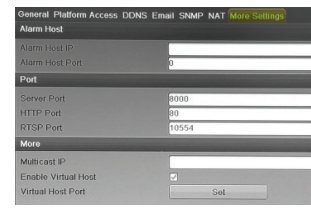


7 SET REMOTE VIEWING PORTS (continued)



- **SERVER PORT** is responsible for the mobile app and client software log-in
 - **HTTP PORT** is responsible for Web browser log-in
 - **RTSP PORT** is responsible for video/audio streaming
- NOTE:** The HTTP port, server port, and RTSP port can be changed to avoid conflicts with the ISP or if multiple devices are installed at a single location.

8 SET UP PORT FORWARDING

Port forwarding redirects communication from one address/port number to another to make services on a protected network available to hosts on an external network.

1. Log into the router, and proceed with **port forwarding**. **Port forwarding** steps differ by router. For **port forwarding** assistance, contact your Internet Service Provider (ISP) or router manufacturer. Also refer to www.portforward.com for step-by-step instructions.

NOTE: Hikvision USA is not associated with www.portforward.com and is not responsible for any activity between the user and www.portforward.com. Avoid accidentally downloading any software from www.portforward.com.

2. Proceed to the **Routers** section on the Website for step-by-step instructions.

9 SET UP HIK-CONNECT P2P CLOUD SERVICE

NOTE: Ports 9010 and 9020 must not be blocked for the Hik-Connect Cloud service to work. Use the Hik-Connect mobile app (from iOS App Store or Google Play) to create a Hik-Connect P2P Cloud account to connect Hikvision devices over the Internet. See the *User Manual*.

1. Enable Hik-Connect P2P on the NVR.

- 1) Go to Main Menu > System Configuration > Network > Platform Access.
- 2) Check the **Enable** checkbox.
- 3) Server Address must be "dev.us.hik-connect.com." If not, check the **Custom** checkbox, and type "dev.us.hik-connect.com."
- 4) Click **Apply**. Status will change to "Online" (if all settings are correct).
- 5) Note the Serial Number and Verification Code shown here (for use when registering the DVR in your Hik-Connect account) or use the QR code displayed.



2. To see a device's video stream on the Hik-Connect or iVMS-4500 mobile app, add the device.

9 SET UP HIK-CONNECT P2P CLOUD SERVICE (continued)

- 1) Login to Hik-Connect mobile app with your user name, e-mail, or mobile number and password.
- 2) On the Home screen, click "+" (upper right corner).
- 3) Enter the device's information.
 - If you have device's **QR Code**: Use the QR Code Scanner to scan the device's **QR Code**.
 - If you do not have device's **QR Code**: Enter the device information manually:
 - a. Click **Edit** (pencil) on top right corner.
 - b. Enter device serial number (device must be online), then click **OK**.
 - c. When the device appears on the "Results" screen, click **Add**.
 - d. Enter device's 6-character Verification Code (all upper case), then click **OK**.
 - e. Click **Finish**.

10 ADD IP CAMERAS

1. Right click a window in **Live View** mode to display the menu.
2. Online cameras in the same network segment will be detected and displayed in the camera list.
3. Select camera and click **+** to add it (using DVR's admin password), or click **One-touch Adding** to add first two cameras in list of three or more (w/same admin password).

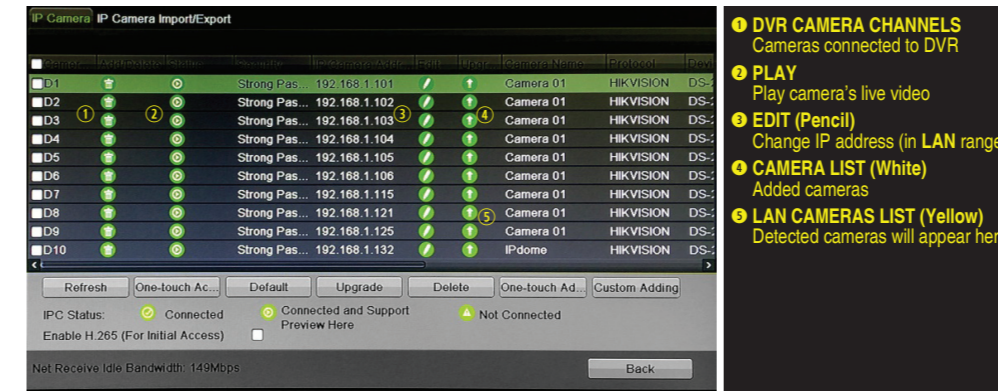
NOTE: Make sure the camera to add has been activated by setting the admin password and the camera's admin password is the same as the DVR's.



Figure 5, IP Camera Management Interface

10 ADD IP CAMERAS (continued)

Icon	Explanation	Icon	Explanation
	Edit basic camera parameters		Upgrade the connected camera
	Camera disconnected: click icon to get camera's exception information		Delete the IP camera
	Play connected camera's live video		Camera connected



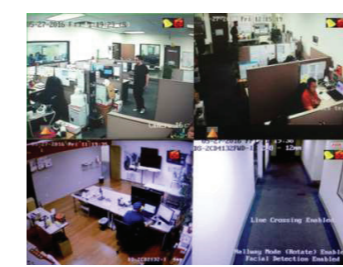
- **DVR CAMERA CHANNELS**
Cameras connected to DVR
- **PLAY**
Play camera's live video
- **EDIT (Pencil)**
Change IP address (in LAN range)
- **CAMERA LIST (White)**
Added cameras
- **LAN CAMERAS LIST (Yellow)**
Detected cameras will appear here

11 ADD ANALOG CAMERAS

1. Connect analog camera(s) to the "Video In" BNC connectors. Analog cameras are enabled by default; no further action is required.

12 VIEW LIVE VIDEO

Live View displays real-time video.



Icons in the upper right of screen show each camera's record and alarm status.

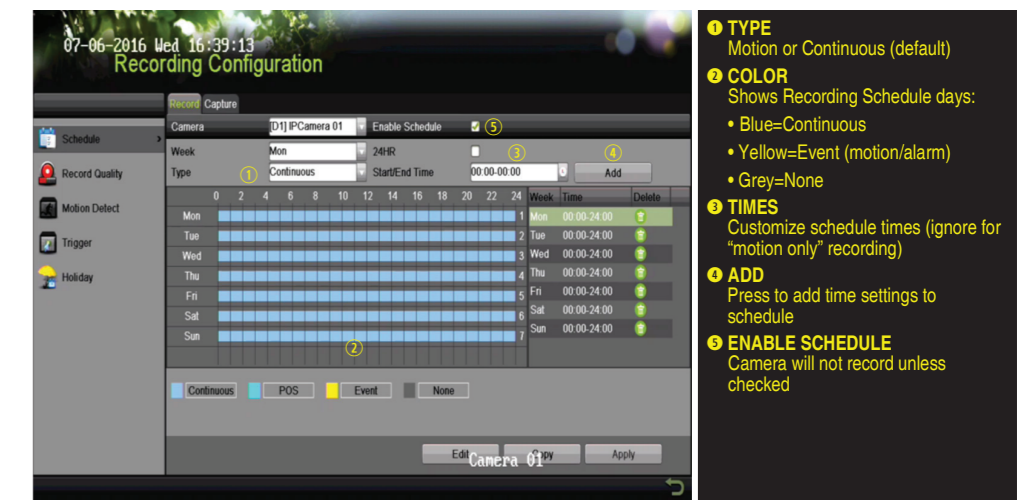
- **Alarm** (video loss, tampering, motion detection, sensor alarm, or VCA alarm)
- **Record** (manual record, continuous record, motion detection, alarm, or VCA triggered record)
- **Event/Exception** (event and exception information appears at lower-left corner of screen)

13 SET UP RECORDING

The system defaults to record video continuously at 8 fps, or at 15 fps when motion is detected.

Recording Schedule

- Default is to record continuously every day. Do the following to change the recording schedule:
1. Go to MENU > RECORDING CONFIGURATION > SCHEDULE.
 2. Choose **CONTINUOUS** or **EVENT/(MOTION DETECTION)** under the **Type** pull-down menu.
 3. Use cursor to select (days will turn blue [continuous] or yellow [event/motion detect]) or deselect (days will turn gray [off]) the calendar days you wish to record.
 4. Apply time settings as desired.
 5. Press **APPLY**.



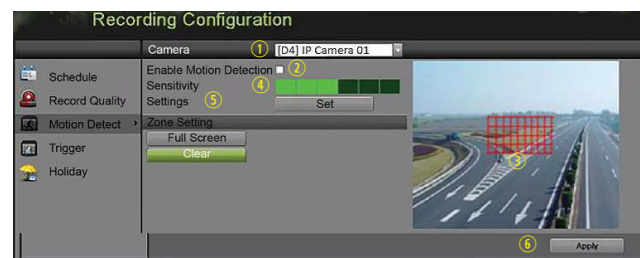
- **TYPE**
Motion or Continuous (default)
- **COLOR**
Shows Recording Schedule days:
 - Blue=Continuous
 - Yellow=Event (motion/alarm)
 - Grey=None
- **TIMES**
Customize schedule times (ignore for "motion only" recording)
- **ADD**
Press to add time settings to schedule
- **ENABLE SCHEDULE**
Camera will not record unless checked

Motion Detection Areas

To define the image areas that Motion Detection will monitor for each camera, do the following:

1. Go to MENU > RECORDING CONFIGURATION > MOTION DETECT.
2. Use **Camera** pull-down menu to select camera to configure.
3. Check the **Enable Motion Detection** checkbox to enable motion detection.
4. Use the **Sensitivity** boxes to select how responsive the detection should be (the more green boxes lit, the greater the sensitivity).
5. Drag a grid(s) over the area(s) on the image that will be sensitive to motion.
6. Click **Settings Set** to configure **Arming Schedule** (when detection is enabled) and **Linkage Actions** (what action(s) to take when motion is detected).

13 SET UP RECORDING (continued)



- **CAMERA (Select)**
- **ENABLE MOTION DETECTION**
Click to enable/disable
- **MOTION GRID (Draw motion area)**
- **SENSITIVITY**
Set green squares for sensitivity
- **SETTINGS/SET**
Arming schedule & linkage actions
- **APPLY**

Record Quality

Main Stream

1. Go to RECORDING CONFIGURATION > RECORD QUALITY > MAIN STREAM.
 - **Stream Type** enables/disables audio streaming from the cameras (if the camera does not have audio capabilities, **Stream Type** will have only **Video** option).
 - **Resolution** sets recording resolution.
 - **Bitrate Type:**
 - > **Variable** saves HDD space
 - > **Constant** provides more stable stream



- **RECORD (MAIN STREAM)**
Select tab
- **CAMERA**
Select IP camera
- **EVENT**
For event recording only (motion or alarm)
- **CONTINUOUS**
For live view image and continuous recording
- **VIDEO QUALITY**
Select number of green squares to set quality (in example, sensitivity is set to 5)
- **VIDEO ENCODING**
Select compression scheme

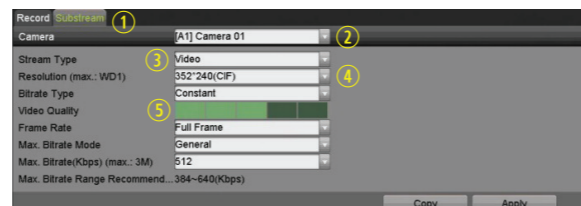
- **Video Quality** adjusts clarity (high = four green squares is default). Use highest if HDD allows. Medium setting is balance between good image and saving HDD space.
- **Frame Rate** sets recording frame rate (8 fps on continuous and 15 fps on motion by default). Higher rates require more storage, but allow better slow motion playback.
- **Max Bitrate Mode** chooses between pre-set and custom values (**General** is default).
- **Max Bitrate (kbps)** is chosen bitrate for streaming video. Adjust Max Bitrate to meet or exceed the rate recommended by the system for the chosen parameters.
- **Max Bitrate Recommended** is impacted by resolution, quality, and frame rate.
- **Record Audio** turns on audio recording. Requires external mic or camera built-in mic.
- **Video Stream** determines which stream is recorded. Leave at default (Main Stream).

13 SET UP RECORDING (continued)

Substream

1. Go to RECORDING CONFIGURATION > RECORD QUALITY > SUBSTREAM to set up the **Sub Stream** to stream to mobile devices and display multiple cameras locally.

NOTE: If speed is insufficient, lower frame rate, bitrate, and/or resolution.



- **SUBSTREAM TAB (Select)**
- **CAMERA (Select Camera)**
- **STREAM TYPE (Select Choice)**
- **RESOLUTION (Up to 4CIF)**
- **VIDEO QUALITY**
of green squares sets quality (in example, sensitivity is 3)

More Setting...

1. Click **More Setting...** to display additional settings.



- **PRE-RECORD**
Secs to record before recording
- **POST RECORD**
Secs to record after recording
- **EXPIRED TIME (DAY)**
Days to keep the recording
- **REDUNDANT RECORD**
Record to redundant drive
- **RECORD AUDIO**
Check to record audio
- **VIDEO STREAM**
Which video stream to record

14 PLAY BACK RECORDED VIDEO

1. Go to MENU > PLAYBACK and select the desired camera(s) from the menu on the right.
2. Select date (days w/recordings will be blue if continuous only or yellow if day has event recording).
3. Press **PLAY** (click within the timeline to jump to desired time).



- **PLAYBACK TYPE MENU**
Select type of record to play
- **FULL SCREEN**
Full screen multi-channel playback
- **PLAY/STOP**
- **CAMERA LIST**
Select camera(s) to play back
- **CALENDAR**
Select date to play back
- **TIMELINE**
Click on timeline to jump to desired playback time

14 PLAY BACK RECORDED VIDEO (continued)

Playback Controls



Play Back Record Files

1. Go to MENU > LIVE VIEW.
2. Left click a Live View window to bring up a shortcut toolbar and click for instant playback.

Playback Controls

1. Right click a Live Image to display a Quick menu and click for instant playback.

15 BACK UP VIDEO RECORDINGS AND CLIPS

Back up recorded video clips to ensure important video is not lost or destroyed.

Choose Recorded Video Clips to Back Up

1. Connect a USB flash drive, HDD, or DVD writer to an available USB port (this step is mandatory).
2. Go to MENU > PLAYBACK.
3. Select cameras for playback.
4. Select the date and beginning time of the incident.
5. Click **START CLIPPING** .
6. Select the ending time of the incident.
7. Click **END CLIPPING** (same button as **START CLIPPING**). Clip will be marked.
8. Repeat steps 1-6 as many times as required.
9. Click **FILE MANAGEMENT** to display a new window containing all marked clips.
10. Select the desired clips.
11. Click **EXPORT** to save files to the inserted USB device.

Lock Video Clips

1. Click on the images of the clips you want to lock.
2. Press **LOCK** to prevent the file from being erased.

Back Up Video Clips

1. Connect a USB flash drive, HDD, or DVD writer to an available USB port.
2. Click **File Management** to display the File Management window.
3. In the File Management window, choose video clip(s) to back up and click **Export**.
4. Choose backup device (USB flash drive, USB HDD, or DVD writer).
5. Click **Export** (to check backup, choose recorded file in Export interface and click .

15 BACK UP VIDEO RECORDINGS AND CLIPS (continued)



- **CAMERA LIST**
Select cameras to view
- **CALENDAR**
Select dates to view
- **PLAY/STOP**
Toggles between Play and Stop
- **START/STOP CLIPPING**
Toggles between Start Clipping and Stop Clipping
- **LOCK**
Locks selected video clips to prevent them from being deleted
- **FILE MANAGEMENT**
Displays list of saved clips, export clips from this window



- **CAMERA LIST**
Select desired cameras to export
- **SEARCH CRITERIA**
Enter what to search for.
- **SEARCH**
Find video clips based on Search Criteria.