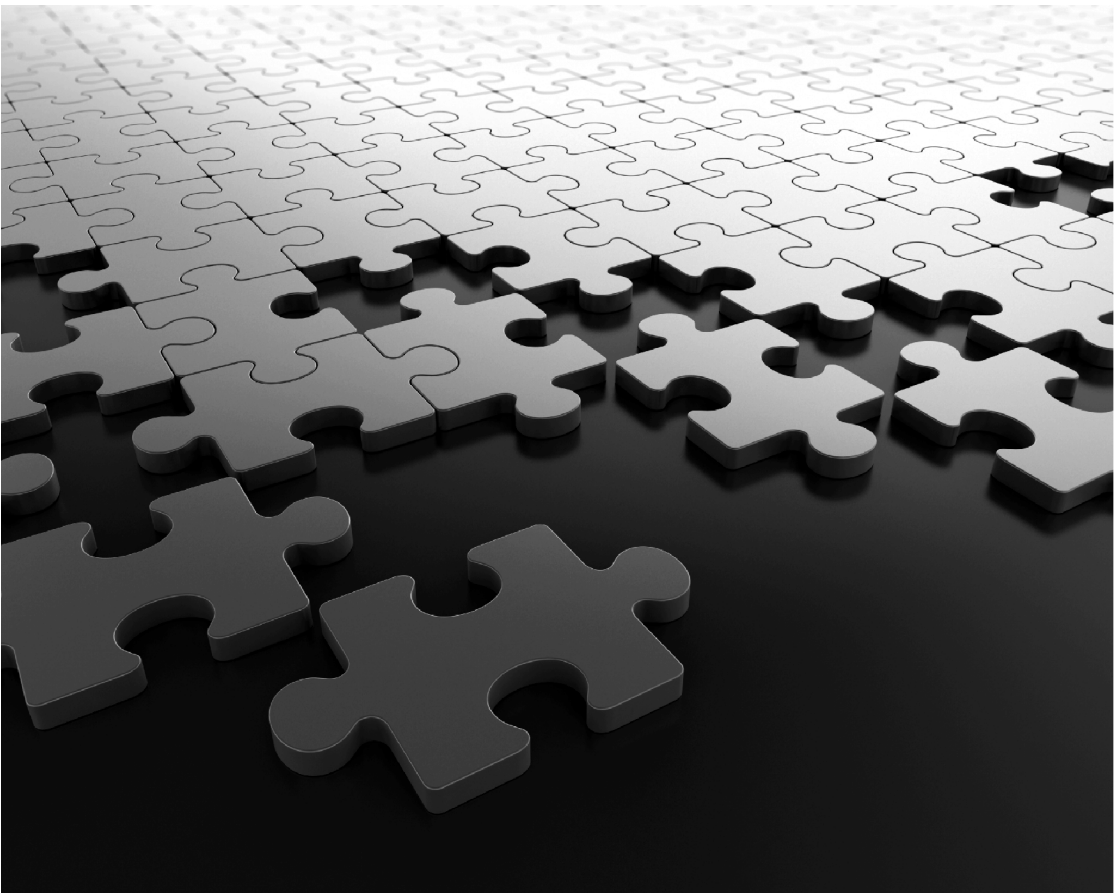


SATATYA HVR

Quick Start



Matrix SATATYA HVR

Video Surveillance Solution

Quick Start



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Version V1

Release date: September 29, 2016

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Know Your SATATYA HVR

Thank you for choosing the Matrix SATATYA HVR, the Hybrid video surveillance recorder available in configurations of 4, 8, 16 and 24 channels. Built on a high performance embedded microprocessor and video compression technology, SATATYA HVR provides uninterrupted performance while recording, monitoring and playback, best image quality with minimum storage space requirement. In addition to efficient local and remote monitoring, it offers an effective alarm management system.

This Quick Start guide is meant to help you get familiar with SATATYA HVR, install the device and configure its basic parameters.

This is a common document for all the configurations of SATATYA HVR. The different variants are:

HVR 1624P/ HVR 1624S: Analog Channels are 16, Max IP Camera supported are 24, Device can connect maximum 24 Cameras with the Combination of IP and Analog Cameras.

HVR 0824P/ HVR 0824S: Analog Channels are 8, Max IP Camera supported are 24, Device can connect maximum 24 Cameras with the Combination of IP and Analog Cameras.

HVR 0408P: Analog Channels are 4, Max IP Camera supported are 8, Device can connect maximum 8 Cameras with the Combination of IP and Analog Cameras.

HVR 0408S: Analog Channels are 4, Max IP Camera supported are 8, Device can connect maximum 8 Cameras with the Combination of IP and Analog Cameras.

For the purpose of illustration, the 16-channel configuration of SATATYA HVR is used throughout this document. The HVR Variants are referred in the document by following conventions:

HVR 1624P/ HVR 1624S: HVR with 16 Channel, HVR16

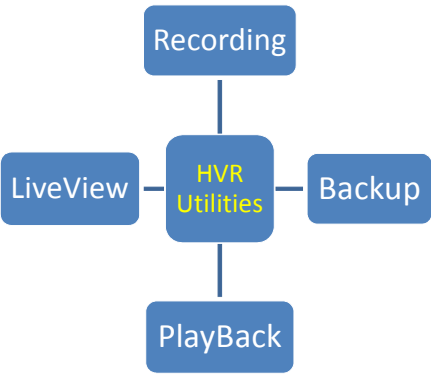
HVR 0824P/ HVR 0824S: HVR with 8 Channel, HVR8

HVR 0408P/ HVR 0408S: HVR with 4 Channel, HVR4

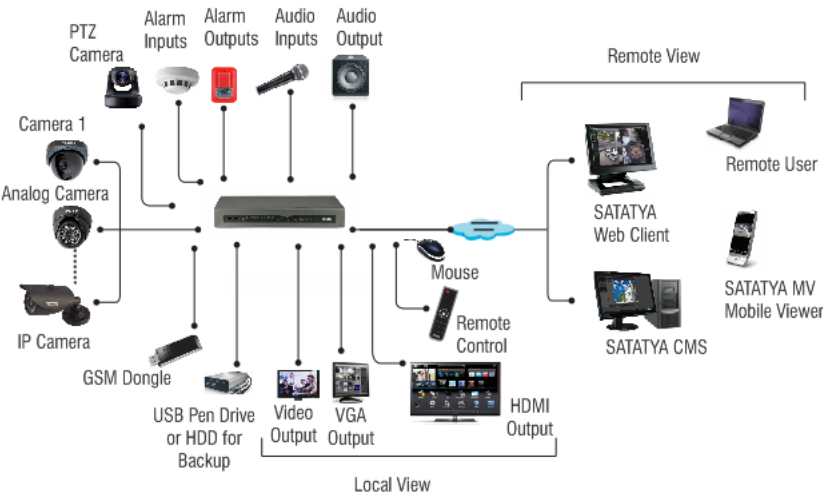
HVR16/8 in document refers to HVR16 and HVR08.

For complete product information and for detailed instructions on the installation and configuration of SATATYA HVR, you may refer the *Matrix SATATYA HVR System Manual*. A copy of the manual is provided to you on the product CD.

Satatya HVR Utilities

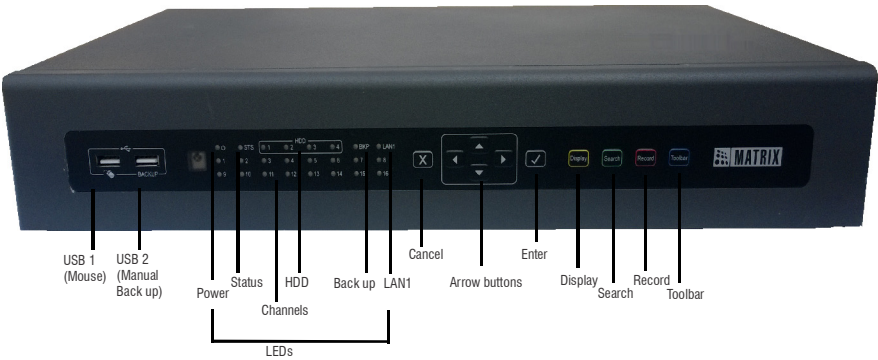


The Interfaces

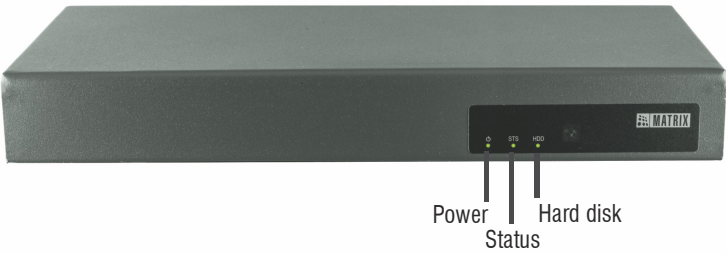


The Front Panel

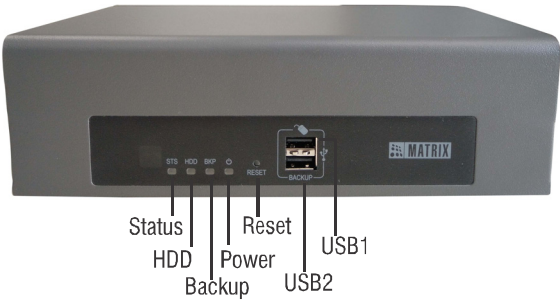
HVR 16/8P (HVR 1624P and HVR 0824P)



HVR 16/8S (HVR 1624S and HVR 0824S)



HVR 0408P and HVR 0408S



The front panel has a set of interfaces and controls to operate the SATATYA HVR and LEDs for indication of events on the HVR.

Control buttons

Sr. No.	Name	Function	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
1	USB port 1	To connect USB Mouse external USB storage device for Manual backup.	USB Mouse	No	USB Mouse	No	USB Mouse, dongle and Manual backup.	USB Mouse, dongle and Manual backup.
2	USB port 2/ Backup	To connect external USB storage device.	Manual backup	No	Manual backup	No	USB Mouse, Scheduled backup	USB Mouse, Scheduled backup
3	Display	Loads Display Layout list on the screen. This button is also mapped to the Default button on the menu screens.	Yes	No	Yes	No	No	No
4	Search	Loads the Playback Search option for recorded files. This button is also mapped to the Refresh button on the menu screens.	Yes	No	Yes	No	No	No

Sr. No.	Name	Function	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
5	Record	Starts the manual recording. This button is also mapped to the Save button on the menu screens.	Yes	No	Yes	No	No	No
6	Toolbar	Loads the tool bar on the local display and navigates to different Configuration options.	Yes	No	Yes	No	No	No
7	Enter button	Press to select desired menu item, to select highlighted option from the virtual keyboard. This button is also used to load the menu list over the selected monitoring window.	Yes	No	Yes	No	No	No
8	Left right Arrow keys	To navigate between the options after selecting a menu item. Also used to navigate between the monitoring windows or set of channels in the event of default layout template being loaded. Also used to navigate on the virtual keyboard.	Yes	No	Yes	No	No	No
9	Up Down Arrow Keys	To scroll through the various values available for each parameter of a functionality. Also used to navigate on the virtual keyboard.	Yes	No	Yes	No	No	No

Sr. No.	Name	Function	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
10	Cancel	Highlights the Cancel button to exit an interface. It is also used to return from the full screen view of a particular channel to the selected layout. It is also used to unload the menu list over the selected the window.	Yes	No	Yes	No	No	No
11	Reset	Press and hold down the reset button for atleast 4 seconds to default the following parameters. <ul style="list-style-type: none"> • LAN Settings • User Settings. • General Settings 	No	No	No	No	Yes	Yes

SATATYA HVR can be operated using a mouse (wired or wireless) and an infrared Remote Control. The infrared (IR) sensor is located on the front panel.

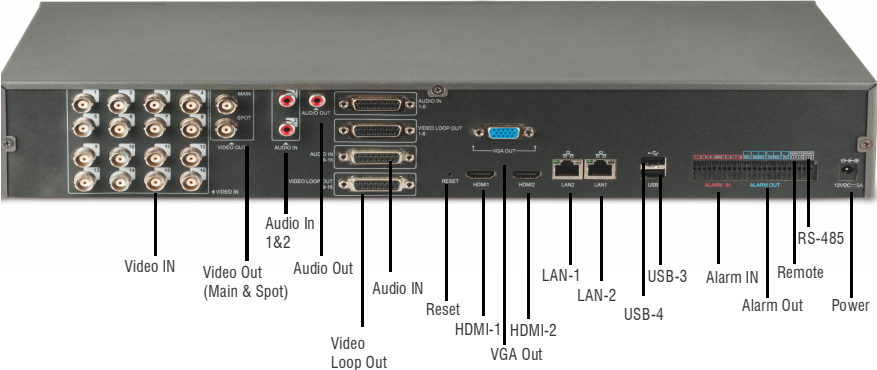
LEDs

LED	Color	Cadence	Description
Status	Green	3000 ON–1000 OFF	System in normal state.
	Orange	1000 ON–5000 OFF	Incomplete Volume.
		2000 ON–2000 OFF	Storage Alert.
		1000 ON–3000 OFF	Disk Full.
		1000 ON–1000 OFF	Formatting Disk.
	Red	1000 ON–2000 OFF	Firmware upgrade in progress.
	Red	1000 ON–1000 OFF	Firmware upgrade failed.
HDD1/ HDD2	Green	Steady	Disk normal.
	Green	1000 ON–2000 OFF	Disk error.

LED	Color	Cadence	Description
Backup Button	NA	LED is not illuminated	No disk.
	NA	LED is not illuminated	No backup device connected.
	Green	Steady ON	Device ready for backup.
	Green	2000 ON–2000 OFF	Backup in progress.
	Green	1000 ON–3000 OFF	Backup is disabled.
	Green	1000 ON–2000 OFF	Backup device is full.
	Green	1000 ON–1000 OFF	Formatting backup device.
Power Button	Green	1000 ON–3000 OFF	Supply connected but application not initialized.
	Green	500 ON–500 OFF	Application initialization.
	Green	Steady	Idle state.
LAN 1 LED	Green	Steady	HVR is connected to the network
	Green	LED is not illuminated	HVR is disconnected from the network
	Green	2000 ON–1000 OFF	Changing the IP Address of HVR
Channel	Green	Steady	Camera is connected to the respective channel

The Rear Panel

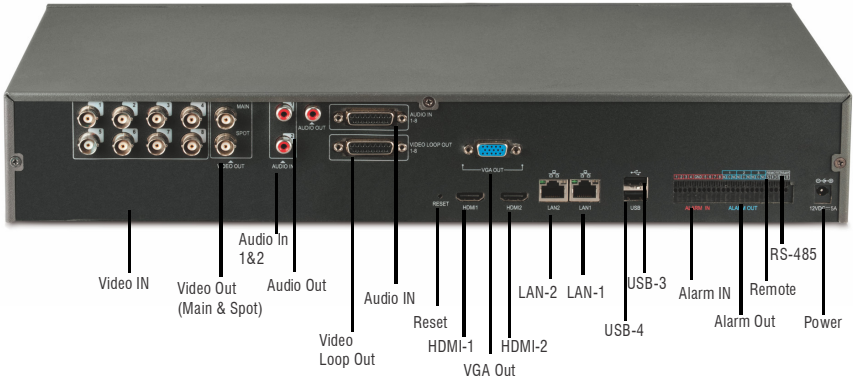
HVR 1624P



HVR1624S



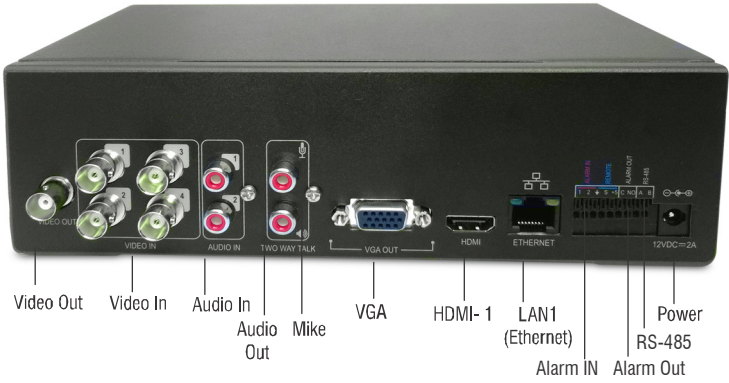
HVR 0824P



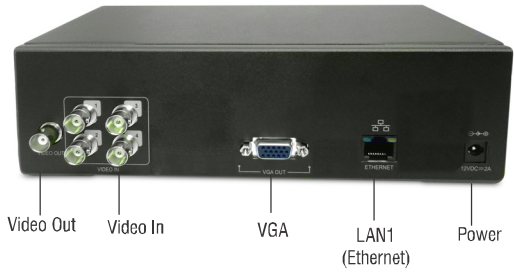
HVR 0824S



HVR 0408P



HVR 0408S



Note: For 15 pin connector, consider pin1 from the left most pin.

Ports and Connectors

Interface	Connector	Description	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
12VDC	DC Jack	To connect 12VDC Power Adapter	Yes (5A)	Yes (2A)	Yes (5A)	Yes (2A)	Yes (2A)	Yes (2A)
Reset	Reset Pin	Press and hold down the reset button for atleast 4 seconds to default the following parameters. <ul style="list-style-type: none"> • LAN 1 Settings • User Settings • General Settings 	Yes	Yes	Yes	Yes	No	No
ALARM IN	Push Type Terminal	To connect a sensor device to detect alarm events.	Yes(8)	Yes(4)	Yes(8)	Yes(4)	Yes(2)	No
ALARM OUT	Push Type Terminal	To connect an alarm sounding relay device such as a hooter or siren.	Yes(3)	Yes(1)	Yes(3)	Yes(1)	Yes(1)	No
REMOTE Extender	Push Type Terminal	To connect a Remote IR Receiver.	Yes	No	Yes	No	No	No
RS 485	Push Type Terminal	The PTZ cameras can be connected to the A and B ports of HVR in RS485 loop. The dip switches on the PTZ cameras are used to set the RS485 address of the cameras.	Yes	Yes	Yes	Yes	Yes	No

Interface	Connector	Description	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
HDMI 1	HDMI (MAIN)	To connect a high definition digital monitor or TV for Main view.	Yes	Yes	Yes	Yes	Yes	No
HDMI 2	HDMI (SPOT)	To connect a high definition digital monitor or TV for Spot view	Yes	No	Yes	No	No	No
LAN 1	RJ45	To connect a standalone personal computer, or a LAN Switch, or to connect to the Internet over a DSL Modem or Router.	Yes	Yes	Yes	Yes	Yes	Yes
LAN 2	RJ45	To connect a standalone personal computer, or a LAN Switch, or to connect to the Internet over a DSL Modem or Router.	Yes	No	Yes	No	No	No
USB -3	USB Ports	The USB upper port is used for connecting mouse, GSM dongle or Manual Backup	Mouse, GSM Dongle	Mouse, Manual Backup	Mouse, GSM Dongle	Mouse, Manual Backup	No	No
USB -4	USB Ports	The USB lower port is used for connecting the USB Flash drive for Scheduled back up.	Mouse, Scheduled Backup	Mouse, GSM Dongle, Scheduled Backup	Mouse, Scheduled Backup	Mouse, GSM Dongle, Scheduled Backup	No	No

Interface	Connector	Description	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
VGA OUT	VGA	To connect a VGA type monitor (LCD monitor of a personal computer) for local viewing; to access HVR controls and configuration settings from the display.	Yes	Yes	Yes	Yes	Yes	Yes
Audio IN	RCA	To connect audio input device such as a mike.	Yes	Yes	Yes	Yes	Yes	No
Audio OUT	RCA	To connect a low impedance earphone, active sound box or an amplified speaker.	Yes	Yes	Yes	Yes	Yes	No
Two-way Talk	RCA	Currently Not in Use	No	No	No	No	Yes	No
Video Out-Main	BNC	The "Main" BNC Connector is used to connect a CVBS monitor for local viewing, to access HVR controls and configuration settings from the display.	Yes	No	Yes	No	No	Yes
Video Out-Spot	BNC	The "Spot" BNC connector is used to connect a CVBS monitor configured for local viewing only.	Yes	Yes	Yes	Yes	Yes	No

Interface	Connector	Description	HVR 1624P	HVR 1624S	HVR 0824P	HVR 0824S	HVR 0408P	HVR 0408S
Video Inputs	BNC	These are used to connect standard PAL or NTSC Analog video cameras.	Yes	Yes	Yes	Yes	Yes	Yes
Audio In(1-8)	DB-15	First to eight channel audio input DB-15 port can be used to connect multiple audio inputs.	Yes	No	Yes	No	No	No
Audio In(9-16)	DB-15	First to eight channel audio input DB-15 port can be used to connect multiple audio inputs.	Yes	No	Yes	No	No	No
Video Loop Out (1-8):	DB-15	These output provide loop through connections, and can be used for direct monitoring of connected video cameras.	Yes	No	Yes	No	No	No
Video Loop Out (9-16):	DB-15	These output provide loop through connections, and can be used for direct monitoring of connected video cameras.	Yes	No	No	No	No	No



In HVR4 channel, there is only one LAN/ Ethernet port so consider as LAN1 and HDMI port as HDMI1 in this document.

The User Interface

You can view recordings, operate and configure SATATYA HVR locally (on-site), or from any location across the world on a network computer. You can also view live videos on smart phones.

Local View

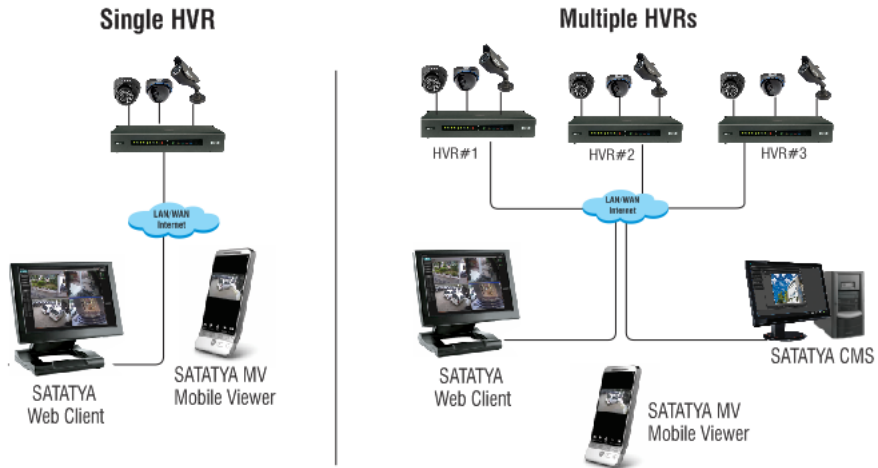
The Local View enables on-site access to live and stored videos of SATATYA HVR. You can access all the features and configure the HVR settings on the Monitor connected to your HVR.

You can use the Control Buttons on the front panel, or a mouse or the Remote Control for operating the device. SATATYA HVR provides IR Module Extension. You can connect an IR Remote Receiver to your HVR and use the Remote Control from a distance of 100 meters depending on the quality of the cable used. IR Extension is useful when the SATATYA HVR is located at considerable distance from you.



Remote View

SATATYA HVR offers you three options for Remote View: A Web Client, a Central Management System(Core) and a Mobile Viewer.



SATATYA Web Client (Device Client)

The SATATYA Web Client enables access to live and stored video images of SATATYA HVR from a remote location through the Web. Using the SATATYA Web Client you can access, search, browse, display and transfer stored video to a remotely connected workstation. You can configure the HVR and camera settings, receive notification of events such as alarm, motion detection and video loss.

SATATYA CMS (SATATYA Core)

Matrix SATATYA CMS is a centralized video surveillance application server to monitor and control multiple recording devices from a single location. Using SATATYA CMS, you can view upto 36 video channels in a single window. The CMS application software is provided to you on the product CD of your HVR. To know more, read the *SATATYA CMS System Manual*, also provided on the product CD of your HVR.

SATATYA Mobile Viewer (SATATYA SIGHT)

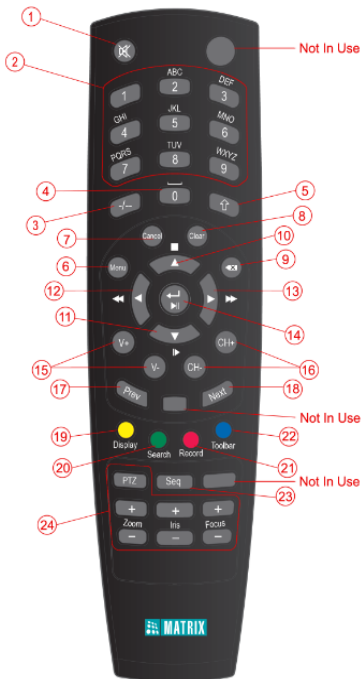
You can view live video of the recording any time, anywhere, on your smart phone using the mobile viewer SATATYA MV.

SATATYA MV supports live viewing of any one channel and is available for Android-based phones and iPhone™.

To know more, read the User Guides *Matrix SATATYA MV for Android* and *Matrix SATATYA MV for iPhone*.

The IR Remote Control

In addition to the mouse, you can operate the SATATYA HVR and configure it with an infrared Remote Control.



Sr. No.	Button Name	Function
1	Mute	To disable audio mode, toggles between the enable and disable audio.
2	Alphanumeric buttons	To enter password, channel or switch channel.
3	-/--	To change the single or two digit channel number.
4	0 and Spacebar	The '0' button loads the default layout, also used for creating space.
5	Shift Key ⇧	No action in idle mode. To toggle between Uppercase and Lowercase characters on the virtual keyboard.
6	Menu	To load menu list (Substream, PTZ control, Start Recording, Snapshot, Zoom In, Start Audio) on the selected window in the Local view.
7	Cancel	To highlight the Cancel button to exit an interface. To return from the full screen view of a particular channel to the selected layout.
8	Clear	To clear the selection.
9	Backspace	To edit text fields.
10	Up	To scroll through the various values available for each parameter of a functionality. To navigate through the virtual keyboard.
11	Down	To scroll through the various values available for each parameter of a functionality. To navigate through the virtual keyboard.
12	Left	To navigate options in a menu item. To navigate between the monitoring windows or set of channels when the default layout template is being loaded. To navigate through the virtual keyboard.
13	Right	To navigate options in a menu item. To navigate between the monitoring windows or set of channels when the default layout template is being loaded. To navigate through the virtual keyboard.
14	Enter	To enter menu, select the desired menu option. To select characters on the virtual keyboard, to store a setup value in the menu, or to display the 1 x 1 layout of the selected monitoring window.
15	Volume Control	To load the volume control interface for the audio option.
16	Channel Control	To load the next or previous channel or set of channels depending on the current layout.
17	Previous	To navigate to the previous frame, when the HVR is in playback mode.
18	Next	To navigate to the next frame, when the HVR is in playback mode.
19	Display	To select the Layout from the various layout templates of the HVR. This button is also mapped to the Default button on the configuration menu screens.

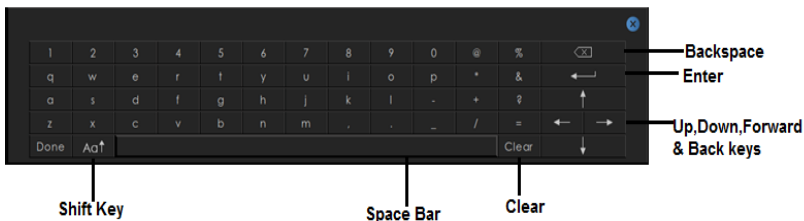
Sr. No.	Button Name	Function
20	Search	To load the search interface to view recordings. This button is also mapped to the Refresh button on the configuration menu screens.
21	Record	To load the manual recording interface. This button is also mapped to the Save button on the configuration menu screens.
22	Toolbar	To load the tool bar. This button is also mapped to the Cancel button on the configuration menu screens.
23	Seq	To start auto sequencing of screen in full screen mode.
24	PTZ Controls	To adjust the iris, focus and zoom of the PTZ camera.

Navigating the Configuration Menu with Remote Control

- Press the **Toolbar** button of the Remote Control to load the toolbar on the display.
- Press the **Back** or **Forward** arrow button of the Remote to reach the desired menu option.
- When the desired option is highlighted, press the **Enter** button on the Remote Control.
- On the configuration window, press the **Forward** or **Back** arrow buttons on the Remote Control to reach the desired parameter. You may also use the **Up** or **Down** arrow buttons.
- Use the **Enter** button to make a selection.
- Some of the buttons that appear on the configuration menu screens require you to press a specific button on the Remote Control. See the table below for the mapping of buttons on the menu screens to the buttons on the Remote Control.

The Virtual Keypad

A virtual keypad will appear when you select an option on the Local View that requires you to type digits or alphabets.



If you are using a Mouse for operation,

- Click the digits or alphabets on the virtual keypad with the mouse and press the **Enter** button.
- Click the space bar to insert space.
- Click the **Shift** key to change case (upper case or lower case) for the alphabets.

If you are using a Remote Control for operation,

- Press the alphabets/digit buttons on the Remote Control to enter the digits/alphabets.
- Use the **Shift** button on the Remote Control to change case of the alphabets.
- Use the space bar button (button for digit '0') on the Remote Control to insert space.
- Use the **Clear** key to delete all characters you entered in the input field of the keypad.
- Use the **Backspace** key to delete one character at a time from the input field of the keypad.

OR

- Navigate the virtual keypad characters by pressing the **Up, Down, Forward, Back** arrow buttons on the Remote Control and press the **Enter** button on the Remote Control to select the desired characters.

Installing SATATYA HVR



WARNING!

- Opening or removing the device cover without adequate precautions may result in electric shock or exposure to other hazards.
- To reduce the risk of electric shock, do not perform any servicing other than that contained in the instructions in this document, unless you are qualified to do so. Servicing should be done by a qualified technician only.
- Use the product only for the purpose for which it was designed.

What Your Package Contains

- SATATYA HVR unit
- An (infrared) Remote Control unit
- A 12VDC @ 5A power adapter for HVR16/8P, 12VDC @ 2A power adapter for HVR16/8S and HVR 4 channel with the Power Cord
- Two Side Clamps for Rack Mounting in HVR16/8P
- Four M3x8 CSK PH Screws for the Side Clamps in HVR 16/8P
- 16 Hard Disk fitting screws for HVR 16/8P and 2 screws for HVR 16/8S and HVR 4 channel
- 4 Hard Disk Power Cable for HVR16/8P and 1 for HVR 16/8S and HVR4 channel
- 4 Hard Disk SATA Cable for HVR16/8P and 1 for HVR 16/8S and HVR4 channel
- 1 DB15m to RCA connector cable for HVR16/8P channel
- A Quick Start Guide
- Product CD containing the Central Management Software (CMS) installer, the System Manuals for CMS and SATATYA HVR
- A USB Mouse
- A Warranty Card

Things You Will Need

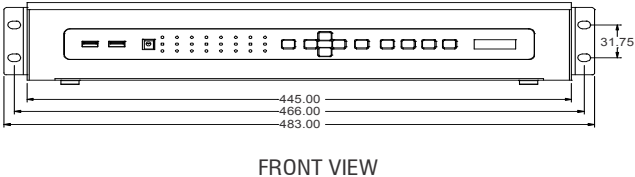
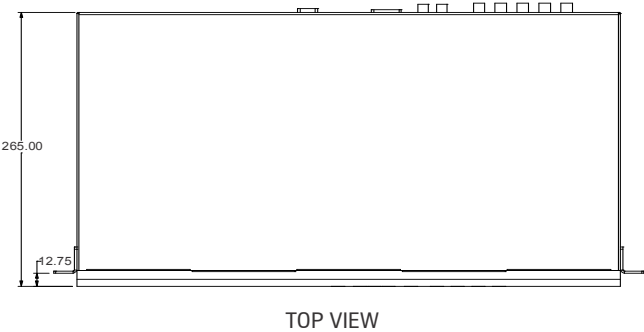
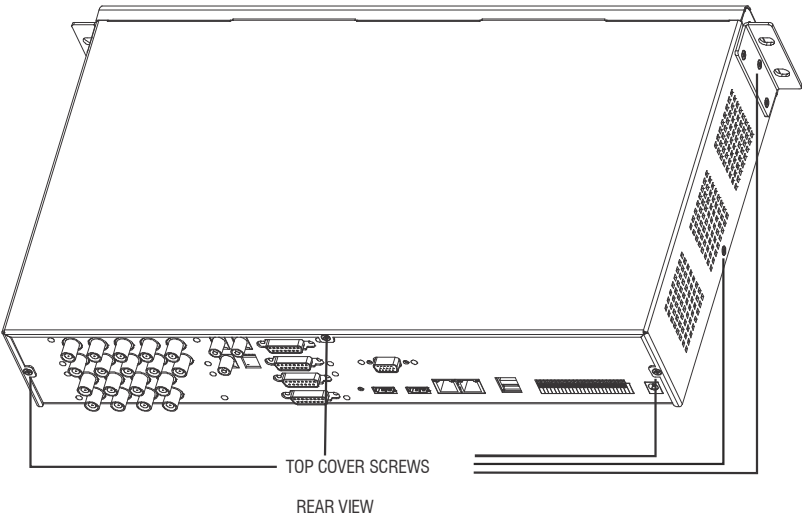
- A Power Hand Drill
- A Wire Stripper
- Insulation Tape
- A Screwdriver set
- Cameras (Analog Cameras, IP Cameras, PTZ cameras).
- Monitors (VGA, HDMI) with the appropriate cables to connect.
- At least one SATA Video Surveillance Hard Disk (upto 4TB), if you want to record on a hard disk in the HVR.
- A USB mouse (Wired or Wireless) to operate the HVR, if required.

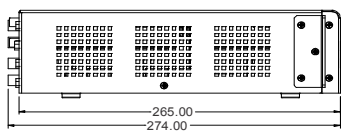
- A personal computer or a LAN computer with a browser installed on it (Internet Explorer, Mozilla Firefox, Google Chrome), if you want access the HVR from a remote location.
- Any audio device you want to connect with cables.
- An Ethernet cable to connect to a computer/LAN/WAN (over a DSL Modem or Router).
- Insulated copper wires (wire range: 28-16 AWG, 0.5 -1.5mm²), if you want to connect sensor and alarm devices.
- A remote IR Receiver and IR extension cable, if you want to access the controls on the HVR Display located at considerable distance.
- Two AAA Batteries for the IR Remote Control.
- A rack, if you want to mount the HVR16/8P on a rack.

Preparing for Installation

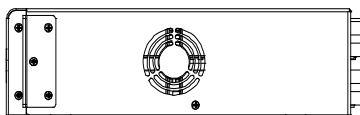
- Unpack SATATYA HVR and check the package contents.
Do not discard the packaging material. If any of the items is missing or damaged, please contact the source from where you purchased the product.
- Select a suitable location after reviewing your video surveillance layout requirements, cable runs and power needs.
 - The SATATYA HVR is meant for indoor installations only.
 - The SATATYA HVR16/8P can be mounted on a rack, HVR16/8S can be placed on any stable flat surface such as a table or desk and HVR4 can be wall mounted.
 - Select a suitable location for installation taking the following recommendations into consideration. The location should
 - be secure, yet easily accessible for servicing the equipment.
 - not expose the device to extreme heat or moisture, high voltages.
 - have adequate ventilation to prevent overheating.
 - be clear of any obstructions to the IR sensor, if you intend to use the remote control to operate the HVR.
 - be clear of any obstructions to the ventilation holes on the side panels of the HVR.
 - have a power outlet near by.
- Complete the wiring and installation of all the devices you want to connect to SATATYA HVR.
- You are recommended to first install the hard disk(s), make the required cable connections, and then mount the device. If you choose rack mounting, fix the side clamps and then mount the device.
- Refer to the following diagrams for the location of screws that you will need to remove and secure when installing the hard disks, wall mounting and rack mounting side clamp.

HVR16/8P (HVR 1624P & HVR 0824P)
For Rack Mounting





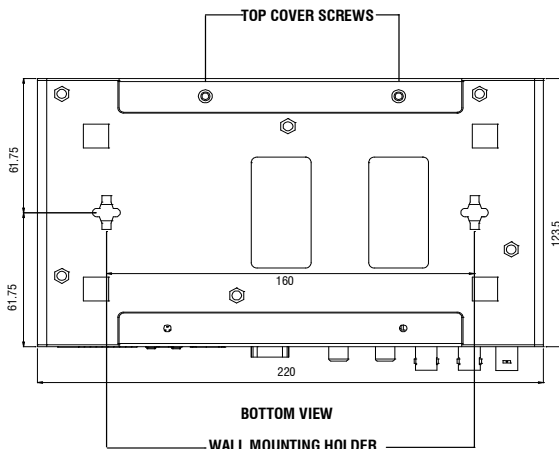
LEFT VIEW



RIGHT VIEW

HVR 4Channel (HVR 0408P & HVR 0408S)

For Wall Mounting



Installing the Hard Disk

SATATYA HVR 16/8P supports four hard disks whereas HVR 16/8S and HVR 4 supports 1 hard disk, each with upto 4 Terabytes of storage capacity.

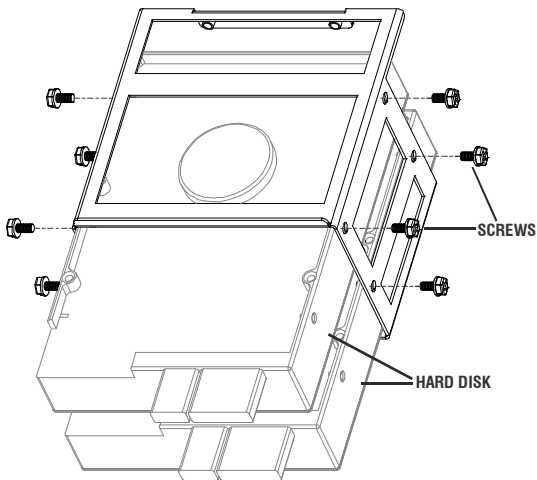
You are recommended to install video surveillance SATA Hard disks of any standard brand.



CAUTION! Any electrostatic energy coming in contact with the hard disk or the internal parts of the HVR can cause permanent damage to them. Before you begin the installation of the hard disk, make sure your workstation is static-free. Always wear an electrostatic discharge preventive wrist strap or belt and use a grounding mat.

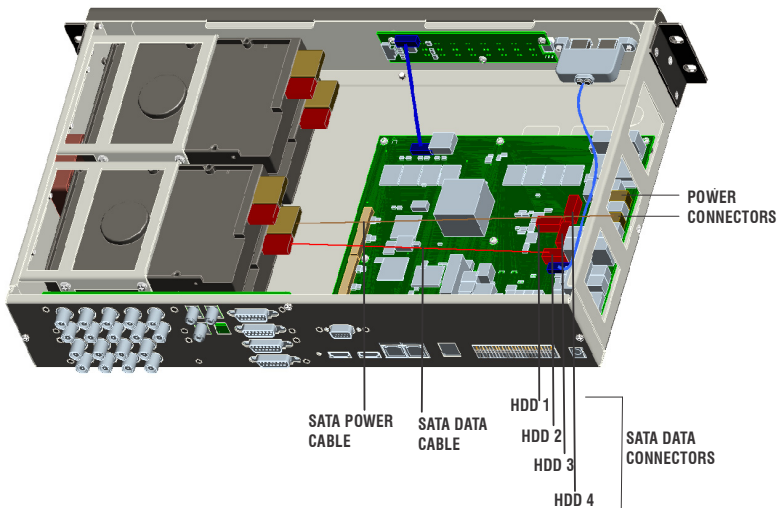
- Make sure power supply is disconnected. Unplug the power adapter, if you have connected it to SATATYA HVR.
- The top cover screws are located on the rear panel and the side panels. Remove the top cover screws and slide open the cover.
- Inside the device, you will find two sets of SATA power cable and data cable for each hard disk.

- Plug the SATA power cable and the data cable into the respective connectors on the Hard disk.

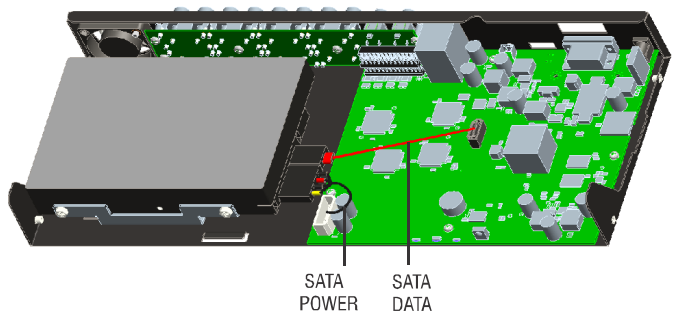


- Take the Clamp and Place the Hard Disk inside the Clamp. Secure the hard disk inside the Clamp with the four screws provided using a magnetic screw driver.
- Now Place the Clamp fitted with Hard disk on the bottom plate, align with the screws on the plate.

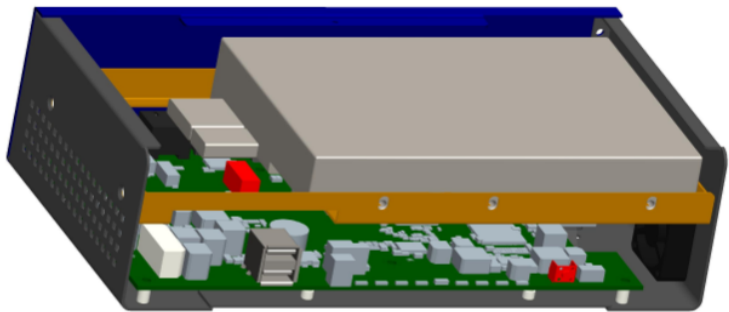
HVR16/8P (HVR 1624P & HVR 0824P)



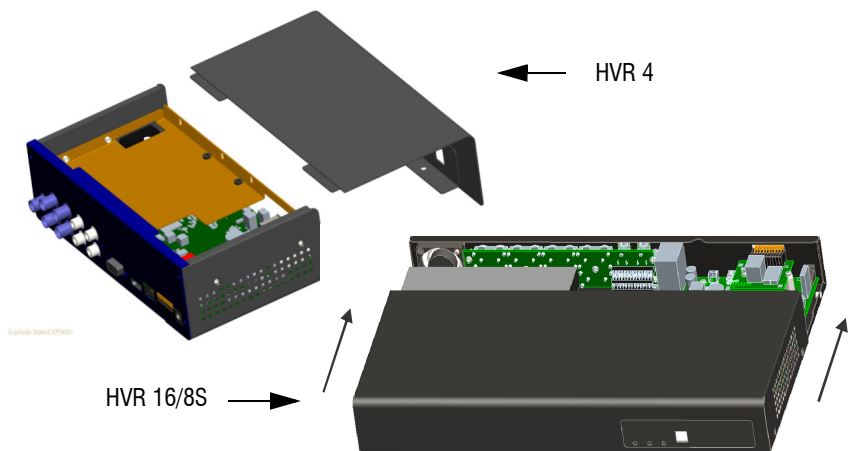
HVR16/8S (HVR 1624S & HVR 0824S)



HVR4 (HVR 0408P & HVR 0408S)



- Replace the top cover and secure it with the screws.



- Apply power to the HVR only after you have completed the entire installation.



It is possible to use your HVR without installing a Hard Disk. All you need to do is connect your HVR to a standalone personal computer or to a LAN computer and use the SATATYA Web Client for recording.

Connecting Devices

To connect the devices, verify the availability of the connecting ports to your HVR from [“Ports and Connectors”](#).

Cameras

- You can connect upto 24 Cameras with the combination of Analog and IP cameras, including multiple PTZ cameras, depending on the channel license you have.

Monitors

- If you are using a VGA type monitor, connect one end of the VGA cable to the Video IN of the monitor and connect the other end to the **VGA OUT** port of your HVR.



The recommended VGA cable length is 3 meters (9.8 ft.). When a monitor is connected to the SATATYA HVR, the default display resolution will be set at 1024x768. You can manually adjust the display resolution with the display options in SATATYA HVR. However, to obtain the best display and picture quality, you must know the optimal resolution setting of monitor. Refer the document of the monitor manufacturer.

- If you are using an HDMI compatible monitor such as a high definition Digital TV, connect one end of the cable to the Video IN of the monitor and the connect the other end to the **HDMI** port.
 - For Main view, connect the monitor to **HDMI 1**.
 - For Spot view, connect the monitor to **HDMI 2**.
- If you are using a CVBS monitor for local viewing, connect the BNC Connector to the “Main” **Video Out** port of HVR to access the controls and configuration settings from the display.



If you have connected the VGA OUT and the HDMI OUT of the HVR to the same monitor, you must select interface for viewing on the monitor.

Audio Inputs

The Audio input channel is provided on your HVR to which you can connect one microphone.

- If you are connecting a mike, connect the wire from the mike to the **Audio IN** port of your HVR.



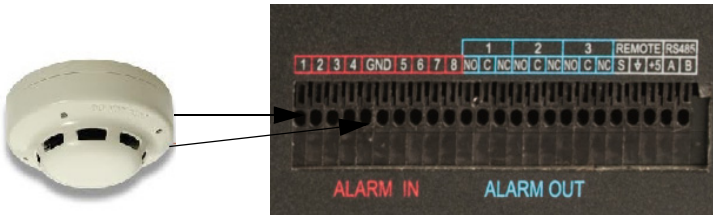
The wire from the mike must have an RCA connector. If the wire from the mike has a stereo connector, use an RCA to 3.5mm Stereo Converter cable. Connect the RCA end of the cable to the Audio IN of the HVR.

Audio Output

- You may connect low impedance earphone, active sound box or an amplified speaker to the **Audio OUT** port of your HVR 16/8.

Sensors

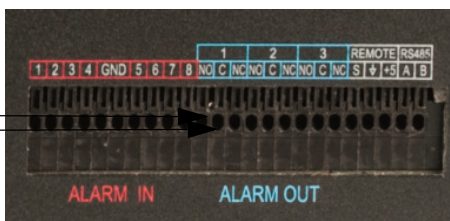
- You can connect upto 8 sensors to your HVR16/8P, 4 sensors to HVR 16/8S and 2 sensors to HVR 0408P. Connect the wires from the Sensor device you have installed into the **ALARM IN** port on the rear panel.
- Connect the NO/NC wire from the sensor into any pin (1, 2, 3, 4, 5, 6, 7, 8) of ALARM IN. Connect the ground wires from the sensor into any one of the “Ground” pins (marked with downward arrow).



HVR 16/8P includes HVR 1624P and HVR 0824P whereas HVR 16/8S includes HVR 1624S and HVR 0824S.

Alarm Devices

- You can connect upto 3 alarm devices to your HVR16/8P and 1 alarm device to HVR 16/8S and HVR 0408P. Connect the wires from the Alarm device (Hooter or Siren) you have installed into the **ALARM OUT** port on the rear panel.



Computer/LAN/WAN

- You can connect SATATYA HVR to a standalone personal computer or to a LAN switch or to a WAN for Remote View.
- Connect the Ethernet cable from your computer/LAN Switch to the Ethernet port on the rear panel.
- To connect SATATYA HVR to the internet, connect its Ethernet port either directly to the DSL Modem or Router or over a LAN Switch.



- When connecting the Ethernet Port of SATATYA HVR to a network computer, you may need to change the IP Address, the Subnet Mask and Gateway address of SATATYA HVR. You may ask your Network Administrator for the IP Address assignment used on the network, the IP Address, Subnet Mask and Gateway Address for SATATYA HVR. You may configure the IP Address Assignment and other network parameters from the Local View or from the SATATYA Web Client. [See "Configuring Network Settings" on page 38.](#)

Backup Storage Device

- To store back up of the recordings, you may connect any removable storage device such as an external hard disk or a pen drive in the following way

Device	Front Panel		Rear Panel	
	USB1	USB2	USB-3	USB-4
HVR1624P	USB Mouse	Manual Backup	Mouse/Dongle	Schedule Backup
HVR1624S	NA	NA	Mouse, Manual Backup	Mouse, GSM Dongle, Scheduled Backup
HVR0824P	USB Mouse	Manual Backup	Mouse/Dongle	Schedule Backup

Device	Front Panel		Rear Panel	
HVR0824S	NA	NA	Mouse, Manual Backup	Mouse, GSM Dongle, Scheduled Backup
HVR0408P	Manual Backup/ Dongle	Schedule Backup	NA	NA
HVR0408S	Manual Backup/ Dongle	Schedule Backup	NA	NA

Remote IR Receiver (Remote Controller)

- To use the remote control unit, insert two AAA Batteries in the remote control.

If you want to access the HVR display from a considerable distance, you may connect a remote IR Receiver to access the HVR controls. Connect the three conductors from a remote IR receiver unit to **REMOTE** terminal. See [“The IR Remote Control” on page 16](#).

Mouse

- Connect a wired or wireless mouse to any USB port of Front or Rear Panel of HVR.

GSM Dongle

- Connect the GSM dongle to the USB port as specified in [“Backup Storage Device”](#).

Connecting Power Supply

- Connect the power adapter provided to you to the power jack on the rear panel of HVR, 12VDC, 5A for HVR16/8P, 12VDC, 2A for HVR16/8S and HVR 4 channel.



The AC input to the Universal Power Supply adapter can be 90-285VAC@50- 60Hz. It is advisable to route the power supply from the mains through an Uninterrupted Power Supply (UPS) for continuous operation.

- If you have completed all the connections you want to make, plug the power adapter into the power outlet. Switch on the power supply. Wait for the reset cycle to complete.

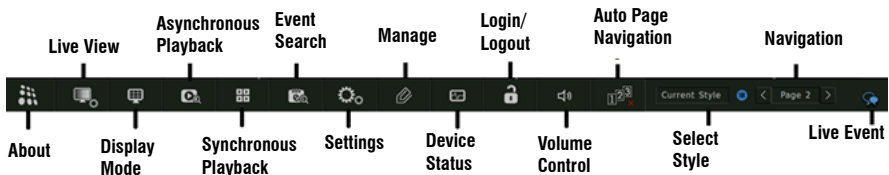
Accessing the SATATYA HVR

Accessing the Local View

- Make sure the Analog and IP Cameras connected on the network are powered on.
- Select the Input for the monitor you have connected.
- Switch on power supply to your HVR.
- The Matrix corporate logo will appear on your screen.
- The default monitoring layout which appears on the monitor screen is (4x4) for HVR with 16/8 channels and (2x2) for HVR with 4 channels.
- You may access the Local View using a mouse or the IR remote control.
- Log in with the **User Name** (default: admin) and **Password** (default: admin).

Using a Mouse

- Use the mouse to invoke the toolbar on the monitor screen .




- All configuration settings can be changed by clicking the **Settings** icon.



- On clicking the **Settings** button or just pressing the Menu key of the IR remote control, the following menu interface appears.



- To exit, click the **Logout** icon  from the Toolbar.

Using Remote Control

Navigate the tool bar using the Up, Down, Forward, Back keys. Use the ENTER key to select the highlighted option on the tool bar.

For detailed description of the function of each key on the remote, see [“The IR Remote Control”](#) under *Know Your SATATYA HVR*.

Accessing the Remote View

You can access the Remote view in three ways, using:

- SATATYA Device Client
- SATATYA Core
- SATATYA MV (mobile viewer).

Instructions for accessing the Device Client are provided in this document. To know how to use SATATYA Core and SATATYA MV, read their respective product documentation.

To use the SATATYA Device Client you will need,

- The IP Address of your HVR. Use the default IP Address of LAN 1 or LAN 2 when accessing for the first time.
- A network computer with
 - Operating Systems: Windows® XP or higher
 - Processor: Pentium IV at 1.8 GHz

- RAM: 2 GB recommended
- Hard disk: 40 GB
- Screen resolution: Minimum 1024 x 768
- Graphics Accelerator card with support for DirectX 9.0
- Network Interface card: 10/100 Base-T network adaptor
- A browser—Internet Explorer (6.0 and later), Mozilla Firefox, Google Chrome—installed on it.



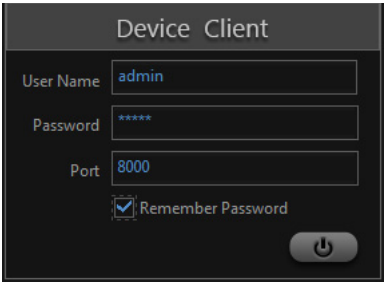
- The IP Address of the HVR must not conflict with that of any other device on the LAN and it should be in the same Subnet as the network computer you are trying to access. If you need to change the IP Address, Subnet Mask and Gateway Address of your HVR, do it first from the Local View and then connect the HVR to the LAN switch.
- If your network has dynamic IP Address assignment, it would be difficult to know the current IP Address of the HVR. You may use the **Matrix DNS Server** or the **Dynamic DNS** to assign a domain Name to the HVR. Each time you want to access the HVR from a remote location, you can use the name instead of the IP Address. To know more about this feature, refer the *Matrix SATATYA HVR System Manual*.

Now, follow these steps to install the HVR Device Client on the network computer.

- Open the browser window on the computer.
- In the Address bar, type the default IP Address of the LAN port of SATATYA HVR which is connected to the network.
 - For LAN 1, type: **http://192.168.1.123**
 - For LAN 2, type: **http://192.168.2.2**
- Click the **Go** button from the address bar of the browser or press the Enter key on your keyboard.
- If you are using **Internet Explorer**, you will get a prompt to download **ActiveX** controls. Download ActiveX¹ and refresh the browser.
 - You will get an alert message asking you if you want to allow the program SatatyaHVRClientSetup.exe to make changes to your computer.
 - Click **Yes**.
 - SATATYA Device Client will get automatically installed on your computer.
 - Refresh the browser.
 - The SATATYA HVR Device Client login window will appear.

1. ActiveX is Microsoft software component technology which facilitates sharing of information between differing applications. Hybrid video recorders utilize ActiveX to remotely view security cameras online.

- The SATATYA Device Client Login will appear.

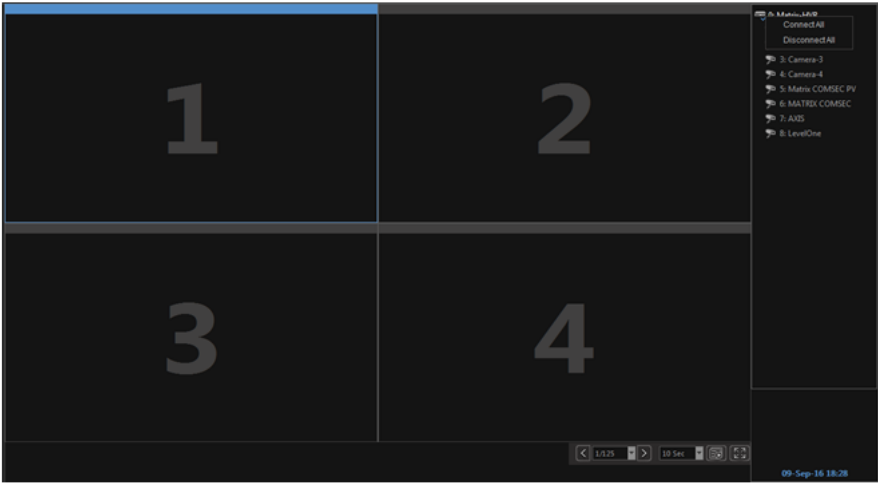


The image shows a 'Device Client' login window. It has a title bar 'Device Client'. Below it, there are three input fields: 'User Name' with 'admin' entered, 'Password' with '*****' entered, and 'Port' with '8000' entered. Below the 'Port' field is a checkbox labeled 'Remember Password' which is checked. At the bottom right is a power button icon.

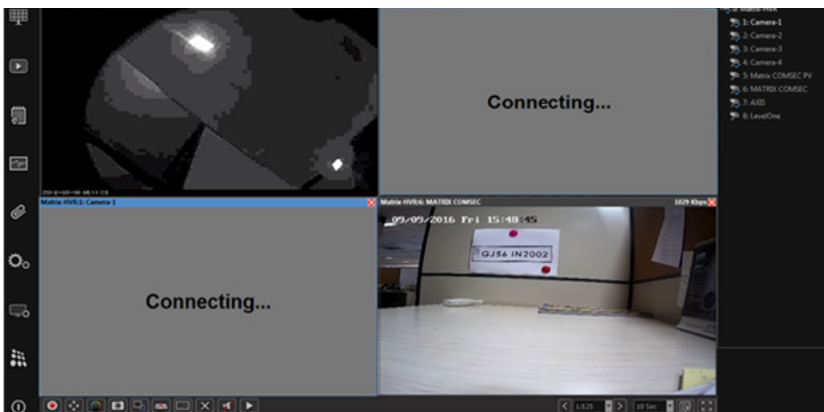
- SATATYA supports three access levels - Administrator, Operator and Viewer. The default user names and passwords for these three levels are:

Access Level	Default User Name	Default Password
Administrator	admin	admin
Operator	operator	operator
Viewer	viewer	viewer

- Log in as Administrator. The HVR display screen will open, with the default display layout as shown below:



- On the right pane of the window, right click on the device icon and select **Connect All** option.
- The images captured on the cameras will appear on the display.

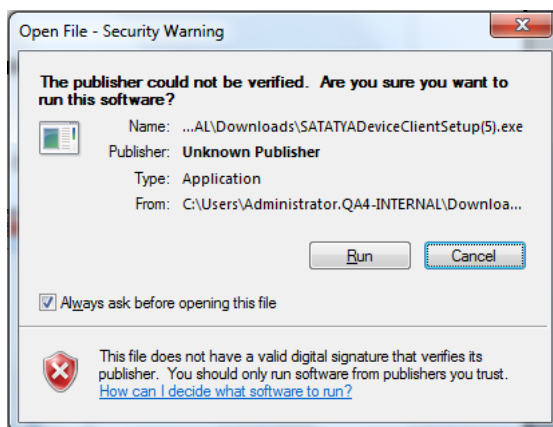


To know more about the HVR controls and configuration settings available on the Device Client, read the Matrix SATATYA HVR System Manual.



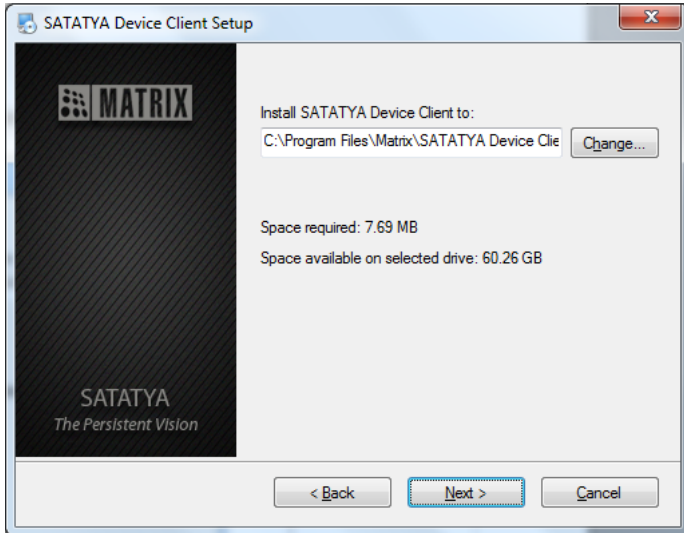
SATATYA HVR allows nine simultaneous login sessions on the Device Client.

- If you are using **Mozilla Firefox**² or **Google Chrome**, on typing the IP Address of SATATYA HVR, the download window will open.
- Click the **SATATYADeviceClientSetup** application to install the device client.

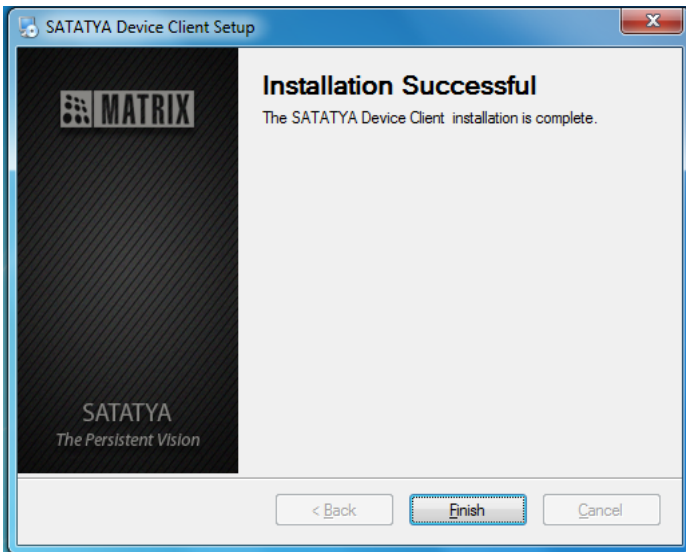


2. Instructions given here are with reference to Mozilla Firefox.

- Click the **Run** button. The Satatya Device Client Setup window appears as shown below.

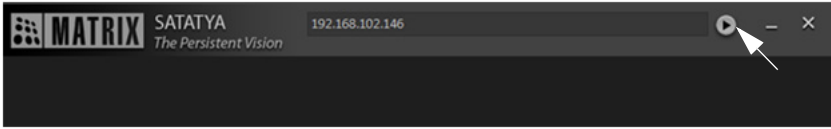


- Click on **Next** button to proceed with the installation process. If required, you may change the Path of the folder where the Device Client should be installed. The Installation Successful window appears as shown below.

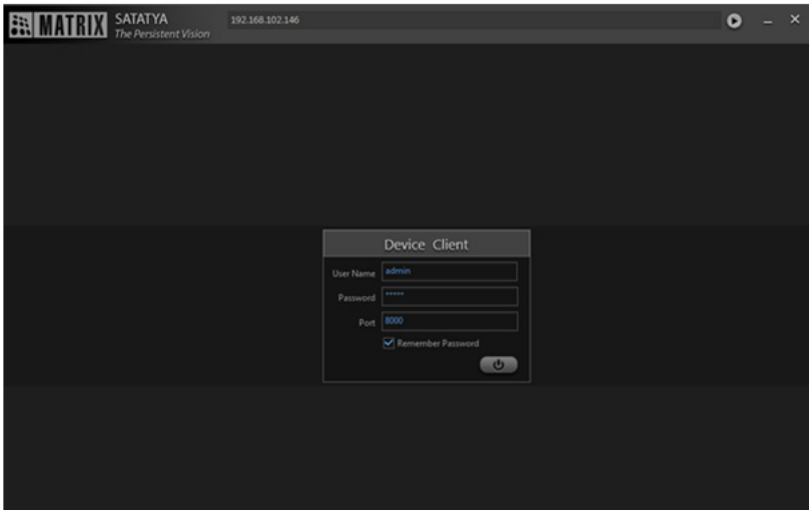


- Click on **Finish** to complete the installation. The Matrix SATATYA Device Client window will open

- Type the current IP Address of your HVR. When accessing for the first time, you may use the default IP Address.
- Click on the **Go** button to load the login page of the HVR.



- The SATATYA Device Client Login will appear.



- Log in as Administrator, on the right pane, right click on the device name and select **Connect All** option. The images captured on the cameras will appear on the display.

Configuring SATATYA HVR

Formatting the Hard Disk

You can format the hard disks you have installed from the Local View or from a remote location using the SATATYA Web Client.

From Local View

To format the Hard Disk you have installed in the HVR, make sure you have connected a to the HVR, the HVR is powered on and is working.

Invoke the tool bar using the mouse or remote control.

- Log in with the **User Name** (default: admin) and **Password** (default: admin).
- Click the **Settings** icon on the tool bar.
- Click **Storage and Backup Settings** and then click **HDD**.
- In **HDD Management** page, click the **Format** button.

SATATYA HVR will start formatting the hard disk. The status of the hard disk will change from **Normal** to **Creating** and then to **Formatting**.

From Remote View

- Make sure the computer you are using has the SATATYA Web Client installed.
- Open the Matrix SATATYA HVR Web Client on your computer.
- In **HVR Address**, type the current IP Address of the HVR you want to access.
- Click **Go**.
- Login as **admin**.
- Click the **Device Configuration** icon from the left pane of Webclient.
- In the Configuration menu, under **Storage and Backup Settings**, click **HDD**.
- In **HDD Management**, click the **Format** button.



Formatting of the Hard Disk is also indicated by the fast blinking of the HDD LED on the front panel.

Configuring Network Settings

The SATATYA HVR comes factory configured with the following default IP address settings.

LAN 1

- IP Address: **192.168.1.123**
- Subnet Mask: **255.255.255.0**

LAN 2

- IP Address: **192.168.2.2**
- Subnet Mask: **255.255.255.0**

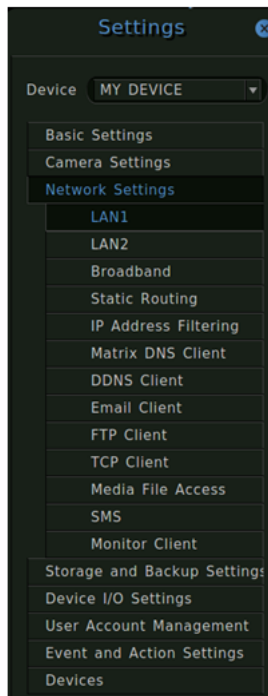


1.LAN 2 is not available in HVR4 channel.

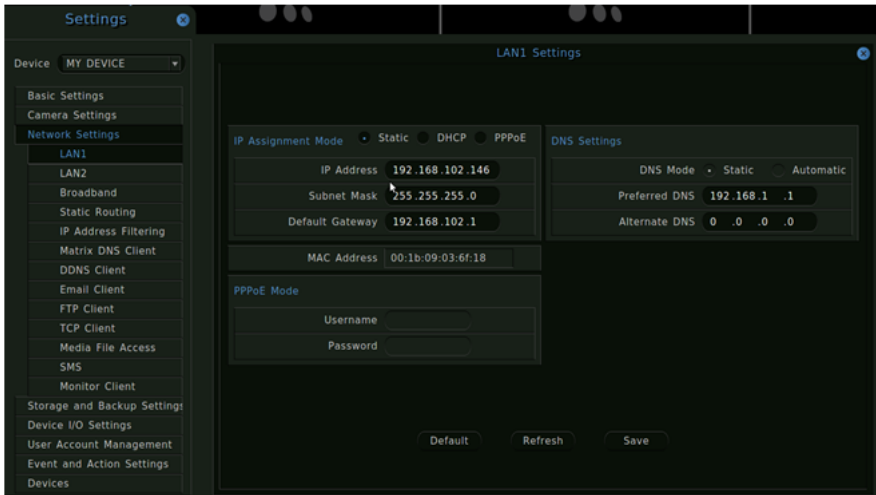
2.Ask your network administrator for information on the IP Addressing used by the network to which your HVR is connected.

From Local View

- Invoke the toolbar using the mouse or remote control.
- Click the **Settings** icon on the toolbar.
- Click **Network Settings** and then click either **LAN 1** or **LAN 2**.



- The Network Settings window will open.
- In **LAN 1 Settings**, select the **IP Assignment Mode** of the network to which your HVR is connected.

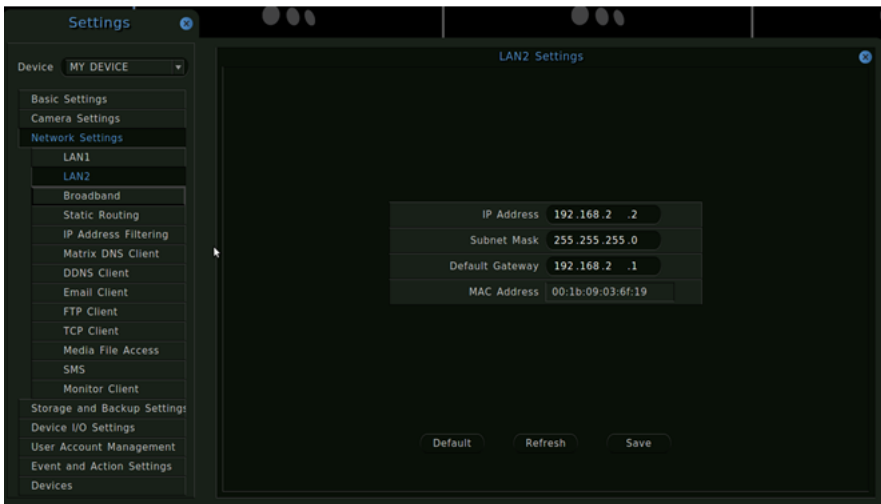


- Select **Static**, if your network uses Static IP Addressing. Enter the Static IP Address, the Subnet Mask and the Gateway address.
- Select **DHCP**, if your network uses dynamic IP Addressing. The IP Address, Subnet Mask and the Gateway address will be assigned by the DHCP server on the network.
- Select **PPPoE**, if your network uses this protocol for IP addressing. While the IP Address and the Subnet Mask will be assigned automatically by the PPPoE server, you will need to configure the PPPoE User Name and Password for the connection.

When you click/select the User Name and Password field, the Virtual Keypad will appear, enabling you to enter alphanumeric characters.

- Click the **Save** button.
- Close the configuration window to return to the display.

By Clicking **LAN2** in Network Settings, the LAN2 Settings page appears as shown below:



- Configure IP Address, the Subnet Mask and the Gateway address of LAN 2 on the **LAN 2 Settings** page similar to LAN1 Settings

From Remote View

- Open the Matrix SATATYA HVR Web Client on your computer.
- In **HVR Address**, type the current IP Address of the HVR you want to access.
- Click **Go**.
- Login as **admin** and click the **Device Configuration** icon on the left pane.
- In the Configuration Settings menu, under **Network Settings**, click **LAN 1** or **LAN 2**.
- In **LAN 1 Settings**, configure the IP Assignment Mode as described earlier.
- Click the **Save** button.
- Close the Device Configuration menu to return to the display.



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