

CCTV42

User Manual

HD TVI Hybrid DVR

Notes

- Please read this user manual carefully to ensure you can use the DVR correctly and safely.
- This DVR should only be operated with the power adaptor supplied. This is designed to be used with a UK 240 volt mains supply. Unplug the device if it is not going to be used for long periods.
- Do not install this device near any heat or water sources.
- Do not block any ventilation apertures and ensure proper air flow to the unit.
- Do not power off the DVR while recording.
- This DVR is for indoor use only. Do not expose to rain or moisture. In the event of contamination, turn off the device immediately and get it checked by a qualified technician.
- Do not try to repair the device by yourself.

Introduction

Features

Live Surveillance

- VGA or HDMI video output.
- 1080p / 720p HD-TVI or 960 H / D1 analogue video inputs.
- All channels are individually time and date stamped.

Compression Format

- H.264 compression with low bit rate for better image quality and more storage time.

Storage

- Maximum capacity of 6TB per SATA drive. **Use only AV grade / surveillance hard drives.**

Backup

- USB 2.0 for backup.
- Save recorded files in AVI standard format (windows) or MP4 (Mac) to a remote computer through the internet.

Record and playback

- Record modes: Manual, Scheduled, Motion triggered and Sensor alarm recording
- Automatic disc recycle once hard drive is full.
- Resolution, frame rate and picture quality are adjustable.
- Remote access through LAN or internet.

Security

- Customize user rights so users have individual levels of access and control.
- Supports event log recording and checking on unlimited events.

Network

- TCP/IP, DHCP, PPPoE and DDNS protocols.
- NAT Access and QR CODE scanning.
- Dual stream. Sub-stream for poor internet connections, master-stream for improved quality.
- Picture snap in remote live viewing.
- Search by time or event.
- Remote access to set-up menu.
- Mobile access by phones with Windows, iPhone, iPad and Android OS.
- CMS.NVM software available to manage multi devices over the internet.

BASIC OPERATION

Startup and shutdown

Please make sure all the connections are done properly before you power the unit on. Proper startup and shutdown are crucial to expanding the life of the device.

Startup

- i. Connect the power.
- ii. The DVR will boot and power LED will turn blue.
- iii. A wizard window will pop up and show some information about the time zone, time setup, network configuration, record configuration and disk management. Set the details according to your local times.

Shutdown

You can power off the by using the remote control, keyboard and mouse.

By remote control:

- i. Press the power button. This will take you to a shutdown window. The unit will power down after a while by clicking the OK button.
- ii. Disconnect the power.

By keyboard and mouse:

- i. Click **Main Menu** ➔ **Shutdown** to pop up the Shutdown window. The unit will power down after a while by clicking the OK button.
- ii. Disconnect the power.

Remote Control

- i. It uses two AAA size batteries.
- ii. Open the battery cover of the remote control.
- iii. Place batteries. Please take care of the polarity (+ and -).
- iv. Replace the battery cover.

Key points to check in case the remote doesn't work.

- i. Check batteries polarity.
- ii. Check the remaining charge in the batteries.
- iii. Check IR controller sensor for any masking.
- iv. Check the ID of the remote with respect to the HD TVI Hybrid DVR.

If it still doesn't work, please replace the controller or contact your dealer.

The Interface of the remote control is shown below.



Button	Function
REC	Record manually
Search	To enter search mode
MEUN	To enter menu
Exit	To exit the current interface
ENTER	To confirm the choice or setup
Direction button	To move cursor in setup
ZOOM	To zoom in
PIP	To set picture in picture
▶▶▶▶◀◀◀◀	To control playback. Play/ Pause/ Stop/ Previous Section/Next Section/Backward/ Forward
Multi	To choose multi screen display mode
Next	To switch between single picture and picture group
SEQ	To go to auto dwell mode
INFO	Get information about the device like firmware version, HDD information

Entering the password by remote control

To enter the password (123456) by IR remote control, you will need to use the following steps:

- Move the cursor to the password box and then press “Enter” button on the remote control to pop up a little soft keyboard.



- Move the cursor to “1” on the little soft keyboard then press “Enter” button on the remote control, then “2, 3, 4, 5, 6” separately.
- The press “Enter”.

Controlling Multiple Devices by remote control

The default device ID of the HD TVI DVR is 0. It's not necessary to reset the device ID when a remote is used to control a single device. However when controlling multiple devices with multiple remote controls, you will need to configure the device ID, please refer to the following steps:

- i. Activate the remote control: Turn the IR sensor towards the IR receiver on the front panel, press "8" twice and input the device ID of the DVR to be controlled (Ranges from 0-65535; the default device ID is 0) and press "Enter" to confirm.
- ii. You can check the device ID of the DVR by going to **Setup ➔ Basic ➔ System** Interface. You can also set multiple devices with the same device ID, however this can cause interference if the devices are kept close to each other.

Using a Mouse

* It is recommended to use a mouse as this is the most intuitive interface for the user. *

During live:

- i. Double-click on any camera window to see the full screen. Double-click again to return to previous screen.
- ii. Right click to reveal the control menu on the screen. Right click again to hide the menu.

In Configuration:

- i. Click to enter a particular option. Right click to cancel the option or return to the previous menu.
- ii. In order to input a value in a particular screen, move the cursor to the input box and click.
- iii. It supports mouse drag. Using motion detection as an example: click customized and hold down the left button and drag to set motion detection area.

In Playback:

Click to choose the options. Right click to return to Live mode.

In Backup:

Click to choose the options. Right click to return to previous picture



*Mouse is the default tool for all operations unless specified otherwise.

WIZARD SETUP

The wizard will start once the device has loaded, which will guide you through some important settings on your device. You can follow these instructions to set. However, you can skip this wizard by clicking “Exit” button and then go to the setup interface to do a detailed setup. To setup the wizard follow the steps as follows:

- i. Set the device name, language, data format, time format, time zone, system date, etc. Then click “next” button to continue.

This screenshot shows the first step of the Wizard setup. It contains fields for Device Name (EDVR), Language (English), Date Format (MM-DD-YY), Time Format (24 Hour), Time Zone (GMT), System Date (08 / 28 / 2014 25), System Time (17 : 37 : 09), and Startup Wizard (checkbox checked). At the bottom are Prev, Next, and Exit buttons.

- ii. Set network, set the network according to Information on your own local network settings. Then click “Next” to continue.

This screenshot shows the second step of the Wizard setup, focusing on network configuration. It includes fields for HTTP Port (80), Server Port (6036), Obtain an IP address automatically (checkbox checked), IP Address (192.168.001.002), Subnet Mask (255.255.000.000), Gateway (192.168.001.001), Preferred DNS Server (192.168.001.001), and Alternate DNS Server (000.000.000.000). At the bottom are Prev, Next, and Exit buttons.

- iii. Set the Disk Management. You can format the HDDs and set their properties. Then click the “Next” button to continue.

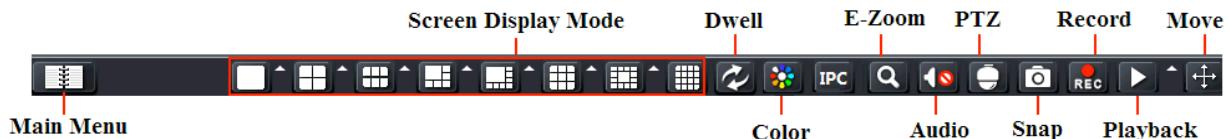
This screenshot shows the third step of the Wizard setup, Disk Management. It displays a table of drives with one entry: ID (empty), Type (SATA), Size[GB] (250), Free[GB] (200), Status (Normal), Properties (Read & Write, checkbox checked), and Source (Local). Below the table are Refresh, Format, Prev, Next, and Exit buttons.

- iv. Click “Next” button to complete the wizard setup.

LIVE VIEW



Symbol	Meaning	Symbol	Meaning
Green	Manual record	Red	Sensor Alarm record
Yellow	Motion detection record	Blue	Schedule record



Click the right mouse or press ESC on the front panel and the control bar will be display at the bottom of the screen.

Screen Mode: You can choose a screen display mode to show the live feeds.

Dwell: Dwell you can display live feed from different cameras in a sequence. The images may be displayed as a single channel or in a grid fashion using different cameras.

Colour: If this button is enabled, you can adjust the colour of live feed from all channels or from single channels.

IPC: Click this button to set the parameters of the IP cameras. Please refer to IP camera settings for more details.

E-Zoom: Single channel large screen electronic amplification.

Audio: Enable sound.

PTZ: Click the PTZ button to control rotation position, speed and auto scan of the PTZ.



Double click “Iris +” to enable the menu of the PTZ camera. Use the directional wheel to move around the menu, then use “Iris+” as an enter command. Please refer to the user manual of the PTZ for more details.

Snap: Click this button to snap a live picture, these picture will be save to the DVR HDD.

Record: Click this button to start/stop recording.

Playback: Click this button to playback the record files.

You can move the menu bar by clicking the Move button and left click and hold then drag it elsewhere.

Click Main Menu  to go to the main menu interface.

Login

You can login or log off the DVR, Once logged off the user cannot do any other operation except changing the multi-screen display.



The default username is “admin” and the default password is “123456”. Input the default username and password for first time login.

Main Menu

The menu system is colourful and easy to understand



Main Menu



Setup Menu

Setup Live View

To set up camera name:

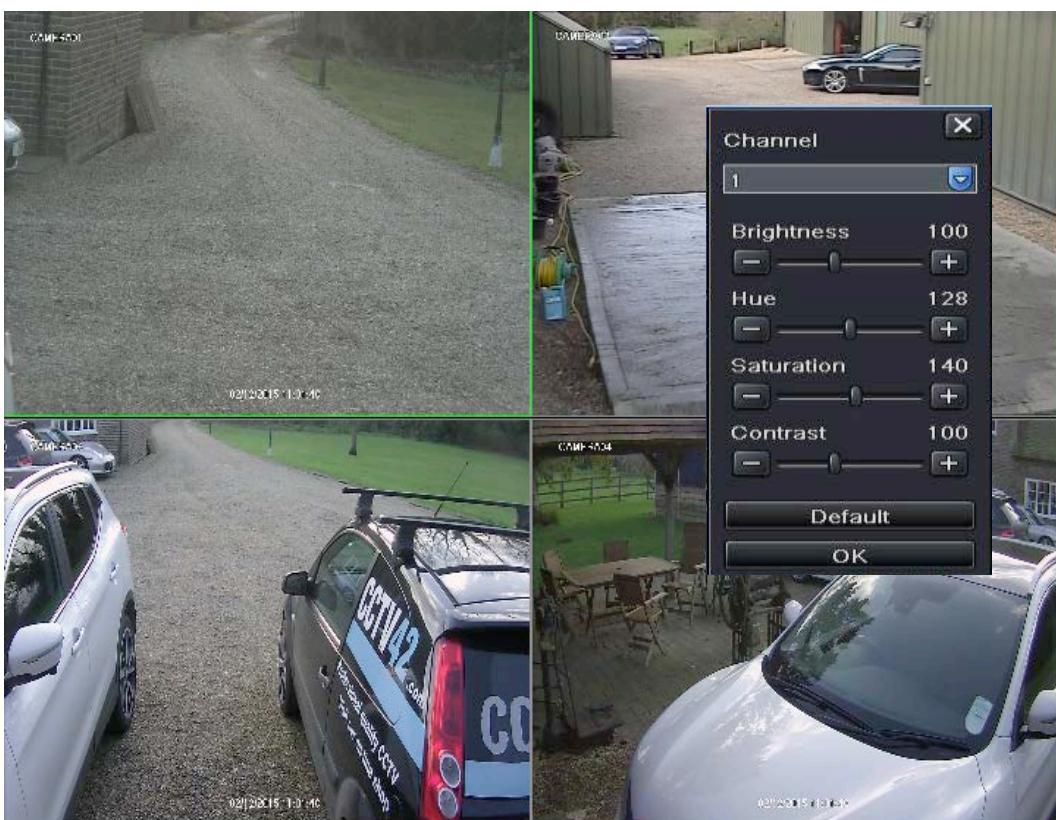
- i. Go to **Main Menu** → **Setup** → **Live** → **Live** tab.
- ii. A software keyboard will pop up by clicking camera name. Use the keyboard to rename the camera
- iii. Tick all the cameras that you want to display their names.
- iv. Click “Apply” to save settings.



To set up colour:

Some models may support this function.

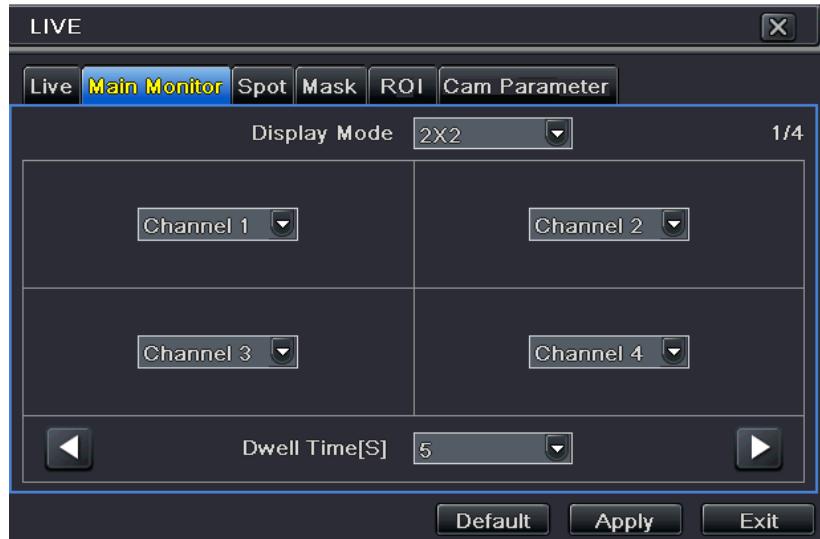
- i. Click “Setting” button for a particular camera/ channel to see a window as below:



- ii. In this interface, you can adjust brightness, hue, saturation and contrast on the Live. Click “OK” button to save the setting.

Sequence View

You can view channel or channel group.



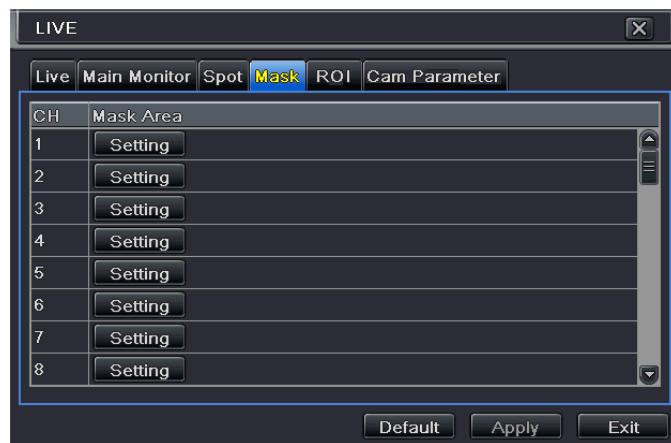
- i. Go to **Main Menu** → **Setup** → **Live** → **Main Monitor** tab
- ii. Select display mode (This is for the screen layout) and channel (For cameras within the grid).
- iii. You can also select the dwell time which ranges from 0-60 seconds in 5 second increments.
- iv. Click for the next page of channels.
- v. Click for the previous page of channels.
- vi. Click "apply" to save the settings.
- vii. Return to the live camera feed, Right click to show toolbar and click to enable Dwell.

If there is something you don't want to display in the live image. You can set up a mask area for a given channel, a maximum of three areas can be masked.

Mask View

To setup the mask area:

- i. Go to **Main Main** → **Setup** → **Live** → **Mask** tab



- ii. Click "Setting", this will take you the Live camera feed.
- iii. Go to the area you want mask out and left click and drag to create a box to cover the area.
- iv. Right click to exit and click "Apply" to save.



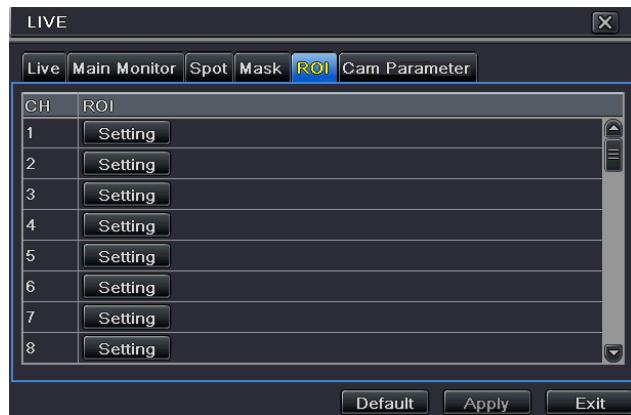
To Delete a mask area:

- i. Click "Setting" in the mask tab.
- ii. Double click on the mask you want to delete.
- iii. Right click to exit and click "Apply".

ROI

You can set ROI areas these area are clearer then other areas especially in low bitrate conditions. You can use this function after adding an IP camera.

- i. Go to **Main Menu** → **Setup** → **Live** → **ROI** tab.



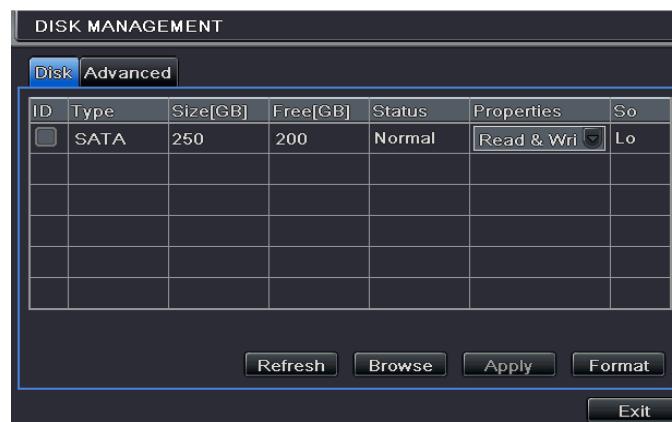
- ii. Click "Setting". The Live feed and dialogue box will appear.



- iii. Check "Enable". Drag the mouse to set the ROI area, you can set a maximum of 3 areas.
 iv. The slide bar ranges from 0-9, the higher the value the more sensitive it is to motion.
 Sensitivity is influenced by colour and time (day/night), you should adjust the sensitivity according to conditions.
 v. Click to save the setting. Click to exit.

RECORDING

Before recording, please format the HDD first. Go to **Main Menu** → **Disk Management** to access the disk management settings. In here you can format your disk.



Recording settings

Go to **Main Menu** → **Setup** → **Record** → **Enable** to do the record settings.



- i. Enable record and/or audio. Then click "Apply" to save the settings.
- ii. Set record stream. Go to Record Bitrate tab to set record bitrate as shown below.



Setup the DVR: Set the FPS, resolution, quality, encode and max bitrate according to your recording requirements then click "Apply".

- **Resolution:** The higher the resolution the clearer the image.
- **FPS:** The higher the frame rate the more fluent the video, however more storage room will be taken up. (As rule we recommend 3 or 6 FPS for our HD DVR to balance video capture and storage space).
- **Encode:** Including CBR and VBR. CBR or Constant BitRate and means no matter how changeable the video stream is the compression bitrate stays the same. This is good for keep the image quality constant but make calculating the storage capacity easier. VBR or Variable BitRate means the bitrate can be adjustable according to the change in video. This can help with save storage space.
- **Image Quality:** When VBR is selected you need to choose the image quality, the higher the image quality the more bitrate required.

Time Tab: set expiration time, pre-alarm time and post-alarm time.

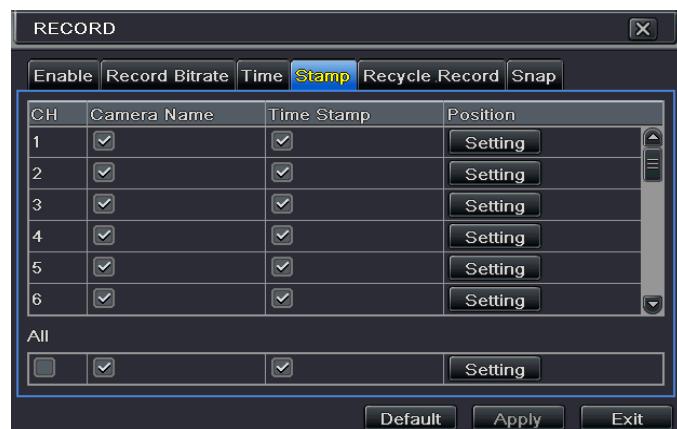


Expiration time: Set the expiration time for recorded video. If the set date is overdue, the recorded files will be deleted automatically.

Pre-alarm Time: Set the time in seconds to record before the actual recording begins.

Post-alarm Time: Set the time in seconds to record after the actual recording finishes.

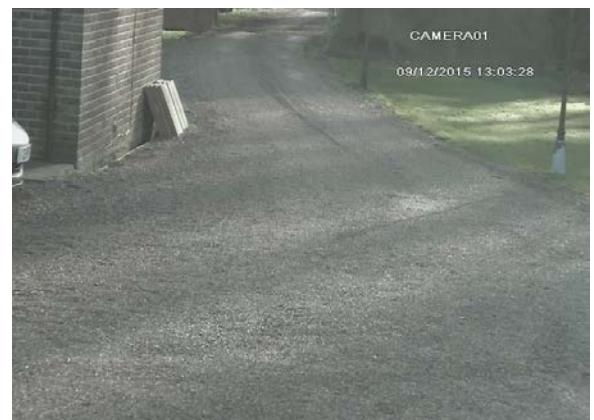
Stamp tab: Go to stamp tab. In this tab, you can enable and disable the camera name and the time stamp on the video and choose a position for the stamp on the screen.



- i. Check mark camera name and time stamp. Click the “setting” button to set the position of the stamp. You can drag the camera name and time stamp at random positions. Refer to pictures on the next page.



Before



After

Recycle Record tab: Go to Recycle Record tab. In this tab it allows you to recycle the recorded footage once the HDD is full. If enabled, the system will automatically delete the earliest footage to make room for new recordings.

Manual Record

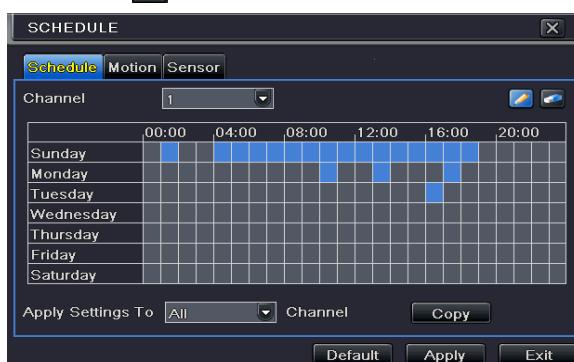
A menu toolbar will display will display by right clicking in live. Then click  button to start recording.

Schedule, Motion and Sensor Recording

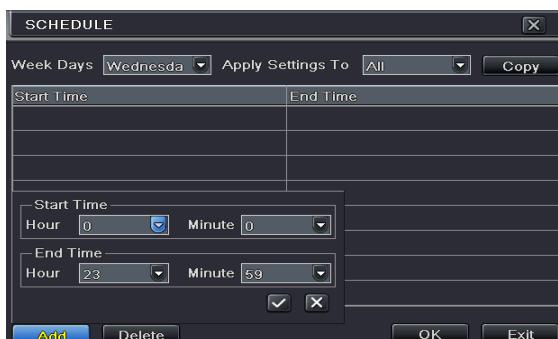
The system allows scheduled recording, recording 7 days a week, 24 hours a day. It is displayed in a grid format. Every row is a day of the week, every column the hours of the day.

Note: The grid represents 1 hour blocks, If highlighted the DVR is scheduled to record on that day and time.

- i. Go to **Main Menu** → **Setup** → **Schedule** → **Schedule** tab.
- ii. To manually set the recording schedule select the channel and click  button add a day to the schedule. Click  button to remove the schedule.



- iii. If your going to be recording 24/7 on all channels (the default settings we send the DVR out with), double-click the grid, click "Add", its default is 24 hours, then click the tick.



- iv. Select "All" from the drop down menu next to "Apply setting to" and click copy.
- v. Click "OK" to save and return to the previous page.
- vi. All the blocks in the grid should be highlighted blue at this point. Select "All" from the "Apply settings to" drop menu and click "copy".
- vii. Lastly click "Apply" to save the schedule.

PLAYBACK

You can playback your record by time, picture, event, file and bookmark.

Playback

Right click the mouse in the live view mode to pop up the menu toolbar. Then click the little triangle button beside  button to set the playback time (eg. 2,5 or 10minutes). Then click the  button to play back the recording from the past 2,5 and 10 minutes in the live view mode.



Previous/next section: Select the previous section or next section to play the previous recording file or the next file,

FF/Rewind: Forward/rewind the recording.

Pause/play: Pause/play the recording.

Stop: Stop the recording.

Audio: Click to enable audio. Click again to disable.

Frame: Click “Pause” button in single Display channel and then click this button the to play the recording frame by frame.

Screen Mode: Click these buttons to choose the screen layout.

Cut: After sliding to the correct time, click the cut button to start the clipping, move the time slider to the end time you require and click the cut button again.

Backup: Insert storage device into the device and then click this button to see the clipped recording, then click “start” to backup the recording files into device (see Backup for details).

Exit: Exit the current session.,

Move tool: Click and hold this button and drag to move the menu to a different location.

Searching past recordings

- i. Go to Main Menu→ Search→ Time Search tab.



- i. Select the date and channels on the right hand side and press the 'search' button. A date with a highlighted border indicates the presence of data on that day.
- ii. Set the start time by clicking in the grid or by entering a specific start time.
- iii. Select the channel display mode 1, 4, 6 or 9 and click the play button , then use the playback toolbar to control the playback.

Searching past events

- i. Go to Main Menu→ Search→ Event Search tab.

CH	Type	Start Time	End Time
1	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
2	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
3	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
4	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
5	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
6	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
7	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
8	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
9	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
10	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
11	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
12	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
13	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04
14	Motion	03/21/2013 15:11:40	03/21/2013 15:12:04

- ii. Select the date and the channels on the right side. A date with a highlighted border indicates the presence of data on that day.
- iii. Check Motion, Sensor or All accordingly.
- iv. Click the "Search" button to list the files.
- v. Double click a file to playback.

File Management

- i. Go to **Main Menu** ➔ **Search** ➔ **File Management** tab
- ii. Select date and Channels.
- iii. Click the “Search” button to display the searched files.
- iv. Use the “All” check box to select or unselect all the files on the page.
- v. Double click an unlocked item to play the file.

Lock: Select a file and click the “Lock” button to lock the file, this file will not be deleted or written over.

Unlock: Select a locked file and click the “Lock” button to unlock the file.

Delete: Select an unlocked file and click the “Delete” button to delete file.

Snap Settings and Picture Search

You need to capture pictures first and then playback through picture search.

Snap Settings

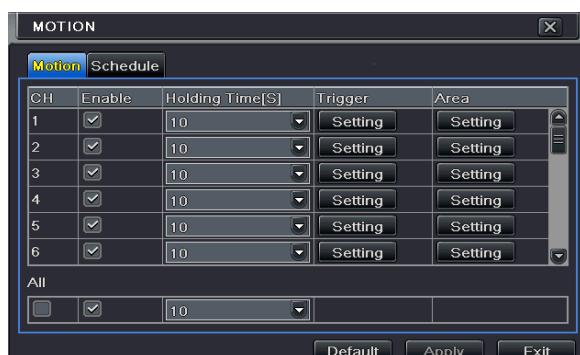
Manual Snap: In the Live view mode, right click to display the main menu. Then click the  on this icon to take a snapshot.

Triggered Snap setup: Go to **Main Menu** ➔ **Setup** ➔ **Record** ➔ **Snapshot**, as shown below.



This is where you can set the details for the snap alerts, resolution (D1 is best), quality, time between shots 1-5s and number of shots to take 0-3.

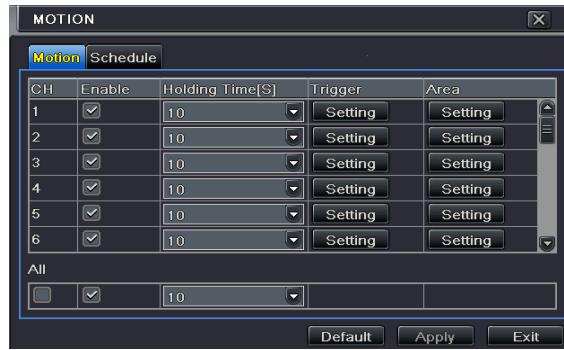
Motion trigger Snapshots: Go to **Main Menu** ➔ **Setup** ➔ **Alarm** ➔ **Motion** tab.



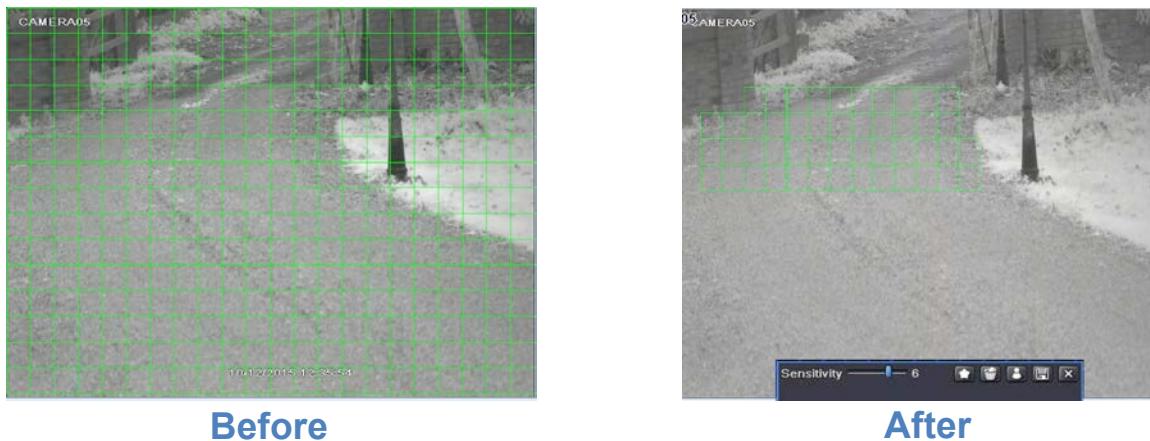
Motion Detection

Motion detection has two pages: motion and schedule. The motion page includes trigger settings (actions when motion is detected) and area setting (configuring which areas will watch for motion).

- i. Go to **Main Menu**→ **Setup**→ **Alarm**→ **Motion**.



- ii. Choose the cameras you wish to have motion detection on and check the enable button. Select the holding time, once motion has stopped the system will wait for the time specified before it stops this event. If motion is detected again within this time it will be classed as the same event.
- iii. The Trigger settings are actions when the system detects motion i.e. sound buzzers/alarms, show the camera full screen, take snap shots and email them to you.
- iv. The Area settings configure the detection patch as seen below the grid represents the patch.



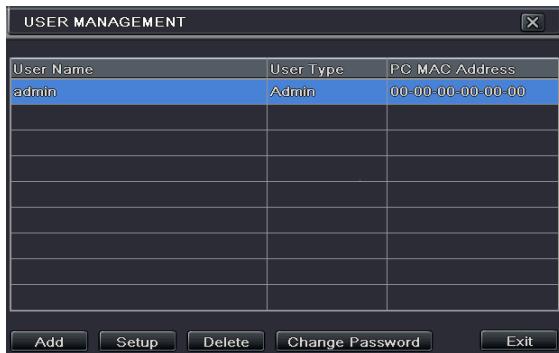
- v. In the Area settings, you can drag slide bar to set the sensitivity value (1-8). The higher the value is the more sensitive it is to motion. Since the sensitivity is influenced by color and time (day or night), you can adjust its value according to the practical conditions.
- vi. Left click the grid and drag to delete area. Click icon to set the whole area as detection area. Click icon to clear the detection grid. Click icon to test the sensitivity as per the local conditions. Click icon to save the setting. Click icon to exit the interface.

Device Management

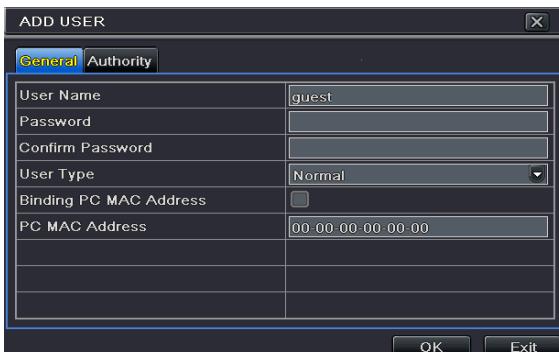
User Management

Add, Delete & Modify User

- i. Go to Main Menu → Setup → Users.



- ii. Click Add button to display a dialog box as below. The General tab will allow you to set the name, password, user type (normal/advanced – alters the access to the system) and binding to a specific PC.



- iii. The Authority tab lets you customize the access assigned to user as below.



- i. Click "OK" to save the settings.

To delete user:

- i. Go to **Main Menu**→ **Setup**→ **Users** interface.
 - ii. Select the added user you want to delete and then click “Delete” button.

To modify user:

- i. Go to **Main Menu**→ **Setup**→ **Users** interface.
 - ii. Select the added user you want to modify and then click “Modify” button to do the relevant operation.

To change user password:

- i. Go to **Main Menu** ➔ **Setup** ➔ **Users** interface.
 - ii. Select the added user you want to change its password and then click “Change Password” button.

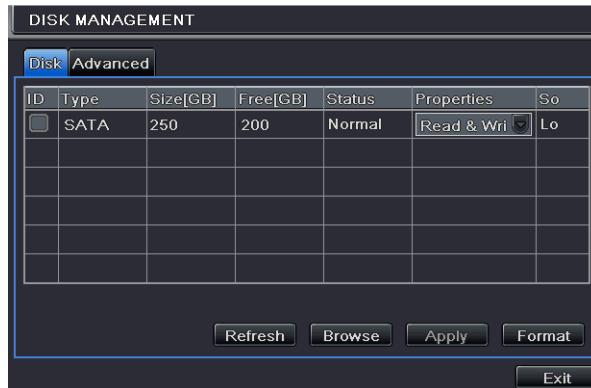
Online Users

This function allows you to check how many users are accessing the device and help the administrator to disconnect the online user. Go to **Main Menu**➔ **Information**➔ **Online Users** interface. This will show current online users.



Disk Management

Click **Main Menu**→ **Disk Management** to go to disk management as shown below.



To format the disk:

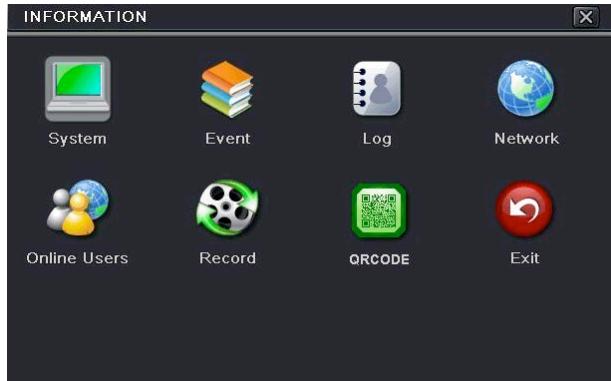
Select a hard disk and click Format button to start format. **Note:** All recorded files in the hard disk will be lost after formatting.

To check other information of disk:

After you go to **Disk Management** ➔ **Advanced** tab, you can check model, S/N, firmware and the health status of the disk. You can also monitor the temperature, internal circuit, dielectric material of the disk and analyze potential problems to safe guard the data.

View Information

Go to **Main Menu** ➔ **Information** interface as shown below. In this interface, you may check the information of system, event, log, network, online users, record and QRcode



System: Check the hardware version, MCU version, kernel version, device ID, etc.

Event: Search for events like motion, sensor and video loss. You can search by date and channel and saved on a USB flash drive as an html file using the export button.

Log: Search for relevant logs based on date and event (Operation, Setup, Playback, Backup, Search, Check Information and Error). This report can also be saved on a USB flash drive as an html file using the export button.

Network: Check network information.

Online Users: Check the details of the connected online users.

Record: Check resolution, fps (frames per second) and record status (sensor alarm, motion, manual or schedule recording).

QRcode: You can quickly access the mobile client by scanning QRcode.

Shutdown

Click **Main Menu** ➔ **Shutdown** to open a system shutdown window. Click “OK” to confirm shutdown.

ADDING IP CAMERAS

This chapter mainly introduces how to connect multiple IP cameras through the HD DVR. Once you finish adding IP cameras the live feeds will be active and viewable on the DVR Monitor. An IPC which supports the Onvif protocol can be added manually.

To add IP cameras via LAN:

- i. Go to **Main Menu** ➔ **IP Camera** tab. Click “Search”, the DVR will search the local network.



- ii. Go to the search tab. Click "Refresh" to refresh the searched devices.



If the IP Camera is not in the same local network, you can select the device and click “setup” to modify the IP address of the searched device.

NOTE: If the network of the IP camera and the DVR are on the same local network, their IP address needs to be of the same network area. For example: If the IP address for the DVR is 192.168.1.2, then the IP address of the IP cameras must be 192.168.1.xxx



- iii. Check mark the searched camera and click “OK” to return to the previous page. Click “Apply” and the added cameras will be listed in the Device Management page. (“Connected” status means the device connected successfully and you will be able to see the live feed).

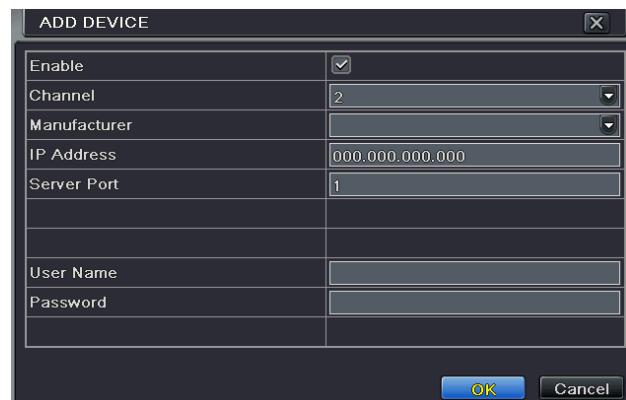


- iv. You may also select the added device and click “setup” button to modify the channel, IP address of the device.



To add IP cameras via WAN:

- i. Go to Main Menu → IP Camera tab.
- ii. Click "Add" button and a pop up window will appear as shown below. Check mark "Enable" box, then select channel and manufacturer and manually input IP address, server port, username and password for the DVR.



NOTE: If the HD DVR and IP cameras you want to add are in WAN, the IP address of the IP camera must be the WAN IP.

IP Camera Settings

Go to Main Menu → Setup → Live → Cam perimeters page. Click the "Setting" button, a dialog will pop up as seen below.



- i. Enable "Mirror" and "Flip"
- ii. Select the focus mode according to the lens type of IPC.
- iii. Adjust the value of focus and zoom.
- iv. Click "save" to save the settings.

Front Panel Descriptions

The following descriptions are for reference only

Type 1:

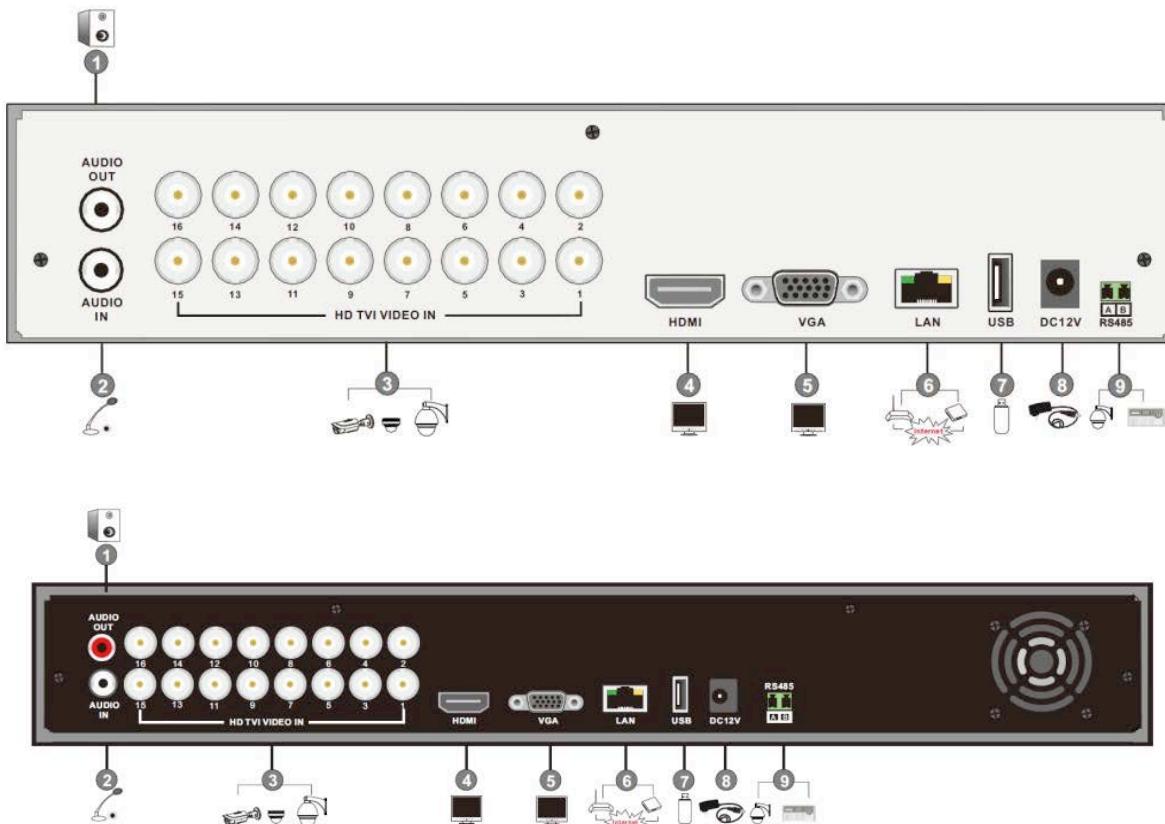
Name	Descriptions
REC	When recording, the light is blue
Net	When access to network, the light is blue
Power	Power indicator, when connection, the light is blue
Fn	Switch the resolution of the VGA/HDMI output

Type 2:

Name	Descriptions
Power	Power Indicator, when connected, the light is blue
HDD	The light turns blue when reading/writing HDD
Net	The light turns blue when it is able to access the network
Backup	The light turns blue when backing up files and data
Play	The light turns blue when playing video
REC	Power Indicator, when connected, the light is blue
AUDIO /+	1. Adjust audio 2. Increase the value in setup
P.T.Z / -	1. Enter PTZ mode 2. Decrease the value in setup
MENU	Enter Menu in live
INFO	Check the information of the device
BACKUP	Enter backup mode in live
SEARCH	Enter search mode in live
Exit	Exit the current interface
	Manually record
	Play/Pause
	Rewind key
	Fast forward
1-9	Input digital number and select camera
0--	Input number 0, the number above 10
Direction Key	Change direction
Multi-Screen Switch	Change the screen mode
Enter	Confirm selection
U/SR	To connect external USB device like USB mouse or USB thumb drive

Rear Panel Descriptions

The following are example rear panels to show you the interface and connections. They are only for reference.



No.	Name	Descriptions
1	AUDIO OUT	Audio output; connect to sound box
2	AUDIO IN	Connect to audio input device, like microphone, pickup, etc
3	HD TVI VIDEO IN	(HD-TVI signal) 1080P/720P, (analog signal) 960H/D1 video inputs
4	HDMI	Connect to high definition display device
5	VGA	Connect to monitor Audio input
6	LAN	Network port
7	USB	Connect USB storage device or USB mouse
8	DC12V	DC12V power input
9	RS485	Connect to keyboard or speed dome. A is TX+; B is TX-

Connections

Video Connections

Video Input: BNC fitting which supports PAL/NTSC.

Video Output: VGA/HDMI (you can connect a monitor simultaneously or independently).

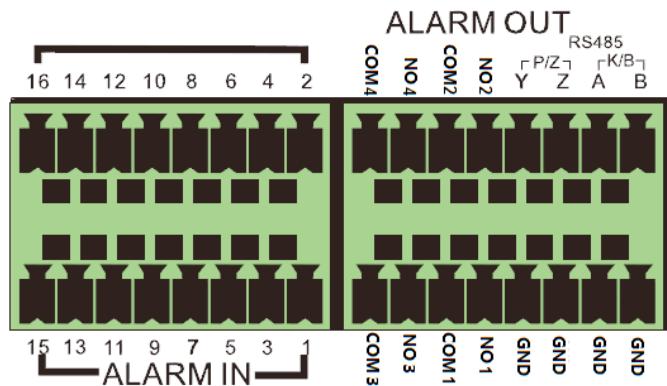
Audio Connections

Audio Input: Connect to microphone, pickup etc.

Audio Output: Connect to headphones, sound box or other audio devices.

Alarm Connections

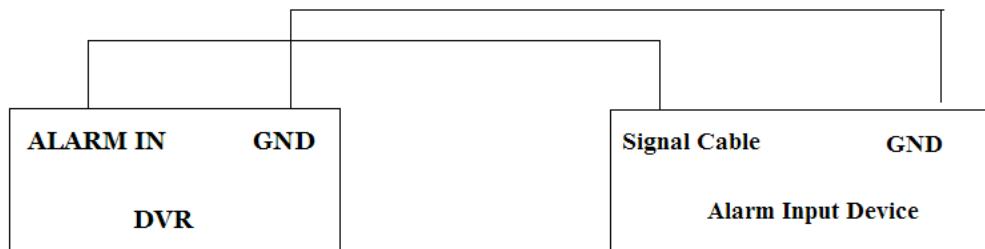
Take these 16 channel inputs and 4 channel alarm output as an example.



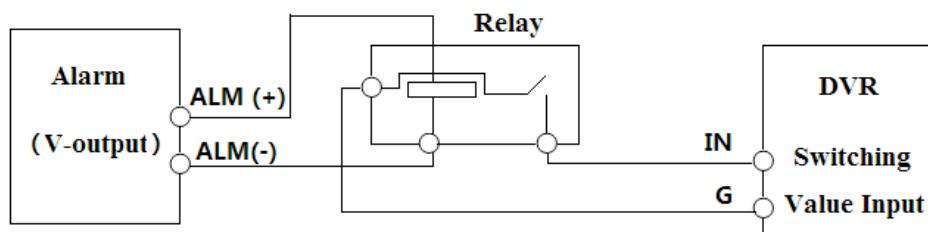
Alarm Input:

Alarm IN 1-16 are 16channel alarm input, NO type and NC type are both available.

The way to connect sensor and the device is as shown below:



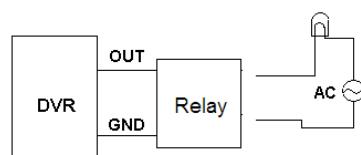
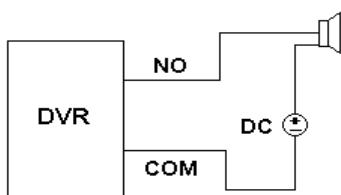
The alarm input is an open/closed relay. If the input is not an open/closed relay, please refer to the following connection diagram:



Alarm Output:

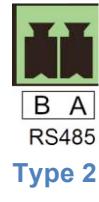
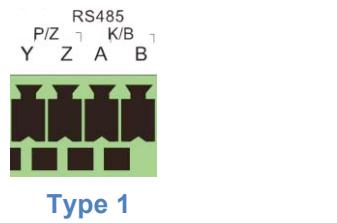
The way to connect the alarm output:

Pull out the green terminal blocks and loosen the screws in the alarm out port. Then insert the signal wires of the alarm in to the port of NO and COM separately. Finally, tighten the screws. If the external alarm needs power, you can connect the power supply as shown in the following images.



PTZ Connection

There are two types of RS485 connection.



Type 2

Type 1: The P/Z connection is used to connect speed dome. K/B connection is used to connect a keyboard.

Type 2: The RS485 connections are not only used to connect speed dome but also a keyboard.

How to connect a speed dome to the HD TVI DVR:

Type 1: Disconnect the pluggable block from the RS-485 terminal block and then loosen the fixed screws from the pluggable block, insert signal cables into Y and Z port separately (Y is TX+; Z is TX-) and tighten the fixed screws. Next, connect the pluggable block back into the terminal block. Finally, connect the video cable of the speed dome to the video input of the HD TVI DVR.

Type 2: Disconnect the pluggable block from the RS-485 terminal block and then loosen the fixed screws from the pluggable block, insert the signal cables into A and B ports separately (A is TX+; B is TX-) and tighten the fixed screws. Next, connect the pluggable block back into the terminal block. Finally, connect the video cable of the speed dome to the video input of the HD TVI DVR.