KT&C

INNOVATIVE
HIGH DEFINITION SURVEILLANCE

OMNI-IP
Scalable IP Solutions

KNR-p16Px16

KNR-p32Px16

Network Video Recorder

Quick Installation Guide

TABLE OF CONTENTS

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer. This manual is applicable to the models listed in the following table.

Series	Model	Type
Omni IP	KNR-p16Px16	Network Video Recorder
	KNR-p32Px16	

NVR Pre-Installation

These Omni IP series KNR-p16Px16 and KNR-p32Px16 NVRs are highly advanced surveillance equipment that should be installed with care. Please take into consideration the following precautionary steps before installation of the NVR.

1. Keep all liquids away from the NVR.
2. Install the NVR in a well-ventilated and dust-free area.
3. Ensure environmental conditions meet factory specifications.
4. Install a manufacturer recommended HDD.

NVR Installation

During the installation of the NVR:

1. Use brackets for rack mounting.
2. Ensure there is ample room for audio and video cables.
3. When routing cables, ensure that the bend radius of the cables are no less than five times than its diameter.
4. Connect both the alarm (if used) and LAN/WAN cables.
5. Allow at least 2cm (≈0.75-inch) of space between racks mounted devices.
6. Ensure the NVR is grounded.
7. Environmental temperature should be within the range of -10 ℃ ~ 55 ℃, 14ºF ~ 131ºF.
8. Environmental humidity should be within the range of 10% ~ 90%.

Hard Disk Installation
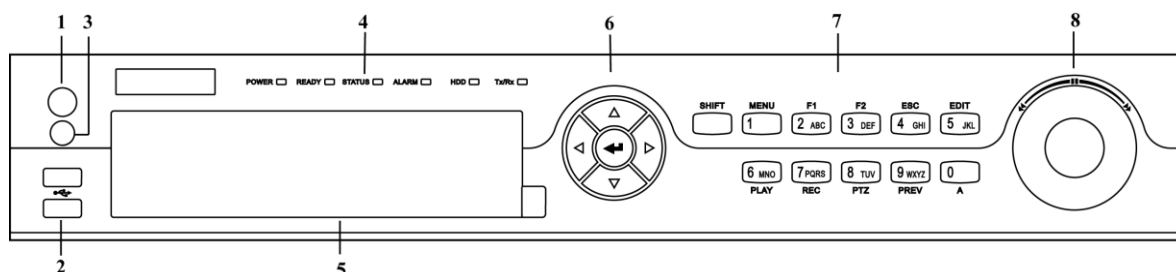
Before you start:

Disconnect the power from the NVR before installing a hard disk drive (HDD). A factory recommended HDD should be used for this installation.

Up to 4 SATA hard disks can be installed on your NVR; or 2 SATA HDD plus optional DVD-RW.

Tools Required: Screwdriver.

Front Panel

KNR-p16Px16 and KNR-p32Px16

No.	Name	Function Description
1	**POWER ON/OFF**	Power on/off switch.
2	**USB Interface**	Connect to USB mouse or USB flash memory.
3	**IR Receiver**	Receiver for IR remote control.
4	**POWER**	Power indicator lights in green when NVR is powered up.

	READY	Ready indicator is normally green, indicating that the NVR is functioning properly.
	STATUS	Indicator turns green when NVR is controlled by an IR remote control with the address from 1~254; Indicator turns red when the SHIFT button is used; Indicator does not light when the NVR is controlled by a keyboard or by the IR remote control with the address of 255; Indicator turns green when the NVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time , and the SHIFT button is not used; Indicator turns orange : (a) when the NVR is controlled by IR remote control (with the address from 1~254) and keyboard at the same time and the SHIFT button is used as well; (b) when the NVR is controlled by IR remote control (with the address from 1~254) and the SHIFT button is used.
	ALARM	Alarm indicator turns red when a sensor alarm is detected.
	HDD	HDD indicator blinks in red when data is being read from or written to HDD.
	Tx/Rx	TX/RX indictor blinks in green when network connection is functioning properly.
5	**DVD-ROM**	Slot for optional DVD-RW (replaces 2 HDD).
6	**DIRECTION**	The DIRECTION buttons are used to navigate between different fields and items in menus. In Playback mode, the Up and Down button is used to speed up and slow down recorded video. In All-day Playback mode, the Left/Right button can be used to select the recorded video of next/previous day; in Playback by Normal Video Search, the Left/Right button can be used to select the next/previous recorded file. In Live View mode, the directional buttons can be used to cycle through channels. In PTZ control mode, it can control the movement of the PTZ camera.
	ENTER	Confirm selection in any of the menu modes. It can also be used to tick checkbox fields. In Playback mode, it can be used to play or pause the video. In Single-frame Playback mode, pressing the ENTER button will advance the video by a single frame. In Auto-switch mode, it can be used to stop /start auto switch.
7	**SHIFT**	Switch of compound keys between the numeric/letter input and functional control.
	1/MENU	Enter numeral "1"; Access the main menu interface.
	2ABC/F1	Enter numeral "2"; Enter letters "ABC"; The F1 button can be used to select all items on the list; In PTZ Control mode, the F1 button can be used to zoom out (zoom-) the PTZ camera; In live view or playback mode, the F1 button can be used to switch between main and spot video output.
	3DEF/F2	Enter numeral "3"; Enter letters "DEF"; In PTZ Control mode, the F1 button can be used to zoom in (zoom+) the PTZ camera; The F2 button can be used to cycle through tab pages.
	4GHI/ESC	Enter numeral "4"; Enter letters "GHI"; Exit and back to the previous menu.
	5JKL/EDIT	Enter numeral "5"; Enter letters "JKL"; Delete characters before cursor; Select the checkbox and ON/OFF switch; Start/stop record clipping in playback.
	6MNO/PLAY	Enter numeral "6"; Enter letters "MNO"; In Playback mode, it is used for direct access to playback interface.
	7PQRS/REC	Enter numeral "7"; Enter letters "PQRS"; Manual record, for direct access to manual record interface; manually enable/disable record.
	8TUV/PTZ	Enter numeral "8";

		Enter letters "TUV"; Access PTZ control interface.
	9WXYZ/PREV	Enter numeral "9"; Enter letters "WXYZ"; Multi-camera display in live view; In Playback mode or Menu→Playback→Tag playback interface, this button can be used to delete the selected tag.
	0/A	Enter numeral "0"; Switch between input methods (upper and lowercase alphabet, symbols and numeric input). In Playback mode, this button can be used to add the default tag.
8	**JOG SHUTTLE Control**	Move the active selection in a menu. The inner ring will move the selection up and down; the outer ring will move it left and right. In Playback mode, the inner ring is used to jump 30s forward/backward in video files. The outer ring can be used to speed up/slow down the video. In Live View mode, it can be used to cycle through different channels. In PTZ control mode, in can control the movement of the PTZ camera.

Rear Panel
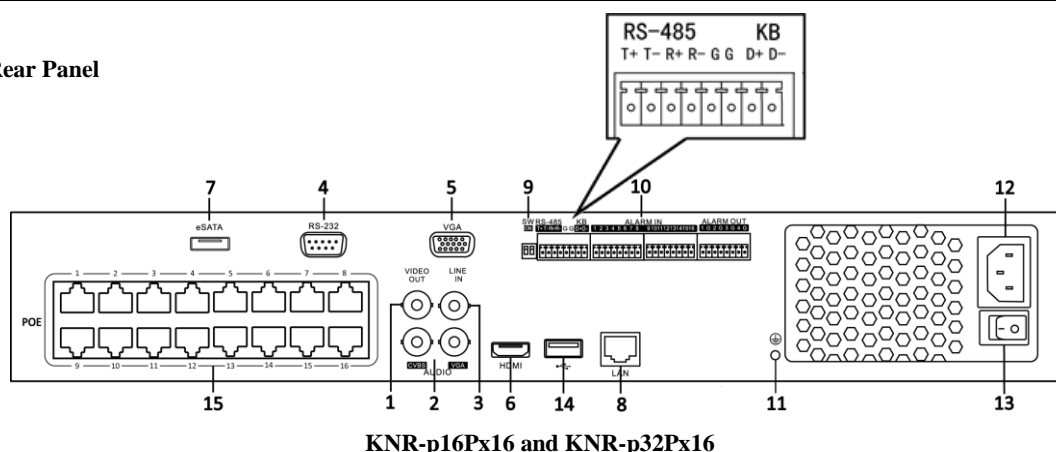
KNR-p16Px16 and KNR-p32Px16

No.	Item	Description
1	VIDEO OUT	BNC connector for video output.
2	CVBS AUDIO OUT	BNC connector for audio output. This connector is synchronized with CVBS video output.
	VGA AUDIO OUT	BNC connector for audio output. This connector is synchronized with VGA video output.
3	LINE IN	BNC connector for audio input.
4	RS-232 Interface	Connector for RS-232 devices.
5	VGA	DB15HD connector for VGA output. Display local video output and menu.
6	HDMI	HDMI video output connector. Includes HDMI audio support.
7	eSATA (Optional)	Connects external SATA HDD, CD/DVD-RM.
8	LAN Interface	One 10/100/1000 RJ45 Ethernet interface
9	Termination Switch	RS-485 termination switch. Up position is not terminated. Down position is terminated with 120Ω resistance.
10	RS-485 Interface	Connector for RS-485 devices. T+ and T- pins connect to R+ and R- pins of PTZ receiver respectively.
	Controller Port	D+, D- pin connects to Ta, Tb pin of controller. For cascading devices, the first NVR's D+, D- pin should be connected with the D+, D- pin of the next NVR.
	ALARM IN	Connector for alarm inputs.
	ALARM OUT	Connector for alarm outputs.
11	GROUND	Ground (recommended to be connected when NVR starts up).
12	AC 100V ~ 240V	AC 100V ~ 240V power supply.
13	POWER	Switch for turning on/off the NVR
14	USB interface	Universal Serial Bus (USB) ports for additional devices such as USB mouse and USB Hard Disk Drive (HDD).
15	Network Interfaces with PoE function	16 Plug-and-Play network interfaces for the cameras and to provide Power over Ethernet.

Peripheral Connections

Wiring of Alarm Inputs

The alarm input is an open/closed relay. To connect the alarm input to the device, use the following diagram.
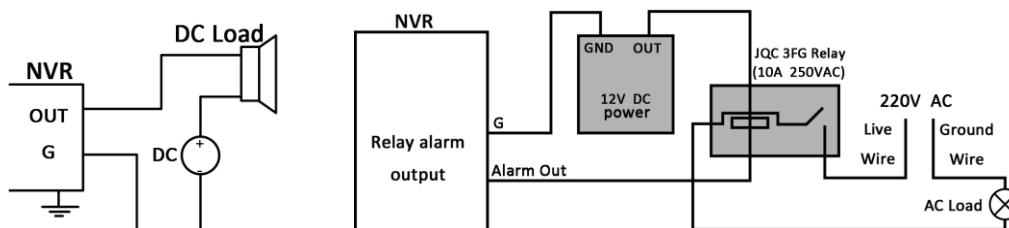
NOTE

If the alarm input is not an open/close relay, please connect an external relay between the alarm input and the device.
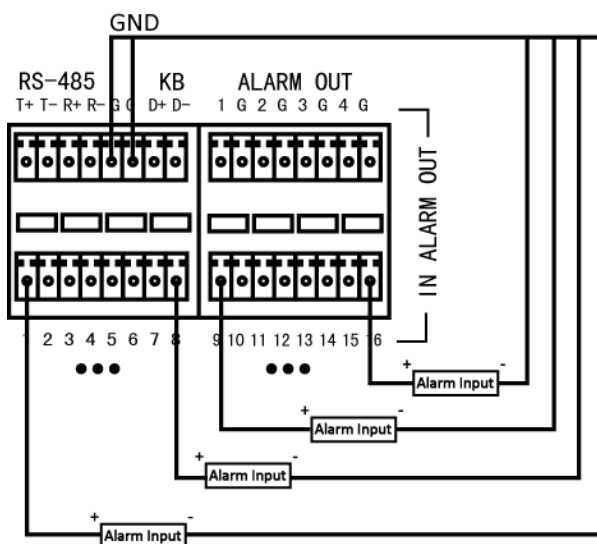
Wiring of Alarm Output

To connect to an alarm output (AC or DC load), use the following diagram:

DC Load Connection Diagram   **AC Load Connection Diagram**

For DC load, the jumpers can be used within the limit of 12V/1A safely.

To connect an AC load, jumpers should be left open (you must remove the jumper on the motherboard in the NVR). Use an external relay for safety (as shown in the figure above).

There are 4 jumpers (JP1, JP2, JP3, and JP4) on the motherboard, each corresponding with one alarm output. By default, jumpers are connected. To connect an AC load, jumpers should be removed.

Example:

If you connect an AC load to the alarm output 3 of the NVR, then you must remove the JP 3.

Using of Alarm Connectors

To connect alarm devices to the NVR:

1. Disconnect *pluggable block* from the ALARM IN /ALARM OUT terminal block.

2. Unfasten stop screws from the *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.

3. Connect *pluggable block* back into terminal block.

Controller Connection
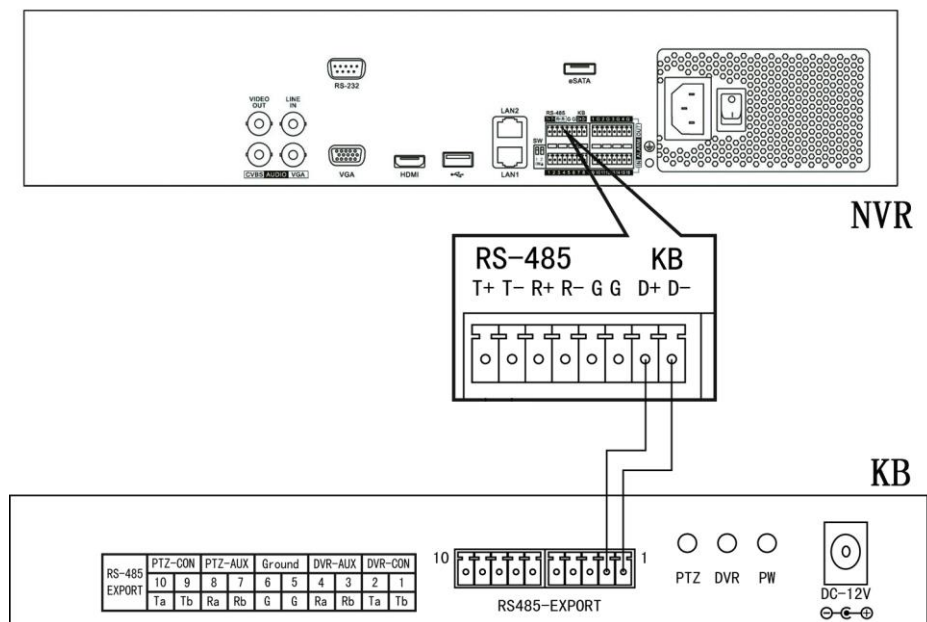
To connect optional controller to the NVR:

1. Disconnect pluggable block from the KB terminal block.

2. Unfasten stop screws from the KB D+, D- *pluggable block*, insert signal cables into slots and fasten stop screws. Ensure signal cables are in tight.

3. Connect Ta on controller to D+ on terminal block and Tb on controller to D- on terminal block. Fasten stop screws.

4. Connect *pluggable block* back into terminal block.

NOTE

Make sure both the controller and NVR are grounded.

Specifications

	KNR-p16Px16	KNR-p32Px16
Streaming Video Inputs & Recording		
Maximum Number of IP Cameras	16	32
Number of built in PnP/PoE Switch Ports	16	16
Supported Live View/ Record Resolutions	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF	
Sub-stream	Supported for recording, playback and live viewing	
Audio streaming	Supported from audio capable cameras	
Maximum FPS rate per camera (Live and Record)	30FPS Main stream; 30FPS Sub-stream Up to 480FPS total for 16 cameras	30FPS Main stream; 30FPS Sub-stream Up to 960FPS total for 32 cameras
Maximum Record Streaming Video Input Bandwidth (all cameras combined)	80Mb/s	160 Mb/s
Recording Compression	Depends on IP Camera; typically H.264 for main stream, MJPEG for sub-stream	
Recording Modes	Continuous, Motion, Alarm, Motion+Alarm, Motion or Alarm	
Motion Detection	Camera Side, configurable from NVR for KNC-p3 Omni IP Series Cameras	
Schedule Period	Per day in 1 hour blocks; or 8 time periods per day, each with different record mode; plus holidays	
Pre- and Post- Event Recording	Pre-record 0~30 seconds; post record 5s~10 minutes	
Built in network switch port speed	10/100 Mb/s each port	
KT&C Omni-IP 'hands free Plug and Play' Cameras Fully Supported	KNC-p3BR4IR, KNC-p3BR6IR, KNC-p3BR12IR, KNC-p3DR4IR, KNC-p3DR3IR,KNC-p3DR6IR, KNC-p3DR12IR, KNC-p3BR4XIR, KNC-p3BR6XIR, KNC-p3BR12XIR, KNC-p3TR4XIR, KNC-p3TR3XIR, KNC-p3TR6XIR, KNC-p3LR4IR, KNC-p3LR3IR, KNC-p3LR6IR, KNC-p3BR28V12IR, KNC-p3DR28V12IR	
Third Party Cameras Supported (requires traditional configuration and setup)	Onvif; Acti, Arecont, Axis, Bosch, Brickcom, Canon, Hikvision, Hunt, Panasonic, Pelco, Samsung, Sanyo, Sony, Vivotek, Zavio	

Local Live Presentation of Streaming Video/Audio		
Local Display Main Monitor Outputs	HDMI 60Hz: 1920×1080, 1600×1200, 1280×1024, 1280×720, 1024×768	
	VGA 60Hz: 1920×1080P, 1600×1200, 1280×1024, 1280×720, 1024×768	
	BNC/CVBS (1.0V p-p, 75 Ω) 704 × 480 (NTSC)	
Camera Display Layouts	1, 2x2, 1+5, 1+7, 3x3, 4x4	1, 2x2, 1+5, 1+7, 3x3, 4x4, 5x5, 32, 6*6
Multiple Independent Monitors	HDMI and VGA monitors can be duplicates, or display independent live and/or playback screens; CVBS is independent and can function as a call or auxiliary monitor	

Automatic Stream Selection	Single camera view and 2x2 at main stream resolution; Automatic switching to sub-stream resolution in >4 cameo multi-view display to conserve CPU capacity and maintain parity between per-camera screen area and image size
Audio Output (requires audio equipped cameras)	2-ch Line Level, BNC (Linear, 600Ω), one synched to CVBS, one synched to VGA; HDMI audio on HDMI monitor output

Playback of Recorded Video/Audio	
Supported Playback Resolutions	5MP / 3MP / 1080P / UXGA / 720P / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
Local Display Playback Maximum Video Bandwidth (all cameras combined)	~32Mb/s nominal
Nominal Local Playback Capability (actual playback depends on decoding load which varies based on settings for recorded video bandwidth restrictions, resolution, image quality, FPS rate, compression efficiency, and complexity of pixel change in the scene)	8 channels @ 1920x1080; 16 channels @ 1280x720 (based on average per channel bandwidth of ~4Mb/s@1080p and ~2Mb/s @ 720p) Reduced total bandwidth permits greater number of cameras to be played.
Playback search modes	Time/Date; Alarm (motion or other source); Manual Tags; Smart Search for motion events from recorded video
Playback Controls	Play; Pause; Forward/Reverse; speed control for single~1.8~16X; Slide bar with overview of record type and snapshot display from slider position
Digital Zoom During Playback	Supported on Local Displays and CMS

Local Hard Drives and Other Storage	
Number of Internal Hard Drives	Up to 4 SATA HDD; up to 4TB each for 16TB maximum
Mirror Recording	Can clone pairs of disks
S.M.A.R.T	With extensive statistics, alarms, on demand tests and reporting
Optional DVD-RW	Replaces 2 HDD, limiting internal storage to 8TB maximum
External HDD	one eSATA Interface
Record to	HDD, eSATA, NAS or SAN
Archive to	USB, HDD, eSATA, NAS or SAN

Local Plug and Play Camera Network Support	
Integral PoE Switch	16 Ports 10/100 Mb/s
Camera Network Security	Option to enable pass though access from LAN/WAN to cameras, or to isolate camera network from LAN/WAN for increased security
PoE Type	802.3at Max 30W per port
Total Power Budget	200W all ports
PnP Network Support (Using KT&C KNC-p3 Omni-IP Series cameras connected to internal PnP PoE switch ports)	Integral DHCP function with address-per-port initial assignment Internal bridge can forward connections from LAN/WAN network port to individual IPC for remote access to IPC OSD detail configuration menus

Remote Viewing and Local/Remote Configuration

Built in Web Server Interface	Live view, playback and configuration via IE, Chrome, Firefox, Safari (with free plug-in/extension installed)
CMS	PC and MAC Client supports multiple device viewing, playback (with digital zoom) and configuration; user rights per camera; E-map support; live view up to 64 cameras in 4:3 and 48 cameras in 16:9; up to 16 cameras in playback
Mobile Apps	iOS and Android supported ; live 1 & 4 camera views; single camera playback; snapshots from live or play; copy clips/record to smartphone; audio support; PTZ control. HD version of app, optimized for tablets, is available
User Rights Control	Per user-per camera for multiple functions
Event Logging	Multiple types: alarm, exception, operation, information; dozens of sub-types within each major type
Firmware Upgrade	From USB or remotely
Backup/Restore Configuration	For NVR settings and for IP Camera settings; from USB or remotely

Network and Other Interfaces

LAN/WAN Network Port	One 10/100/1000Mb/s RJ-45 port	
Connection of non-PnP IP cameras	Supported	
Remote Monitoring Output Maximum Bandwidth	240Mb/s	160Mb/s
Maximum number of remote connections	128	
DST/NTP	Supported; choice of time zone, NTP server, DST start/end/offset	
Port Mapping/uPnP	Automatic port forwarding/redirection using uPnP on routers with this capability	
Serial Interfaces	1xRS-232 DB9; 1xRS-485; 1xKeyboard controller input	
USB 2.0 Interfaces	2 front; 1 rear	
Audio Input	1 BNC	
Alarm Inputs	16	
Alarm Outputs	4 single pole	

General Mechanical and Environmental

Power Input	100~240VAC, up to 300W max. continuous/450W peak, 50~60Hz; USA Power Cord	
Continuous Power Consumption	Up to 40W for NVR; up to 200W for PoE	Up to 45W for NVR; up to 200W for PoE
Operating Temperature	14°F ~ 131°F (-10°C ~ +55°C)	
Operating Humidity Range	10% ~ 90%	
Cooling Fan	1, in power supply	

Size	1.5U Rack mountable chassis (rack ears provided) 17.52" x 15.35" x 2.76" (445mm x 390mm x 70mm)
Weight (without hard drives or ODD)	8.8 lb./4 Kg allow ~1.4 lb. per HDD
Certifications	FCC, CE, RoHS

HDD Storage Calculation Chart

The following chart shows an estimation of storage space used based on recording at one channel for an hour at a fixed bit rate.

Bit Rate	Storage Used
96K	42M
128K	56M
160K	70M
192K	84M
224K	98M
256K	112M
320K	140M
384K	168M
448K	196M
512K	225M
640K	281M
768K	337M
896K	393M
1024K	450M
1280K	562M
1536K	675M
1792K	787M
2048K	900M
4096K	1800M
8192K	3600M
16384K	7200M

NOTE

Please note that supplied values for storage space used is just for reference. The storage values in the chart are estimated by formulas and may have some deviation from actual value.

Accessing by Web Browser

Logging In

You can get access to the device via web browser. Open web browser, input the IP address of the device and then press Enter. The login interface appears.
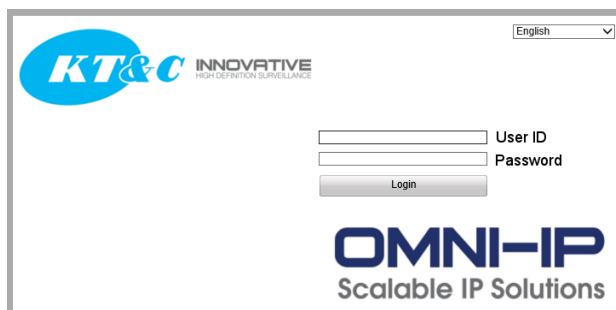
Input the user name and password, and click the **Login** button.

NOTE

- The default IP address is 192.0.0.64.
- The default user name is admin, and password is 12345.
- You may use one of the following listed web browsers: Internet Explorer 6.0, Internet Explorer 7.0, Internet Explorer 8.0, Internet Explorer 9.0, Internet Explorer 10.0, Apple Safari, Mozilla Firefox, and Google Chrome.
- The supported resolutions include 1024*768 and above.

When you log in for the first time, the system will remind you to install the Plug-in control. After the installation, you can configure and manage the device remotely.

Live View

The live view interface appears by default when you log in the device.

Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing and recording status of each channel. NOTE The stream type can be switched by clicking the icon before the channel name: stands for main stream and for sub-stream.
2	Live View Window	Displays the image of channel, and multi-window division is supported.
3	Play Control Bar	Play control operations are supported.
4	PTZ Control	Pan, tilt, zoom operations are supported, as well as preset and patrol editing and calling. NOTE PTZ function can only be realized if the connected camera supports PTZ control.
5	Video Parameters Configuration	Brightness, contrast, saturation and hue of the image can be edited.

Start Live View

Steps:

1. In the live view window, select a playing window by clicking the mouse.
2. Double click a camera from the device list to start the live view.
3. You can click the [icon] button on the toolbar to start the live view of all cameras on the device list.
   Refer to the following table for the description of buttons on the live view window:

Icon	Description	Icon	Description
	Select the window-division mode		Open/Close audio
	Start/Stop all live view		Start/Stop two-way Audio
	Capture pictures in the live view mode		Adjust volume
	Start/Stop all recording		Enable/Disable digital zoom
	Previous/Next page		Full screen

Recording

Before you start

Make sure the device is connected with HDD or network disk, and the HDD or network disk has been initialized for the first time to use.

Two recording types can be configured: Manual and Scheduled. The following section introduces the configuration of scheduled recording.

Steps:

1. Click Remote Configuration> Camera Settings> Record Schedule to enter Record Schedule settings interface.
2. Select the camera to configure the record schedule.

3. Check the checkbox of Enable Schedule to enable recording schedule.
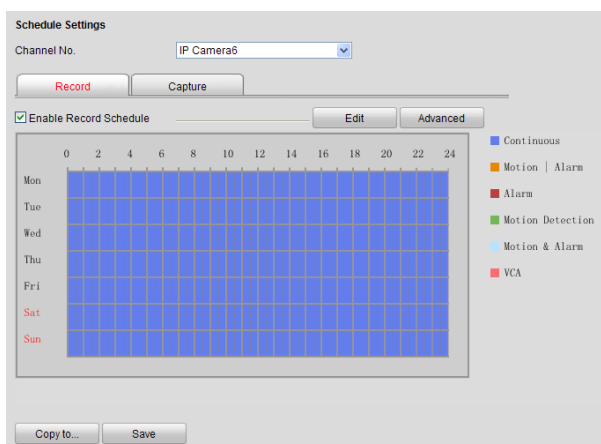
4. Choose the day in a week to configure scheduled recording.

5. Click **Edit** to edit record schedule**.**
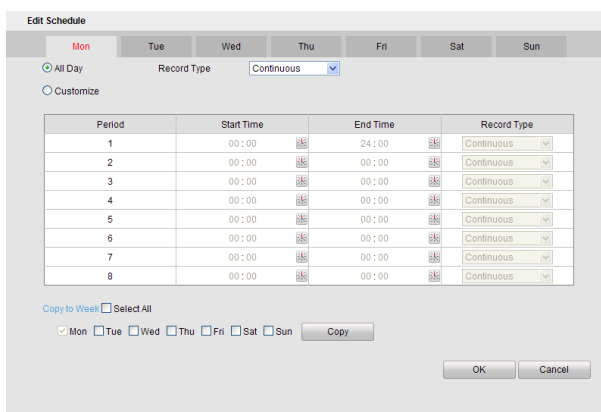
1) Configure All Day or Customize Record:

- If you want to configure the all-day recording, please check the **All Day** checkbox.

- If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time.**

Up to 8 segments can be configured and each segment cannot be overlapped.

2) Select a **Record Type**. The record type can be Continuous, Motion, Alarm, Motion & Alarm, Motion | Alarm and VCA.

3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.

4) Click **OK** to save the settings and exit the **Edit Schedule** interface.

6. Click **Advanced** to configure advanced record parameters**.**

7. Click **Save** to validate the above settings.

8. (Optional) You can click the **Copy to…** button to copy the same setting to other cameras.

Playback

Interface Introduction

No.	Name	Description
1	Channel List	Displays the list of channels and the playing status of each channel.
2	Playback Window	Displays the image of channel.
3	Play Control Bar	Play control operations are supported.
4	Time Line	Displays the time bar and the records marked with different colors.
5	Playback Status	Displays the playback status, including channel number and playback speed.
6	Calendar	You can select the date to play.

Start Playback

Steps:

1. Click **Playback** on the menu bar to enter playback interface.
2. Click the camera from the device list for playback.
3. Select the date from the calendar and click **Search**.
4. Click the [▶] button to play the searched video file on the current date.
5. Use the buttons on the toolbar to operate in playback mode.

Playback Control Buttons Description

Area	Description	Area	Description
▶ ‖	Play/Pause	■	Stop
◀◀	Slow down	▶▶	Speed up
I▶	Play by single frame	📷	Capture
	Stop all playback	⬇	Download
	Video clip	🔇 🔊	Open/Close audio

Area	Description	Area	Description
	Full screen		Transcoded playback
	Reverse playback		Window division

6. You can drag the progress bar with the mouse to locate the exact playback point. You can also input the time

in the textbox [00] : [00] : [00] [→] and click [→] button to locate the playback point.

The color of the video on the progress bar stands for the different video types.

☐ Command ☐ Schedule Recording ☐ Alarm Recording ☐ Manual Recording

NOTE

To play back recording files from different channel, you may set the window division mode by clicking the

[▦▾] button and choose a window, and then repeat the above steps 2-4.

Transcoded Playback

Purpose:

To save the bandwidth cost, the transcoded playback can be adopted.

Steps:

1. Make sure the playback of current channel is stopped.

2. Move the mouse to the [▣▾] icon and edit the required parameters for transcoded playback, including Resolution, Bitrate, and Frame Rate.

		X
Resolution	Auto	▾
Bitrate	2048K	▾
Frame Rate	Full Frame Rate	▾
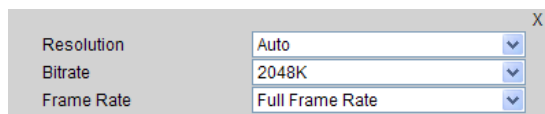
3. Click the [▣▾] button, if it turns to [▣▾], then the trancoding process is compeleted.

4. Click the [▶] button to start transcoded playback.

Log

You can view and export the log files at any time, including operation, alarm, exception and information of device.

Before you start:

The Log function can be realized only when the device is connected with HDD or network disk.

Steps:

2. Click **Log** on the menu bar to enter the Log interface.

3. Set the log search conditions to refine your search, including the Major Type, Minor Type, Start Time and End Time.

4. Click the **Search** button to start searching log files.

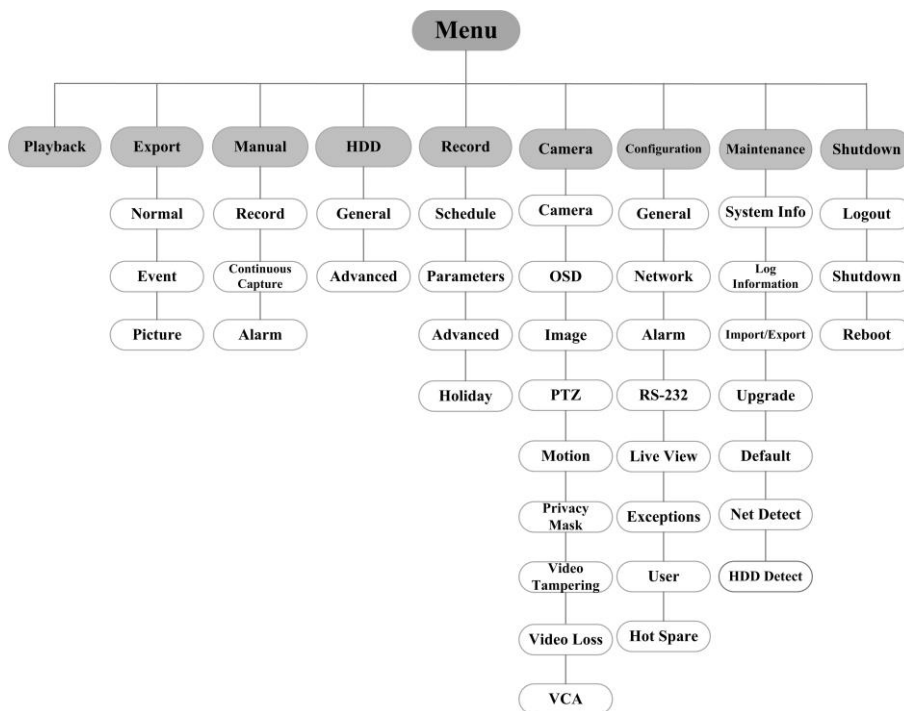**5.** The matched log files will be displayed on the list.

NOTE

Up to 2000 log files can be found each time, and 100 log files can be displayed on each page.

You can click the [🖫 Save Log] button to save the searched log files to local directory.

Menu Operation

Menu Structure


Startup and Shutdown

Proper startup and shutdown procedures are crucial to expanding the life of the NVR.

To start your NVR:

1. Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device.

2. Press the POWER button on the rear panel. The Power LED should turn green. The unit will begin to start. After the device starts up, the wizard will guide you through the initial settings, including modifying password, date and time settings, network settings, HDD initializing, and recording.

To shut down the NVR:

1. Enter the Shutdown menu.

   Menu > Shutdown
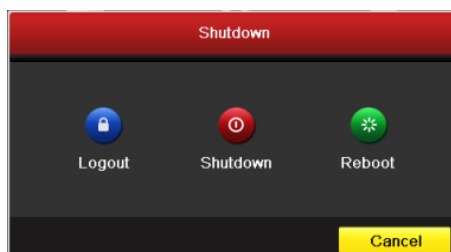
2. Select the **Shutdown** button.

3. Click the **Yes** button.

Live View

Some icons are provided on screen in Live View mode to indicate different camera status. These icons include:

Live View Icons

In the live view mode, there are icons at the upper-right corner of the screen for each channel, showing the status of the record and alarm in the channel, so that you can find problems as soon as possible.

Alarm (video loss, tampering, motion detection or sensor alarm)

Record (manual record, schedule record, motion detection or alarm triggered record)
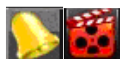
Alarm & Record

Event/Exception (event and exception information, appears at the lower-left corner of the screen.)

Adding IP Cameras

You should add and configure the online IP cameras to enable the live view and recording function.

Steps:

1. Right-click the mouse when you in the live view mode to show the right-click menu.
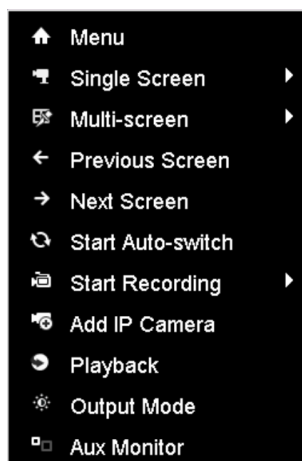
2. Select **Add IP Camera** in the pop-up menu to enter the IP Camera Management interface.

3. The online cameras with same network segment will be displayed in the camera list. Click the ⊕ button to add the camera.

Or you can click the **One-couch Adding** button to add all the online IP cameras.

NOTE

The added camera is marked in white while the camera has not been added is marked in yellow.

Explanation of the icons

Icon	Explanation	Icon	Explanation
✎	Edit basic parameters of the camera	⊕	Add the detected IP camera.
●	The camera is connected.	⚠	The camera is disconnected; you can click the icon to get the exception information of camera.
🗑	Delete the IP camera	⚙	Advanced settings of the camera.

4. To add other IP cameras:

1) Click the **Custom Adding** button to pop up the Add IP Camera (Custom) interface.
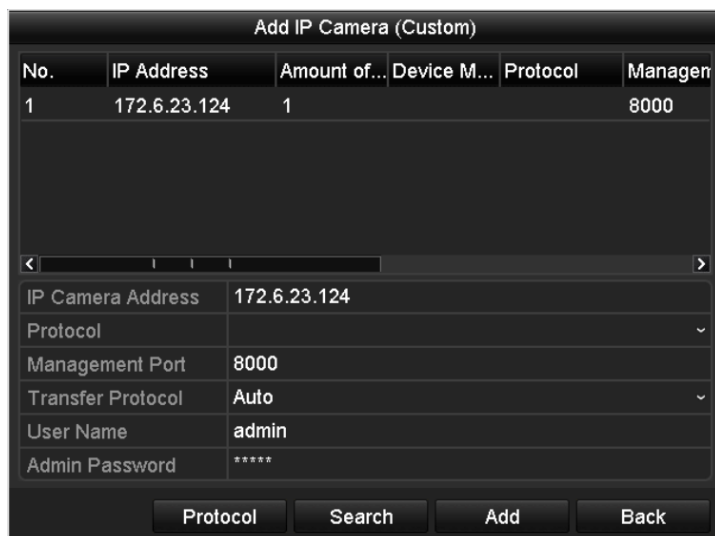
2) You can edit the IP address, protocol, management port, and other information of the IP camera to be added.

3) Click **Add** to add the camera.

4) (For the encoders with multiple channels only) check the checkbox of Channel No. in the pop-up window, as shown in the following figure, and click **OK** to finish adding.
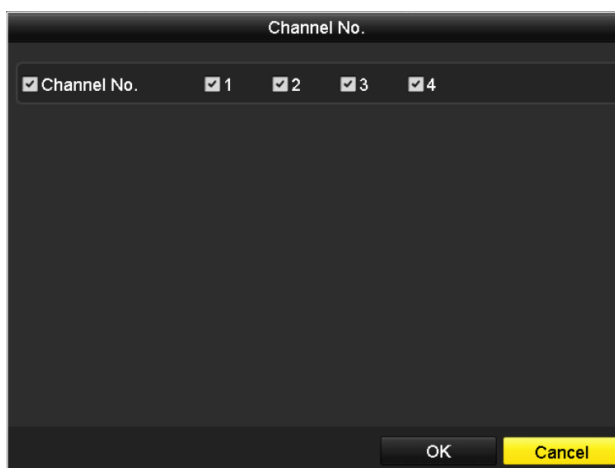
Recording

Before you start:

Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. You may refer to the user manual for detailed information.

Purpose:

Two kinds of record types are introduced in the following section, including Instant Record and All-day Record. And for other record types, you may refer to the user manual for detailed information.

NOTE

After rebooting all the manual records enabled are canceled.

Instant Recording

On the live view window of each channel, there is a quick setting toolbar which shows on the bottom of the window when you click on it.

Click the ⊙ icon to enable the record, and the icon turns to ⦿. And click ⦿ icon to disable the record, then the icon turns to ⊙.

All-day Recording

Steps:

1. On the live view window, right lick the window and move the cursor to the **Start Recording** option, and select **Continuous Record** or **Motion Detection Record** on your demand.
2. And click the **Yes** button in the popup Attention message box to confirm the settings.
   Then all the channels will start to record in the selected mode.

Playback

Play back the record files of a specific channel in the live view menu. Channel switch is supported.

● **Option 1:**

Choose a channel under live view using the mouse and click the button in the shortcut operation menu.

NOTE

Only record files recorded during the past five minutes on this channel will be played back.
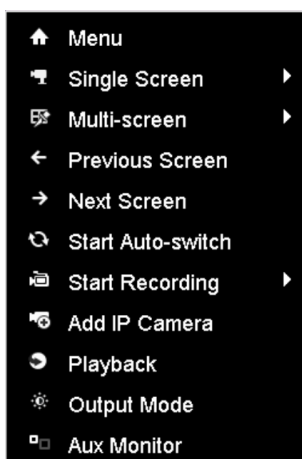
● **Option 2:**

Steps:

1. Enter the Playback menu.

Mouse: right click a channel in live view mode and select Playback from the menu.

Front Panel: press PLAY button to play back record files of the channel under single-screen live view.

Under multi-screen live view, record files of the selected channel will be played back.

Pressing numerical buttons will switch playback to related channels during playback process.

2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Just check the channel or channels if you want to switch playback to another channel or execute simultaneous playback of multiple channels.
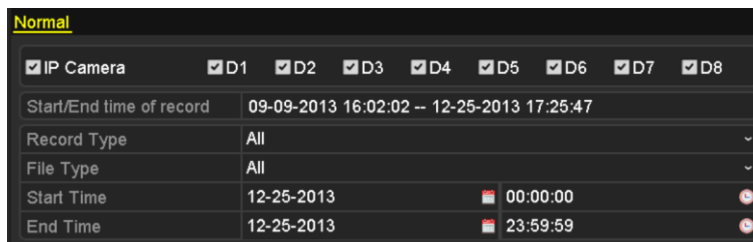
Backup

Recorded files can be backed up to various devices, such as USB flash drives, USB HDDs or a DVD writer.

Steps:

1. Enter Video Export interface.

Choose the channel(s) you want to back up and click on the **Quick Export** button.

2. Enter Export interface, choose backup device and click **Export** button to start exporting.

3. Check backup result.

Choose the record file in Export interface and click button to check it.