

TVE-DEC11 IP Video Decoder User Manual

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Certification



FCC compliance

Class B: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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Contact information

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Introduction

The TruVision TVE H.264 IP video decoder converts compressed IP video streams to analog video output for display. Based on a powerful DSP and a stable embedded system design, the TVE-DEC11 decoder provides a high resolution decoding function for both live view and playback streams from Interlogix IP cameras, digital video recorders and network video recorders.

This user manual provides basic information on setting up and using the TVE-DEC11 model.

The decoder is shipped with on-screen display (OSD) menus in English and Chinese.

Package contents

The TruVision TVE H.264 IP video decoder is shipped with the following items:

- TVE-DEC11 decoder
- Power adaptor
- Power cable
- Quick start guide
- CD (includes the user manual and TruVision Device Manager)

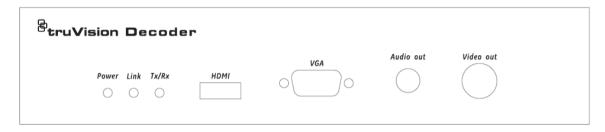
Key features

The following key features are supported by TVE decoders:

- Supports compression H.264 and MPEG4 codec
- Powerful decoding capability:
 - 2-channel video stream at 5MP resolution, or
 - 4-channel video stream at 1080P resolution, or
 - 8-channel video stream at 720P resolution, or
 - 16-channel video stream at 960H resolution
- Multiple video display outputs: You can decode different cameras on either HDMI and CVBS output, or on VGA and CVBS output
- Compatible with Interlogix TruVision IP cameras and TruVision recorders. Please check the Interlogix web site for the latest compatible device list.
- Supports ONVIF, PSIA and CGI communication
- Discoverable via the TruVision Discovery Tool

Product description

Figure 1: Front panel



	Name	Description	
1.	Power	The 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 output	

Figure 2: Rear panel



	Name	Description	
1.	Line out	Audio output, 3.5mm connector.	
2.	Line in	Audio input, 3.5mm connector.	
3.	Ethernet	Connect the 10M/100M/1000Mbps self-adaptive UTP Ethernet port to a network.	
4.	RS-232	Connect to an RS-232 device, such as a computer.	
5.	RS-485	Connect to RS-485 serial port.	
6.	Alarm Input	Connect up to four alarm relay inputs.	
	Alarm Output	Connect up to four alarm relay outputs.	
7.	DC 12V	Connect a 12 V power supply via a PSU.	
8.	GND	Connect to ground.	

Connections

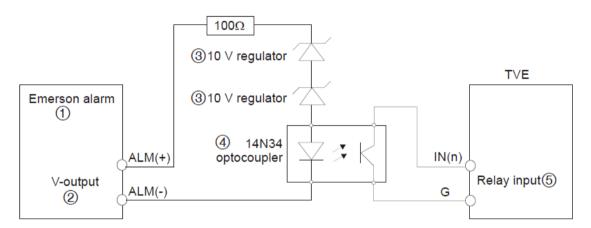
See Figure 2 on page 3 for information on connecting the power, camera, audio and network cables.

Alarm connections

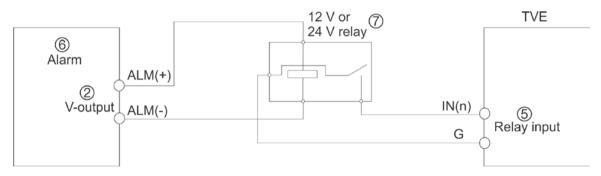
The TVE decoder supports the open/close relay input as the alarm input mode. When the alarm input signal not in open/close relay signal mode, please follow the connections shown below:

Figure 3: Alarm input connections

Alarm input connections for Emerson alarm:



Alarm input connections for normal alarm:

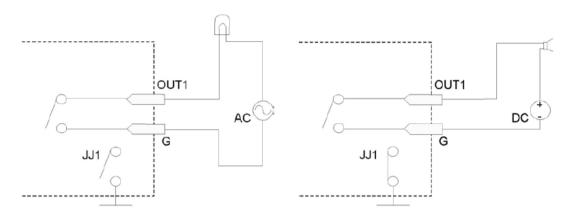


- 1. Emerson alarm
- 2. V output
- 3. 10 V regulator

- 4. 4N35 optocoupler
- 5. Relay output
- 6. Normal alarm
- 7. 12 V or 24 V relay

The alarm input can be selected to NO or NC. Different alarm output connection methods are applied to the AC or DC load. See Figure 3.

Figure 4: Alarm output connections



Note: Please note the different connections of JJ1 shown above. For a DC load, JJ1can be safely used both in NC and NO methods. It is recommended to use 12 V / 1 A. For an external AC input, JJ1 must be open. The motherboard has two jumpers, each corresponding to one alarm output. Both jumpers are factory set to be connected.

Network Settings

This chapter explains how to use TruVision Device Manager to find and configure the IP address and other parameters of the device.

Note: The default user name of TVE is admin, and password is 1234. The default IP address is 192.168.1.70

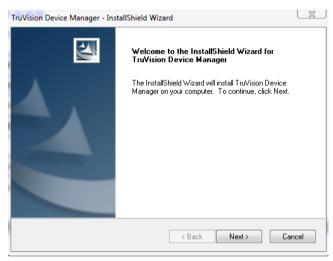
TruVision Device Manager

The TruVision Device Manager tool can be found on the CD shipped with that product.

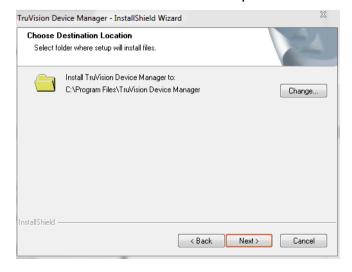
This tool automatically identifies TruVision devices that support "auto-discovery" in the same subnets. You can view and modify the IP address of any discovered device.

To install the TruVision Device Manager:

- 1. Insert the CD in the computer's CD/DVD drive.
- 2. Browse to the folder Tools and double-click the Setup file located in the folder.



- 3. Click Next.
- 4. Select the folder where the setup will install the files then click Next.



5. The program requires a utility called WinPcap to be installed on the computer. If it is already installed, go to step 6.

If the program is not installed, the WinPcap window appears. Follow the onscreen instructions.



6. The TruVision Device Manager Wizard appears. Click **Finish** to complete its installation.

Using the TruVision Device Manager

The setup will install the necessary files and place the following shortcut on your desktop.

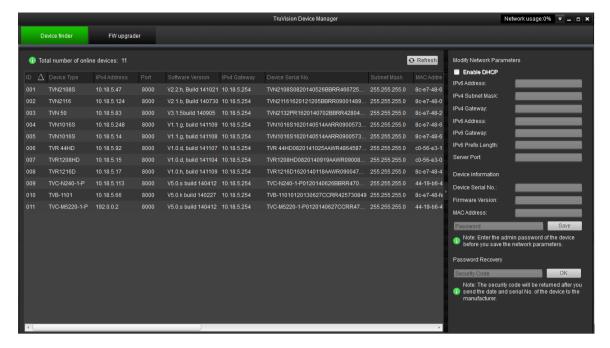
Figure 5: TruVision Device Manager shortcut icon



To use the TruVision Device Manager:

- 1. Double-click the shortcut icon to open the tool.
 - The Start window appears.
- 2. 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.



The tool identifies:

- Device type
- Device MAC address
- IP address
- Number of video channels supported by the device
- Connection port
- Software version
- Device serial number
- DSP/firmware version
- Device subnet mask
- Device start time
- 3. To change the IP address and/or the subnet mask of the device, click the line of the device address to be changed. The key device characteristics for that device are listed in the right pane.
- 4. Change/modify the IP address and or subnet mask as required. Input the device's logon password and press **Save**.
- Repeat this process for each device that needs to be modified. When all changes to all discovered devices is complete, press Exit to close the tool.

Using a web browser

You can configure the decoder over the network with a web browser.

The supported web browsers include:

- Internet Explorer 8 and above
- Firefox 27.0.1 and above
- Chrome 33.0.1750 and above

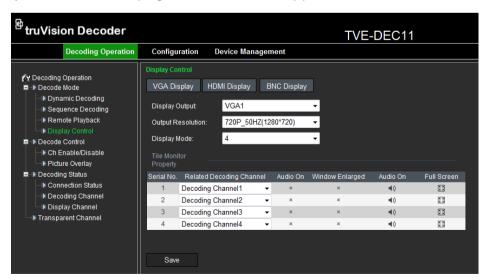
Before you start

- Before accessing the browser, you need to configure the network settings of decoder.
- Connect the decoder to the LAN, and connect a computer to the same LAN as the decoder.
- The decoder's factory default user name is admin and the password is 1234.
- The decoder's factory default IP address is 192.168.1.70.

Accessing the web browser

To access the web browser:

- Open the web browser and 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.
- 2. Enter the user name (default: admin) and password (default: 1234) to log into the system. The main page of the decoder appears.



3. If you need to install the TruVision Device Manager, You can find the tool on the CD shipped with the product.

Decoder operation

Use these menus to define how the decoder operates. There are four main submenus in the decoder menu tree. See Figure 7 below.

Figure 6: Menu tree of Decoding Operation

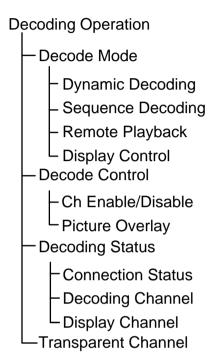


Table 1: Description of decoder menus

Function	Description	
Decode mode	Select decoding channels and sequence.	
	 Configure playback on recorded files. 	
	 Configure display channel, video format, output resolution and display mode. 	
Decode control	Enable/disable a decoding channel, scale video output image, and configure picture overlay.	
Decoding status	Display decoding channel status and video output status.	
Transparent channel	Set up transparent data transmission between the encoder and decoder.	

Dynamic decoding

Use this function to set up the parameters of each channel to be decoded.

To set up dynamic decoding:

 Click Decoding Operation > Decoding Mode > Dynamic Decoding. The Dynamic Decoding window appears.



2. Enter the channel parameters:

Decoding Camera No.: Select the decode channel.

Manufacturer: Select the manufacturer of the encoding device connected to be decoded. Encoding devices are supported from TRUVISION and third party manufacturers.

Remote Host Address: Enter the IP address of the encoding device to be decoded.

Remote Host Port: Enter the port of the encoding device to be decoded.

Remote Host Camera No.: Enter the channel number of the encoding device to be decoded.

User Name/Password: Enter the user name and password used to log into the encoding device.

Transmission protocol: Select the protocol for data transmission: either TCP, UDP or MCAST.

Stream Type: Set the stream type to be decoded and the default type is main stream. The substream is supported for decoding when the encoding device supports dual stream.

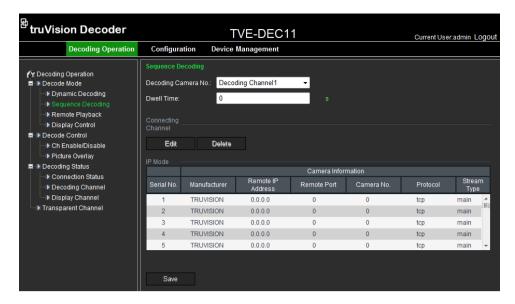
Click Start Decoding to start decoding.

Sequence mode

Set up the decoder so that the decoded images of multiple streams from a camera are automatically sequenced with a set dwell time between each image.

To set up the decoding sequence:

 Click Decoding Operation > Decode Mode > Sequence Decoding. The Sequence Decoding window appears.



- 2. Select the channel to be decoded from the **Decoding Camera No.** drop-down list.
- 3. Enter a dwell time in the **Dwell Time** box. This is the time in seconds that the image is displayed before moving on to the next one.
- 4. Click Edit to define the channel parameters. In the window enter the channel parameters:

Manufacturer: Select the Manufacturer of encoding device connected to be decoded. Encoding devices are supported from TRUVISION and third party manufacturers.

Remote IP Address: Enter the IP address of the encoding device.

Remote Port: Enter the port of the encoding device.

Camera No.: Enter the channel number of the encoding device to be decoded.

Protocol: Select the protocol for data transmission, TCP, UDP or MCAST.

Stream Type: Select the stream type to decode, either main stream or substream.

Note: Up to 64 cameras can be decoded in sequence.

5. Click **Save** to save the settings and return to the previous window.

Remote playback

Use this function to remotely access the encoder or recorder to stream and decode stored files for local output.

To set up remote playback:

 Click Decoding Operation > Decode Mode > Remote playback. The Remote Playback window appears.



- 2. Select the channel for playback from the **Decoding Camera No.** drop-down list.
- 3. Enter the channel parameters:

Remote Host Address: Enter the IP address of the encoding device.

Remote Host Port: Enter the port of the encoding device.

Remote Host Port: Enter the port of the encoding device.

Remote Host Camera No.: Enter the channel number of the encoding device to be decoded.

User Name/Password: Enter the user name and password used to log into the encoding device.

Playback by File: Enter the file name of the file to be played back from the DVR. This is found from a search of the stored files on the DVR.

Playback by Time: Enter the start and end time of the file to be played back.

- 4. Click Save to save the settings.
- 5. Click to start playback.

Control playback by using the buttons on the toolbar to start, stop, slow forward, fast forward and turn audio on/off respectively.

Slow forward is 1/2X, 1/4, 1/8X and minimum. Fast forward is 2X, 4X, 8X and 16X.

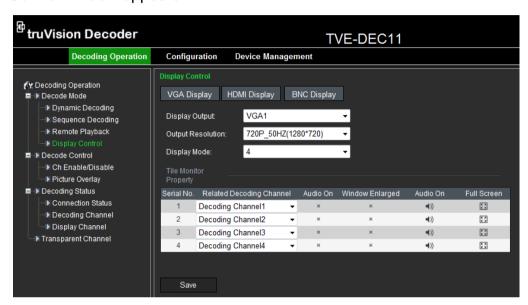
Display settings

Use this window to configure the display channel, video format, output resolution and display mode. There are three display mode formats; full screen, 4-screen, 9-screen and 16-screen.

The decoder automatically detects the video mode (PAL/NTSC).

To set up the display settings:

 Click Decoding Operation > Decode Mode > Display Control. The Display Control window appears.



Click one of the output display buttons to select the output required: VGA, HDMI or BNC.

Depending on the option selected the options displayed in the monitor property window may change.

Note: You can decoder different cameras to either HDMI and CVBS output, or to VGA and CVBS output.

- 3. Select the output resolution from the drop-down list.
- 4. Select the display mode from the drop-down list.
- Under the Tile Monitor Property window, select which video tile on the monitor is associated with which channel. This option depends on the output display option selected.
 - Click the and icons to enable or disable audio and image scaling respectively for each channel.
- 6. Click Save to save the settings.

Enable/disable decoding channel

Use this window to enable or disable a decoding channel. The decoding channel parameters remain unchanged.

To enable or disable a decoding channel:

 Click Decoding Operation > Decode Control > Ch Enable/Disable. The Ch Enable/Disable window appears.



- 2. Select the desired decoding channel from the drop-down list.
- 3. In the On/Off box, enable or disable the selected channel.
- 4. Click **Save** to save the settings.

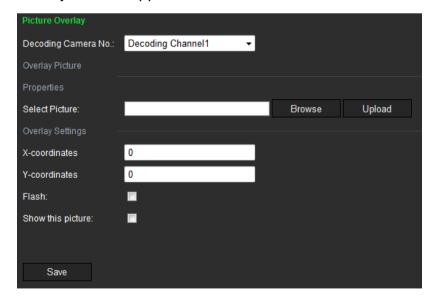
Picture overlay

Use this function to overlay a picture on a decoded channel display. The picture can be positioned anywhere on screen.

The picture must have a 24-bit BMP format. Its height and width should be 32X pixel. A resolution up to 128 x 128 is supported.

To set up picture overlay:

 Click Decoding Operation > Decode Control > Picture Overlay. The Picture Overlay window appears.



Select the desired decoding channel from the drop-down list.

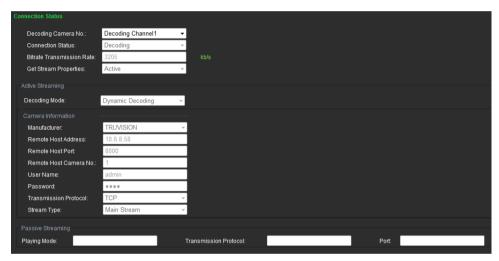
- In the Select Picture box, browse the desired picture and click Upload to upload it.
- 3. Enter the X and Y co-ordinates to position the picture on screen.
- 4. Select how you want the picture displayed. Check **Flash** to have a picture that flashes. If you want the picture to be transparent, disable **Show this picture**.
- 5. Click **Save** to save the settings.

Connection status

Use this menu to configure the channel used by the decoder for decoding and live view. The information is regularly updated automatically.

To view the connection status:

 Click Decoding Operation > Decoding Status > Connection Status. The Connection Status window appears.



2. Enter values for the following parameters:

Decoding Camera No.: Enter the channel to be decoded.

Connection Status: Check the status of the decoding channel that is streaming video from an encoding device.

Bitrate Transmission Rate: View the bit rate of the stream being decoded.

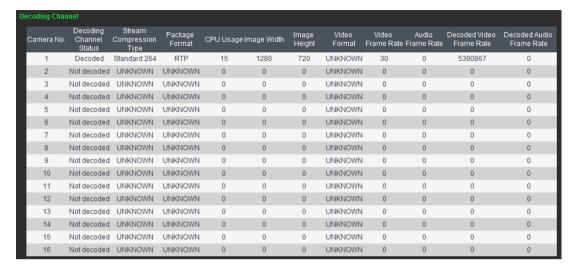
Get Stream Properties: The TruVision decoder can only support active mode. It actively tries to get video streams from an encoder or NVR.

Check decoding channel status

Use this menu to check the current decoding channel for information such as the channel number, decoding channel status, stream compression type and video frame rate, for example. The information is regularly updated automatically.

To view the channel status:

Click Decoding Operation > Decoding Status > Decoding Channel. The
 Decoding Channel window appears that lists the current status for all cameras.

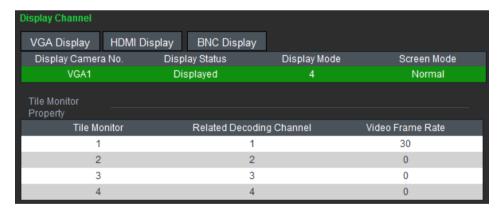


Check display channel status

Use this menu to check the configuration information on the current channel. The information is regularly updated automatically.

To view the channel status:

 Click Decoding Operation > Decoding Status > Display Channel. The Display Channel window appears.



Transparent channel

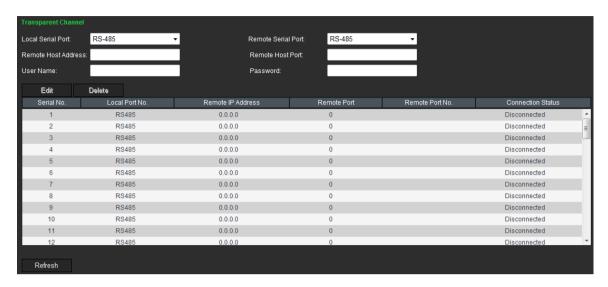
Use this menu to set up the transmission of transparent data between the encoder and decoder. The decoder uses the RS-232 or RS-485 serial port to send transparent data over the network.

Up to 64 encoders can be used to address a decoder.

Note: If RS-232 is selected as the local serial port, you must set up the operation mode as transparent under Configuration > Serial Port Parameters > RS-232.

To set up the transparent channel:

 Click Decoding Operation > Transparent Channel. The Transparent Channel window appears.



2. Enter values for the following parameters:

Local Serial Port: Select the decoder's serial interface from the drop-down list: RS-232 or RS-485.

Remote Serial Port: Select the remote encoding device's serial interface from the drop-down list: RS-232 or RS-485.

Remote Host Address: Enter the IP address of the remote encoding device.

Remote Host Port: Enter the host port of the remote encoding device.

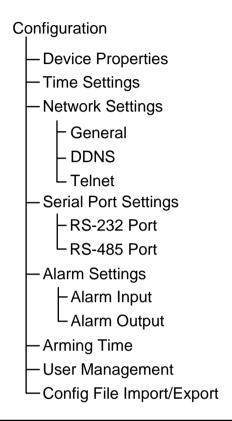
User Name and Password: Enter the user name and password used to log into the encoding device.

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

Configuration

Use these menus to configure the decoder.

Figure 7: Menu tree of Configuration



Function	Description	
Device Properties	Define the decoder name.	
	Display the decoder serial number and firmware version.	
Time Settings	Define the device time	
Network Properties	Define network settings.	
Serial Port Settings	Define the serial port properties.	
Alarm Settings	Configure alarm input/output settings and notification method.	
Arming Time	Define alarm schedules.	
User Management	Create, modify or delete users and allocate user permissions.	
Config File Import/Export	Import/export configuration files.	

Device properties

You can edit the decoder name and view the decoder type and serial number as well as firmware version.

To set up the decoder properties:

 Click Configuration > Device Properties. The Device Properties window appears.



Enter the device name.

The other options are read-only:

Physical address: View the MAC address of the decoder. It is unique and cannot be changed.

Device type: View the decoder model name.

Device Serial No.: View the decoder serial number.

Firmware version: View the firmware version number installed in the decoder.

DSP version: View the software version number used in the DSP.

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

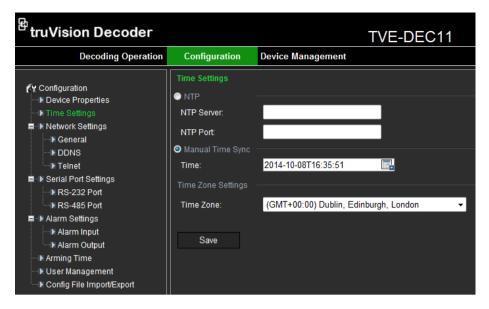
Time settings

You can set up the decoder to use a Network Time Protocol (NTP) server to keep the date and time current and accurate or manually select the local time zone.

Note: If the decoder is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44) or europe.ntp.pool.org. If the encoder is set up in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

To set up the decoder properties:

1. Click Configuration > Time Settings. The Time Settings window appears.



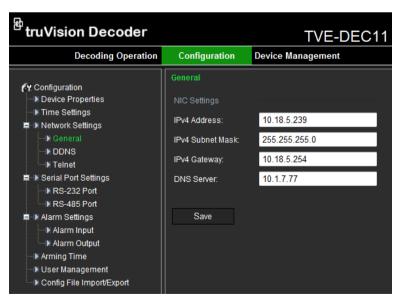
- Check NTP and enter the IP address of the NTP server and the NTP port value.
 Or -
 - Check **Manual Time Sync** and **Time Zone Settings**. Select the time zone that is closest to the device's location from the drop-down list.
- 3. Click **Save** to save the settings.

Network settings

You must configure your decoder's network settings before using it over the network.

To configure general settings:

 Click Configuration > Network Settings > General. The General Network Settings window appears.



2. Enter the required values for the following options:

Option	Description	
IPv4 address	Enter the IP address for the decoder.	
	The default IP address 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 address	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.	
	Default value is 0.0.0.0.	
DNS server	Enter the domain name server to use with the decoder. Default value is 0.0.0.0.	

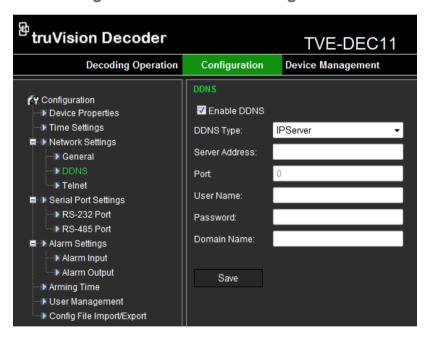
3. Click **Save** to save the settings.

To configure DDNS settings:

If your device is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Prior registration with your DDNS Provider is required before configuring the system to use DDNS.

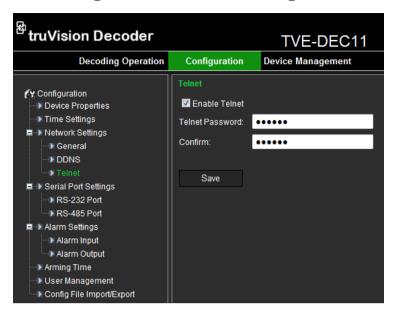
1. Click Configuration > Network Settings > DDNS. The DDNS window appears.



- 2. Check the **Enable DDNS** checkbox to enable this feature.
- 3. Select the **DDNS Type** from the drop-down list. Four different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and ezDDNS.
- 4. Enter the Server Address and Port for DDNS Server.
- 5. Enter the User Name and Password that you applied from the server.
- 6. Click **Save** to save the settings.

To configure Telnet settings:

1. Click Configuration > Network Settings > Telnet. The Telnet window appears.



- 2. Check the Enable Telnet checkbox.
- 3. Enter the Telnet Password and confirm it.
- 4. Click **Save** to save the changes.

Note:

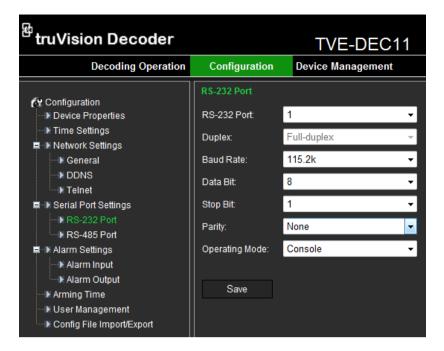
- 1. The Telnet user name is "root" as default, and cannot be changed.
- 2. The default Telnet password is "ab12!"
- 3. The password should be set with at least 4-character password with at least one letter and one number.

Serial port settings

Use this menu to configure the settings of the RS-232 and RS-485 ports.

To set up RS-232 port:

 Click Configuration > Serial Port Settings > RS-232 Port. The RS-232 Port window appears.



- 2. Input the values for the following parameters: RS-232 port, duplex mode, baud rate, data bit, stop bit, parity type, and operation mode.
- 3. Click **Save** to save settings.

To set up RS-485 port:

 Click Configuration > Serial Port Settings > RS-485 Port. The RS-485 Port window appears.



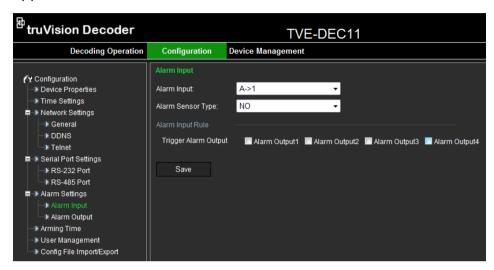
- 2. Input the values for the following parameters: RS-485 camera number, duplex mode, baud rate, data bit, stop bit, and parity type.
- 3. Click **Save** to save settings.

Alarm settings

The decoder can be configured on how it will respond when an alarm input is triggered by an external alarm device (for example, PIR detector, dry contacts...).

To set up alarm inputs:

 Click Configuration > Alarm Settings > Alarm Input. The Alarm Input window appears.



- 2. Under Alarm Input, select the alarm input number of a camera.
- Under Alarm Sensor Type, select the alarm input type: NO (normally open) or NC (normally closed).
- 4. Under Alarm Input Rule, check one or more of the desired response methods: Alarm Output 1 to Alarm Output 4.
- 5. Click **Save** to save settings.

To set up alarm outputs:

 Click Configuration > Alarm Settings > Alarm Output. The Alarm Output window appears.



- 2. Select an alarm output from the drop-down list.
- 3. Under Output Delay, select a time out option from the drop-down list.

The time out setting lets you define for how long a signal remains active after the alarm has ended. Select a time out option: 5, 10, and 30 seconds, 1, 2, 5, and 10 minutes, and Manual stop. If "Manual stop" is selected, the alarm output will stop only when the alarm input is manually stopped.

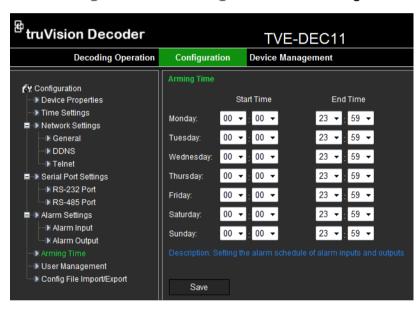
4. Click Save to save settings.

Arming time

You can set up to eight arming schedules for alarm inputs.

To set up the arming schedules:

1. Click Configuration > Arming Time. The Arming Time window appears.



Select the day of the week and the start and end time periods during the day when the alarm inputs and outs are armed. You can schedule up to eight time periods in a day. Default is 24 hours.

Note: The time periods defined cannot overlap.

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

User account management

By default the decoder comes with an administrator user account. The administrator can add, modify or delete users.

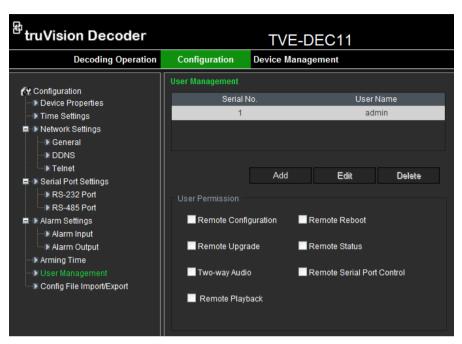
The Administrator can add, delete or configure parameters for all decoder functions. There can only be one administrator. The user name is *admin*. The name cannot be modified. The default password is 1234.

Note: Default passwords should be changed for security reasons.

To add a new user:

 Click Configuration > User Management. The User Management window appears.

Note: Only a system administrator can create a user. You can add up to 31 new users.



- 2. Click **Add** and enter the user name and password. Both the user name and password can have up to 16 alphanumeric characters.
- 3. Under "User Permission", select the desired user access privileges.
- 4. Click OK.

To modify a user:

 Click Configuration > User Management. The User Management window appears.

Note: Only a system administrator can modify a user.

- 2. Select the desired user and click Modify.
- Modify the user access privileges.
- 4. Click OK.

To delete a user:

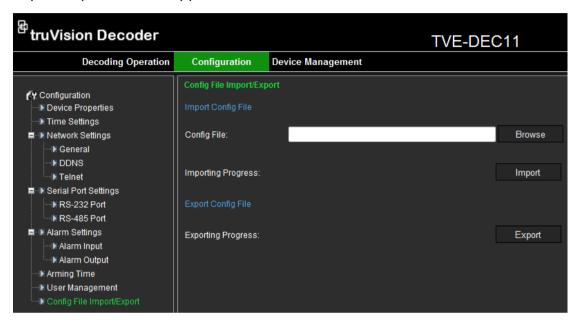
- Click Configuration > User Management. The user Management window appears.
- 2. Select the desired user and click **Delete**.
- 3. Click **OK** in the pop-up window to confirm deletion. The user is immediately deleted.
- 4. Click OK.

Import/Export Configure File

The configuration files of the device can be imported from or exported to a local device for backup. 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.

To import/export config file:

 Click Configuration > Config File Import/Export. The Config File Import/Export window appears.



- 2. Click **Browse** to select the file from the local directory and then click the **Import** button to import a configuration file.
 - -Or-

Click the **Export** button to export configuration files to the local backup device.

Device management

Use this window to update the decoder firmware, restore factory default settings and reboot the device.

Note: Any changes to the default passwords will be lost after a factory reset or firmware upgrade.

To update the firmware:

1. Click Device Management > Upgrade. The Upgrade window appears.



2. Under "Upgrade File", click **Browse** to locate the upgrade file from a local backup device. Click **Upgrade** to start importing.

To restore factory default settings:

- Click Device Management > Restore Default. The restore default window appears.
- 2. Click **Complete** to restore all factory settings including IP address and network settings.
 - Or -

Click **Simple** to restore factory settings except for IP address and network settings.

The default settings are restored immediately.

To restart the decoder:

- 1. Click Device Management > Reboot. The Reboot window appears.
- 2. Click OK. The decoder restarts.

Specifications

Model	TVE-DEC11	
Video/audio	CVBS output	1-channel BNC output
output	VGA output	1-channel VGA output
		Resolution:
		1920×1080@60 / 50HZ,
		1600×1200@60Hz,
		1280×1024@60Hz,
		1280×720@50/60Hz,
		1024×768@60Hz
	HDMI output	1-channel HDMI output
		Resolution:
		1920×1080@60 / 50HZ,
		1600×1200@60Hz,
		1280×1024@60Hz,
		1280×720@50/60Hz,
		1024×768@60Hz
	Audio output	1-channel, RCA
Video/audio	IP video input	H.264 / MPEG4
decoding	Multi-division display mode	1/4/9/16
	Frame rate	25 fps (PAL) / 30 fps (NTSC)
	Audio compression	G.722 / G.711A / G.711U / MPEG2-L2 / ACC
	Network interface	1 RJ45 10/100/1000 Mbps
		Self-adaptive Ethernet interface
	Serial interface	1 RS-485 and & 1 RS-232 serial interface
External	Bidirectional audio input	2-ch, 3.5mm connector (2.0 Vp-p, 1 kΩ)
interface	Alarm inputs	4
	Alarm outputs	4
	Power supply	12 VDC
	Consumption	Max. 15W
General	Operating temperature	-10 to +55 °C (14 to 131 °F)
	Operating humidity	10% to 90%
	Dimension (W xD x H)	220×180×45 mm (8.66 × 7.1 × 1.77 in.)
	Weight	1.12 kg (2.47 lb.)