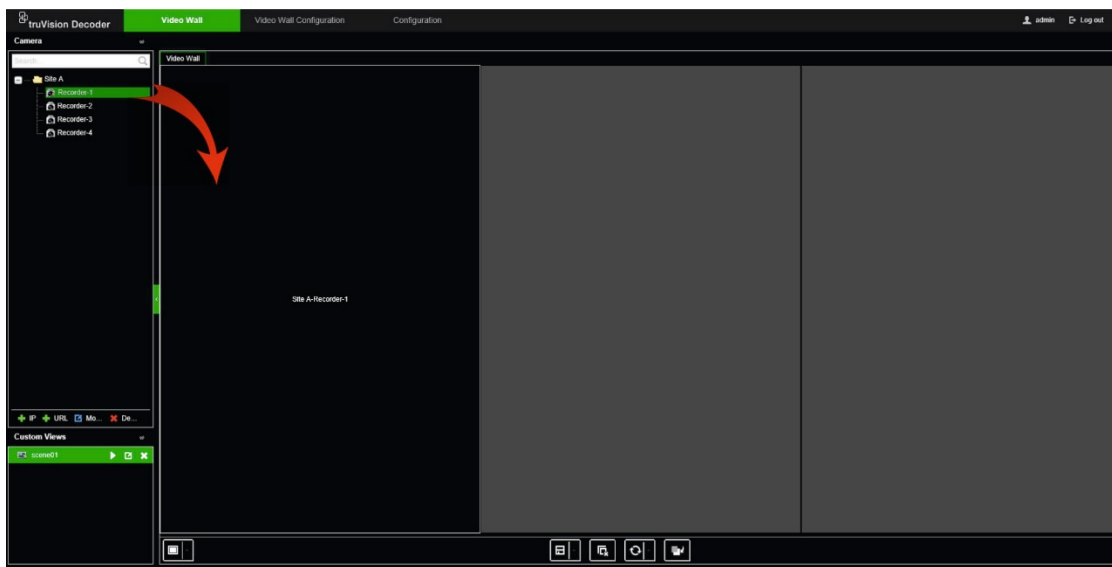

    Note: Video images cannot be seen on the decoder window. Only the name of the stream will appear.

3. Adjust the size of the stream tile as required. See the next section for instructions.

Adjust the size of a stream tile

When you click on a stream, the selected video tile is framed by a red rectangle. You can change the size of the rectangle by pressing the left mouse button on the rectangle and then dragging the mouse until the tile is the desired size (see Figure 6 on page 31).

Figure 6: Resizing a video tile
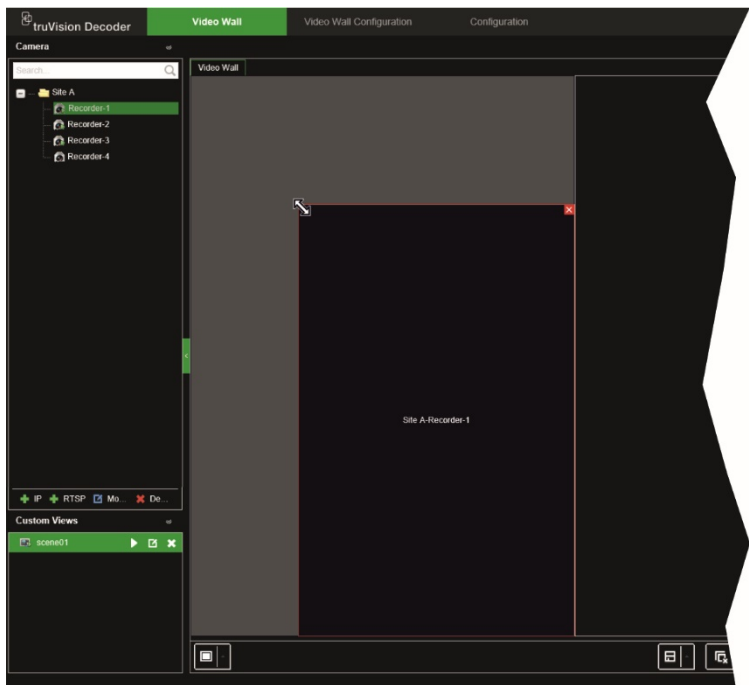
One of the features of the video wall is that you can show one stream spread over different monitors. To do this, extend the size of the rectangle over the two monitors (see Figure 7 below).

Figure 7: Extending a video tile over two monitors
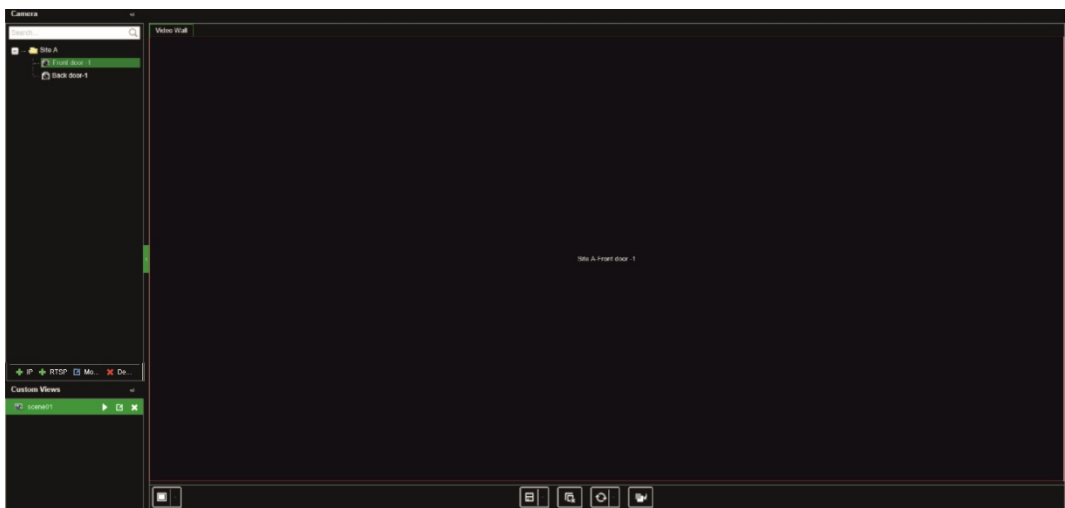
Select a predefined layout

There are some predefined layouts available that you can select for each monitor. The following layouts are available:

- Full screen
- 1x2
- 2x2
- 1+5

- 1+7
- 3x3
- 3x4
- 4x4

To select a predefined layout:

1. Go to **Video Wall**.

2. Add a stream to a monitor. By default, the stream will be displayed in full screen mode.

3. Select the stream so that you see the red rectangle.

4. Click the multiview button ▣ and select the desired layout.

   Note: The maximum number of streams that can be shown simultaneously on all monitors is 16.

5. Once the desired layout is selected, you can assign streams to each video tile in the layout.

Freely position a video tile

The decoder lets you freely position a video tile anywhere on another monitor screen. This can be useful if, for example, you have two monitors located far apart. This decoder feature lets you drag one or more video tiles from one monitor to the other monitor so that you can easily observe the selected roaming tile on the other monitor. See Figure 8 below for an example of the result.
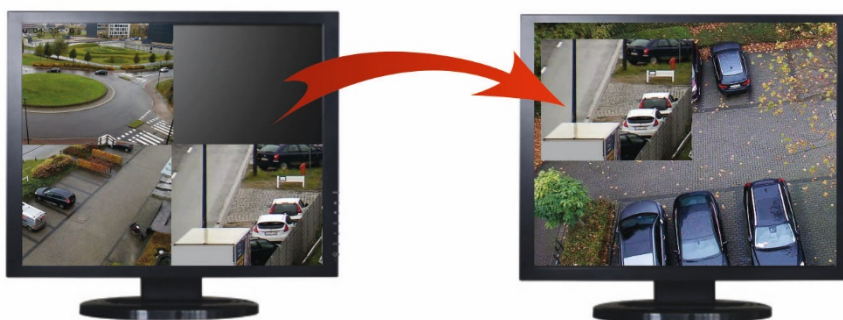
Note: The roaming tile feature is not available for BNC monitors. It can only be used with the HDMI and VGA monitors.

Figure 8: Example of using the roaming tile feature

Two monitors (HDMI and VGA) located far apart. One screen has multiview.

In the decoder, drag and drop a video tile of one monitor to the other monitor. The result will look like this on the monitors:

To set up a roaming tile:

1. Go to **Video Wall**.

2. If you have not already done so, configure the video wall layout and add the devices, such as camera or recorder streams. Define the multiview layout of the selected video monitor.

3. Drag the desired tile from one of the monitor windows and place it anywhere on a monitor window.
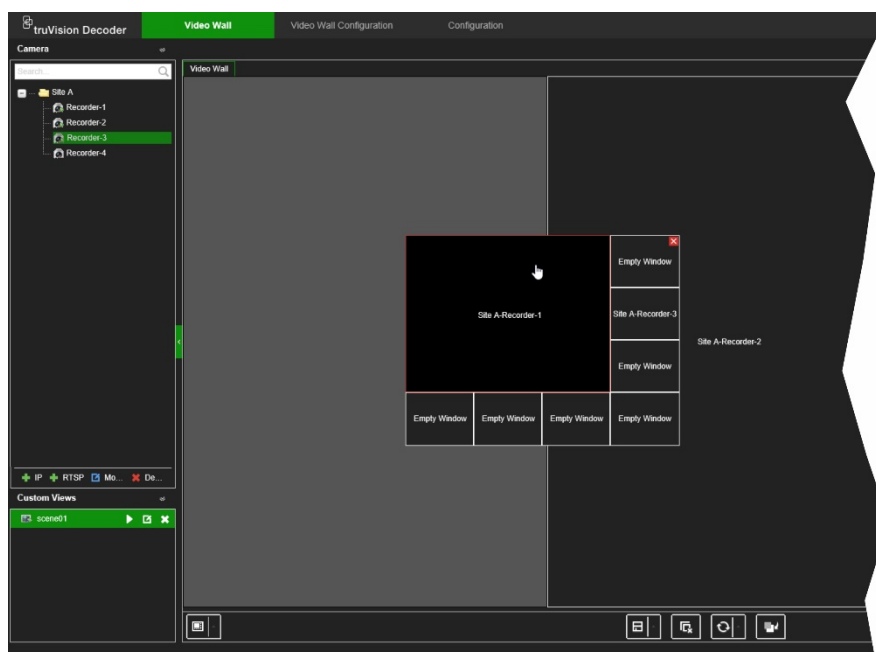
Note: By default the roaming tile is on top of the other tiles. To place it underneath, click the "Send to back layer" button.

4. Double-click the roaming tile to zoom in or out of the tile.

Set up scenes

A Scene is a custom view of the decoder. This feature allows you to store predefined layouts with streams so that it is easy to call them up when needed. The output type is not stored when storing a scene.

By default, Scene1 is always available and cannot be deleted. When first using the decoder, Scene 1 is empty. There are no streams yet assigned to it.

You can configure up to a maximum of eight scenes.

Example:

Streams have been assigned to the monitors (in this example a multiview layout on the left monitor and two full-screen recorder streams on the other monitors). See Figure 9 on page 34.

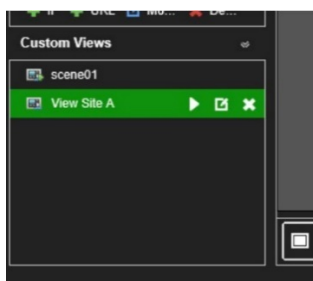**Figure 9: Example of scenes assigned to three monitors**
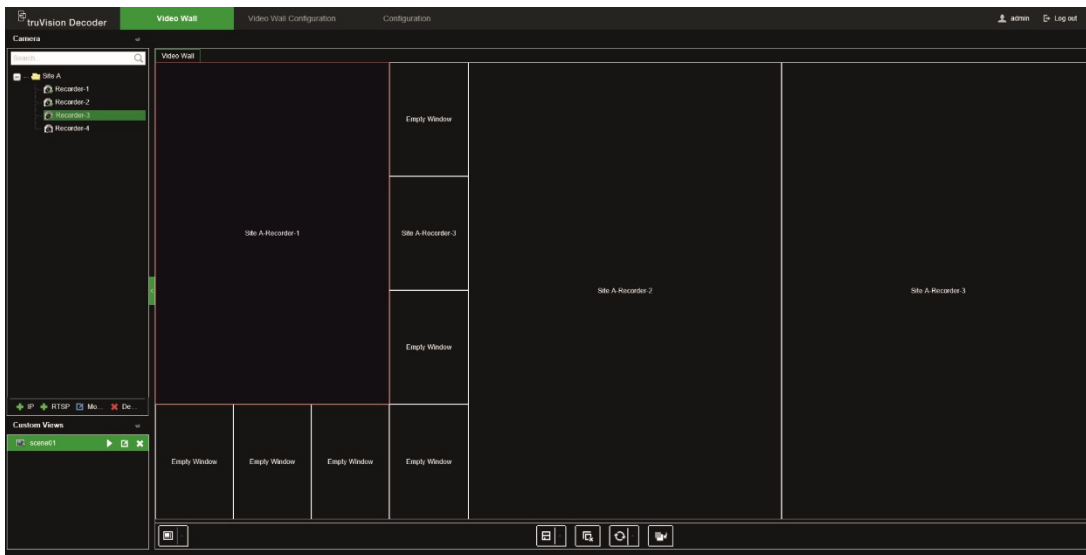
To save a scene:

1. Go to **Video Wall**.

2. To save this layout as a scene, click the **Save/Save As** button.

3. Enter the name of the scene to be saved and click **OK**.

   The layout with streams is then saved as a scene:

To play, rename, or delete a scene:

1. Go to **Video Wall**.

2. To play a predefined scene, click the ▶ play button for the desired scene.

3. To rename a predefined scene, click the ⬜ rename button for the desired scene and enter the new name.

4. To delete a predefined scene, click the ❌ delete button for the desired scene.

Manage the decoding of a video tile

Right-click a stream tile to show the available commands for that tile. The list of options displayed will depend on the device selected. The options available are:

- **Stop decoding**: Start/stop decoding.

- **Show the decoding status**: Show the decoding information for the selected stream.
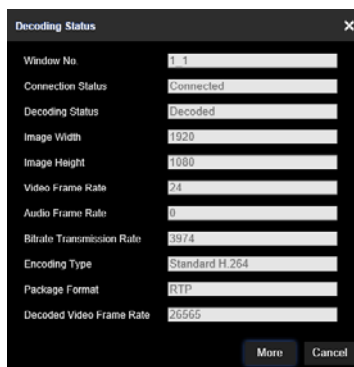
When you click **More**, a separate webpage will open and you can see the decoding status of all streams.

- Turn on/off audio for the stream

- **Decoding delay**: Use this function to prioritize the quality or the fluency of the stream. Select one of the options from the drop-down list:
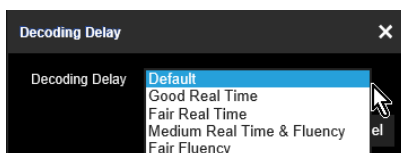
- **Enable Smart Information**: with this function you can show the VCA information for an IP camera in the stream.

Set up a sequence of streams in a tile

You can set up a sequence of streams on the monitor.

To set up a sequence:

1. Go to **Video Wall**.

2. Select a tile in the monitor (red rectangle will be seen around the tile).

3. Right-click the area name in the device tree and select **Start Auto-Switch**.

4. Setup the dwell time.

5. The sequence will start of all cameras of the area.

6. A small icon in the selected video tile on the webpage shows that the sequence is running on the monitor.

It is a known limitation that the actual status of the sequence will not be displayed in the webpage.

Appendix: Supported devices

Cameras

Legacy TruVision IP cameras (TVx-Mx2xx)

Series 1 PTZ and fixed cameras

Series 2

Series 3

Series 4

Series 4 Stainless Steel

Series 5 (fixed and PTZ)

Series 6

360° cameras (TVF)

Panoramic wedge

Residential cameras (RS-xxxx)

Thermal cameras

Encoders

TVE-400

TVE-800

TVE-1600

TVE-110

TVE-410

TVE-810

TVE-1610

Recorders

TVR 41 series

TVR 42 series

TVR 11 series

TVR 12 series

TVR 12HD series

TVR 15HD series

TVR 44HD series

TVR 45HD series

TVR 46 series

TVN 10 series

TVN 11 series

TVN 21 series

TVN 22 series

TVN 70 series

TVN 71 series