



INSTEK DIGITAL



A complete system to provide high resolution, long-term digital video storage and an IP based CCTV solution on a scalable and reliable platform

**DVR-3U Quick Start Guide
(HR-DR38xx-3U, HR-DR37xx-3U)**

**THANK YOU FOR PURCHASING A QUALITY PRODUCT FROM INSTEK DIGITAL.
THIS QUICK START GUIDE WILL PROVIDE YOU WITH THE INSTRUCTIONS
NEEDED TO CONFIGURE YOUR DVR (SERVER) AND VIEW THE VIDEO FROM
THE COMMAND CENTER LITE APPLICATION (CLIENT SOFTWARE).**

**INSTEK DIGITAL SEPERATES THE CLIENT SOFTWARE FROM THE SERVER
INTO TWO DISTINCT ENTITIES. THIS SETUP ALLOWS YOU (THE CUSTOMER)
TO PLACE YOUR SERVER IN A SECURE, TAMPER-PROOF LOCATION, FURTHER
ENHANCING YOUR SECURITY PROTOCOLS.**

**The MatriVideo™ Hybrid Digital Video Recorder (hDVR)
is a state-of-the-art recording system that provides DVD
quality video (CIF~D1) by using the most advanced H.264
compression technology. It is based on the Linux operating
system which is considered to be the most stable and secure
operating system in the world.**

BOX CONTENTS

1. MatriVideo hDVR – x1
2. Document CD – x1
3. Quick Start Guide – x1
4. Power Cable
 - x1 (Single Power Supply)
 - x2 (Dual Power Supply)
5. Bracket Pair – x1
6. Screws Set – x1
7. Warranty Card – x1
8. A/V Extended Connector –x8 (HR-DR3732-3U and HR-DR3832-3U models only)

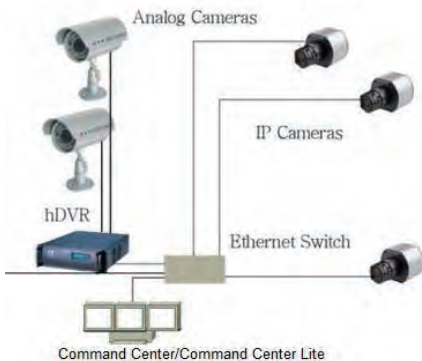
FRONT PANEL OF THE 3U DVR



REAR PANEL OF THE 3U DVR



NETWORK CONNECTION OVERVIEW



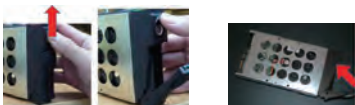
1. Analog Inputs (BNC)
2. Audio Inputs
3. Analog Video/Audio Inputs:
 - Port a: for Camera 1-4, Port b: for Camera 5-8,
 - Port c: for Camera 9-12, Port d: for Camera 13-16,
 - Port e: for Camera 17-20, Port f: for Camera 21-24,
 - Port g: for Camera 25-28, Port h: for Camera 29-32
4. COM2 Port for PTZ Control (RS-485)
5. COM3 Port for PTZ Control (RS-232)
6. Power Socket(s) (Single or Dual)
7. Power Switch
8. COM1 for External I/O Module (RS-232)
9. Ethernet (RJ45) x2
10. Main Power Switch (Dual Power Model only)

STEP 1: CONNECT YOUR DVR

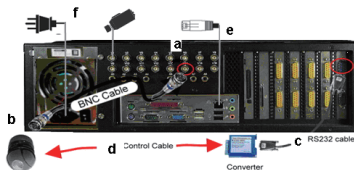
- a. Carefully remove the four screws from the front handles to open the front panel.



- b. Use your thumb to press the key hole of the HDD tray and push it up to unlock the HDD tray. Remove the HDD trays from the front panel carefully. Secure the HDD inside the tray with four screws each. Insert the HDDs (with the trays) back into their slots from HD0~HD7.



- c. Secure the DVR front panel by tightening the four screws.
- d. To connect an analog camera, connect one end of the BNC cable to the BNC port.

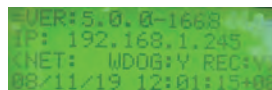


- e. Connect the other end of the BNC cable to the camera.
- f. To connect a PTZ camera, connect an RS-232 cable between the converter and the DVR COM2 port.
- g. Connect the PTZ camera and the RS-232-RS485 converter by using the control cable.

- h. To connect to the network, connect one end of the RJ45 to the switch and the other end to the RJ45 port on the DVR.

STEP 2: POWER ON THE DVR

- a. Connect the power cord.
- b. Turn on the power for the DVR from the rear panel. The booting process will take a few minutes to complete.
- c. Once boot up is complete, you will see the following information on the front LCD panel: System Version, IP Address, Network Connectivity Information, and the System Date & Time.



STEP 3: INSTALL COMMAND CENTER LITE

- a. Insert the Command Center Lite CD into the CD-ROM drive of your PC and run the setup application.

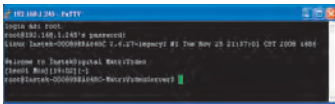
STEP 4: CONFIGURE THE DVR

- a. Configure the DVR either via putty (see step **b**) or connect a keyboard and a monitor directly to DVR (see step **c**).
- b. PuTTY is a Secure Shell (SSH) client used to securely connect to the DVR remotely. To launch PuTTY navigate to Start ->Programs -> Instek Digital -> Command Center Lite -> Putty. In the text box labeled Host Name or IP Address, enter the IP address of the DVR found on the front panel LCD (the default IP address is 192.168.1.245). Click Open to initiate the remote connection to the DVR.

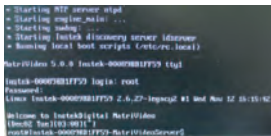


- c. The DVR uses an embedded Linux Operating System. Once the DVR has a keyboard and monitor connected, you will see a login prompt on the monitor. The DVR's default username is root and the password is id

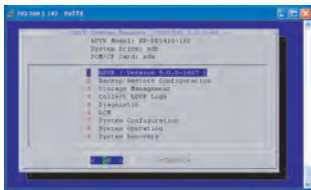
Connection via PuTTY:



Direct connection via the DVR:



- d. Under the OS prompt, type in **hdsM** to run the hDVR System Manager.



c. Change the Time Zone

System Configuration -> Time Zone Change -> Select Continent or Ocean -> Select Country/Region. Select **Yes** to confirm.

d. Change the Date/Time

System Configuration -> Date/Time Change -> Select **Proceed** to stop the process and wait for a few seconds -> Use [TAB], Up Arrow, Down Arrow to change the Year, the Month and the Date. Use [TAB], Up

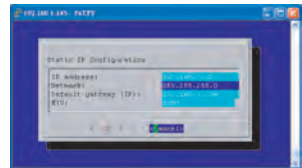
Arrow, Down Arrow to change the Hour, the Minutes and the Seconds -> Select **Proceed** to accept the changes.

e. Change the IP Address

To ensure there is sufficient bandwidth between the IP cameras and DVR, MatriVideo DVR uses multiple network interfaces. It is recommended to connect eth1 of the NVR to the same network segment as the IP cameras and connect eth0 of the DVR to the same segment as the Command Center or nCCTV. Here is an example outlining the eth0 configuration:

System Configuration -> Network Settings -> IP Configuration -> Select eth0 -> Enable eth0 -> Static IP Configuration -> Enter the IP address, Netmask, Gateway -> Select **OK** to proceed. The eth0's IP address has been changed to "192.168.1.10" in this document. Please wait for a few moments for the changes to take effect.

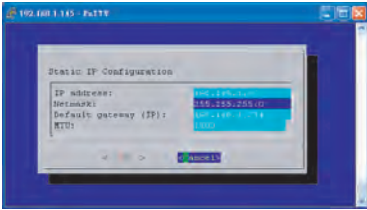
Notice: Keep the value of MTU as default (1500) unless you have other devices such as a SAN connected to the same network.



Note: eth1 should be set to a different network segment that corresponds with the network

System Configuration -> Network Settings -> IP Configuration -> Select eth0 -> Enable eth0 -> Static IP Configuration -> Enter the IP address, Netmask, Gateway -> Select **OK** to proceed. The eth0's IP address has been changed to "192.168.1.10" in this document. Please wait for a few moments for the changes to take effect.

Notice: Keep the value of MTU as default (1500) unless you have other devices such as a SAN connected to the same network.

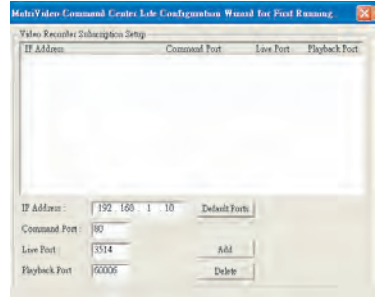


- h. Add Storage to the DVR: The first HDD will automatically be in use by the DVR. Subsequent HDDs will need to be added via the hDSM.
 - Navigate to Storage Management -> Add Storage Repository and select the available storage repositories to add to the NVR. This can be done individually or by using All to select all available storage repositories. Select OK. Proceed to the menu option Detect Available Disk Volume to check the status of the HDDs. The status of the HDDs should display In Use.
- g. Add RAID5 Storage to the DVR: (OPTIONAL) For Internal RAID5 Storage configuration, refer to the DVR user manual.
- h. Remember to go back to HDSM main menu -> hDVR -> Start to start the DVR services. This will take a few seconds to complete.
- i. Add the A/V Extended Connector -x8 (HR-DR3332-3U) Model Only

STEP 5: SUBSCRIBE THE DVR

- a. Run the Command Center Lite software. During the first run, you will be asked to subscribe (or add) the DVR to the video recorder subscription list.
- b. Type in the **IP address**, **Command Port**, **Live Port** and **Playback Port** of the NVR.
 - Command Port: 80
 - Live Port: 3514
 - Playback Port: 60006

Note: Do not change these port numbers if connecting the DVR in a LAN environment. Click Add to continue. You can add additional DVRs in a similar fashion. When all the DVRs have been added, click Next to continue.



- c. Finish the configuration wizard and log into the Command Center. The default username is **admin** and the default password is **id**

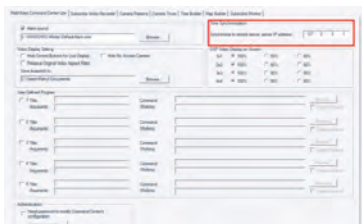


STEP 6: TIME SYNC WITH THE DVR

- a. Click on the MatriVideo Command Center Setup (or Command Center Lite) tab on the bottom left corner of the screen.



- b. Type in the IP address of the DVR or an available timeserver. This will keep the time in sync between the DVR and your laptop/desktop running Command Center Lite and the NTP server.



STEP 7: SETTING UP THE CAMERAS

- a. Right-click on the DVR (labeled by its IP address) in the camera tree panel and click **Video Recorder Setup**. When asked to login the default username is **admin** and the password is **id**



- b. Click the **Camera Setup** tab.
- c. Click **Camera Setup Basic** tab. Click the **Active** box next to the camera name(s) to enable the camera. Analog Cameras can be setup on the top part of the window and the IP cameras can be setup on the bottom part of the window. You can also change the camera name by clicking on the camera name row for each camera, such as "Cam-01", "Cam-02".

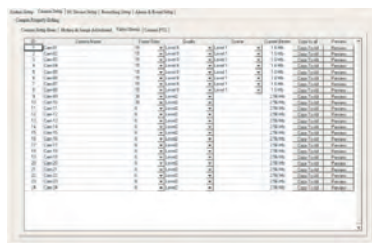


- d. For setting up IP cameras, please go to step e. **Note:** Before continuing, you must configure the IP address of each camera to ensure it is in the same network segment as the DVR. Refer to your

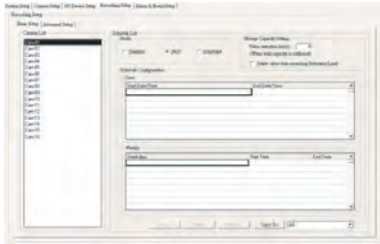
camera's user manual for more information on how to do this.

IP Camera	Camera Name	Camera Type	CH	Port	Login	Audio	Resolution
9	Cam-01	Act	1	192.168.1.107	1	00_Stereo	CF
10	Cam-10	Act	1	192.168.1.106	1	00_Stereo	CF
11	Cam-11	Act	1	192.168.1.100	1	00_Stereo	CF
12	Cam-12	Act	1	192.168.1.100	1	00_Stereo	CF
13	Cam-13	Act	1	192.168.1.100	1	00_Stereo	CF
14	Cam-14	Act	1	192.168.1.100	1	00_Stereo	CF
15	Cam-15	Act	1	192.168.1.100	1	00_Stereo	CF
16	Cam-16	Act	1	192.168.1.100	1	00_Stereo	CF
17	Cam-17	Act	1	192.168.1.100	1	00_Stereo	CF
18	Cam-18	Act	1	192.168.1.100	1	00_Stereo	CF
19	Cam-19	Act	1	192.168.1.100	1	00_Stereo	CF
20	Cam-20	Act	1	192.168.1.100	1	00_Stereo	CF
21	Cam-21	Act	1	192.168.1.100	1	00_Stereo	CF

- e. In the **IP Camera** table, type a descriptive **Camera Name**.
- f. Select the **Camera Type**.
- g. Type the **IP Address** of the IP cameras. DNS is supported if available on the surveillance network.
- h. The **Port** number is dependent on the IP camera. **Ch** refers to the channel number of the video server. See the IP camera or video server manual for additional information.
- i. The **Login** option is used to access the camera configuration settings. Refer to the camera user manual for additional information.
- j. Click **Audio**, if supported. Refer to the camera's user manual for additional information.
- k. Select the **Resolution** for the camera from the drop-down list box.
- l. Click the **Video Stream** tab to set up the **Frame Rate** and **Quality** (Bitrate) for each individual camera.
- m. To setup 24x7 recording, click the **Recording Setup** tab and then click **Basic Setup**. Select a camera from the camera panel and change the recording mode to **24x7**. Alternatively, select **24x7** and then at the bottom of the screen click



Copy to All to apply the setting to all cameras in the group.

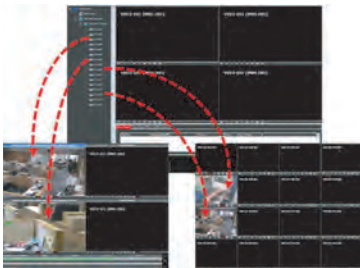


STEP 8: VIEW THE VIDEO

- a. Click on the + icon next to the IP address of the DVR to expand your camera tree.



- b. Drag and drop the video source from the camera tree to the blank patterns (1x1, 2x2, 3x3, 4x4, 3x2, 4x3, 5x3) to view your video.



CONTACT INFORMATION

We graciously thank you for investing your faith in Instek Digital and being a valuable part of our corporation. Instek Digital's prime goal is to deliver leading technology in addition to exceptional customer service and technical support.

Instek Digital technical support representatives are always available to answer any of your support related questions or concerns. Please refer to our website for your regional support contacts:

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