



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-2U Quick Start Guide
(HR-DR38xx-2U, HR-DR37xx-2U)**

**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.**

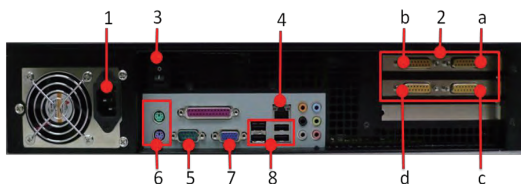
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(HR-DR3708-2U model) – x2
(HR-DR3716-2U, HR-DR3808-2U model)x4

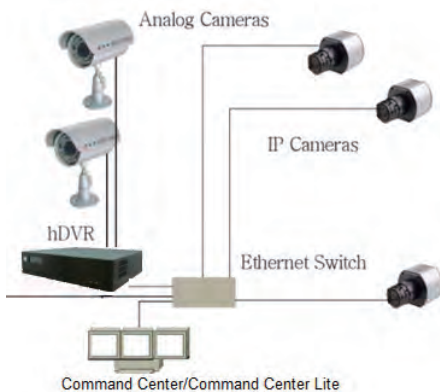
FRONT PANEL OF THE 2U DVR



REAR PANEL OF THE 2U DVR



NETWORK CONNECTION OVERVIEW



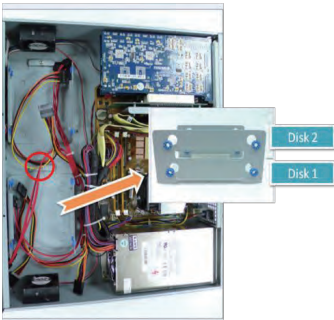
1. Power Socket
2. Analog Video/Audio Inputs
Port a: for Cameras 1-4
Port b: for Cameras 5-8
Port c: for Cameras 9-12
Port d: for Cameras 13-16
3. Power Switch
4. Ethernet (RJ-45)
5. COM1 Port for serial connection (RS232)
6. PS2 ports for keyboard and mouse
7. VGA port for external monitor
8. USB ports for extension devices

STEP 1: CONNECT YOUR DVR

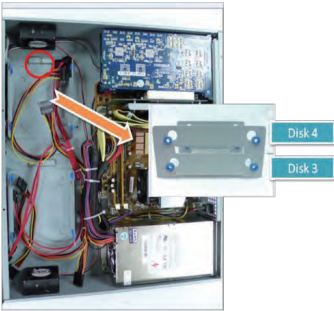
- a. To open the top cover of the DVR, carefully remove the 10 screws: three screws on the right side, three on the left side and two on the front side and two on the rear side.



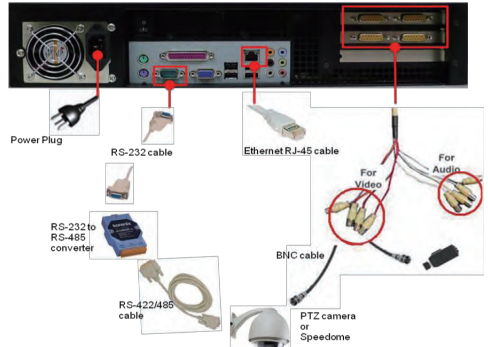
- b. Install Disk1 & Disk2: remove the screw on red circle to dismantle the empty HDD holder and install Disk 1 at bottom and Disk 2 on top. Fasten HDDs inside the HDD holder, 4 screws for each HDD (two on each side symmetrically).



- c. Install Disk3 & Disk4: similar with step b.



- d. Put the HDD holders back to the case and tighten screws.
e. Put the DVR cover back on and tighten all the screws.

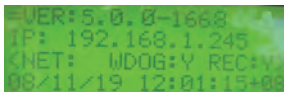


- f. Connect the AV extended connector to the video capture card.
g. Connect the BNC cable between the AV extended connector and the analog camera. The red cables are designated for video and the white cables are designated for audio.
h. To connect a PTZ camera, connect an RS-232 cable between the converter and the DVR COM1 port.
i. Connect the PTZ camera and the RS-232-RS485 converter by using the control cable.
e. To connect the DVR to the network, connect one end of the RJ45 to the switch and the other end to the RJ45 port on the DVR.
f. For extra COM port or RS485 direct connection, please contact Instek for the optional USB to RS232/485 converter.



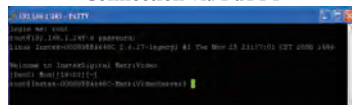
STEP2: POWER ON THE DVR

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

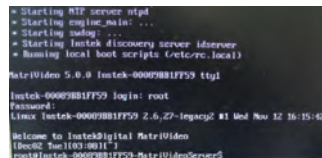


- The DVR uses an embedded Linux Operating System. Once the DVR has a keyboard and monitor connected, you will see a login prompt on the monitor. The DVR's default username is **root** and the password is **id**.

Connection via PuTTY



Direct Connection via the DVR



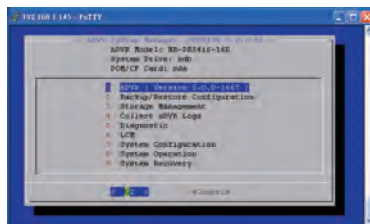
STEP3: INSTALL COMMAND CENTER LITE

- Insert the Command Center Lite CD into the CD-ROM drive of your personal laptop or desktop and run the Command Center Lite Setup application setup.

STEP4: CONFIGURE THE DVR

- Configure DVR either via putty (see step **b**) or connect a keyboard and a monitor directly to DVR (see step **c**).
- 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.

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



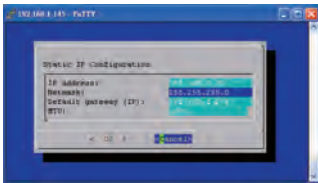
- Change the Time Zone**
System Configuration -> Time Zone Change -> Select Continent or Ocean -> Select Country/Region. Select **Yes** to confirm.
- Change the Date/Time**
System Configuration -> Date/Time Change -> Select **Proceed** to stop the process and

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.

g. Change the IP Address

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

Note: 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 DVR. 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**.

i. Remember to go back to hDSM main menu -> hDVR -> Start the DVR services. This will take a few seconds to complete.

STEP5: 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

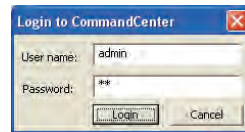
Live Port: 3514

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**

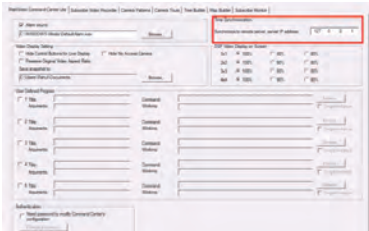


STEP6: TIME SYNC WITH THE DVR

- 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 time server. This will keep the time in sync between the DVR and your PC running the Command Center application.

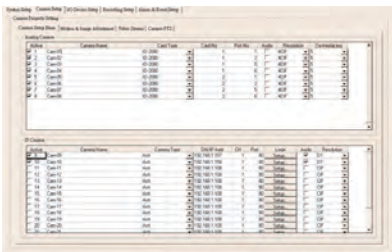


STEP7: SETTING UP THE CAMERAS

- 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**



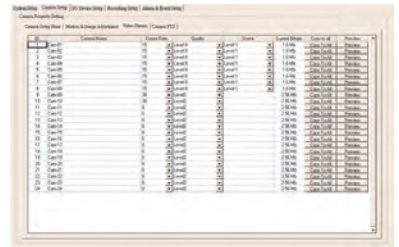
- b. Click the **Camera Setup** tab.
- c. Click **Camera Setup Basic** tab. Click the **Active** box next to the camera name(s) to enable the camera. Analog Cameras can be setup on the top part of the window and the IP cameras can be setup on the bottom part of the window. You can also change the camera 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.

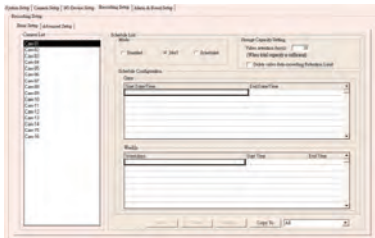
ID	Name	Camera Name	Camera Type	DVP	P	A	S	B	D	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
9	Cam09	Acti	192.168.1.157	1	90	Static																						
10	Cam10	Acti	192.168.1.156	1	90	Static																						
11	Cam11	Acti	192.168.1.100	1	90	Static																						
12	Cam12	Acti	192.168.1.100	1	90	Static																						
13	Cam13	Acti	192.168.1.100	1	90	Static																						
14	Cam14	Acti	192.168.1.100	1	90	Static																						
15	Cam15	Acti	192.168.1.100	1	90	Static																						
16	Cam16	Acti	192.168.1.100	1	90	Static																						
17	Cam17	Acti	192.168.1.100	1	90	Static																						
18	Cam18	Acti	192.168.1.100	1	90	Static																						
19	Cam19	Acti	192.168.1.100	1	90	Static																						
20	Cam20	Acti	192.168.1.100	1	90	Static																						
21	Cam21	Acti	192.168.1.100	1	90	Static																						

- 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. Domain names are 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.



STEP8: 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, 3x or 4x4) 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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