



**INSTEK DIGITAL**



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

DVR (3U) Quick Start Guide

THANK YOU FOR PURCHASING A QUALITY PRODUCT FROM INSTEK DIGITAL.

THIS QUICK START GUIDE WILL PROVIDE YOU WITH QUICK INSTRUCTIONS NEEDED TO CONFIGURE YOUR DVR (SERVER) AND ALSO VIEW THE VIDEO FROM COMMAND CENTER LITE (CLIENT SOFTWARE).

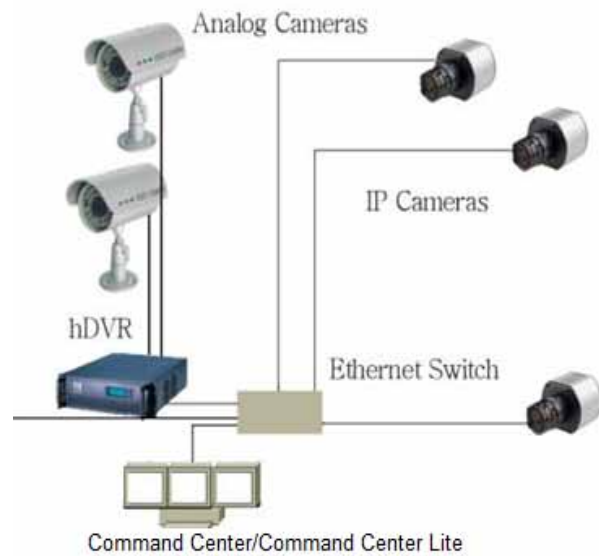
INSTEK DIGITAL SEPERATES THE CLIENT SOFTWARE FROM THE SERVER INTO TWO SEPERATE ENTITIES.THE REASONING BEHIND THIS SETUP IS THAT IT ALLOWS YOU (THE CUSTOMER) TO PLACE YOUR SERVER IN A SECURE, TAMPER-PROOF LOCATION FOR FURTHER ENHANCING YOUR SECURITY PROTOCOLS.

**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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## NETWORK CONNECTION OVERVIEW



## FRONT PANEL OF THE 3U DVR



6. Single Power Switch
7. COM1 for External I/O Module (RS-232)
8. Ethernet(RJ45)
9. Main Power Switch(Dual Power Model)
10. Dual Power Supply(Dual Power Model)

## STEP 1: CONNECT YOUR DVR

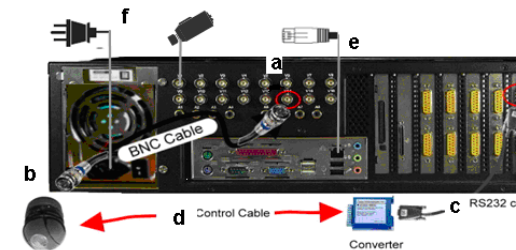
- a. Carefully remove the 4 screws from the front handles to open the front panel.



- 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 4 screws each. Insert the HDDs (with the trays) back into their slots from HD0-HD7.



- c. Secure the DVR front panel by tightening the 4 screws.
- d. To connect an analog camera, connect one end of the BNC cable to the BNC port.



## REAR PANEL OF THE 3U DVR



Single Power Supply



Dual Power Supply

1. Analog Inputs (BNC)
2. Audio Inputs
3. Analog Video/Audio Inputs(for HR-DR3332-3U) :  
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-232)
5. Power Socket

- 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.
- e. 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. Power on the Archive Server from the rear panel. The booting process will take a few minutes to complete.
- c. 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.



## STEP 3: INSTALL COMMAND CENTER LITE

- a. 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.

## 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 (jump to step c).

- b. Putty is an SSH program used to connect to the DVR remotely. On your laptop or desktop, navigate to: Start → All Programs → Instek Digital → Command Center Lite → Putty. A telnet window will open. Enter the IP address of the DVR in the box labeled, "Host Name or IP Address". (IP address is displayed on the front LCD panel of the DVR, default IP: 192.168.1.245). Click on the "Open" button to start a remote connection (telnet session) to the DVR

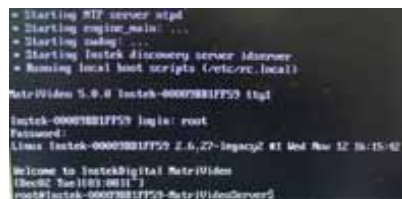


- a. The DVR uses an Embedded Linux Operating System and is password protected for your own safety. Once the keyboard and monitor is connected to the DVR, you will see the login prompt on the monitor. The DVR default username is: root and the default password is: id.

Connection via Putty:



Direct Connection via the DVR:



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



- c. Change the Time Zone: System Configuration → Time Zone Change → Select Continent or Area → Select Country/Region. Press "Yes" to confirm
- d. Change the Date/Time: System Configuration → Date/Time Change → Press 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 → Press "Proceed" to accept the changes.
- e. 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.

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



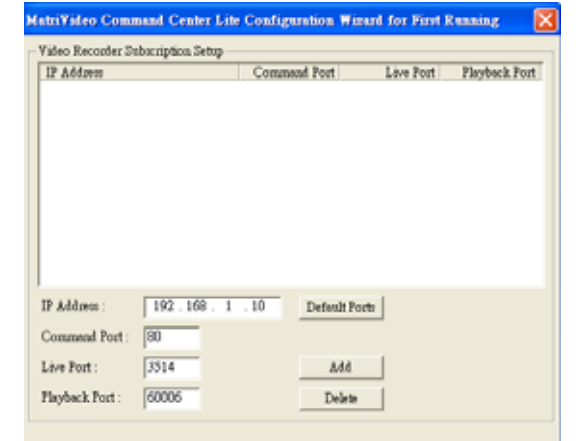
- f. Add Storage to the DVR: The first HDD will be added automatically to the DVR. Any subsequent HDDs will need to be added via hDSM.

- g. Add Storage to the DVR, Part II: if you have more than one hard disk or storage device. From hDSM → Storage Management → Add Storage Repository → Select the available storage to add individually or alternatively select "All" to add the entire storage repository and then select "OK". Subsequently proceed to the menu: "Detect Available Disk Volume" to check the status of the HDDs. The status of the HDDs should be "In Use".
- h. Add RAID5 Storage to the DVR: (OPTIONAL) For Internal RAID5 Storage configuration, refer to the DVR user manual.
- i. Remember to go back to HDSM main menu → hDVR → Start to start the DVR services. This will take a few seconds to complete.
- j. 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. Enter the IP address, Command Port, Live Port and the Playback Port of the DVR.  
Command Port: 80  
Live Port: 3514  
Playback Port: 60006

Note: Do not change these port numbers if connecting DVR in a LAN environment. Hit the "Add" button to continue. Add additional DVRs in a similar fashion. When all the DVRs have been added, hit "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.

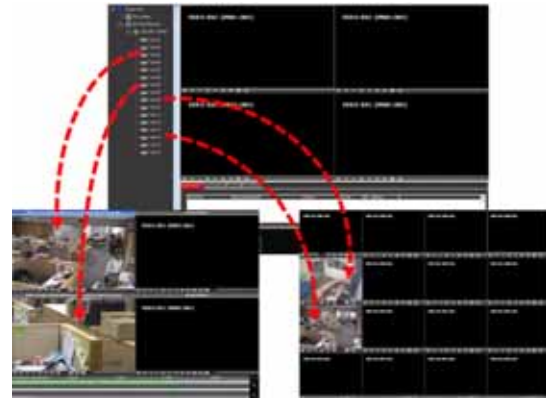


### STEP 6: VIEW THE VIDEO

- 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.

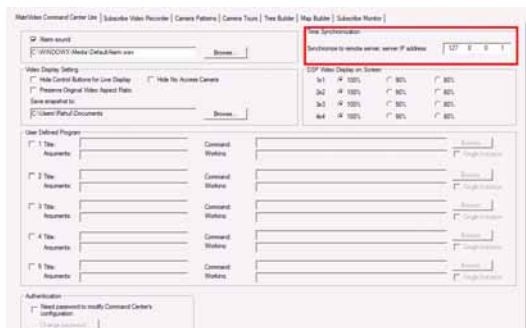


### STEP 7: TIME SYNC WITH THE DVR

- 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 laptop/desktop running Command Center Lite and the NTP server.

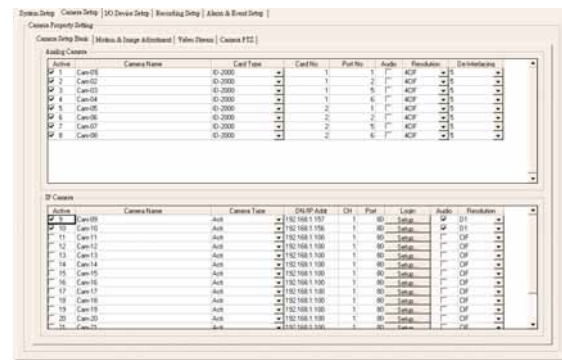


### STEP 8: SETUP THE CAMERA NAME / BITRATE/FRAMERATE / 24x7 RECORDING

- a. Right click on the DVR IP address from the camera tree. From the menu selection, select "Video Recorder Setup". The default username is "admin" and the default password is "id"



- b. Select the "Camera Setup" tab.
- c. Select "Camera Setup Basic" tab. Check 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".

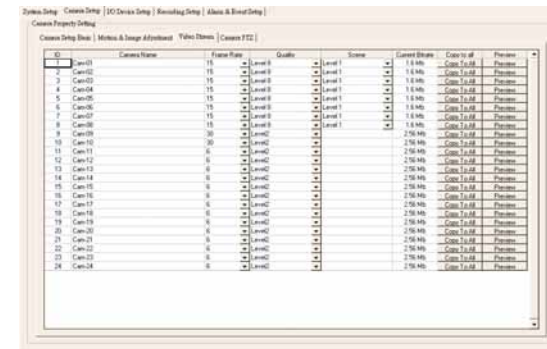


- d. For setting up IP cameras, please refer to steps e through k.

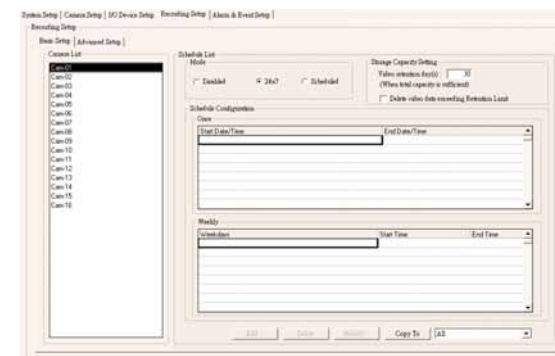
Active	Camera Name	Camera Type	ONVIF Addr	On	Port	Login	Audio	Resolution
<input checked="" type="checkbox"/>	Cam01	Actv	192.168.1.157	1	80	Setup	M	D1
<input checked="" type="checkbox"/>	Cam10	Actv	192.168.1.156	1	80	Setup	M	D1
<input checked="" type="checkbox"/>	Cam11	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam12	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam13	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam14	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam15	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam16	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam17	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam18	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam19	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam20	Actv	192.168.1.100	1	80	Setup	F	CFP
<input checked="" type="checkbox"/>	Cam21	Actv	192.168.1.100	1	80	Setup	F	CFP

- e. Under the "IP Camera" table, enter the Camera Name.
- f. Select the "Camera Type".
- g. Enter the "IP Address" of the IP cameras accordingly. NDS is also supported if available on the surveillance network.

- h. "Port" number is dependent on the IP camera. "Ch" number is the channel number of the video server. Please refer to IP camera or video server manual for additional information.
- i. The "Login" option is used to save the IP camera configuration settings to the cameras. Refer to your camera user manual for the login credentials.
- j. Check "Audio", if supported. Refer to your camera manual for additional information.
- k. Select the "Resolution".
- l. Then, click on the "Video Stream" tab to setup the Frame Rate and Bitrate for each individual camera.



- m. To setup 24x7 recording, click on the "Recording Setup" tab and then "Scheduled Recording". Select one camera and change its recording mode to "24x7". Furthermore, you can copy this setting to all the analog cameras by using the functionality, "Copy to All".



### CONTACT INFORMATION

We would like to 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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