





TVK-610 Configuration Manual

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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.



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Important information

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Installation in accordance with this manual, applicable codes, and the instructions of the authority having jurisdiction is mandatory.

While every precaution has been taken during the preparation of this manual to ensure the accuracy of its contents, Carrier assumes no responsibility for errors or omissions.

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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

Product overview

The TruVision TVK-610 keypad lets you communicate using RS-485 or IP with TruVision recorders, decoders, encoders and PTZ domes. You can easily control the devices.

The keypad is easily configured and operated through the web browser.

Installation environment

When installing your product, consider these factors:

Ventilation: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Ensure that the location planned for the installation of the unit is well ventilated.

Temperature: Consider the unit's operating temperature (-10 to +55 °C, 14 to 131 °F) and noncondensing humidity specifications (10 to 90%) before choosing an installation location. Extremes of heat or cold beyond the specified operating temperature limits may reduce the life expectancy of the recorder. Do not install the unit on top of other hot equipment. Leave 44 mm (1.75 in.) of space between rack-mounted DVR units.

Moisture: Do not use the unit near water. Moisture can damage the internal components. To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture.

Chassis: Equipment weighing less than 15.9 kg (35 lb.) may be placed on top of the unit.

Package contents

When you receive the product, check the package and contents for damage, and verify that all items are included. If any of the items are damaged or missing, please contact your local supplier.

The TVK-610 is shipped with the following items:

- TVK-610 keypad
- Power supply unit (PSU)
- Power supply cords (UK and Europe)
- *TruVision TVK-610 Quick Start Guide*

You can download the software and the manual from our website. Also available from our website are these guides in several languages:

- *TruVision TVK-610 Configuration Manual*
- *TruVision TVK-610 Operator Guide: Keyboard Mode*
- *TruVision TVK-610 Operator Guide: DVR by IP Mode*

- *TruVision TVK-610 Operator Guide: DVR by RS-485 Mode*
- *TruVision TVK-610 Operator Guide: DOME by RS-485 Mode*

Contact information, firmware and manuals

For contact information and to download the latest manuals, tools, and firmware, go to the web site of your region.

EMEA: <https://firesecurityproducts.com>

Manuals are available in several languages.

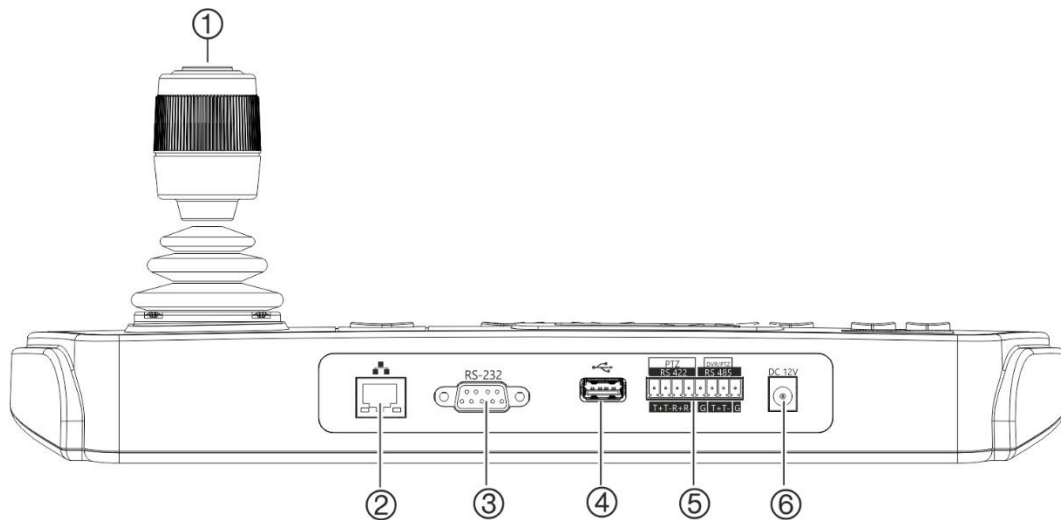
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Keypad description

This chapter describes how to connect the keypad and use the joystick.

Keypad connections

Figure 1: Back panel



1. 4-axis joystick with button on top
2. Network port
10/100 Mbps Ethernet interface
3. RS-232 serial interface
4. USB interface
5. RS-422/RS-485 serial interface (RS-422 not in use)
6. 12 VDC power connector

Joystick operation

In System menu mode:

- Move it up/down to select the desired submenu.
- Move it left/right to modify items in the submenu.
- Press the center button on the joystick to confirm.

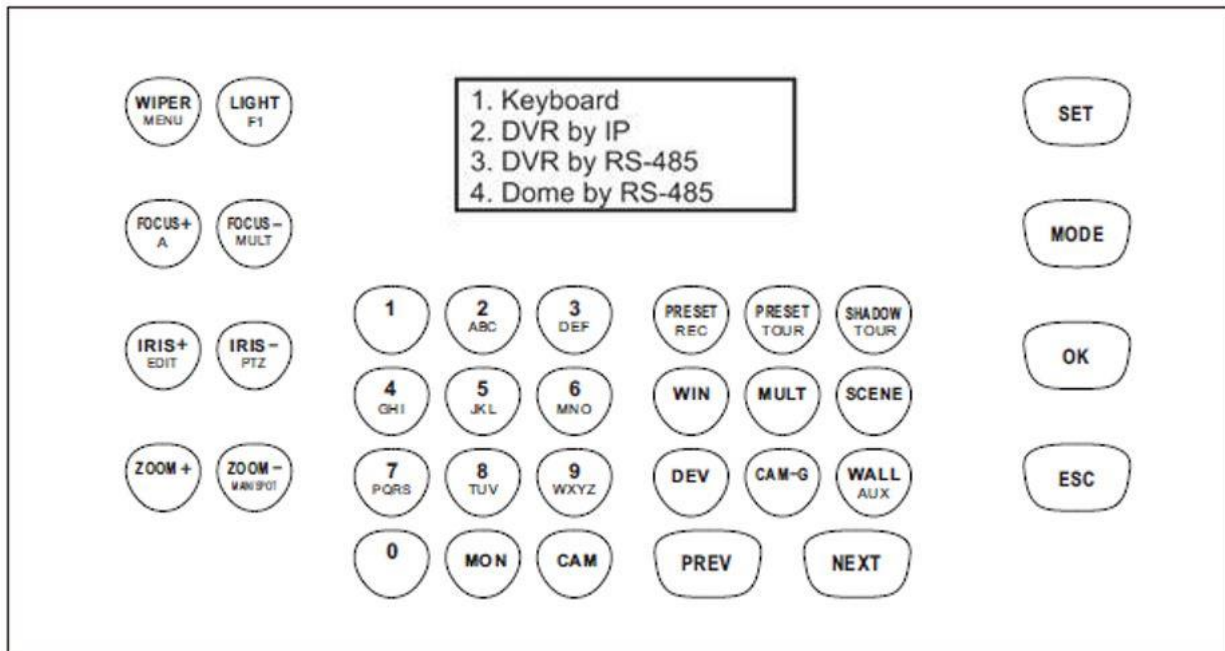
In Shortcut menu mode:

- Move the joystick in one of eight directions to control pan/tilt. Rotate the knob for zoom control.
- Press the center button on the joystick for the Enter function and capture snapshots. Save the snapshots to a USB flash drive.

Function keys

The keypad function keys allow you to quickly select regularly used functions such as to call up presets or to select a monitor.

Figure 2: Keypad button layout



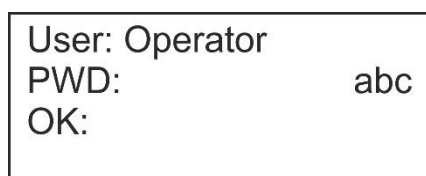
See “Keypad operation” on page 33 for a description of the keypad functions.

Enter alphanumeric values

When using the keypad’s functions, you can enter both numbers and letters in the LCD display using the alphanumeric buttons on the keypad. To toggle between numbers, lowercase letters, and All Caps letters, press the *FOCUS + A* button.

The *FOCUS+* button by default is set to enter numbers. When pressed once, it then enters lowercase letters, and “abc” appears on the screen. Pressed twice, it enters capital letters, and “ABC” appears on the screen. When enabled to enter letters, press the numeric button for the desired letter.

Figure 3: Keypad LCD set to enter lowercase letters



Getting started

Use the web browser to access and configure the keypad over the network.

Supported web browsers

The TVK-610 keypad supports Microsoft Edge Version 91 or higher, Google Chrome version 91 or higher, Mozilla Firefox 116.0.3 or higher, and Apple Safari 15.1 or higher.

Activate the admin password

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.

A message will appear on-screen when the unit has been activated.

Tips on creating a strong password:

- A valid password range must have **between eight and sixteen characters**. You must use a combination of numbers and lower- and upper-case letters. No special characters or spaces are permitted. The password must contain characters from at least all 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.
- The password cannot contain the text 'admin', '123', or four or more continuously increasing or decreasing digits.

Note: If you forget your admin password, please contact Technical Support to reactivate the unit with a new password.

Go to "User management" on page 26 for further information on creating extra users.

Default network settings:

The network settings are:

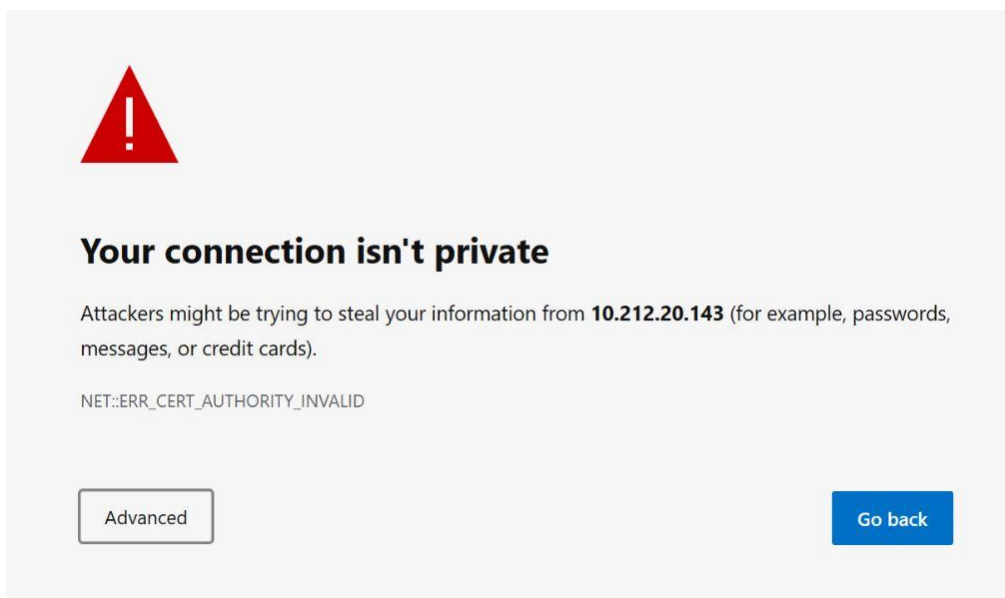
- IP address - 192.168.1.70
- Subnet mask - 255.255.255.0
- Gateway address - 192.168.1.1
- HTTPS port: 443

Access the keypad functions using the browser

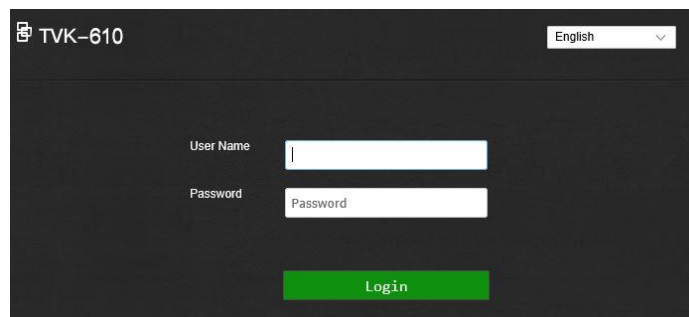
To access the keypad functions using the browser:

1. Once the keypad has been activated, enter the keypad's IP address (**https://address**) in the web browser. Use the TruVision Device Manager to find the IP address of the keypad and assign it a new address on the local network, if desired.
2. If this is the first time you are accessing the keypad, you will see a "Your connection isn't private" warning. Click **Advanced** and then, under the extra information that appears, click **Continue to <IP address> (unsafe)**.

Note: the IP address is considered unsafe because the keypad uses a self-signed certificate. It is safe to continue to the web interface.



The Login dialog box appears.



3. Select your language. English is default.

Note: The user interface in the browser is available in several languages. However, the display on the keypad screen is only available in English.

4. Enter your user name and password as administrator and click **Login**.

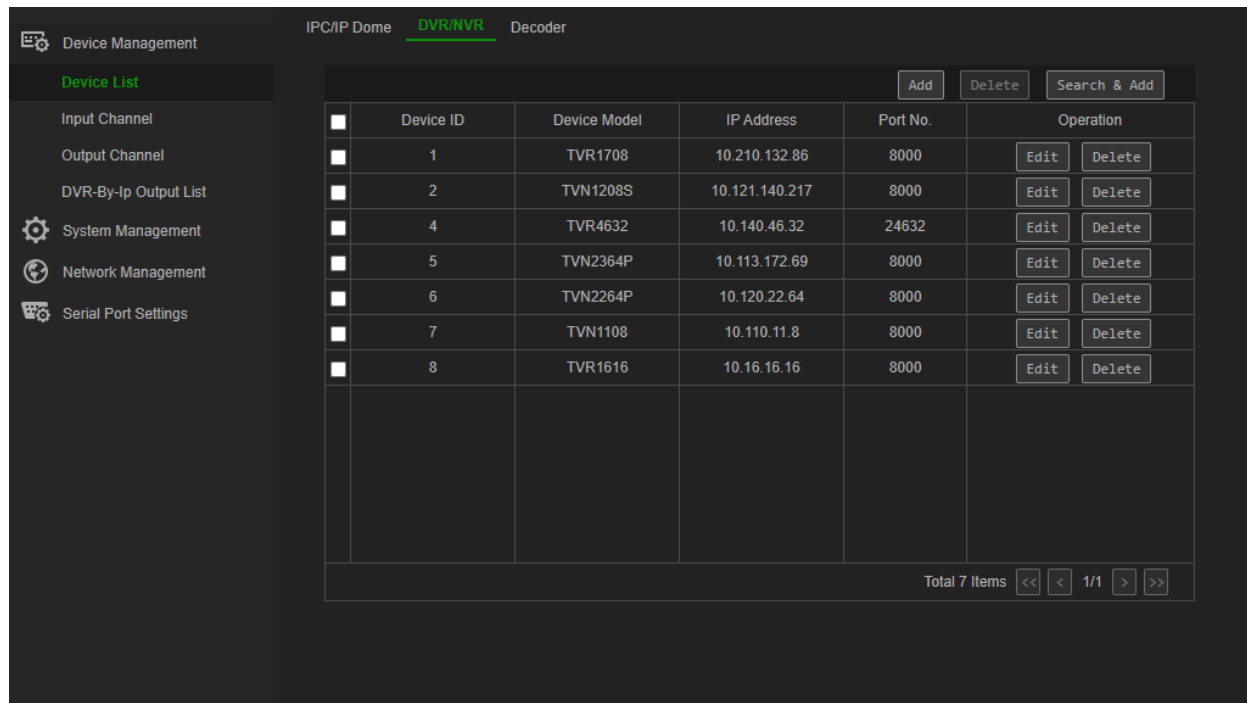
Note: In the Login dialog box, if you enter the wrong password three times, the user account will be locked for 30 minutes.

The browser menu appears. By default, the *Device Management* menu appears (see Figure 4 below).

Browser menu overview

You can configure the keypad using the browser. Only the administrator can access this menu.

Figure 4: Browser menu overview (Device Management shown)



Menu function

Description

1. Device Management

There are four submenus to manage devices and channels.

Device List: Add, modify, and delete a device: IPC/IP Dome, DVR/NVR, and decoder. “IPC” is an IP camera.

Input Channel: Manage the input channel lists and groups.

Output Channel (for keyboard mode): Manage output channel information.

DVR-By-IP Output List: Manage the ID for the recorder's monitor outputs for the mode “DVR-By-IP”.

See “Device management using the browser” on page 18 for further information on this menu.

2. System Management

There are four submenus.

Version: Display the device version and licenses.

User Management: Add, edit, and delete a user, add and delete devices associated with a user, and change the password.

Maintenance: Remotely reboot, restore factory settings, export the config file, and remotely upgrade the firmware.

Security Settings: Enable/disable specific security settings for the keypad.

See “System management using the browser” on page 26 for further information on this menu.

Menu function	Description
3. Network Management	Manage all network related aspects of the device including general network settings, such as IP address, gateway address, and subnet mask. See "Network management using the browser" on page 31 for further information on this menu.
4. Serial Port Settings	Set up the parameters of the RS-485 port. See "Serial port settings" on page 32 for further information on this menu.

Access the keypad functions using the keypad

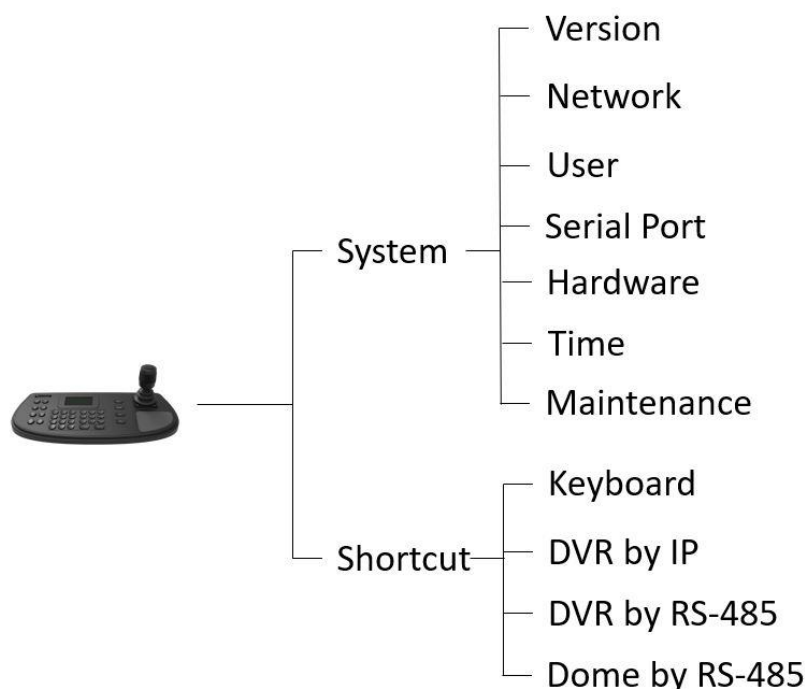
The keypad has two menu modes, System and Shortcut. See Figure 5 below.

The System menu allows you to quickly access the most frequently used settings to configure the keypad. This menu is only available to the administrator.

The Shortcut menu is used to operate the keypad. This menu can be accessed by both the administrator and operators.

Note: The display on the keypad screen is only available in English.

Figure 5: Keypad menu tree



To access the keypad functions using the keypad:

1. Log in to the keypad.
2. As administrator you can access two menus using the LCD display.

Click **System** to configure the keypad. See "System menu of the keypad" on page 33 for further information on using this menu.

- or -

Click **Shortcut** to operate the keypad. See “Keypad operation” on page 36 for more information.

Device management using the browser

The Device Management menu describes how you can add, modify, or delete a device using the browser. You can also search for online devices.

This menu is only available to the administrator.

Add, edit, or delete a device

You can add, edit, and delete IP dome cameras, DVR/NVRs, encoders, and decoders. You can also search the network for devices to add.

The devices connected to the keypad do not support all four keypad modes. See Table 7 on page 54 for the list of supported devices by keypad mode.

Before you use the keypad, you must first add the desired devices that you want to control with it. Once you have created the devices under *Device Management > Device List*, you can then go to the Input Channel and Output Channel menus to make any changes to the devices.

Note: It is important that you keep a backup file of the devices you add to the keypad. We recommend that you create a backup file in Excel format after adding a couple of devices and export the file as a template. See “Import/export an input device list” on page 21 for further information.

Channel and device ID

Every device added to the keypad is automatically allocated a unique ID by the system. Cameras get an input channel ID. Recorders and decoders get a device ID. The ID is allocated a number in the order in which the device is added to the keypad, irrespective if it is a camera, recorder, or decoder. For example, if you add two recorders to the keypad, they will be allocated the device IDs 1 and 2. If you add a decoder, it will get device ID 3. If you then add a third recorder, it is device ID 4.

You can easily change the ID number under Edit in the *Device Management* menu. Before changing the ID numbers of devices, you should first export to an Excel file the list of devices configured in the keypad so that you can see which camera has been allocated which ID number. It is not possible to export a list of the recorders, decoders, or monitor IDs. To find their IDs, you need to look at the *Device Management* screens for these devices.

For further information on channel and device IDs and how they are used, see “How to use device and camera IDs” on page 37.

To add, edit, or delete devices:

1. Log in to the keypad. Go to **Device Management > Device List**.
2. In the **Device Management > Device List** window, select the tab for the desired device type: IPC/IP Dome, DVR/NVR, or Decoder. “IPC” is an IP camera.

Note: Encoder channels are added as input channels.

- Click **Add**. The *Add Device* window pops up.
- Select how you want to add the device: by **IP** or **IP segment**. An *IP Segment* is the range of IP addresses to be used.

Note: The server port is 8000 by default.

- Enter the network parameters and click **OK**.

The device is then added to the device window (IPC/IP Dome, DVR/NVR, or Decoder).

Example of the cameras added under *IPC/IP Dome* is shown below:

Device Model	IP Address	Port No.	Manufacturer	Operation
TVGP-M01-0801-DO...	10.57.110.6	8000	TruVision	Edit Delete

- If desired, select a device and click **Edit** to change the information it.

IPC/IP Dome: You can change the user name and enter the camera or encoder password. You cannot change the camera or encoder password from the keypad. To change the input channel ID of a camera/encoder, go to **Input Channel > Input List**.

DVR/NVR: You can change the recorder user name, password, and device ID.

Decoder: You can change the decoder user name, password, and device ID.

- If desired, select a device and click **Delete** to delete it.

Search for devices and add to the keypad

You can search for the cameras, recorders, encoders, and decoders configured to the keypad.

To search and add devices:

1. Log in to the keypad. Go to **Device Management > Device List**.

The screenshot shows the 'Device Management' interface with the 'DVR/NVR' tab selected. The 'Device List' section displays a table with the following data:

Device ID	Device Model	IP Address	Port No.	Operation
1	TVR1708	10.210.132.86	8000	Edit Delete
2	TVN1208S	10.121.140.217	8000	Edit Delete
4	TVR4632	10.140.46.32	24632	Edit Delete
5	TVN2364P	10.113.172.69	8000	Edit Delete
6	TVN2264P	10.120.22.64	8000	Edit Delete
7	TVN1108	10.110.11.8	8000	Edit Delete
8	TVR1616	10.16.16.16	8000	Edit Delete

At the bottom of the table, it indicates 'Total 7 Items' with navigation arrows.

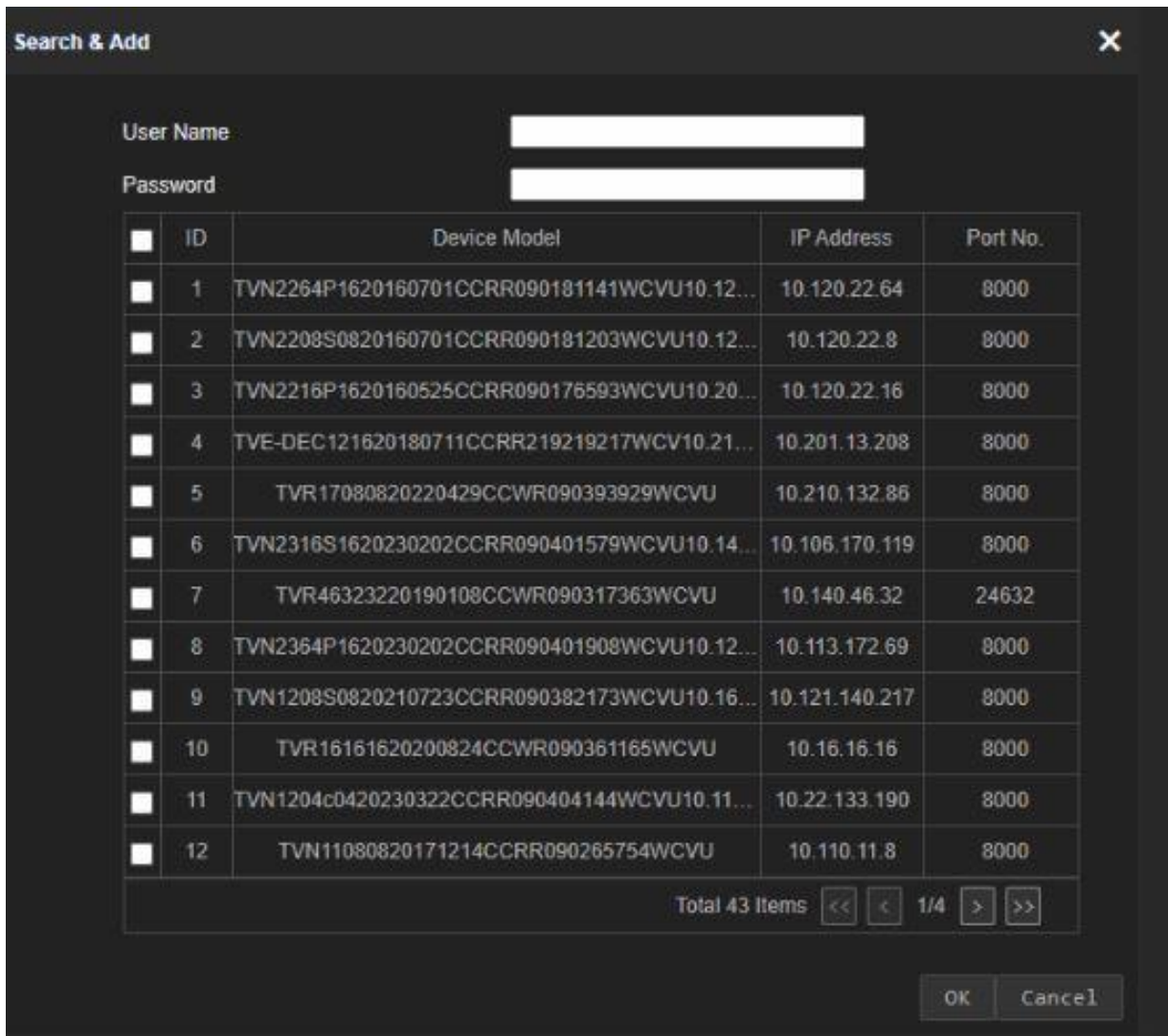
2. In the **Device Management > Device List** window, select the tab for the desired device type: IPC/IP Dome, DVR/NVR, or Decoder. “IPC” is an IP camera.

Note: Encoder channels are added as input channels.

3. Click the button **Search & Add**.

In the window that appears, enter the admin name and password.

The list of the devices linked to the keypad is shown for the selected device type.



- Select the desired devices to add to the keypad, enter their credentials, and click **OK**.

The devices are added to the keypad.

Import/export an input device list

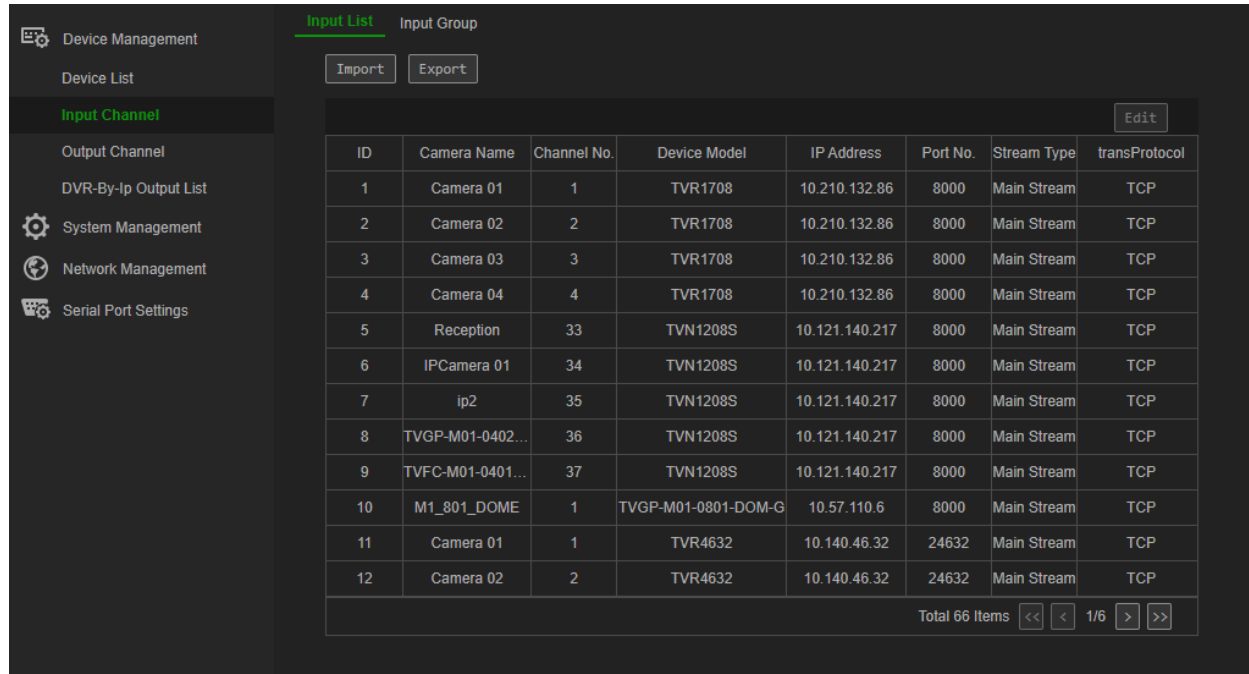
From this menu, you can export and import the device list as well as modify the camera parameters. The camera parameters can be modified from this menu or directly in the exported device list Excel file, which can then be imported into the keypad.

The channel ID of the cameras is automatically allocated in this menu.

Important: Keep the output list of devices secure as it displays sensitive information on how your system has been set up.

To export an input channel list:

1. Go to **Device Management > Input Channel > Input List**.



2. To change the camera or encoder parameters, select a device and click **Edit**.
Change the desired parameters: Input Channel ID, Camera Name, Stream Type, and Protocol Type.
3. Click **Export** to export the channel list in an Excel file to the local directory. Enter the admin password and the keypad password for access authentication and click **OK**.
4. Enter the file name.
5. Click **Browse** to locate where you want the file saved. Click **OK**. The export file appears. This file overwrites the existing device list file in the directory. See Figure 6 below to see an example of an exported Excel list of devices.

Figure 6: Example of an Excel file listing the cameras configured in the keypad

Note:

- 1.The table content for importing must be in text format.
- 2.The specification data must be entered correctly.
- 3.Each item of a column must be in the correct place.
- 4.The ChanId list must be entered with the unique number from 1 to 999999.
- 5.The streammode column must be entered as MAIN(main stream)or SUB(sub-stream).
- 6.The DVR/IPC/DECODER column must be entered as DVR, IPC, or DECODER.
- 7.The Manufacturer must be entered in TruVision or ONVIF.
- 8.The protocol must be entered in TCP,UDP and MCAST.
- 9.The ChannelType column must be entered as either of the following channel types:NORMAL,LOCAL,JOINT,VSCREEN,FUSION.

Tips:You can add the information of a few channels and export the excel file as the template.

ChanId	ChanName	ChanNo.	IP	Port	UserName	Password	Stream Mode	DVR/IPC/DE	Manufacture	Stream Proto	ChannelType
1	ip2	1	10.113.172.8	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
2	M1_801_DO	2	10.113.172.8	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
3	ip1	3	10.113.172.8	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
4	IPCamera 0	4	10.113.172.8	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
5	Reception	33	10.121.140.2	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
6	IPCamera 0	34	10.121.140.2	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
7	ip2	35	10.121.140.2	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
8	TVGP-M01-0	36	10.121.140.2	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
9	TVFC-M01-0	37	10.121.140.2	8000	admin	iLzd0a2vY26	MAIN	DVR	TruVision	TCP	NORMAL
10	M1_801_DO	1	10.57.110.6	8000	admin	iLzd0a2vY26	MAIN	IPC	TruVision	TCP	NORMAL

To import an input channel list into another keypad:

1. Go to **Device Management > Input Channel > Input List**.
2. Click **Import** to import the channel list to the keypad and locate the file in the local directory. Enter the admin password and the keypad password for access authentication and click **OK**.

This file immediately overwrites the existing channel list in the keypad.

Camera groups

Cameras can be grouped so that they can be called up to appear together on a monitor. For example, one group can be cameras viewing the car park and another group can be cameras viewing the entrances of a building.

Every camera group is automatically given a group ID (which cannot be changed). This ID is used when using the CAM-G button on the keypad to select a camera group (see Figure 7 below). The drop-down list for the group names will show you the list of groups created. Selecting one will show its group number.

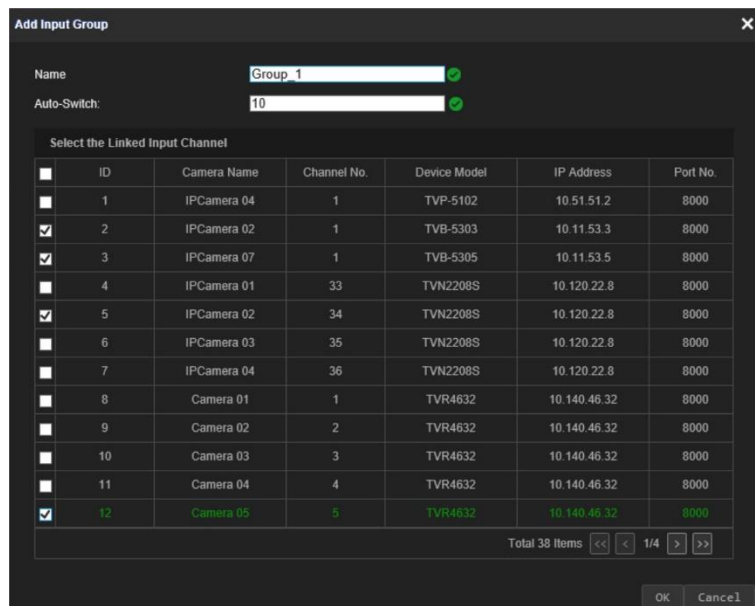
Note: The keypad needs to be connected to a decoder to be able to control camera groups via the keypad. You cannot control camera groups directly from a recorder.

Figure 7: Location of the camera group ID on the screen

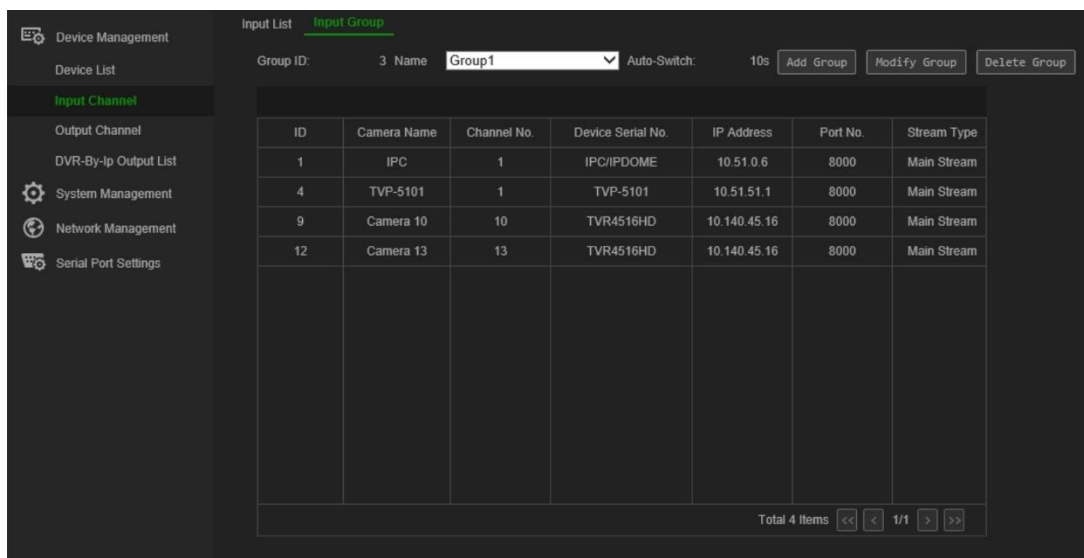


To create camera groups:

1. Go to **Device Management > Input Channel > Input Group**.
2. Select **Add Group**. The *Add Input Group* window appears.



- Enter a name for the input group and under *Auto-Switch* select the desired dwell time, which can be between 10 and 10,000 seconds. Select the channels from the list to include in the group. Click **OK**. The *Input Group* window for the selected group appears.



- To edit a group, click **Modify Group**. You can change the selected cameras and the name of the group.

To delete a group, click **Delete Group**.

- To add another camera group, click **Add** again. You can add up to 16 camera groups.

Manage an output channel for keyboard mode

This menu lets you check the channel information of monitors and the decoders, DVRs, and NVRs to which they are connected.

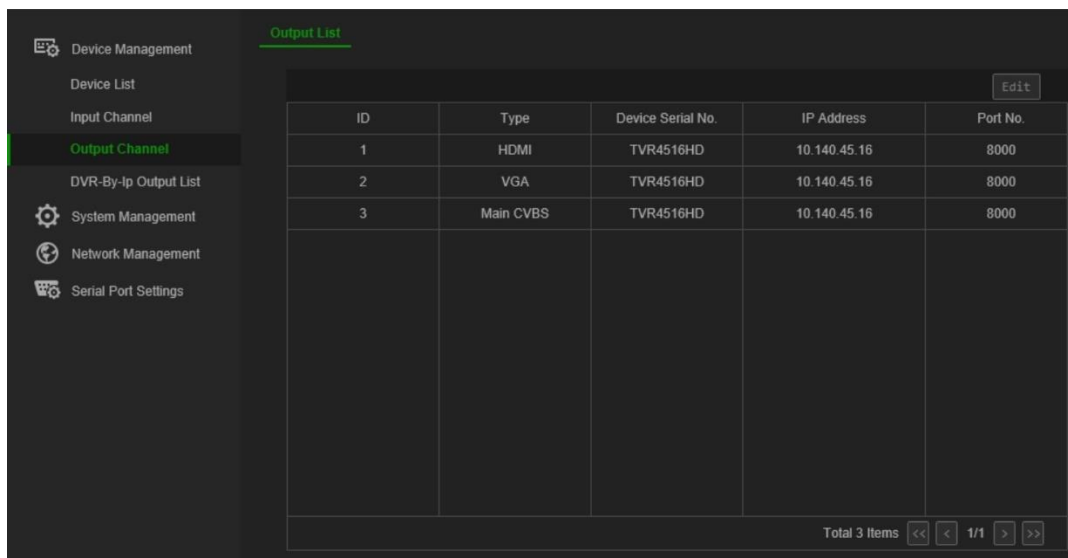
There are up to three different video outputs for monitors: VGA, HDMI, and BNC. They can be main or event monitors. By default, the main monitor of a recorder always has ID number 1, and the next monitor has ID number 2. If there is a third monitor, it has ID number 3. You can change the output channel ID.

It is not possible to export a list of the output channels.

Output List

To manage output channels:

1. Go to **Device Management > Output Channel > Output List**.



ID	Type	Device Serial No.	IP Address	Port No.
1	HDMI	TVR4516HD	10.140.45.16	8000
2	VGA	TVR4516HD	10.140.45.16	8000
3	Main CVBS	TVR4516HD	10.140.45.16	8000

2. If you want to change the ID of an output channel, select the channel from the list and click **Edit**.

Enter the new ID of the selected output channel and click **OK**.

DVR-By-IP Output List

Only use this menu for the DVR-By-IP mode. It allows you to check the IDs for the monitor output of the connected recorders.

System management using the browser

The System Management menu lets you via the browser check the keypad version, manage users, restore factory default settings, upgrade firmware, reboot the device, and import/export the device's configuration settings.

This menu is only available to the administrator.

Version information

You can quickly see the firmware, core, panel, hardware, and web versions used by the keypad under the **System Management > Version** menu.

You can also see the keypad's license agreement under **System Management > Version > About** and click **View Licenses**.

User management

You can add and delete a user, add, and delete devices associated with a user, and change the user's password. You can have a maximum of 1 administrator and 15 operators.

Passwords can have between eight and sixteen characters and can only consist of numbers and letters. No special characters or spaces are permitted. See page 11 for more details.

To add a new user:

1. In the keypad browser, go to **System Management > User Management**.
2. Click **Add** to a new user. The *Add User* window appears.

Add User [X]

User Name []

Admin Password []

Password []

A valid password range must be between 8 and 16 characters. You must use at least one character from each of the following items: numbers, lower-case letters, upper-case letters.

Confirm Password []

Select The Linked Device [Select All]

<input type="checkbox"/>	ID	Device Type	IP Address	Port No.	Device Model

Selected 0 Total 0 Items << < 0/0 > >>

[OK] [Cancel]

3. Enter the new user name and password. All new users are operators only. Only the administrator can change the operator's name and password. Operators cannot change their keypad password.

Note: It is highly recommended that you use a strong password. See page 13 for more information on how to create a strong password.

4. Select the linked devices that the user can access using the keypad.
5. Click **OK** to save the settings.

A window pops up confirming the linked devices that this user can access.

6. Click **OK** to confirm. The user is added to the list on the User Management window.

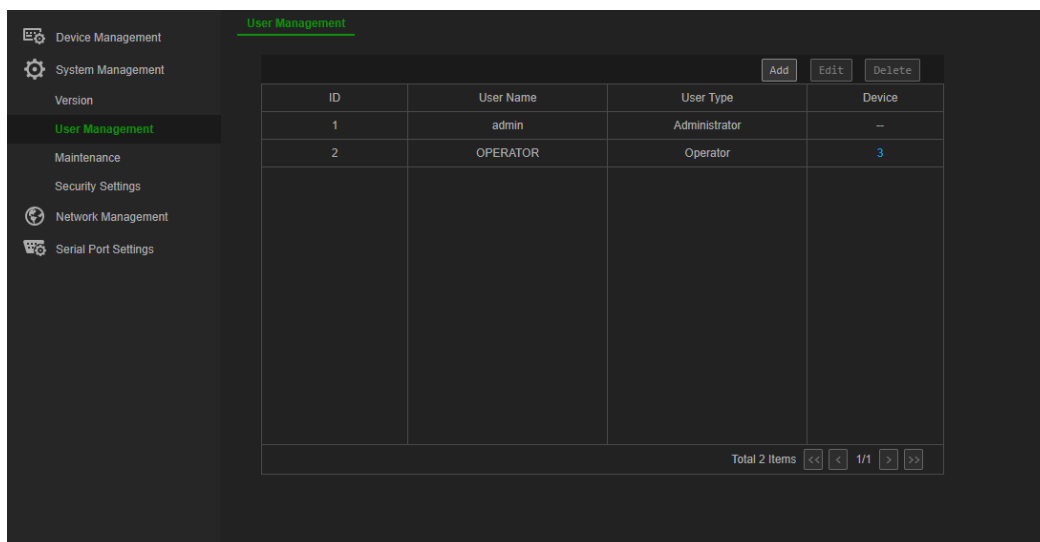
Click this icon to see all the linked devices accessible by this user.

User Management [Add] [Edit] [Delete]

ID	User Name	User Type	Device
1	admin	Administrator	-
2	OPERATOR	Operator	[Icon]

Total 2 Items << < 1/1 > >>

Click this icon to see all the linked devices accessible by this user



To edit user parameters:

1. In the keypad browser, go to **System Management > User Management**.
2. From the list of users select the desired user and click **Edit**. The *Edit User* window displays the user's parameters.
3. Enter the admin password.
4. Change the desired parameters, which can be the user password and linked devices. You cannot change the user name or type.

Note: If you change the password, it is highly recommended that you use a strong password. See page 13 for more information on how to create a strong password.

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

To delete a user:

1. In the keypad browser, go to **System Management > User Management**.
2. From the list of users select the desired user and click **Delete**.
3. Click **OK** in the pop-up window to confirm deletion. The user is immediately deleted.

Maintenance

Use this menu to:

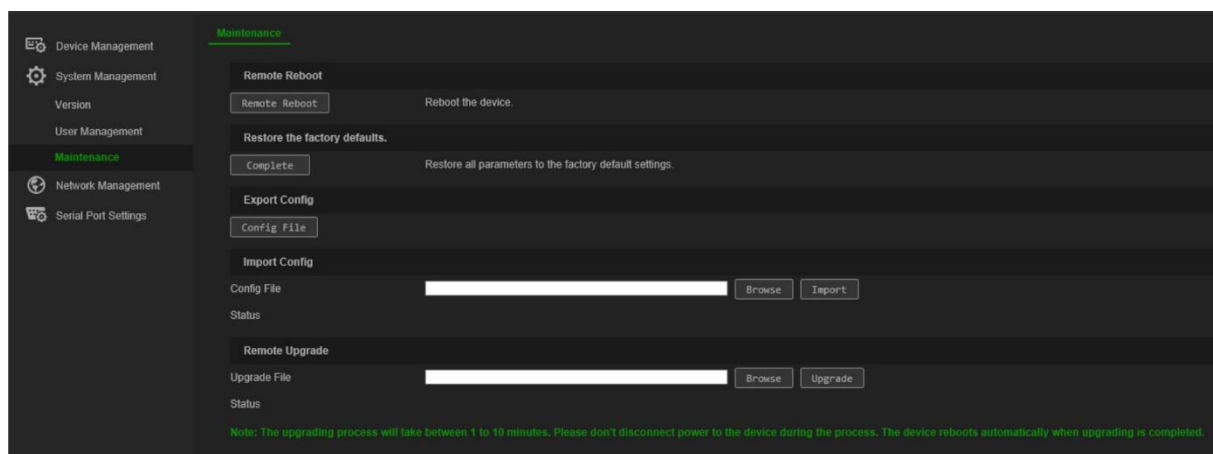
- **Reboot the keypad:** The administrator can reboot the keypad.
- **Restore the default settings:** The administrator can reset the keypad to the factory default settings. Network information such as IP address, subnet mask, and gateway are not restored to factory default settings.
- **Import/export configuration settings:** The administrator can also export and import configuration settings to and from the keypad. 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 keypad firmware:** The administrator can update the decoder firmware using the decoder web browser. The firmware can also be updated using TruVision Device Manager (version 9.3 or newer). For further information, refer to the TruVision Navigator user manual. The firmware upgrade file is labeled *tvk610.dav*.

Note: Only the administrator can access and modify maintenance functions.

Figure 8: Maintenance window



To reboot the keypad:

1. In the keypad browser, go to **Device Management > System Management > Maintenance**.
2. Under *Remote Reboot*, click the **Remote 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. In the keypad browser, go to **Device Management > System Management > Maintenance**.
2. Under *Restore the factory defaults*, click **Complete**.

The changes appear immediately.

To import and export files to and from the keypad:

1. In the keypad browser, go to **Device Management > System Management > Maintenance**.
2. To export the keypad's configuration parameters to the PC, click the **Export** button.

To import configuration parameters from the PC, click the **Browse** button to locate the file on the PC and select it. Click **Import**.

To update the system firmware using the browser:

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

EMEA: <https://firesecurityproducts.com>

ANZ: <https://firesecurityproducts.com.au/>

2. In the keypad browser, go to **Device Management > System Management > Maintenance**. Under *Restore the factory defaults*, click **Complete**.
3. Click the **Browse** button to locate the file on the PC and select it. Click **Upgrade**. Click **Yes** to begin the upgrade process.
4. When the upgrade process is completed, the keypad will reboot automatically.

Security Settings

Use this menu to enable/disable SSH, network discovery of the keypad and auto logout.

SSH

SSH or Secure Shell is a cryptographic network protocol for operating network services securely over an unsecured network.

This function is for technical support only.

SSH is disabled by default.

Discovery

The discovery function determines if the keypad can be found by TruVision Device Manager.

Enable Discovery so that TruVision Device Manager can find the keypad on the network.

Discovery is enabled by default.

Auto logout

The Auto logout function determines if the webpage will automatically logout after a period of inactivity.

The Auto logout function is disabled by default.

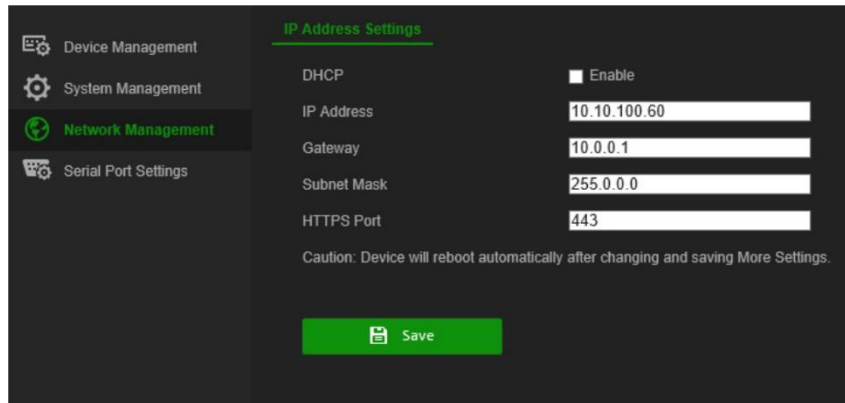
Network management using the browser

The Network Management menu allows you to use the browser to manage the keypad's network settings.

This menu is only available to the administrator.

To set up the IP settings:

1. In the keypad browser, go to **Network Management > IP Address Settings**. The window appears.



2. If required, select **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 recorder to automatically obtain an IP address and other network settings from that server. The DHCP server is typically available in your router.

The default value is disabled.

3. Enter the IP address, gateway, and subnet mask as well as the HTTPS port value.
4. Click **Save** to save the settings.

Note: The keypad will automatically reboot when network settings are changed and saved.

Serial port settings using the browser

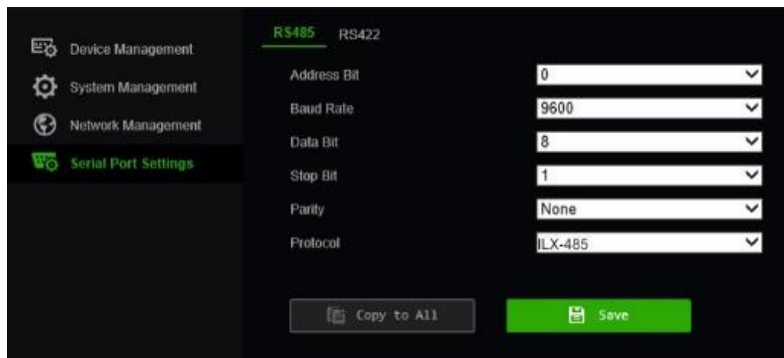
The Serial Port Settings menu allows you to set the parameters of the keypad's RS-485 serial port.

This menu is only available to the administrator.

To set up the RS-485 parameters:

1. In the keypad browser, go to **Serial Port Settings** and click the **RS-485** tab.

Select the desired parameters for the RS-485: address bit, baud rate, data bit, stop bit, parity, and protocol. The protocol options are PELCO-P, PELCO-D, and ILX-485.



The screenshot shows a web-based configuration interface for RS485 settings. On the left is a navigation menu with options: Device Management, System Management, Network Management, and Serial Port Settings (highlighted). The main area is titled 'RS485 RS422' and contains several dropdown menus: Address Bit (0), Baud Rate (9600), Data Bit (8), Stop Bit (1), Parity (None), and Protocol (ILX-485). At the bottom, there are two buttons: 'Copy to All' and a green 'Save' button.

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

System menu of the keypad

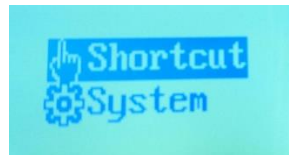
The System menu on the keypad lets you check the current version of the keypad and network settings as well as access frequently used functions such as user management, RS-485, hardware, time and date, and maintenance.

It is only accessible by the administrator. Operators cannot access it.

The menus are only available in English.

To access the system menu of the keypad:

1. Log in to the keypad. The Shortcut/System menu screen appears:



2. Using the joystick, or the **PREV** or **NEXT** buttons, to scroll up/down the list, select **System**. Press the button on top of the joy stick or press the **OK** button to access it.

Enter the admin password.

The following LCD screens appear.

1. Version 2. Network 3. User 4. Serial Port

5. Hardware 6. Time 7. Maintenance
--

3. Select the desired menu and press the button on top of the joystick or press the **OK** button to access it.

Note: The keypad menus time out after five minutes.

Version menu

Use this menu to see the version information of the keypad. It displays the firmware, panel, hardware, and software versions.

Network menu

Use this menu to see the network information of the keypad. It displays the DHCP, IP Address, Gateway, and Subnet Mask values.

User management

This menu lets you change the admin password as well as add, edit, and delete users. Only the administrator can make these changes.

Figure 9: User menu

- 1. Change PWD
- 2. Add User
- 3. Edit User
- 4. Delete User

Serial port

This menu lets connect to an analog dome camera or a recorder using the RS-485 port. When you select “Copy All”, the RS-485 settings are copied to all other RS-485 devices connected to the keypad.

Figure 10: Serial port menu

- 1. AddrBit: 0
- 2. Baud Rate: 9600
- 3. Data Bit: 8
- 4. PROT: PELCO-P

- 5. Stop Bit: 1
- 6. Parity: None
- 7. Copy All: No

Hardware

This menu lets you set the sound for the button press, auto-logoff, and backlight functions.

When auto-logoff is enabled, the keypad automatically logs out if it has not been used for 30 minutes. The backlight can be set to Open (always on), 5 min., 10 min., 30 min., or 60 min.

Time

Use this menu to set the time. You can set the year, month, date, time format, hour, minute, and second.

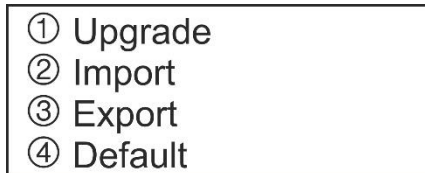
Maintenance

Use this menu to upgrade the device, import and export configuration files, and return the keypad to default settings.

The file format of the firmware update is *tvk610.dav*.

Connect a USB flash drive to the keypad before upgrading or importing/exporting files. The upgrade file and config file must be located on the root directory of the USB flash drive.

Figure 11: Maintenance menu



To maintain the keypad:

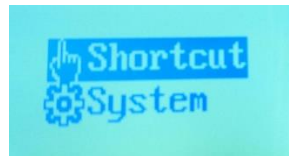
1. Log in to the keypad.
2. Using the joystick or buttons, select **System > Maintenance**.
3. To upgrade the keypad firmware, insert a USB flash drive with the latest firmware file in the keypad. Select button 1 and press **OK**.
4. To import a config file, insert a USB flash drive in the keypad. Select button 2 and press **OK**.
5. To export a config file, insert a USB flash drive in the keypad. The file must be on the root directory. Select button 3 and press **OK**.
6. To return the keypad settings back to factory default, select button 3 and press **OK**.

Keypad operation

This section describes how to control devices, such as cameras, recorders, and decoders/encoders, using the keypad.

Once the keypad has been configured, you are then ready to take control of the devices using the Shortcut menu of the keypad. This menu can be accessed by both the administrator and operators.

Figure 12: Shortcut/System menu



Note: The keypad LCD display is only available in English.

Keypad modes to control a device

There are four shortcut keypad modes that let you select which device and function to control using the keypad (see Table 1 below). Selecting the *Shortcut* function when you log into the keypad gets you direct access to the keypad operational modes.

The keypad modes are independent of each other. If you have selected one and then want to access another, press MODE to return to *Shortcut* and then select the desired keypad mode. See Figure 13 and Table 1 below.

Note: The devices connected to the keypad may not be controlled by all four keypad modes. See Table 7 on page 54 for the list of supported devices by keypad mode.

Figure 13: Shortcut keypad modes.

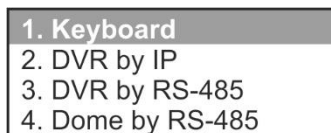


Table 1: Overview of the shortcut keypad modes to operate the keypad

Number	Shortcut keypad mode	Description
1.	Keyboard	<p>This mode allows you to access the devices using the keypad as if you were using the security system. You can control devices such as IP cameras, IP dome cameras, DVRs, NVRs, decoders, encoders, as well as control multiview. There is usually a decoder linked to the keypad when using multiview.</p> <p>You can add devices to be managed by the keypad using the web browser and give each a unique device ID.</p> <p>See “Control a camera using Keyboard mode” on page 40 for more information.</p>

Number	Shortcut keypad mode	Description
2.	DVR by IP	This mode allows you to access the recorders/decoders using the keypad. You connect the keypad to a DVR or NVR using IP. You can then call up the recorder menu and control PTZ cameras through a virtual panel. See “Control a recorder using DVR by IP mode” on page 45 for more information.
3.	DVR by RS-485	This mode allows you to access recorders using the keypad with the RS-485 serial port. You can then call up the recorder menu and control PTZ cameras through a virtual panel. You cannot use this mode to directly access cameras (use the <i>Dome by RS-485</i> mode). See “Control a recorder using DVR by RS-485 mode” on page 48 for more information.
4.	Dome by RS-485	This mode allows you to access analog/HD/TVI dome cameras using the keypad with the RS-485 serial port. You can then call up the camera menu and control the video wall and PTZ cameras through a virtual panel. You cannot use this mode to directly access recorders/decoders (use the <i>DVR by RS-485</i> mode). See “Control a dome camera using Dome by RS-485” on page 51 for more information.

How to use device and camera IDs

You need to tell the keypad the specific recorder/decoder, monitor, and camera that you want to control.

When in **Keyboard** mode, you enter the ID of the recorder or decoder (DEV), then that of the monitor (MON), and then that of the camera (CAM) to be controlled. For three of the modes, the KEY function lets you enter both the MON and CAM IDs consecutively. See Figure 14 below.

Figure 14: Device ID screen. Keyboard mode shown

```

DEV :
MON :      [ ]
CAM :

```

You can also enter in this screen the desired multiscreen format and select which camera is displayed in which window.

DEV button

Enter the unique ID of the recorder or decoder and press the **DEV** button.

You can see the list of recorders and decoders configured in the keypad under the *Device Management > Device List* menu with their IDs, model numbers, and IP addresses.

It is not possible to output the list of recorder/decoder IDs to an Excel file for later reference.

MON button

This appears on screen when you are in **Keyboard** mode (see Figure 14). Enter the unique ID of the monitor and press the **MON** button.

For information of the monitor ID, go to **Device Management > Output Channel > Output List** menu (see “Manage an output channel” on page 24 for an example).

It is not possible to output the list of monitor IDs to an Excel file for later reference.

CAM button

This appears when you are in **Keyboard** mode. Enter the unique ID of the camera and press the **CAM** button.

The camera numbers that you need to enter in Keyboard mode are the numbers that appear for the cameras as ID numbers in the Input List.

Example:

Camera numbering for a TVN1208S in the recorder webpage:

IP Camera			Add	Modify	Delete	Refresh	Quick Add	Custom Protocol	Activation
<input type="checkbox"/>	Channel No.	Camera Name	IP Address	Channel No.	Management Port	Security	Status	Protocol	Connect
<input type="checkbox"/>	D1	Reception	10.111.122.232	1	8000	Strong	Online	TruVision	
<input type="checkbox"/>	D2	IPCamera 01	10.11.56.5	1	8000	Strong	Online	TruVision	
<input type="checkbox"/>	D3	ip2	10.31.56.4	1	8000	Strong	Online	TruVision	
<input type="checkbox"/>	D4	TVGP-M01-040...	10.51.40.2	1	8000	Strong	Online	TruVision	
<input type="checkbox"/>	D5	TVFC-M01-040...	192.168.254.6	1	8000	N/A	Online	TruVision	
<input type="checkbox"/>	D6	IPCamera 06	192.168.254.7	1	8000	N/A	Offline(IP camera...	TruVision	
<input type="checkbox"/>	D7	IPCamera 07	192.168.254.8	1	8000	N/A	Offline(IP camera...	TruVision	
<input type="checkbox"/>	D8	IPCamera 08	192.168.254.9	1	8000	N/A	Offline(IP camera...	TruVision	

Total 8 Item(s) << < 1/1 > >>

There are 5 cameras connected to the recorder via LAN (D1 → D4) and there is one camera (D5) connected to a PoE port.

Device list TVK-610 keypad:

IPC/IP Dome DVR/NVR Decoder

Add Delete Search & Add

<input type="checkbox"/>	Device ID	Device Model	IP Address	Port No.	Operation	
<input type="checkbox"/>	1	TVR1708	10.210.132.86	8000	Edit	Delete
<input type="checkbox"/>	2	TVN1208S	10.121.140.217	8000	Edit	Delete
<input type="checkbox"/>	4	TVR4632	10.140.46.32	24632	Edit	Delete
<input type="checkbox"/>	5	TVN2364P	10.113.172.69	8000	Edit	Delete
<input type="checkbox"/>	6	TVN2264P	10.120.22.64	8000	Edit	Delete
<input type="checkbox"/>	7	TVN1108	10.110.11.8	8000	Edit	Delete
<input type="checkbox"/>	8	TVR1616	10.16.16.16	8000	Edit	Delete

Total 7 Items << < 1/1 > >>

The recorder has Device number 2.

Input List in the TVK-610:

Input List Input Group

Import Export

Edit

ID	Camera Name	Channel No.	Device Model	IP Address	Port No.	Stream Type	transProtocol
1	Camera 01	1	TVR1708	10.210.132.86	8000	Main Stream	TCP
2	Camera 02	2	TVR1708	10.210.132.86	8000	Main Stream	TCP
3	Camera 03	3	TVR1708	10.210.132.86	8000	Main Stream	TCP
4	Camera 04	4	TVR1708	10.210.132.86	8000	Main Stream	TCP
5	Reception	33	TVN1208S	10.121.140.217	8000	Main Stream	TCP
6	IPCamera 01	34	TVN1208S	10.121.140.217	8000	Main Stream	TCP
7	ip2	35	TVN1208S	10.121.140.217	8000	Main Stream	TCP
8	TVGP-M01-0402...	36	TVN1208S	10.121.140.217	8000	Main Stream	TCP
9	TVFC-M01-0401...	37	TVN1208S	10.121.140.217	8000	Main Stream	TCP
10	M1_801_DOME	1	TVGP-M01-0801-DOM-G	10.57.110.6	8000	Main Stream	TCP
11	Camera 01	1	TVR4632	10.140.46.32	24632	Main Stream	TCP
12	Camera 02	2	TVR4632	10.140.46.32	24632	Main Stream	TCP

Total 66 Items << < 1/6 > >>

When you want to show the cameras on the recorder's monitor via the keypad in the Keyboard you enter the following:

- Select the device: 2 + DEV button
- Select the monitor: 1 + MON (in this setup 1 = HDMI/VGA)
- Select a multi-screen. For the TVN1208S, you can select:
 - 1 + MULT: 1x1 layout
 - 4 + MULT: 2x2 layout
 - 8 + MULT: 1+7 layout
 - 9 + MULT: 3x3 layout

When you select a 1x1 layout and want to see the cameras:

- Select 1+ MULT
- For this example : Select 5 to 9 + CAM to see each camera.

When you select a multi view layout, you need to select the video tile of the layout and then select the camera.

Example:

- Select 4 + MULT to see a 2x2 layout.
- Select 1 + WIN to select the top left corner tile. See "WIN button" on page 41
- Select 5 + CAM to see camera 5 (in this example 1st camera of the TVN1208S) in that tile.

The above process shall be used for recorders and decoders when Keyboard mode is used.

For more information about Keyboard mode, see page 4242.

KEY

When you are in **DVR by IP** mode, you will see the LCD screen shown in Figure 15 below. There is no KEY button on the keypad. This text stands for "Keyboard buttons". You need to enter both the monitor and camera IDs here.

Figure 15: Device ID screen. DVR by IP mode shown



```
DEV :  
KEY: 5
```

For more information about DVR By IP mode, see page 45.









Multiscreen options

You can quickly and easily select which multiscreen format you want to see on the monitor screen as well as select which camera is displayed in which window of the multiscreen.

MULT button in Keyboard mode

Press the numeric button(s) for the desired multiview display mode and the MULT button to select the recorder's multiview. For example, if you enter **4** and **MULT**, you will get a 2*2 multiview. The multiview display settings available depend on the recorder. Therefore, not all those listed below in Table 2 may be available.

Table 2: List of MULT settings available (depending on the recorder)

Full screen display = 1 and 	3*3 multiview display = 9 and 
2*2 multiview display = 4 and 	4*4 multiview display = 16 and 
1+5 multiview display = 6 and 	5*5 multiview display = 25 and 
1+7 multiview display = 8 and 	32 cam multiview display = 32 and 

The multiview setting selected is not displayed on the LCD screen. It is seen on the monitor.

In DVR-By-IP mode or DVR-By-RS485 mode, the multiview layout will change by just pressing the MULT button.

WIN button

Once you have selected the multiview display (MULT), you can then allocate which camera appears in which video tile (WIN). For the selected camera displayed in the LCD screen, press the desired video tile number on the monitor and then the WIN button.

This option is only for Keyboard mode.

Figure 16: Example of the video tile (WIN) layout in 2*2 multiview



In the example below, Camera 5 is video tile 2. You would enter "2 WIN" for Camera 5.

Figure 17: Example of WIN selection

DEV : 3	
MON : 1	[2]
CAM : 5	

Information to provide to the operator

You must provide the Operators who will be using the keypad with the list of device IDs (e.g. DEV, MON, CAM if using Keyboard mode) or RS-485 address (if using DVR by RS-485 or Dome by RS-485) that they will need to use as they do not have access to the browser menus. You also need to consider whether they will be controlling devices directly via a recorder or via a decoder. They also need information on the multiscreen formats available for the recorders/decoders.

Control a camera using Keyboard mode

This mode allows you to take control of cameras, recorders, and decoders/encoders using the keypad. It is normally used when there is a decoder linked to the keypad, but it also can be used to directly access a recorder.

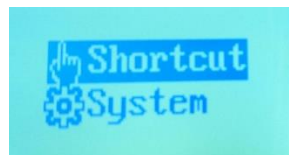
Note: Before you set up the keypad to control a device, ensure that you have the information on hand for the recorder, decoder/encoder, and monitor IDs to be used as well as the list of camera IDs.

Once you have selected the devices, you can then use the keypad to control them.

Note: For the list of supported devices that can be controlled by this keypad mode, see Table 7 on page 54.

To control a device using keyboard mode:

1. Power-up the keypad and press the button on top of the joystick to get the login screen. Enter your name and password to log in to the keypad. The Shortcut/System menu screen appears.



Note: In the Login dialog box, if you enter the wrong password three times, the user account will be locked for 30 minutes.

2. Select **Shortcut**.

Note: When operators access the keypad, they can only access the *Shortcut* menu.

3. Press the **MODE** button on the keypad. The list of the four keypad operation modes to control devices is shown in the LCD display.

1. Keyboard
2. DVR by IP
3. DVR by RS-485
4. Dome by RS-485

- Press the numeric button **1** (one), or press **PREV/NEXT** to scroll up/down the list, to select **Keyboard** mode and press **OK**. The *Device ID* screen appears.



- To select your device, enter the ID number of the recorder or decoder to control and then press the **DEV** button. The number appears beside DEV.
- To select your monitor, enter the ID of the monitor controlled by the selected recorder/decoder and then press the **MON** button.
- To select your camera, enter the ID of the desired camera or camera group to be controlled by the selected recorder/decoder and then press the **CAM** or **CAM-G** button. You can only press **CAM-G** if using a decoder.
- Select the desired multiview format. Enter the multiview number and then press the **MULT** button. See Table 3 on page 44 for the list of multiview options.
- Select which camera will appear in the video tiles of the multiview (WIN). For the selected camera displayed on the LCD screen, press the desired video tile number on the monitor and then the **WIN** button.

Press the **PREV** or **NEXT** buttons to scroll to the previous or next camera to select another camera.

- The keypad can now be used to control the selected camera. See Figure 18 and Table 3 below for information on the buttons to use for controlling the selected devices and carrying out functions, such as presets or zoom in/out.

Figure 18: Keypad buttons to use in Keyboard mode

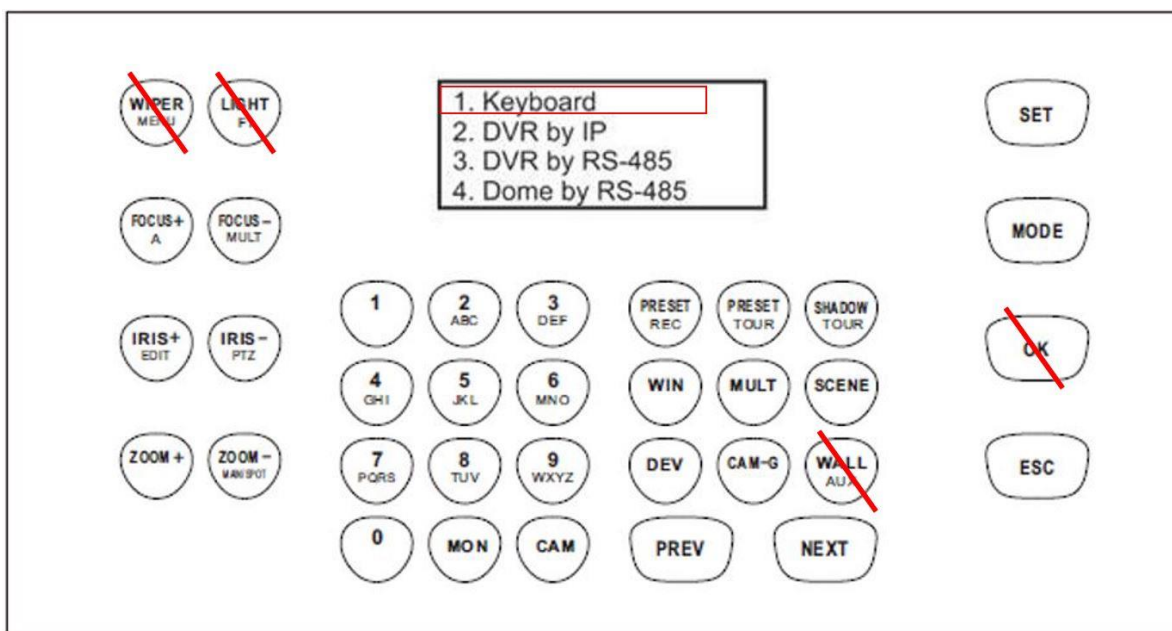































Table 3: How to control a camera using *Keyboard* mode

Numeric button	Keypad button	Action
N		Press the numeric button(s) of the desired recorder ID and this function button to select the recorder.
N		Press the numeric button for the desired monitor and this function button to select the monitor.
N		<p>Press the numeric button for the ID of the desired camera or encoder and this function button to select the device.</p> <p>The camera numbering is using the ID number of the cameras that is shown in the Input List (web interface TVK-610).</p>
N		<p>Press the numeric button(s) for the desired multiview display mode and this function button to select the multiview of the video wall. For example, if you enter 4 and MULT, you will get a 2*2 multiview. The multiview and video tile formats available depends on the recorder and how it has been set up. Therefore, not all the multiviews listed below may be available.</p> <p>Full screen display = 1 and </p> <p>2*2 multiview display = 4 and </p> <p>1+5 multiview display = 6 and </p> <p>1+7 multiview display = 8 and </p> <p>3*3 multiview display = 9 and </p> <p>4*4 multiview display = 16 and </p> <p>5*5 multiview display = 25 and </p> <p>6*6 multiview display = 32 and </p>
N		Press the numeric button(s) and this function button to select the desired tile of the multi view layout.
		<p>Press this button to focus far.</p> <p>This button is also used to enter alphanumeric values in the LCD display. Press the button to toggle between numbers, lower case letters, and capital letters. See “Enter alphanumeric values” on page 12 for more information.</p>
		Press this button to focus near.
		Press this button to open the iris.
		Press this button to close the iris.
		Press this button to zoom in.
		Press this button to zoom out.
	Numeric buttons	Press a numeric button to enter a specific number.
N		Press the numeric button(s) for a desired preset and this function button to call up the preset.
N		Press the numeric button(s) for a desired preset tour and this function button to call up the preset tour.
N		Press the numeric button(s) for a desired shadow tour and this function button to call up the shadow tour.

Numeric button	Keypad button	Action
N		Press the numeric button(s) for a desired scene and this function button to select the decoder scene. 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. For more information on scenes, refer to the TruVision decoder user manual. Note: This option is only available when using a decoder.
N		Press the numeric buttons for a desired camera group and this function button to select the camera group. Note: This option is only available when using a decoder.
		Press this button to move to the previous camera or camera group. Note: Camera groups are only available when using a decoder.
		Press this button to move to the next camera or camera group. Note: Camera groups are only available when using a decoder.
		Press this button to enter the Shortcut/System menu LCD screen.
		Press this button to enter the keypad mode menu. Select another mode from the list.
		Press this button to delete the number entered.

Control a recorder using DVR by IP mode

This mode allows you to control a recorder that is connected via IP. It cannot be used with a decoder.

Before you set up the keypad to control a device, ensure that you have the information on the recorder and monitor IDs available as well as the list of camera IDs. You must provide Operators with the list of device IDs that they will be using as they do not have access to the browser menus.

Once you have selected the recorder, you can then use the keypad to control it.

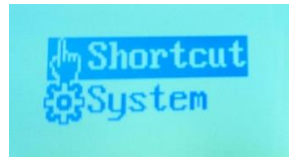
Note: For the list of supported devices that can be controlled by this keypad mode, see Table 7 on page 54.

Important:

- Before using this mode, it is important to assign every camera channel to a tile of a multiview layout for the selected monitor. This is done in the configuration menu of the recorder in the Live View Settings. See the user manual of the recorder for more information.

To control a recorder using *DVR by IP mode*:

1. Power-up the keypad and press the button on top of the joystick to get the login screen. Enter your name and password to log in to the keypad. The Shortcut/System menu LCD screen appears.

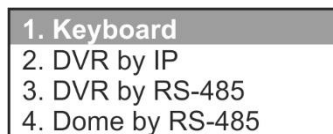


Note: In the Login dialog box, if you enter the wrong password three times, the user account will be locked for 30 minutes.

2. Select **Shortcut**.

Note: When operators access the keypad, they can only access the *Shortcut* menu.

3. Press the **MODE** button on the keypad. The list of the four keypad operation modes to control devices is shown in the LCD display.



4. Press the numeric button **2** or press **PREV/NEXT** to scroll up/down the list, to select **DVR by IP** mode, and press **OK**. The *Device ID* screen appears.



5. To select your device, enter the ID number of the recorder to control and then press the **DEV** button. The number appears beside **DEV**.

6. There is no **KEY** button on the keypad. This text stands for “Keyboard buttons”. You need to enter both the monitor and camera IDs here.

Enter the ID of the desired monitor and press the **MON** button.

Then enter the ID of the desired camera and press the **CAM** button. These two sets of numbers appear alongside **KEY** on screen.

7. Select the desired multiview format. Enter the multiview number and then press the **MULT** button. The multiview display settings available depend on the recorder. Your selected multiview setting is seen on the monitor. See the complete list of settings in Table 4 below.

8. The keypad can now be used to control the selected camera. See Figure 19 and Table 4 below for information on the buttons to use for controlling the selected devices and controlling the recorder from the virtual front panel.

Figure 19: Controlling the DVR by IP

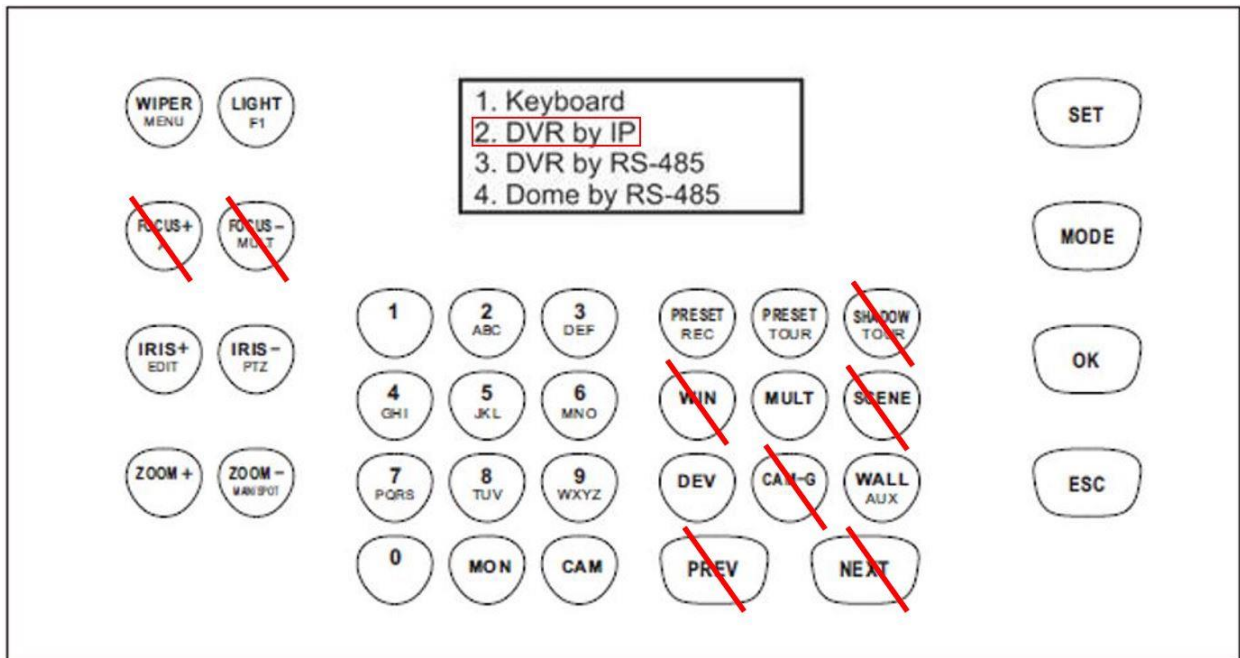












Table 4: How to control a recorder using *DVR by IP* mode

Numeric button	Keypad button	Action
N		Press the numeric button(s) of the desired recorder ID and this function button to select the recorder.
N		Press the numeric button for the desired monitor and this function button to select the monitor.
N		<p>Press the numeric button(s) for the ID of the desired camera and this function button to select the camera.</p> <p>For network video recorders, the keypad uses the IP camera numbering as shown in the recorder.</p> <p>For hybrid recorders, the keypad uses the camera numbering as shown in the recorder for the analog/HD video cameras.</p> <p>When IP cameras are connected to a hybrid recorder, the IP cameras Are using the following numbering:</p> <ul style="list-style-type: none"> • 4 channel recorder: IP cameras have numbers 5-8 • 8 channel recorder: IP cameras have numbers 9-16 • 16 channel recorder: IP cameras have numbers 17-32 • 32 channel recorder: IP cameras have numbers 33-64
N		Press the MULT button to change the multiview layout.
		<p>Not supported by all recorders. Press this button to have the same function as the F1 button on the recorder.</p> <p>In Playback mode, click to start and stop video clipping. For audio, press F1 and a numerical button to play the audio of the specified camera in live view.</p>

Numeric button	Keypad button	Action
		Not supported by all recorders. Press this button to have the same function as the F2 button on the recorder. In live view mode, 24-hour playback, and playback modes press to display or hide the time or control bar. In PTZ mode, stop all ongoing operations. Select or deselect an item. Enter a selected folder of the external storage device, such as a USB flash drive used for archiving.
		Press this button to enter or exit the recorder's menu on the monitor.
		Press this button to enter the Shortcut/System menu LCD screen.
		Press this button or the top of the joystick to enter or exit the PTZ control mode.
		Press this button to enter the keypad mode menu. Select one of the four modes from the list.
N		Press the numeric buttons for a desired preset and this button to call up the preset.
N		Press the numeric buttons for a desired preset tour and this button to call up the preset tour.
		Press this button to zoom in.
		Press this button to zoom out.
	Numeric buttons	Press a numeric button to enter a specific number.
		Press this button to delete the number entered.

Control a recorder using DVR by RS-485 mode

This guide explains how to control a recorder, which can be connected to a single analog/HD-TVI PTZ dome, using the RS-485 port of the TVK-610 keypad. It cannot be used with a decoder.

Connect the T+ and T- terminals of the keypad's RS-485 serial port to the recorder's KB port on its back panel.

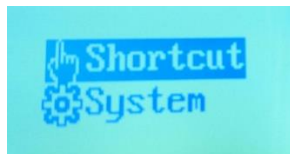
Before you set up the keypad to control a device, ensure that you have the RS-485 address information for the recorder to be controlled available.

Once you have selected the recorder and camera via the keypad, you can then use the keypad to control them.

Note: For the list of supported devices that can be controlled by this keypad mode, see Table 7 on page 54.

To control a recorder using *DVR by RS-485* mode:

1. Power-up the keypad and press the button on top of the joystick to get the login screen. Enter your name and password to log in to the keypad. The Shortcut/System menu LCD screen appears.

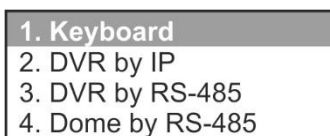


Note: In the Login dialog box, if you enter the wrong password three times, the user account will be locked for 30 minutes.

2. Select **Shortcut**.

Note: When operators access the keypad, they only get access to the Shortcut menu. They cannot access the System menu.

3. Press the **MODE** button on the keypad. The list of the four keypad operation modes to control devices is shown in the LCD display.



4. Press the numeric button **3** or press **PREV/NEXT** to scroll up/down the list, to select *DVR by RS-485* mode and press **OK**. The *Device ID* screen appears.



5. To select your device, enter the ID number of the recorder to control and then press the **DEV** button. The number appears beside **DEV**.
6. There is no **KEY** button on the keypad. This text stands for “Keyboard buttons”. You need to enter both the monitor and camera IDs here.

Enter the ID of the desired monitor and press the **MON** button.

Then enter the camera ID to be controlled and press the **CAM** button. These numbers appear alongside **KEY** on the screen.

7. Select the desired multiview format. Enter the multiview number and then press the **MULT** button. The multiview display settings available depend on the recorder. Your selected multiview setting is seen on the monitor. See the complete list of settings in Table 5 below.
8. You can now start to control the PTZ dome camera and recorder with the keypad. See Figure 20 and Table 5 below for the description of how to use the keypad buttons.

Figure 20: Controlling the DVR using the RS-485 serial port

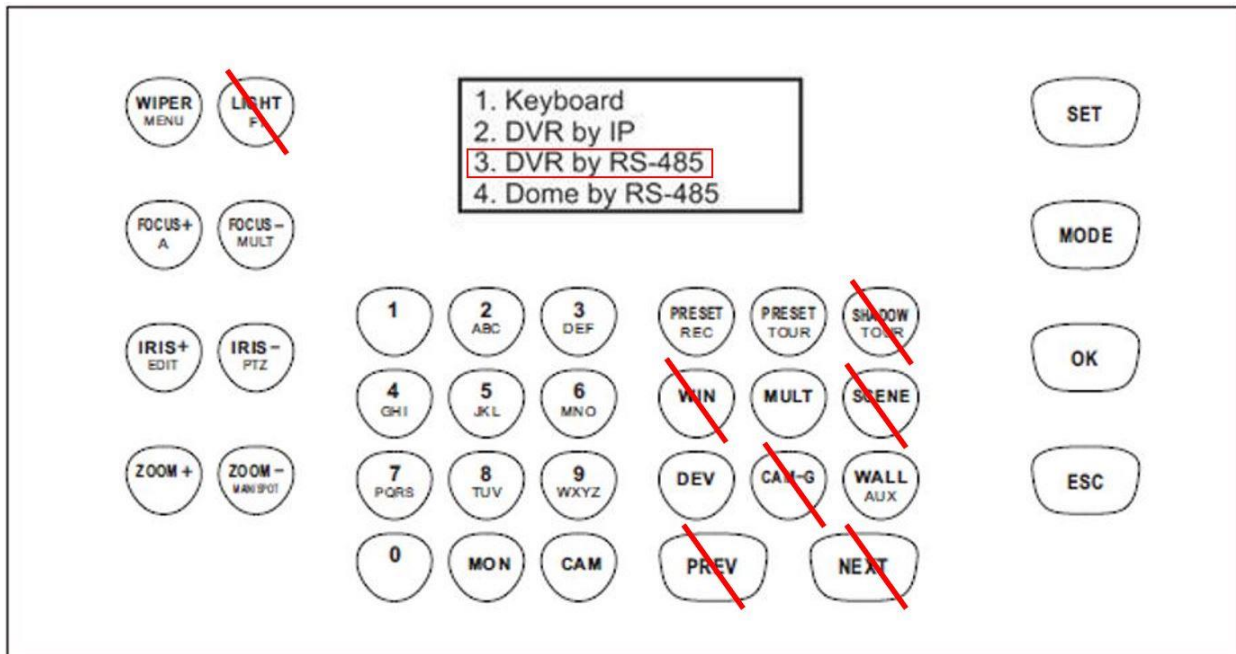









Table 5: How to control a device using *DVR by RS-485* mode

N		Press the numeric button of the desired recorder ID and this function button to select the recorder.
N		Press the numeric button of the desired monitor ID and this function button to select the monitor.
N		Press the numeric button of the desired camera ID and this function button to select the camera. For network video recorders, the keypad uses the IP camera numbering as shown in the recorder. For hybrid recorders, the keypad uses the camera numbering as shown in the recorder for the analog/HD video cameras. When IP cameras are connected to a hybrid recorder, the IP cameras use the following numbering: <ul style="list-style-type: none"> • 4 channel recorder: IP cameras have numbers 5-8 • 8 channel recorder: IP cameras have numbers 9-16 • 16 channel recorder: IP cameras have numbers 17-32 • 32 channel recorder: IP cameras have numbers 33-64.
N		Press the MULT button to change the multiview layout.
		Press the numeric buttons for the desired AUX1, AUX2, AUX3, and AUX4 on the keypad and this button to select the desired auxiliary function.
		Press this button to enter or exit the recorder's menu on the monitor.
		Press this button to enter the main menu on the LCD display.
		Press this button or the top of the joystick to enter or exit the PTZ control mode.
		Press this button to enter the keypad mode menu. Select one of the four modes from the list.

N		Press the numeric buttons for a desired preset and this button to call up the preset.
N		Press the numeric buttons for a desired preset tour and this button to call up the preset tour.
		Press this button to open the iris.
		Press this button to close the iris.
		Press this button to zoom in.
		Press this button to zoom out.
	Numeric buttons	Press a numeric button to enter a specific number.
		Press this button to delete the number entered.

Control a dome camera using Dome by RS-485 mode

This mode lets you control a single analog/HD-TVI PTZ dome using the RS-485 port of the TVK-610 keypad. It cannot be used with a decoder.

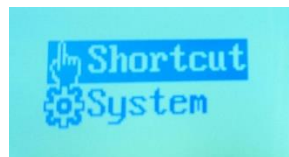
Connect the T+ and T- terminals of the keypad's RS-485 serial port to the dome camera's RS485+ and RS485- terminals.

Note: The keypad RS-485 settings must be the same as those for the analog dome camera.

Note: For the list of supported devices that can be controlled by this keypad mode, see Table 7 on page 54.

To control a device using Dome by RS-485:

1. Power-up the keypad and press the button on top of the joystick to get the login screen. Enter your name and password to log in to the keypad. The Shortcut/System menu LCD screen appears.



Note: In the Login dialog box, if you enter the wrong password three, the user account will be locked for 30 minutes.

2. Select **Shortcut**.

Note: When operators access the keypad, they only get access to the Shortcut menu. They cannot access the System menu.

3. Press the **MODE** button on the keypad. The list of the four keypad operation modes to control devices is shown in the LCD display.

- | |
|--|
| <ol style="list-style-type: none"> 1. Keyboard 2. DVR by IP 3. DVR by RS-485 4. Dome by RS-485 |
|--|

4. Press the numeric button 4 or press **PREV/NEXT** to scroll up/down the list, for *Dome by RS-485* mode and press **OK**.
5. **SITE** appears on the LCD screen. Enter the RS-485 address of the dome camera to control and then press **OK**.

SITE:

6. The keypad can now be used to control the selected dome camera. See Figure 21 and Table 6 below for information on the buttons to use for controlling the selected camera.

Figure 21: Controlling dome cameras by the RS-485 serial port

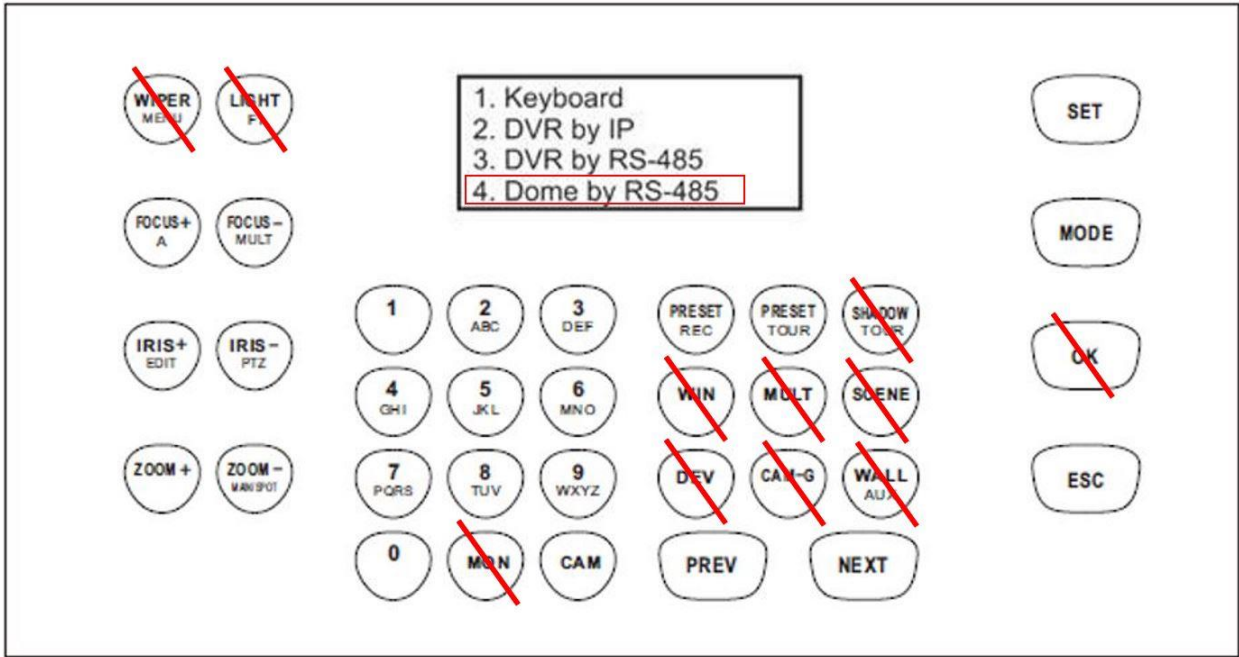













Table 6: How to control a device using *Dome by RS-485* mode

Numeric button	Keypad button	Action
N		Press the numeric button for the desired camera ID (RS-485 address) and press the CAM button to select the camera.
	/ TOP	Press this button or the top of the joystick to enter or exit the PTZ control mode.
		Press this button to enter the keypad mode menu. Select another mode from the list.
		Press this button to enter the Shortcut/System menu LCD screen.

Numeric button	Keypad button	Action
N		Press the numeric buttons for a desired preset and this button to call up the preset.
N		Press the numeric buttons for a desired preset tour and this button to call up the preset tour.
		Press this button to focus far.
		Press this button to focus near.
		Press this button to open the iris.
		Press this button to close the iris.
		Press this button to zoom in.
		Press this button to zoom out.
	Numeric buttons	Press a numeric button to enter a specific number.
		Press this button to switch to the previous camera.
		Press this button to switch to the next camera.
		Press this button to delete the number entered.

Appendix A: List of supported devices by keypad mode

The devices connected to the keypad do not support all four keypad modes. See Table 7 below for the list of supported devices for each keypad mode.

Table 7: List of supported devices by keypad mode

Device	Keypad mode
TruVision PTZ cameras:	
TruVision IP Compact PTZ cameras	Keyboard
TruVision IP Full Size PTZ cameras	Keyboard
TruVision Stainless Steel IP PTZ cameras	Keyboard
TruVision TVI PTZ cameras	Keyboard, Dome by RS-485
TruVision recorders:	
TVN 11	Keyboard, DVR by IP, DVR by RS-485
TVN 21	Keyboard, DVR by IP, DVR by RS-485
TVN 12	Keyboard, DVR by IP
TVN 22	Keyboard, DVR by IP, DVR by RS-485
TVN 23	Keyboard, DVR by IP
TVR 15HD	Keyboard, DVR by IP, DVR by RS-485
TVR 16	Keyboard, DVR by IP, DVR by RS-485
TVR 17	Keyboard, DVR by IP
TVR 45HD	Keyboard, DVR by IP, DVR by RS-485
TVR 46	Keyboard, DVR by IP, DVR by RS-485
TruVision decoders:	
TVE-DEC11	
TVE-DEC12	
TVE-DEC13	
TruVision encoders and non-PTZ IP cameras:	None (only as an input)