

# User Manual for Commercial NVRs of V7

Version 00 March 2019

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# **About This Document**

## **Intended Audience**

This document is intended for the personnel who:

- Work with the commercial Network Video Recorders (NVRs)
- Know video surveillance basics

### **Document Versions**

Version 00 (2019-03-08)

This is a draft.

# Compatibility

The following table provides the products and NVR software version to which this document applies.

Product	• NVR1827
	• NVR1828
	• NVR1829
NVR Software	NVR V7R2B2
Version	

# **Getting Started**

In this document, the admin account (username: **admin**) is applied and the "device" indicates a commercial NVR.

## Procedure

### Preparations

- 1. Connect a network cable to a network port (default IP: 192.168.1.100) of the device.
- Install one or multiple HDDs.
   For details, see the related installation guide.
- Connect peripheral devices (such as an alarm input) to the device.
   If you already connect such devices to the device when installing it, this step can be skipped.
   For details, see the related installation guide.
- 4. Power on the device.

### Activating the Device

5. In the **Activate Device** dialog box, create a strong password, confirm the password, and enter a mail address for password resetting.

The more a password contains special characters, the stronger the password is. You are advised to use a strong password to ensure your data safety. Periodically changing your password at 3-month intervals would be appreciated. If your network environment is risky, you should change your password at weekly or monthly intervals. Additionally, do not leak your username and password.

The mail address is used to re-enable the default password of the admin account, which helps you access the device when you forget the new password of the account. Your mail box is the only access to resetting your password. Therefore, you must enter a valid and often used mail box address. For details on how to re-enable the default password of the admin account, see section "Re-Enabling the Default Password of the admin Account".

6. Click Activate and Log In.

# **Configuring Time Settings**

7. Configure the time settings.

÷		Se	tup Wizard		
Date and Time	Date and Time	2			
Date and Time ↓ IP Address ↓ Add Channel ↓ HDD Initialization	Device Name	NVR			
Add Channel	Time Zone	(UTC+01:00) Amsterdam,	Berlin, Rome, Paris 🔻		
HDD Initialization	Time	2019-03-05	11:44:06		
Cloud					
Done					
Recording Scheduling					
Do not s				Skip	Next

8. Click Next.

### **Configuring Network Settings**

9. Configure the network settings.

÷		Setup Wizard	
Date and Time	IP Address		
IP Address	Working Mode	Multi-Address	
Add Channel	NIC	LAN	
HDD Initialization	NIC Speed	Self-Adaptive	
Recording Scheduling	IP Mode	Static 🗸	
Cloud	IP Address	100 . 100 . 70 . 80	
Done	Subnet Mask	255 . 255 . 224 . 0	
	Default Gateway	0.0.0.0	
	Obtain DNS Serve		
	Preferred DNS Ser	0.0.0.0	
	Alternate DNS Se	0.0.0.0	
	Default Route	LAN	
Do not s		Skip Previous Ne	sxt

For PoE ports, their IP address is 172.26.1.100 and it cannot be changed.

10. Click Next.

### **Adding Cameras**

11. Add target cameras. KEDACOM 苏州科达科技股份有限公司 Suzhou Keda Technology Co.,Ltd

#### Method 1: PoE or ONVIF Cameras

- 1) Ensure the following:
  - The target PoE camera must meet any of the following conditions:
    - ➢ It is located on the same network segment (172.26.1.X) as the device (default IP: 172.26.1.100).
    - It is a deactivated KEDACOM camera. (Deactivated KEDACOM cameras can be reached by the device immediately after they are connected to the PoE ports, achieving plug and play.) Alternatively, the camera is already reset to factory defaults.
    - > It is an activated KEDACOM or third-party camera but meets the following conditions:
      - $\checkmark$  DHCP is enabled for the camera.
      - $\checkmark$  The camera has been added to the device.
  - The target ONVIF camera is located on the same network segment (172.26.1.X or 192.168.1.X) as the NVR (default IP of LAN1: 192.168.1.94).

If not, change its IP address on its web client. The following is an example.

KEDACOM		IPC2233-FN-PIR40-Z2712	English •	· · · · · · · · · · · · · · · · · · ·
Live View Playback	Snapshot Settings		① admin Logout Help About	
Local Setting 4 Quick Settings 4 Network • IP and Port • Access Protocol Other Protocols Camera 4 Event 4 Storage 4 System 4	LAN Port IP Address Configuration IP Version Mode IP Address Subnet Mask Default Gateway Multicast Address MAC Address MTU	IFV4 V Static V 172.26.1.2 Test 255.255.255.0 0.0.0 0.0.0 0.0.14-10-17-00-F7 1500		
	DNS Server Setting Automatically Obtain DNS Preferred DNS Server Alternate DNS Server			~

Under **IP** Address Configuration of the preceding figure only the **Multicast Address** parameter is optional and the other parameters are mandatory.

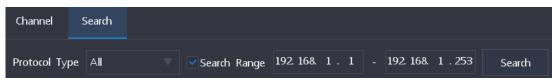
2) Click Search.

	Channel		Search					
	Protocol <sup>-</sup>	Гуре	All	Search Range				Search
	No.	Add	IP	Model	Protocol	Port	Channels	Activated
¥		+	100.100.82.1	N/R2821H-04016B/I	ONVIE	80		Yes
	2	+	100.100.81.1	NVR2881-16064B	ONVIF	80		Yes
	□3	+	100.100.67.2	NVR2881	ONVIE	8080		Not Supp
	4	+	100.100.83.1	NVR2881-16128B	ONVIF	80		Yes
	5	+	100.100.81.2		ONVIE	8080		Not Supp
	6	+	100.100.81.8	NVR2881	ONVIF	80		Not Supp.
	7	+	100.100.67.12	SVR2620-08016A	ONVIE	80		Yes
	8	+	100.100.71.40	NVR2821H-01004B/G	ONVIF	80		Yes
	<b>9</b>	+	100.100.71.20	ITS200-S-8	ONVIE	80		Yes
	10	+	100.100.70.2	NVR1828-02016B/8P	ONVIF	80		Yes
		+	100.100.71.90	NVR1829-01016B	ONVIE	80		Yes
	12	+	100.100.87.1	NVR2881-16032B	ONVIF	80		Yes
	13	+	100.100.85.1	NVR1821-08032A	ONVIE	80		Yes
	□14	+	100.100.68.200	KDM2882-16016B	ONVIE	80	0	Yes
Do not s				Add Batch Activat			ls 14 / Tot Previous	al Channels Next

KEDACOM 苏州科达科技股份有限公司 Suzhou Keda Technology Co.,Ltd ONVIF Cameras located on the 172.26.1.X and 192.168.1.X network segments will be searched.

3) (Optional) Specify the search criteria.

The following is an example.



Note that two IP addresses entered in the two text boxes should be identical in the most significant eight bits. For example, **172.16.2.**10 and **172.16.168.**12.

4) Select the target camera from the search results and click + or Add.

Channel	S	Search						
Protocol	Туре	All	Search Range 192.1					Search
No.	Add	IP	Model	P	Protocol	Port	Channels	Activated
	+	100.100.70.2	NVR1828-02016B/8P	C	ONVIF	80	0	Yes
2	+	100.100.70.17	NVR1827-04032B/16P	C	ONVIF	80	0	Yes
3	+	100.100.85.1	NVR1821-08032A	C	ONVIF	80	0	Yes
4	+	100.100.71.40	NVR2821H-01004B/G	c	ONVIF	80	0	Yes
<ul><li>✓5</li></ul>	+	100.100.74.123	LC2450-HN-DIR30-L060	00 C	ONVIF	80	0	Yes
✓6		100.100.71.105	LC2450-HN-DIR30-L060					Yes
7	+	100.100.71.125	Hp-22B13	C	ONVIF	5550	0	Not Supp
8	+	100.100.71.121	Hp-22D13	C	ONVIF	5550	0	Not Supp
9	+	100.100.71.90	NVR1829-01016B	C	ONVIF	80	0	Yes
10	+	100.100.81.1	NVR2881-16064B	C	ONVIF	80	0	Yes
11	+	100.100.81.8	NVR2881	C	ONVIF	80	0	Not Supp
12	+	100.100.81.2		C	ONVIF	8080	0	Not Supp
13	+	100.100.86.1	NVR1828-02009B/8P	C	ONVIF	80	0	Yes
14	+	100.100.84.201	IPC2252-Gi4N-SIR50-Z7	022 C	DIVITE	80	0	Yes 👻
					Idle	Channels	14 / Tota	l Channels 16
			Add Batch Activ	/ation	Skip	Р	revious	Next

If you add multiple cameras at a time, you must click Add.

 In the displayed dialog box, specify parameters displayed. The following is an example.

÷	Add
Protocol Type	
IP Channel ID	
IP	
Port	
Transmission	Auto
Remote Channel ID	
Authorized Username	admin
Password	*****
	Add Close

If you add multiple cameras, ensure that they use the same protocol, username, and password in advance. Otherwise, you cannot add them at a time.

6) Click Add.

Note that a wireless front-end device, such as a Body Worn Camera (BWC), is also an ONVIF camera.

#### Method 2: VSIP Cameras

- 1) Ensure that the target VSIP camera is located on the same network segment (172.26.1.X or 192.168.1.X) as the device.
- On the camera web client, choose Settings > Quick Settings > Access Protocol > VISP and configure VMS Address (IPv4) and VMS Port Number.

KEDACOM		IPC2233-FN-PIR40-Z2712	English •
Live View Playback	Snapshot Settings		① admin Logout Help About
Local Setting 4 Quick Settings	VSIP ONVIF GB28181		
IP Address	Registered VMS		
Access Protocol  Device Info Time Network 4 Camera 4 Event 4 Storage 4 System 4	VMS Method VMS Address (IPv4) VMS Port Number Camera UUID Camera Password Send NAT Probe Packets	IP Address         Image: Constraint of the second sec	
	VSIP Service		
	Auto Networking	Skip Back Next	

#### VMS Address (IPv4): device IP

VMS Port Number: device port number, which is specified by HTTP Port (Settings > Network > IP and Port).

÷				Network		
IP and Port	Ethernet	Service	Port			
Other Protocol	HTTP Port		80			
Platform	RTSP Port		554			
Cloud						
						Close

3) Under Search, set Protocol Type to VSIP.

Channel	Search						
Protocol Typ	oe ∨SIP	▼	Search Range	192.168.1.1	- 192.168	1.253	Search

- 4) Click Search.
- 5) Select the target camera from the search results and click + (single camera) or Add (single or multiple cameras).
- 6) Click Add.

#### Method 3: RTSP Cameras

- 1) Ensure that the target RTSP camera is located on the same network segment (172.26.1.X or 192.168.1.X) as the device.
- 2) Under Search, click Add.



 In the displayed dialog box, specify parameters displayed. The following is an example.

÷	Add
Protocol Type	RTSP
IP Channel ID	Auto
Transmission	Auto
Address of Main Stre	rtsp://192.168.1.65:554/real time?
Address of Secondary	rtsp://192.168.1.65:554/real time?
Authorized Username	admin
Password	******
	✓TCP Keepalive Heartbeat
	Add Close

Note that the RTSP addresses (main and secondary streams) of cameras from different vendors differ.

4) Click Add.

If the camera status is "Authentication Failed", check whether the entered password is correct.

If the status of a VSIP camera is "Not Registered", wait at most one minute till the status changes to "Online".

In this step, you can activate and change IP addresses for KEDACOM V7 cameras (ONVIF and VSIP) with the **Batch Activation** and **Edit IP** buttons.

12. Click Next.

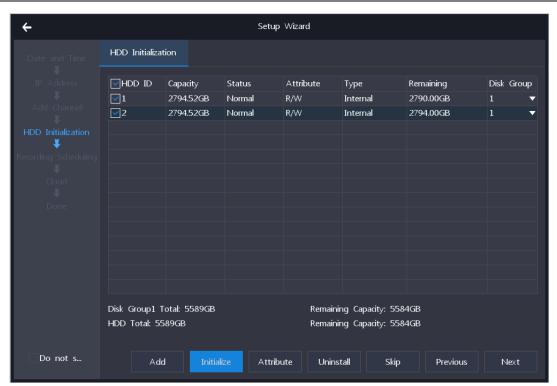
### **Initializing HDDs**

13. Initialize HDDs.

IF YOU DO NOT INITIALIZE HDDS, NO RECORDING CAN BE STARTED.

1) Select the target HDDs and click **Initialize**.





2) Confirm your operation.

	NVR			
?	Are you sure you want to initialize it?			
	Yes No			

- 3) Enter the password of the admin account.
- 4) Click **OK** when the intialization is completed.
- 14. Click Next.

### **Scheduling Recordings**

- 15. Schedule recordings.
  - 1) Choose Settings > Recording > Recording Schedule > Recording Schedule.
  - 2) Select a channel.
  - 3) Specify a recording mode.

÷		Recording	
Recording Sched	Recording Schedule		
Snapshot Schedule	Channel	D1-IPCamera	
Holiday	Recording Mode	Always Enabled  • Scheduled and Event Triggered Always Disabled	

Scheduled and Event Triggered: indicates that a recording will be started:

- At a scheduled time, which can be configured at step 6)
- Upon the occurrence of an event/alarm (Motion Detection and Intelligent Feature Alarms) (assuming alarm linkage settings of the channel already include the recording action; for details about the alarm linkage settings, see sections "Motion Detection" and "Intelligent Feature Alarms")
- 4) Click Advanced Channel Settings to configure advanced channel settings.

← Adv	Advanced Channel Settings			
	✓With Audio			
Stream	Main Stream Preferred			
Recording Expired In	0	days		
(0~90, The value 0 indicates that recordings will be not deleted forcibly.)				
		Cancel		

The following table provides parameter descriptions.

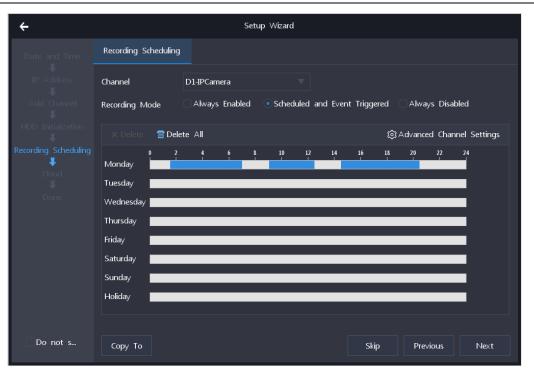
Parameter	Description			
With Audio	Whether to include audio in a record			
Stream	Stream preferentially recorded			
Recording Expired In	Number of days after which a record (unless locked) will be deleted.			
	The NVR deletes records at 00:00 of each day.			
	When recording space is sufficient:			
	✓ If you set it to 3, involved records (except locked ones) will			
	be saved only for 3 days.			
	$\checkmark$ If you set it to 0, involved records will not be deleted.			
	When recording space is full:			
	Either the involved records (except locked ones) will be			
	overwritten or recordings will be stopped, depending on the			
	policy described in section "Setting the Recording Policy".			
	NOTE:			
	The locked records will be deleted only when you format related HDDs.			

5) Click **OK**.

6) Press and hold the left mouse button and draw one or multiple lines on the timeline (accurate to the minute) of a day.

The following is an example.

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After this, a recording will be enabled during the preceding three periods. A maximum of eight periods can be created in a day and those periods cannot overlap.

If you double-click a period, you can edit its start and end times.

÷	Edit Time			
01:25		07:00		
	Save	Close		

7) Copy the period settings of a day to other target days by clicking in and selecting the target days.

The following is an example.

÷	Сору То	
All		
Monday	Tuesday	✓ Wednesday
Thursday	🗸 Friday	Saturday
Sunday	Holiday	
		OK Cancel

If you want to copy the settings to the other six days in a week and holidays, check All.

You can define holidays by choosing **Settings** > **Recording** > **Holiday** > **Edit** and specifying parameters displayed. The following is an example.

÷	Edit			
	✓ Enable			
Name	National Day			
Select Date By	Day			
Start Time	2019-10-01			
End Time	2019-10-07			
	OK Close			

After this, you can find the following.

No.	Name	Start Date	End Date	Status	Edit
1	National Day	2019-10-1	2019-10-7	Enable	<u>Edit</u>

- 8) Click OK.
- Copy the recording schedule settings of the channel to other target channels by clicking Copy To and selecting the target channels.



### 10) Click **OK**.

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16. Click Next.

### **Enabling the Cloud Service**

- 17. Enable the Cloud service, which allows you to view camera videos of the NVR on your mobile phone.
  - 1) Check Enable.

÷		Setup Wizard
Date and Time	Cloud	
↓ IP Address	Cloud	✓ Enable
↓ Add Channel	De∨ice Serial No.	KAN77818798912111B
HDD Initialization		
Recording Scheduling		
Cloud V		
Done		
Do not s		Skip Previous Next

- 2) Download vSee Pro (iOS) or vSee (Android) from the mobile phone application market.
- 3) Open vSee Pro.

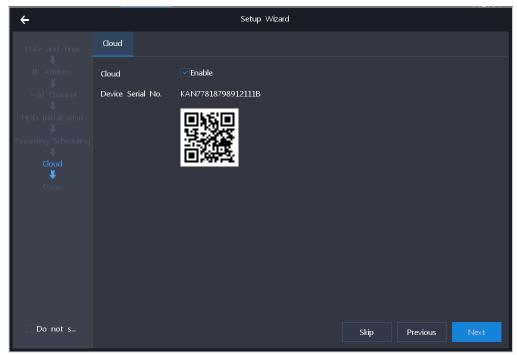
The following operations are performed on vSee Pro (iOS) and operations on vSee (Android) will not be detailed here since operations are similar.

4) Choose Local login-> > => Device Manager > => P2P > Device ID.

	≣ Live P	review 📴		
				😑 Live P
$\odot$	+		Live Preview	+
A Please enter your user name			🛞 Playback	
Please enter your password			🖭 Device Manager	
Log in	+		윤소 Local File	+
Local login->			. More	
				> to 2
Forget PassWord Register				

📃 Device Manager 🕂	Add device		${}^{}$	Add device
	Des P2P	>	Device type	P2P
	P2P IP/Domain	>	Name	Device 1
			Device ID	Device ID
			User ID	admin
			Password	Password
				Save

5) Scan the QR code.



After this, the device serial number of the NVR is read. The following is an example.

$\bigcirc$	Add device
Device type	P2P
Name	Device 1
Device ID	KANF5H1681826GF05B
User ID	admin
Password	Password
	Save

6) Enter the password of the admin account.

#### 7) Click Save.

After the preceding steps are performed, the NVR is added to the device list and you can view camera videos on your mobile phone.

#### 18. Click Done.

÷		Setup Wizard		
Date and Time	Done			
↓ IP Address	The initial configuration	is completed.		
Add Channel	Device Name	NVR		
	System Time	2019-3-5 12:42:32		
HDD Initialization	HDD	Total: 2; initialized: 2; size: 5.46 TB		
Recording Scheduling	LAN1 IP Address	100.100.70.80		
Cloud	LAN2 IP Address	172.26.1.100		
Done	IP Channels Added	3/16		
	Recording Status	1/3,Started		
Do not s			Previous	Close

# **Re-Enabling the Default Password of the admin Account**

If you forget the password of the admin account, you can reset the password using IPCSearch3.0, which can be downloaded from

https://en.kedacom.com/en/r/cms/www/kedacom/downloads/IPCSearch%203.0%20Setup.zip.

To reset your password:

1. Find your device from the device list and click **Password Reset**.

Sean	ch BroadSet	Modify Params	Login Password Reset	Batch Processing				💿 Language 🤻	<ul> <li>Setting Column</li> </ul>	Export Device	🕜 Help
										, <u> </u>	
lo.	IP	<ul> <li>Alias</li> </ul>	Device Type	Mask	Gateway	MAC	Version	Serial Number	Runtime		
0	192.168.125.55	DT nvr198.66	NVR1821-08064A	255.255.255.0	192.168.125.254	12-3D-B1-11-00-00	7.2.3.294(daily)	hi3536	0hr.29min.32sec.		
6	192.168.125.20	NVR-djy	NVR2860E(Ver.B)	255.255.224.0	0.0.0.0	00-30-64-26-B1-06		KDC0205245	785hr.14min.18sec.		
	192.168.1.100		SDVR-1104-HH	255.255.255.0		A0-C6-13-63-71-BA		KDC0205245	0hr.5min.52sec.		
8	172.16.199.239	IPCamera	IPC2255-Gi4N	255.255.224.0	172.16.192.254	00-14-10-18-7E-69	7.2.2.202(daily)	1719023715	0hr.13min.55sec.		
4	172.16.199.229	IPCamera	IPC123-HN	255.255.224.0	172.16.192.254	00-14-10-0F-00-F4	7.2.1.209	1535003398	6hr.23min.32sec.		
9	172.16.199.217	IPCamera	IPC123-AN(VER.A)	255.255.248.0	172.16.192.254	00-00-23-34-45-66	7.2.1.209	1535003397	1hr.56min.15sec.		
3	172.16.199.213	IPCamera	IPC123-HN	255.255.224.0	172.16.192.254	00-14-10-0F-00-F1	7.2.2.207(daily)	1535003427	5hr.38min.24sec.		
6	172.16.199.166	D5-IPC	IPC2431-Gi0N-S-L0180	255.255.224.0	172.16.192.254	00-14-10-18-E2-A6	7.2.1.199_IPC-8	0170VA0JCP	67hr.57min.43sec.		
2	172.16.199.159	IPCamera	IPC123-HN	255.255.248.0	172.16.199.254	00-14-10-0F-01-04	7.2.2.209(daily)	1535003396	6hr.55min.30sec.		

2. In the displayed **Password Reset** dialog box, click the URL or scan the QR code.



#### If you click the URL:

1) Enter the mail address specified when activating the NVR.

KEDACOM		中文   English
Restore Passwor	d	
Serial Number	7637FBFC6C235B873C88F4273255426C8DED 9DEBEDA7B780C594334A39031C1D	
Email		
Verification Code	, <u>8</u> Q <del>35</del> '	
	Get Security Code	
C	pyright ©1995-2017 Suzhou Keda Technology Co., Ltd. (ICP:10015492.)	

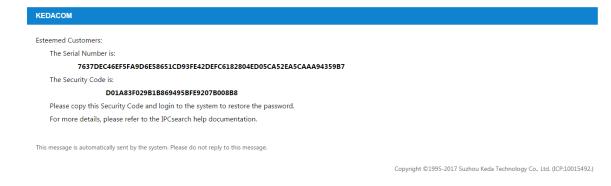
- 2) Enter the verification code.
- Click Get Security Code.
   After this, you will find the following.

Restore Passwor	rd	
Serial Number	7637DEC46EF5FA9D6E58651CD93FE42DEFC6 182804ED05CA52EA5CAAA94359B7	
	Tip	×
En Si	uccess, Security Code Has Been Sent To Ema	il, Please Check.
Verification Cour-		
	Get Security Code	

If you scan the QR code, you will see the following. The following steps are similar to the preceding ones.

II SingTel 4G	4:36 PM	🕑 69% 🔳
×	Reset Password	•••
KEDACO	M 🔒 重置密码	马 中文 Englisi
Serial Number	7637BAE3BEB302 769F9D3647B2BF	E2147AF51
Email		
Verification Code		ZHZQ
	Get Security Code	

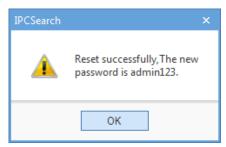
3. Find and copy the security code from your mail box.



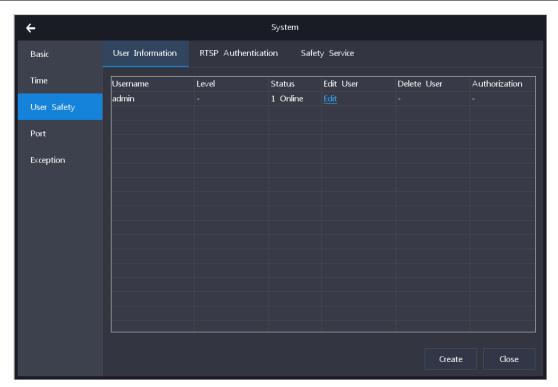
4. Paste the security code to the Command text field.



- 5. Click OK.
- 6. Click OK.



- 7. Log in to the NVR with the default password.
- 8. Create your own strong password again.
  - 1) Choose Settings > System > User Safety > User Information.
  - 2) Select the admin account and click Edit.



3) In the **Edit User** dialog box, enter the old password and a new strong password and confirm the new password.

÷	Edit User
Old Password	****
Password	*****
Confirm Password	*****
	Save Close

- 4) Click **Save**.
- 9. Log in to the device again.

# Logging In to the Device

To log in to the device:

1. In the displayed Log In dialog box, enter a username and a password.

÷	Log In	
Username	admin	
Password		
	ОК	

#### 2. Click OK.

If you enter an incorrect password three times in succession, your IP will be locked for 10 minutes. If you forget your password, reset your password (see section "Re-Enabling the Default Password of the admin Account") or contact your system administrator to re-enable the default password of your account (specific to standard users).

#### NOTE

The graphical user interface (GUI) of the device is continuously changed. Therefore, do not be alarmed when you find the screenshots in this document are different from actual ones. We greatly appreciate your understanding. All the screenshots in this document are taken from the NVR1828. If you find some options are missing, contact the system administrator to check whether your device supports these options. If so, contact the local authorized KEDACOM agent.

# **Configuring Cameras**

## **Basic Information**

### **Channel Name**

To change the channel name of a camera:

- 1. Choose Settings > Channel > Basic > Channel Name.
- 2. Select the camera from the Channel drop-down list.

÷		Channel
Channel	Channel Name	Group Time Synchronization
Basic	Channel	D1-IPCamera
Audio and Video	Channel Name	IPCamera
Motion Detection		Set as Logo

- 3. Enter a channel name.
- 4. (Optional) Check Set as Logo to set the channel name of the camera as the camera logo. After this, you can find the channel name is displayed on the top left corner of the viewing window. If you do not want to show the logo, please go to the IPC Web and uncheck Label (Settings > Camera > OSD).

KEDA	СОМ			IPC2	233-FN-I	PIR40-Z27	12				Eng	ılish 👻
Live View	Playback	Snapshot	Settings						0	admin Lo	gout Help	About
Local Setting	4	OSD										
Quick Settings	s 4											
Network	4	Content										
Camera	•	🔽 Time	🗖 Lable 🛛 💀	Alarm	PTZ	OSD1	OSD2	🔲 0SD3	C OSD4	0SD5	OSD6	
Image												

NOTE:

This option does not apply to VSIP and offline channels.

 (Optional) Check Set as Device Name to set the channel name of the camera as its device name. After this, you can find the device name of the camera is changed on its web client. Before:

KEDACOM		IPC2233-FN-PIR40-Z2712	English 🝷
Live View Playback	Snapshot Settings	① admin Logout	Help About
Local Setting	Device Info		
IP Address Access Protocol	Device Name	ONVIF-1.155 Set as OSD text.	
Device Info	Device Serial No.	1714010102	
Network 4 Camera 4	Hardware Version Software Version	1.0.0 7.1.6.499 Jul 6 2017 16:08:35	
Event 4 Storage 4	Number of Video Sources	1	
System 4		Skip Back Next	

After:

EDAC	Ю			IPC2233-FN-	PIR40-Z2712			English
Live View	Playback	Snapshot	Settings				admin Logout	Help Ab
Local Setting	4	Device Info						
Quick Settings	•							
IP Address		Device Nan	ne	DT-ONVIF-1.	155-Test 🗌 S	et as OSD text.		
Access Proto	col	Device Mod	lel	IPC2233-FN-PIF	40-Z2712			
Device Info	÷	Device Seri		1714010102				
Time								
Network	4	Hardware V	/ersion	1.0.0				
Camera	4	Software Ve	ersion	7.1.6.499 Jul 6 2	017 16:08:35			
Event	4	Number of	Video Sources	1				
Storage	•							
System	4			Skip	Back	Next		

NOTE:

This option does not apply to VSIP and offline channels.

6. Click Save.

### Group

The camera grouping function applies only to NVRs that can accommodate more than 9 channels. To create a camera group:

1. Click Group.

Channel	Channel Name	Group	Time Synchronization
Basic	Group ID	1	▼_

- 2. Select a group ID and enter a group name.
- 3. Select a camera to be grouped into the camera group and click <.

User	Manual f	for	Commercial	<b>NVRs</b>	of	V7

÷			Channel			
Channel	Channel Name	Group	Time Synchronization			
Basic	Group ID	1				
Audio and Video	Group Name	DTest				
Motion Detection	Intra-Group Chann				D1 IPCamera	
Intelligent Feature					D2 IPCamera	
Advanced				< <tr>         ~           ~           V</tr>	D3 IPCamera	
					Save	Close

#### 4. Click Save.

To delete a camera group, remove all the included cameras and then the group name.

### **Time Synchronization**

To change the time settings of a camera:

- 1. On the Time Synchronization tab page, select the camera from the Channel drop-down list.
- 2. Select a value from the Synchronization With drop-down list.

The following table provides an example.

lf	Then
The NVR uses the	When Time Zone and Time is selected, the IPC time is 4:00.
UTC +08 time zone	(Formula: 10-8+2=4)
and the current time is	When Time Zone and Time is selected and Use Time Zone of NVR is
10:00 (24-hour).	checked, the IPC time is 10:00.
The IPC uses the UTC	(Formula: 10-8+8=10)
+02 time zone.	When Local Time is selected, the IPC time is 12:00.
	(Formula: 10+2=12)
	When UTC Time is selected, the IPC time is 4:00.
	(Formula: 10-8+2=4)

3. Click Save.

## Audio and Video

NOTE:

Parameters displayed under Audio and Video vary according to the camera type.

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### **Video Encoding**

To configure the video encoding settings of a camera:

- 1. Click Video Encoding.
- 2. Configure parameters displayed.

The following is an example.

÷			Channel	
Channel	∨ideo Encoding	Audio Encoding	Audio Decodi	ing
Basic	Channel	D1-IPCamera		
Audio and Video	Stream Type	Main Stream		
Motion Detection	Resolution	2560*2560		
Intelligent Feature	Bitrate Type	CBR		
Advanced	∨ideo Quality			
	∨ideo Frame Rate	10		(1~10)Fps
	Bitrate Upper Limit	2048		(32~16384)Kbps
	Compression	H264		
	Encoding Level	Low		
	Max Key Frame In	75		(1~250)
	Smart Encoding			Parameter value changes take effect only after e
				Save Close

**Smart Encoding**: Whether to enable the smart encoding function. If this function is enabled and the IP mode is static, it helps reduce the video frame rate. If it is enabled and the bitrate is low, it helps improve the image quality.

Not all cameras support the Video Quality and Smart Encoding parameters.

Changing the values of the **Resolution** and **Compression** parameters for ONVIF cameras will cause them to go offline and then online.

3. Click Save.

### **Audio Encoding**

To configure the audio encoding settings of a camera:

- 1. Click Audio Encoding.
- 2. Configure parameters displayed. The following is an example.

÷			Channel			
Channel	∨ideo Encoding	Audio Encoding	Audio Decodin	9		
Basic	Channel	D1-IPCamera				
Audio and Video	Audio Source Type	LINE-IN				
Motion Detection	Encoding Channel	1				
Intelligent Feature	Compression	G711				
Advanced	Sampling Rate	<b>8</b> K				
	Encoding ∨olume		50			
					Save	Close

Encoding Volume: indicates the audio input volume.

Changing the values of the **Compression** and **Sampling Rate** parameters for ONVIF cameras will cause them to go offline and then online.

3. Click Save.

### **Audio Decoding**

To configure the audio decoding settings of a camera:

- 1. Click Audio Decoding.
- 2. Configure parameters displayed.

÷			Channel		
Channel	∨ideo Encoding	Audio Encoding	Audio Decoding		
Basic	Channel	D1-IPCamera			
Audio and Video	Decoding ∨olume		50		
Motion Detection		Audio Mixing			
Intelligent Feature					
Advanced					
					Close

Decoding Volume: indicates the audio output volume.

**Audio Mixing**: Whether to enable the audio mixing function. When this function is enabled, you can hear the sound from two-way audio (listening and calling). VSIP cameras do not support this function.

3. Click Save.

### **Motion Detection**

The motion detection feature can detect suspicious motions in guarding areas of cameras. When a motion is detected, the " Alarm:Moving " text is displayed on the viewing window of the related camera and multiple linkage actions (if configured) will be triggered.



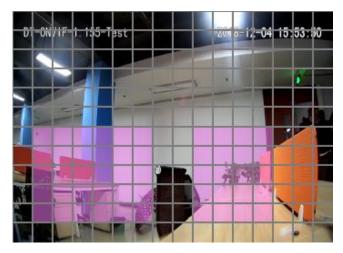
To enable this feature for a camera:

- 1. Click Motion Detection.
- 2. Select the camera from the Channel drop-down list.
- 3. Under **Settings**, check **Enable**.

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÷			Channe	
Channel	Motion Detection			
Basic	Channel	D1-IPC	amera	
Audio and ∨ideo	Settings Du	uration	Linkage Action	
Motion Detection	✓ Enable			

- 4. Specify the detection Sensitivity.
- 5. Click Start Drawing.
- 6. Draw detection areas (displayed in purple red).



As shown in the preceding figure, the entire guarding area is divided into 16\*12 cells. You can draw at most four detection areas (rectangles) for the camera.

You can draw in the bottom right direction to select areas and in the top left direction to unselect areas.

#### 7. Click Stop Drawing.

After this, you can find the following.



- 8. (Optional) Click Clear All to clear all detection areas.
- 9. Click Save.
- 10. Under **Duration**, select the durations when the Motion Detection is enabled.

÷		Channel
Channel	Motion Detection	
Basic	Channel	D1-IPCamera
Audio and Video	Settings Dura	ation Linkage Action
Motion Detection	X Delete  🖬 Del	ete All
Intelligent Feature	0 2 Monday	4 6 8 10 12 14 16 18 20 22 24
Advanced	Tuesday	
	Wednesday	
	Thursday	
	Friday	
	Saturday	
	Sunday	
	Holiday	
		Save Close

In this step, operations are similar with those described in section "Scheduling Recordings".

- 11. Click Save.
- 12. Under Linkage Action, specify linkage actions.

The following is an example.

÷		Channel		
Channel	Motion Detection			
Basic	Channel D1	L-IPCamera		
Audio and Video	Settings Duration	Linkage Action		
Motion Detection	Regular Linkage	Alarm Output Recording	Snapshot	PTZ D1 🔻
Intelligent Feature Advanced	<ul> <li>✓ Sound Alert</li> <li>Mail</li> <li>✓ Report Center</li> <li>✓ Send to HDMI</li> <li>☐ Send to VGA</li> </ul>	↓ Local-1       ▲       ✓       D1         ✓       Local-2       □       D2         ↓ Local-3       □       D3       □         ↓ Local-4       □       D3       □         ↓ Local-5       □       □       □       □         ↓ Local-6       □       □       □       □         ↓ Local-7       □       ↓       □       □         ↓ Local-8       □       ↓       □       ↓	<ul> <li>✓ D1</li> <li>☐ D2</li> <li>☐ D3</li> </ul>	Preset 1 Tour 1
				Save Close

#### The following table provides action descriptions.

Туре	Action	Description
	Sound Alert	Trigger the sound alert on the NVR.
Regular	Mail	Email an alarm notification to specific users. When a mail
Linkage		address is configured, the NVR can notify users of alarms and
		exceptions. The mail addresses can be configured in the

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Туре	Action	Description			
		following path.			
		← Network			
		IP and Port PPPoE Mail Port Mapping			
		Other Protocol Select Mail 163Mail			
		Platform SMTP Server snitp.163.com			
		Cloud SMTP Port 465			
		Username DTest123			
		Password   Password   Control to the set of			
		Sender Address ABC@test.com Enable Image Attachment			
		Receiver Address +Add			
		test@hello.com			
		Delete			
		Verify Save Close			
		To configure mail addresses:			
		1. Select a mail type.			
		If you select an existing mail type (for example, 126/163			
		mail), you do not need to specify SMPT Server and SMTP			
		Port. Instead, they will be configured by the device itself. If			
		you select <b>Other Mail</b> , they are mandatory.			
		2. Specify Username and Password.			
		3. (Optional) Enable the SSL.			
		If you enable the SSL, mails will be encrypted by the SSL			
		and the SMTP port will be automatically updated to <b>465</b> .			
		4. Specify Sender Address and Sender Name.			
		5. (Optional) Enable image attachment.			
		If you enable image attachment, real-time snapshots will			
		be attached to alarm/exception notification mails.			
		6. Specify <b>Receiver Address</b> .			
		You need to enter a receiver address and click <b>Add</b> .			
		A maximum of eight receiver addresses can be added.			
		7. Click <b>Save</b> .			
		<ol> <li>8. Click Verify to verify the mail settings.</li> </ol>			
	Report Center	Report an alarm to the management system (for example, the			
	Report Center	VMS).			
	Send to HDMI	Send the live video of the alarming camera to the display			
		connecting to the HDMI port of the NVR.			
	Send to VGA	Send the live video of the alarming camera to the display			
Alores		connecting to the VGA port of the NVR.			
Alarm	Local->1/2/3/4	Trigger the going off of the NVR alarm outputs.			
Output		The number of alarm outputs varies according to the NVR			
<b></b>		model.			
Recording	D1/D2	Trigger a recording on the linked camera.			
Snapshot	D1/D2	Trigger a capture on the linked camera.			

Туре	Action	Description			
PTZ	Preset	Enable the linked camera to go to a specific preset.			
	Tour	Enable the linked camera to start a specific path tour.			

13. Click Save.

## **Intelligent Feature Alarms**

### Introduction

The NVR supports the following intelligent feature alarms of cameras:

Intelligent Feature	This Alarm Is Triggered When			
Alarm				
Tampering	The video of the camera is blocked.			
Guard Line	A person crosses the preconfigured guard line.			
Enter Guard Area	A person enters the guarding area.			
Entry Guard Area	A person loiters around the guarding area.			
Exit Guard Area	A person leaves the guarding area.			
Object Removal	A person takes away an object from the guarding area.			
Object Left	A person leaves an object in the guarding area.			
Defocus	The video image gets blurred.			
Gathering	People gather in an area (for example, emergency exit) where people			
	are not supposed to do so.			
Scene Change	The guarding area changes.			
Audio Surge	An audio surge occurs.			
Face Detection	A target face is detected.			

# Configuring

To configure an intelligent feature alarm for a camera:

- 1. Click Intelligent Feature.
- 2. Select the camera from the **Channel** drop-down list.
- 3. Specify **Detection Type**.
- 4. Under **Duration**, select the durations when the alarm is enabled. The following is an example.

÷			Channel				
Channel	Intelligent Feature						
Basic	Channel	D1-IPCamera					
Audio and ∨ideo	Detection Type	Tampering					
Motion Detection	Duration Linkage Action						
Intelligent Feature	X Delete i Dele						
Advanced	0 2 Monday	4 6	8 10 12	14 16	18 20	22	24
	Tuesday						
	Wednesday						
	Thursday						
	Friday						
	Saturday						
	Sunday						
	Holiday						
							Close

In this step, operations are similar with those described in section "Scheduling Recordings".

- 5. Click Save.
- 6. Under Linkage Action, specify linkage actions.

In this step, operations are similar with those described in section "Motion Detection".

7. Click Save.

### **Advanced Settings**

### Upgrade

NOTE:

Do not power off the camera in operation or device during an import or export. Otherwise, the imported/exported channel list may be erroneous.

#### To upgrade a camera:

- 1. Choose Advanced > Upgrade.
- 2. Select the camera model from the Model drop-down list and the camera from the channel list.
- 3. Click Upgrade.

### Importing or Exporting a Channel List

NOTE:

Do not power off the device during an import or export. Otherwise, the imported/exported channel list may be erroneous.

The channel list importing/exporting function can help you quickly add/replace a batch of cameras to/for a device.

To export a channel list:

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- 1. Select Export Channel List
- 2. Select an external storage path, for example, a USB flash drive path.
- 3. Enter a file name.

The following is an example.

÷		Channel	
Channel	Upgrade Import	and Export	
Basic	• Export Channel Lis	t	
Audio and Video	Import Channel Lis	st	
Motion Detection	Path	USB Disk b4	
Intelligent Feature			
Advanced			
	File Name	DTest channel list	xls
			Start Close

4. Click Start.

To import a channel list:

- 1. Select Import Channel List.
- 2. Select an external storage path, for example, a USB flash drive path.

In this step, you must upload a Microsoft Excel file and the format of the data included in the file must be valid. Otherwise, the import may fail.

After the new channel list is imported, the original channel list will be removed from the device together with the originally listed cameras.

# **Configuring Storage Settings**

#### NOTE:

Commercial NVRs do not support network storage units.

# **Editing an HDD**

# Initializing an HDD

#### NOTE:

You cannot initialize a USB flash drive or an HDD where playbacks are in progress.

To initialize an HDD:

- 1. Stop all playbacks.
- 2. Select the HDD from the HDD list.
- 3. Click Initialize.

÷			Н	DD				
Basic	Basic							
Advanced		Capacity 2794.52GB 2794.52GB	Status Normal Normal	Attribute R/W R/W	Type Internal Internal	Remaining 2748.00GB 2794.00GB	-	
	Disk Group1 T HDD Total: 55		Initial	Remaini	ng Capacity: 554 ng Capacity: 554 ute Uninsta	2GB	Close	

4. Confirm your operation.



5. Enter the password of the admin account.

÷			Н	DD			
Basic	Basic						
Advanced	HDD ID	Capacity 2794.52GB 2794.52GB	Status Normal Normal	Attribute R/W R/W	Type Internal Internal	Remaining 2748.00GB 2794.00GB	Disk Group 1 T
		÷	Log	g In			
		Username			v		
		Password					
			O	K			
	Disk Group1 HDD Total: 5	Total: 5589GB 589GB			ng Capacity: 554 ng Capacity: 554		
		Add	l Initiali	ize Attrib	ute Uninsta	all Save	Close

If **Enable Operation Password** is unchecked, this step can be skipped. For details about this option, see section "Device Name and ID".

÷		System	
Basic Bas	sic ∨irtual Cha	annel	
Time Devi	ice Name	NVR	
User Safety Devi	ice ID	255	
Port Lang	guage	English	
Exception Auto	o Logout	Never	
Men	nu Transparency		
Defa	ault Audio Ch	All	
		✓Enable Setup Wizard	
		Enable Operation Password	
		Show Notification Icon	
		Show Notification Pop-Up	

6. Click Save.

# Adding a Network Storage Unit

#### N/A

**NOTE:** Commercial NVRs do not support network storage units.

# Editing the Attribute of an HDD

To edit the attribute of an HDD:

- 1. Select the HDD from the HDD list.
- 2. Click Attribute.
- 3. Select an attribute.

÷	Ed	it Attribute	
HDD ID Attribute • R/W RO	1		
			Close

#### 4. Click Save.

NOTE:

You cannot edit the attribute of a USB flash drive.

### **Changing the Storage Mode**

The NVR supports the following storage modes:

- **Disk Group**: When a camera is assigned a group, records and pictures of the camera will be saved in HDDs of this group. An HDD can belong to only one disk group, which can include multiple HDDs.
- Quota: A camera is assigned a specific amount of recording/capturing/synopsis space quota. The synopsis quota is available only to cameras supporting the record synopsis function. A quota must be a multiple of 2. You can click **Copy** to copy the quota settings of a camera to other cameras. In quota mode, when the data size of a camera exceeds the specified quota, the excess will be saved temporarily. If the storage space becomes insufficient, the excess will be overwritten preferentially.

Please note the following before changing the storage mode:

• Switching between the disk group and quota modes will cause the device to reboot.

• USB flash drives and NAS/IPSAN storage units do not support the disk group mode.

To change the storage mode of the device from **Disk Group** to **Quota**:

- 1. Choose Advanced > Storage Mode.
- 2. Select Quota from the Storage Mode drop-down list.
- 3. Click Yes.

<b>←</b>	HDD
Basic	Storage Mode Advanced
Advanced	Storage Mode Quota V
	Channel D1 IPCamera
	Recording Quota ( 0
	Used R NVR
	Snapshe Vou must reboot the device before you can proceed. Are you sure you want to reboot it? Ves No
	Remaining Quota 5554GB Total HDD Capacity 5588GB
	Copy Save Close

- 4. Wait while the storage mode is being changed.
- 5. Log in to the NVR again.

After the preceding steps are performed, you can find the following.

÷		HC	D		
Basic	Storage Mode 🛛 A	dvanced			
Advanced	Storage Mode	Quota			
	Channel	D1 IPCamera			
	Recording Quota (	0			
	Used Recording Q	6144MB			
	Snapshot Quota (	2			
	Used Snapshot Q	0MB			
	Remaining Quota 555	4GB	Total HDD Capacity	/ 5588GB	
				Сору	Close

You can then assign a specific amount of recording/snapshot quota to a camera. If you set **Recording Quota** to **0**, the device will still try to save the records of the camera to a space-sufficient HDD. If you set **Snapshot Quota** to **0**, snapshots of the camera will be not saved.

### **Uninstalling an HDD**

To uninstall an HDD, select the HDD from the HDD list and click **Uninstall**.

NOTE:

You cannot uninstall an HDD involved in an ongoing playback.

# **Testing an HDD**

#### **SMART Test**

To conduct a Self-Monitoring Analysis and Reporting Technology (SMART) test, choose **Maintenance** > **HDD** > **SMART**.

÷			I	Maintenance		
System Status	HDD					
Log	HDD ID	Туре	Capacity	Status	SMART	Faulty Channel Detection
HDD	1 2	Internal Internal	2794.52GB 2794.52GB	Normal Normal	<u>SMART</u> <u>SMART</u>	Faulty Channel Detection Faulty Channel Detection
Network						
Device						
Advanced						
						Close

The following is an example for test results.

÷			SMART					
HDD ID		1						
Model		HGST HUS7240	)30ALA640					
Serial Nu	nber	PN1234P8KJEAF	×					
Temperate	ure (°C)	48						
Used For	(Days)	1054						
Test Resu	lts	Passed, Status	Normal					
ID	ATTRIBUT	e_NAME	FLAG	VALUE	WORST	TJRESHOLD	RAW_VALUE	STATUS
0×1	Raw_Read	l_Error_Rate	0×000b	86	86	16	8257536	OK
0X2	Throughp	ut_Performance	0×0005	137	137	54	78	OK
0X3	Spin_Up_	Time	0×0007	127	127	24	490	OK
0X4	Start_Sto	p_Count	0×0012	94	94	0	27341	OK
0X5	Reallocate	d_Sector_Ct	0×0033	100	100	5	0	OK
<b>0</b> X7	Seek_Erro	r_Rate	0×000b	100	100	67	0	OK
0.0	Seek_Time	e_Performance	0×0005	138	138	20	27	ОК
<b>0</b> ×8	Dower Or	n_Hours	0×0012	97	97	0	25301	OK
0X8 0X9	FOWEI_OI		0×0013	100	100	60	0	OK

## **Faulty Channel Detection**

To conduct a faulty channel detection:

- 1. Choose Faulty Channel Detection.
- 2. Specify Test Type.

Both the two test types will take an hour. However, the accuracy of the complete test type is higher than that of the key area test type.

3. Click Start.

÷	Faulty Channel Detection
HDD ID	1 Good
HDD Capacity	2794.52GB Damaged
Sector Size	0.50KB
Test Type	Key Area Test
Test Status	Not Tested
Number of Errors	N/A
LBA	Cylinder NO. Head NO. Sector NO. Sectors Time Consumed (ms) Error Info
	Start Stop Close

- 4. Wait while the detection is going on.
- 5. Click **Close** when the detection is completed.

## **Regrouping a Camera**

To regroup a camera, select a new group ID from the Save in Disk Group drop-down list and click Save.

## **Enabling HDD Dormancy**

The HDD Dormancy function enables an HDD to become dormant if it is idle for over 15 minutes. When an HDD becomes dormant, it stops reading and writing. It may take 5-15 seconds to wake up a dormant HDD, depending on the HDD model. This function takes effect only when HDDs support this function and no RAID array is created.

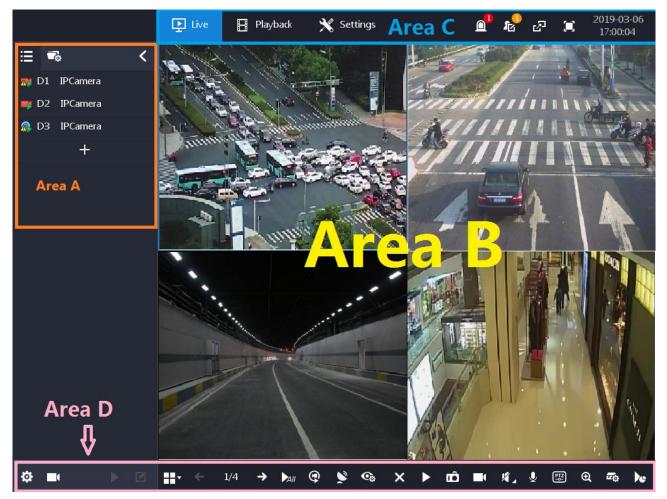
To enable this function, choose Advanced > Advanced, check Enable Dormancy, and click Save.

÷			HDD		
Basic	Storage Mode	Advanced			
Advanced	<b>⊡</b> Enable Dorman	¢y			
				Save	Close
				Jave	

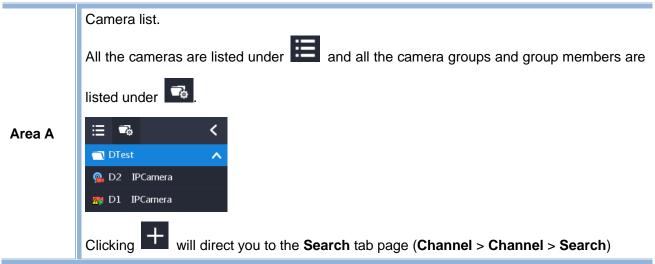
# Live View

# **Main Interface**

The following is the main interface of the Live tab page.



The four main areas are described as follows:



	Screen layout with viewing windows.	
	You can click 🖶 to change the screen layout.	
Area B		
	To view videos of a camera, select a viewing window and double-click the camera.	
	Alarm notifications. The following is an example.         Image: Clicking is an example.    Alarm notifications. The following is an example.          Image: Clicking is an example.    Clicking is an example.	
	(Maintenance > System Status > Alarm Status).	
	Logs. The following is an example.	
Area C	TimeMain Cate Camera ALSecondary Cr A Motion D D 2019-03-07 10:41:402019-03-07 10:41:40Camera ALA Motion D D D 2019-03-07 10:41:312019-03-07 10:41:31Camera ALA Motion D Configured t Configured t 2019-03-07 10:38:302019-03-07 10:38:30User OperConfigured t Configured t 2019-03-07 10:34:572019-03-07 10:34:57User OperStopped a v Stopped a v 2019-03-07 10:34:552019-03-07 10:34:57User OperStorted a br Stopped a v 2019-03-07 10:34:502019-03-07 10:34:50User OperStorted a br Stopped a v 2019-03-07 10:34:502019-03-07 10:34:50User OperStorted a br Stopped a v 2019-03-07 10:34:502019-03-07 10:34:50User OperStorted a br Stopped a v 2019-03-07 10:30:482019-03-07 10:30:48Camera AL.A Motion D 2019-03-07 10:30:482019-03-07 10:30:48Camera AL.A Motion D 2019-03-07 10:30:482019-03-07 10:30:49Camera AL.A Motion D 2019-03-07 10:30:482019-03-07 10:30:49Camera AL.A Motion D 2019-03-07 10:30:482019-03-07 10:30:49Camera AL.A Motion D 2019-03-07 10:14:082019-03-07 10:31:28Camera AL.A Motion D 2019-03-07 10:14:082019-03-07 10:14:08Camera AL.A Motion D 2019-03-07 10:14:082019-03-07 10:14:08Camera AL.A Motion D 2019-03-07 10:14:082019-03-07 10:14:08Camera AL.A Motion D 2019-03-072019-03-07 10:14:08Camera AL.A Motion D 2019-03-07	
	Clicking Main Category Main Cate can allow you to choose	
	logs of a specific log category to be showed on the main	
	SCREEN.	
	then only user operation logs will be showed on the main	
	screen.	
	<ul> <li>Clicking a log link (for example, <u>A Motion D</u>) will show you the log details. The following is an example.</li> </ul>	

	Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search tab page (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).         Image: Constrained on the search (Maintenance > Log > Search).
	Direct you to the Channel tab page (Channel > Channel > Channel).         Direct you to the Recording Schedule tab page (Recording > Recording Schedule > Recording Schedule)
	View videos from a channel.         Image: Rename a channel.         Image: Change the screen layout.
Area D	<ul> <li>► 1/4 →</li> <li>Screen display pages which vary according to the camera accommodating capability of the device and the current screen layout.</li> <li>► View videos from all online cameras. In such a case, all cameras</li> </ul>
	<ul> <li>will be assigned a viewing window.</li> <li>Start a screen tour.</li> <li>To start a screen tour:         <ol> <li>Select a screen layout.</li> <li>Note that the number of screen pages must be equal to or greater than 2.</li> <li>Image: Image: I</li></ol></li></ul>

	Dwell Time • 5s 10s 20s 30s 60s
	2min 5min 10min 20min
	OK Cancel
	<ul> <li>4. Click <b>OK</b>.</li> <li>After the preceding steps are performed, each screen page will be toured and each page will dwell for 5s.</li> </ul>
<b>&gt;</b>	Start a broadcast to all the cameras that support broadcasts.
	Change display settings.
	Standard Bright Soft
0	Brightness 50
€¢	Contrast 50
	Saturation 50
	Chroma 50
×	Cancel viewing videos from a camera.
	Start a rapid playback which plays back a record of the last five
	minutes.
	For example, if the current time is 12:00:00, and then a rapic playback will start from 11:55:00 and end at 12:00:00.
	You cannot start a rapid playback if no record is found, which
	usually because:
	1) The recording function is disabled.
	2) The recording mode is Scheduled and Event Triggered but the
	scheduled time has not arrived yet or no event has occurred.
	Take a capture. To back up captures to an external storage unit:
	<ol> <li>Choose Settings &gt; Recording &gt; Backup &gt; Snapshot.</li> </ol>
Ê	<ol> <li>Select a camera group or a specific camera.</li> </ol>
	3. Specify <b>Picture Type</b> , <b>Start Time</b> , and <b>End Time</b> .
	The following is an example.

	← Recording   Recording Sded. Record   Snapshot All   Goup Picture Type   Hoidday D1   D2 Badvap   Badvap D3   D4 D4   C05 Start Time   D6 D5   D6 D6   D7 D11   D12 D13   D14 D12   D15 D16     Endedting Close	
	<ol> <li>Click Search.</li> <li>From Search Results, select captures you want to downloand click Back Up.</li> <li>Insert the external storage unit to the device and select it fr the Backup Device drop-down list.</li> </ol>	
	🗲 Back Up	
	Backup Device         Backup Device         Size of Data to Be Backed Up: 35.47KB         Remaining Space on Backup Device: 0MB         Format       Start         Cancel         In this step, you can format the external storage unit.         7. Click Start.	
	Change the recording mode of cameras.	
<b>U</b> )_	Adjust the volume of a video. If With Audio is unchecked, all the cameras will not include au into videos. In such a case, adjusting the volume of videos useless.	i

#### User Manual for Commercial NVRs of V7

		Recording
		Recording Sched Recording Schedule
		Snapshot Schedule Channel D1-IPCamera
		Holiday Recording Advavs Enabled  Scheduled and Event Triggered Always Disabled
		Backup dvanced Channel Settings
		Advanced 20 22 24 Mond Stream Main Stream Preferred
		Tuesd Recording Expired In 0 days
		(090, The value 0 indicates that Thurs recordings will be not deleted fordibly.)
		Friday Sature OK Cancel
		Sunday
		Holiday
		Copy To Save Close
	2	If you click (*), you can switch between audio channels for cameras that have two audio channels. Call a camera.
		PTZ controls, which are detailed in section "PTZ Controls".
(	<u>S14</u>	Presets and tour paths, which will be detailed in section "Presets
		and Paths".
¢	Ð,	Digitally zoom in or out.
		Decoding mode:
é	Ťġ.	Real-Time Balanced Smooth
		Show the frame rate, bitrate, resolution, and video compression of
		a camera. The following is an example.
		[25fps][3773Kbps][1920×1080][H.264]
	~	
		) 🖿 ( 🕪 🖉 🖾 😋 🔁

#### The table helps you read icons in Area A.

Q	Online	9	Being viewed
Q	Offline or not registered	2	Alarm generated and recording in progress
2	Alarm generated	-	Recording in progress and being viewed
<b>@</b>	Recording in progress		Recording in progress, being viewed, and alarm generated

#### **PTZ Controls**

#### NOTE:

PTZ controls take effect on only PTZ cameras.

PTZ controls are described as follows.

	Direction buttons. You can click 5 to reset the camera to the factory position.	Q Q A	Increase or decrease the focus. Alternatively, use the automatic focus. Increase or decrease the aperture. Alternatively, use the automatic aperture.
\$ \$	Adjust the PTZ speed.	9 12	Enable or disable the backlight.
*	Zoom in or out.	116	Enable or disable the wiper.

# **Presets and Paths**

### **Creating a Preset**

NOTE:

Only ONVIF/VSIP cameras support this operation.

#### To create a preset for a camera:

1. Move the camera in operation to a position using arrow buttons.



2. Select a preset from the **Preset** text filed under **Quick Control** using

÷		
Channel	D2 IPCamera	
Basic Contro	l Quick Control Im	age Adju
Preset	1	• •
	Start Save	Delete
Tour Path	1	• •
	Start Touring Sto	p Touring

3. Click Save.

After the preceding steps are performed, a preset is saved. Clicking **Start Touring** will enable the camera to go to the preset.

#### **Touring Presets**

Go to the IPC Web of the camera in operation to tour its presets. For details, see the camera user manual.

### **Touring Paths**

On the NVR Web, you can only tour paths and these paths can be configured only on the IPC Web of the camera in operation.

KE	DACOM	Live View	Playback	Snapshot	Settings				👤 admin	⑦ Help → Logout	
Ţ	Camera	Basic Config Gu	ard Tour Preset	Restricted Patrol	Path Mode Mixed N	Node Scheduled Task	Positioning				^
	Image OSD Video Audio PTZ	Patrol P.	The device may have be have stopped transfermation resource in resource in	een disconnected and in stream because of nitation. Patrol F		▲ ▼ ♣ ₩	elete	Stop			
		Add	Modify	Delete							
		Patrol Spot	t Prese	t	Stay Time 5~1800 (s)	Enable Patrol Spots	Patrol Spot Name				
		1	1		10	Already Set	preset-1				
		2	2		10	Already Set	preset-2				
		3	3		10	Already Set	preset-3				~
		<	А		10	Alreadu Set	nreeat_/			>	

To tour paths of a camera:

- 1. Select a path from the **Tour Path** text filed under **Quick Control** using
- 2. Click KEDACOM 苏州科达科技股份有限公司 Suzhou Keda Technology Co.,Ltd

# Recording

# Scheduling a Recording

For details, see section "Scheduling Recordings".

# **Setting the Recording Policy**

The recording policy includes the following:

- What to do when storage space is insufficient
- How long a recording starts in advance, in other words, the pre-recording length, when an alarm is generated

Pre-recording	Pre-recording time for scheduled or event-triggered (with alarm linkage settings configured) recordings. For example, if an alarm is generated at 11:00:10 and this
	parameter is set to 5, a recording will be started from 11:00:05. The maximum value of this parameter is 60.

· How long a recording prolongs when an alarm is generated

Prolong Post-recording time for event-triggered (with alarm linkage settings configured) recordings. For example, if an alarm is cleared at 12:00:30 and this parameter is set to 20, the recording will last to 12:00:50. The maximum value of this parameter is 300.

- Whether to allow cameras to store recordings when they are disconnected from the NVR and transfer these recordings to the NVR when they are connected to the NVR again. This is achieved using the Automatic Network Replenishment (ANR) technology.
- Whether to enable the Long Term Recording function, which allows you to use the device storage capability to the full extent.

To configure the recording policy:

- 1. Choose Settings > Recording > Advanced.
- 2. Specify parameters displayed.

÷		Recording			
Recording Sched	Advanced				
Snapshot Schedule	When recording s	• Overwrite data Stop re	cording		
Holiday	Pre-recording	5	s(0~60)		
Backup	Prolong Recording	20	s(0~300)		
Advanced		Enable ANR			
		Enable Long Term Recording			
		Estimated Storage C Quota for Complete Record (Approximate	'apability (Approximate): 194 d ): 0 days	ays	
		Quota for Event-Exclu	sive Record (Approximate): 194	4 days	
$\mathbf{k}$					
					Close

If you select **Enable ANR**, the ANR technology is enabled. For cameras, the ANR technology can be configured only on the camera side using the IPC Web. For details, see the related user guide. When the Long Term Recording function is enabled, the device calculates the **Quota for Complete Record** and **Quota for Event-Exclusive Record** in a timely manner if you drag the slider. The following are examples.

Enable Long Term Recording
Estimated Storage Capability (Approximate): 178 days Quota for Complete Record (Approximate): 16 days Quota for Event-Exclusive Record (Approximate): 162 days
Enable Long Term Recording
Estimated Storage Capability (Approximate): 156 days
Quota for Complete Record (Approximate): 38 days Quota for Event-Exclusive Record (Approximate): 118 days

3. Click Save.

# **Backing Up Records**

To back up records:

- 1. Choose Settings > Recording > Backup > Record.
- 2. Select a camera group, a specific camera, or all the cameras.
- 3. Specify Record Type.

÷			Recording			
Recording Sched	Record	Snapshot				
Snapshot Schedule	All	Group		Record Type		
Holiday				All	•	
Backup	✓D2					
	D4			Motion Detectio	'n	
Advanced	D5			Alarm Input		
	D6			Intelligent Featu	re	
	D7					
	D8			Start Time		
	□D9 □D10			2019-03-08	00:00:00	
				End Time		
	D13			2019-03-08	15:31:30	
	D14					
	D15					
	D16					
					Search	Close

4. Specify Record Locked.

Record Locked					
Yes	▼				
All	Y				
Yes					
No					

- Yes: locked records
- No: unlocked records
- 5. Specify **Start Time** and **End Time**.
- 6. Click Search.
- 7. Select target records from the search results and click **Back Up**.
- 8. Select an external storage unit and click Start.

÷	Back Up
Backup Device	<b></b>
Size of Data to Be Back	red Lin: 772.50M/B
Remaining Space on Bad	
Forn	nat Start Cancel

In this step, you can format the external storage unit.



# Capturing

# Scheduling a Capturing

To schedule a capturing for a camera:

- 1. Choose Settings > Recording > Snapshot Schedule.
- 2. Select a channel.
- 3. Specify a capturing mode.

÷		Recording	
Recording Sched	Snapshot Schedule		
Snapshot Schedule	Channel	D1-IPCamera	
Holiday	Capturing Mode	• Scheduled and Event Triggered	Always Disabled

Scheduled and Event Triggered: indicates that a capturing will be started:

- At a scheduled time, which can be configured at step 6
- Upon the occurrence of an event/alarm (Motion Detection and Intelligent Feature Alarms) (assuming alarm linkage settings of the channel already include the capturing action; for details about the alarm linkage settings, see sections "Motion Detection" and "Intelligent Feature Alarms")
- 4. Click Advanced Channel Settings to configure advanced channel settings.

s(5~300)
s(5~300)
Cancel

The following table provides parameter descriptions.

Parameter	Description
Event-Triggered Capture	Interval at which capturings triggered by an event/alarm are made
Interval	
Scheduled Capture Interval	Interval at which scheduled capturings are made

- 5. Click **OK**.
- 6. Press and hold the left mouse button and draw one or multiple lines on the timeline (accurate to the minute) of a day.

After this, capturings will be made during the preceding six periods at a specific interval

(Event-Triggered Capture Interval or Scheduled Capture Interval). A maximum of eight periods can be created in a day and those periods cannot overlap.

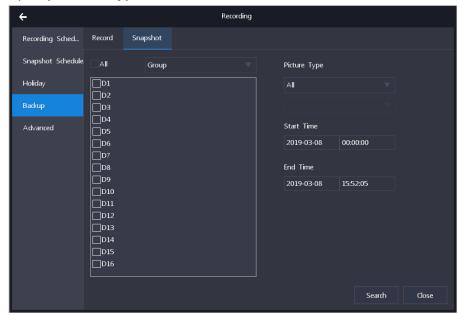
If you click a period, you can edit its start and end times.

- 7. Copy the period settings of a day to other target days by clicking 🔲 and selecting the target days. For references, see section "Scheduling Recordings".
- 8. Click Save.
- 9. Copy the capturing schedule settings of the channel to other target channels by clicking **Copy To** and selecting the target channels.
- 10. Click **OK**.
- 11. Click Save.

# **Backing Up Snapshots**

To back up records:

- 1. Choose Settings > Recording > Backup > Snapshot.
- 2. Select a camera group, a specific camera, or all the cameras.
- 3. Specify Picture Type.



- 4. Specify Start Time and End Time.
- 5. Click Search.
- 6. Select target records from the search results and click **Back Up**.
- 7. Select an external storage unit and click **Start**.

In this step, you can format the external storage unit.

# **Playing Back**

NOTE:

- If you click All Channels, existing and deleted channels will be displayed.
- When a record is played back for the first time, the playback will start from the very beginning.

### **Starting a Rapid Playback**

On the Live page, clicking **L** at the bottom allows you to start a rapid playback. For details, see section "Main Interface".

## Starting a Playback by Channel

To start a playback by channel:

- 1. Choose Playback.
- 2. Select one or multiple cameras from the channel list.
  - Note:

The screen layout will automatically change according to the number of selected cameras. A maximum of 16 cameras can be played back at the same time.

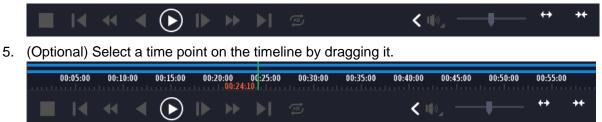
When multiple channels are selected, they are bound to view windows according to the channel ID in an ascending order and will be played back simultaneously from the start time of the first record-available date.

Usually, channels have different record-available dates. For synchronous playbacks, all these dates are blue, for example, <sup>5</sup>. From the view of the set theory, the specially displayed dates are the union of the selected cameras' record-available dates. For example, records are available on March 1 for camera 1 and records are available on March 2 for camera 2. In such a case, the dates March 1 and 2 are specially displayed. Additionally, all these dates are specially displayed no matter which view window is currently selected.

3. Select a blue date.

If you do not select a date, the playback will start from the very beginning of the first record-available date.

4. Click 💽



### Starting a Playback by Event

To start a playback by event:

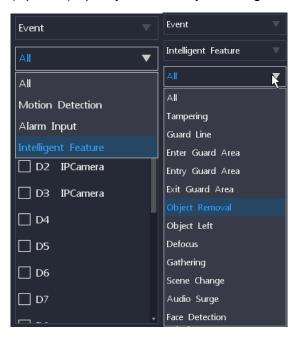
1. Click Q.



2. Select Event from the first drop-down list.



3. (Optional) Specify the event by selecting items in the second and third drop-down lists.



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- 4. Select the target camera(s).
- 5. Specify the start and end times.
- 6. Click Search.
- 7. Double-click each searching result to play back records related to the event.
- 8. Click Back.

# Starting a Playback by Locked Record

1. Click Q.

- 2. Select Locked Record from the drop-down list.
- 3. Select the target channel(s).
- 4. Specify the start and end times.

Locked Record					
✓All Channels					
✓ D1 IPCamera					
✓ D2 IPCamera					
✓ D3 IPCamera					
✓ D4					
✓ D5					
✓ D6					
☑ D7					
✓ D8					
✓ D9					
✓ D10 -					
Start Time					
2019-03-08 00:00:00					
End Time					
2019-03-08 14:45:16					
Search					

- 5. Click Search.
- Double-click each search result to play back locked records.
   Note: In this step, you can unlock specific records. You can also lock them back later.

For details on how to lock records, see the description about in section "Playback Controls".

# Starting a Playback by Tag

The steps are similar to those described in section "Starting a Playback by Locked Record".

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# Starting a Playback by Sub-Period

The sub-period playback is a playback where a record is equally divided into several sub-records with the same duration and these sub-records are played back simultaneously.

For example, a 12-hour record is equally divided into 4 (specified by **Fragments**) sub-records each of them lasting for 3 hours and these 4 sub-records are played back simultaneously.

To start a playback by sub-period:



- 2. Select the target channel.
- 3. Select a blue date.
- 4. Specify Fragments.

The Fragments parameter indicates the number of sub-records.

- 5. Click 💽.
- 6. (Optional) Further divide a sub-record into fragments by choosing **K** > **☑** Recursive Fragment. The following is an example.

You can click as long as the sub-record/fragment duration is long enough. If a sub-record/fragment lasts for less than 2 minutes, you will find a, indicating that the

sub-record/fragment cannot be further divided.

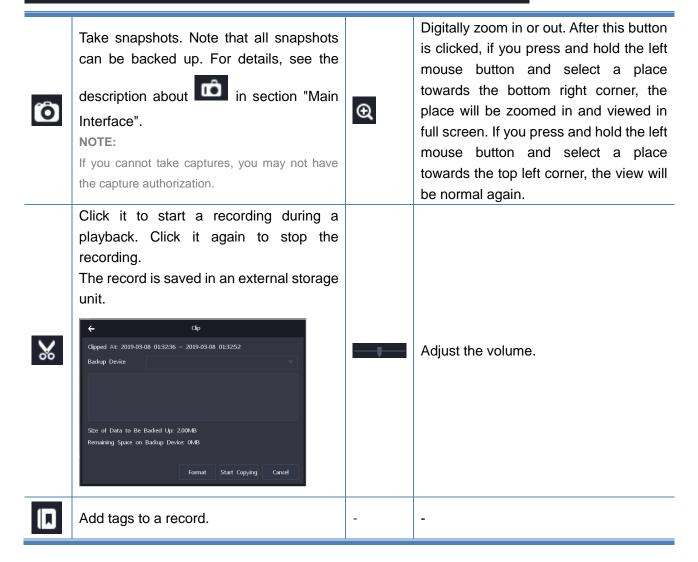
# **Playback Controls**

Playback controls are described as follows.

	<ul> <li><ul> <li><ul< th=""><th>&lt;</th><th>( 11)</th></ul<></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul></li></ul>	<	( 11)
	Stop a playback.	▶	Accelerate the playback. Every click will increase the speed from 2X to 4X and then 8X 16X 32X and finally 64X. When the speed is 64X, clicking it will make the speed normal again.
<b> </b> ◀	Go backward 30 seconds.	►I	Go forward 30 seconds.
₩	Slow the playback down. Every click will slow down the speed from 1/2X to 1/4X and then 1/8X and finally 1/16X. When the speed is 1/16X, clicking it will make the speed normal again.	tā)	<ul> <li>Repeatedly play back a certain section of a record.</li> <li>To start a loop playback:</li> <li>1. Click 2.</li> <li>2. Enter a start time and an end time.</li> </ul>

			← Loop Duration Start Time 00:00:00 End Time 23:59:59 OK Cancel 3. Click OK.
	Play the record back reversely. Clicking it again will stop the reverse playback.	<	Expand the control bar.
() ()	Start/pause a playback.	( <b>(</b> ®]	Mute/unmute the speaker. In addition, you can select an audio channel.
_	Play back frame by frame. Every click will play a single frame. To go back to the		
	normal playback, click .	-	-

#### ĨÕ ‰ Ĝ II @ ♠, — I— ↔



>

Lock a certain section or the whole section of a record to prevent this section from being overwritten.

To achieve this:

- 1. Click **o** at the target start time.
- 2. Click it again at the target end time.
- 3. Click OK.

•

÷	Lock R	lecord	
Duration: 2019-03-07	20:02:05 ~	2019-03-08	02:45:19
Size: 1024.00MB			
			_
		OK	Cancel

- To back up locked records:
- 1. Choose Settings > Recording > Backup > Record.
- 2. Select the target channel(s).
- 3. Specify Recording Type, Record Locked (set it to Yes), Start Time, and End Time, and click Search.

	Record Type All Record Locked Yes		
	All Record Locked		
	Record Locked		
	Yes		
	Start Time		
	2019-03-08	00:00:00	
	End Time		
	2019-03-08	15:31:30	
			n Close
			Search

4. Select target locked records and click **Back Up**.

# Alarming

# **Motion Detection**

For details, see section "Motion Detection".

# **Intelligent Feature Alarms**

For details, see section "Intelligent Feature Alarms".

## Alarm Inputs of the Device

For details, see section "Alarm Inputs".

# **Exceptions on the Device**

For details, see section "Exceptions".

# **Active Alarm**

For details, see section "Active Alarms".

# **Configuring Network Settings**

### NICs

For details on how to configure NICs, see section "Configuring Network Settings".

# **HTTP and RTSP Ports**

÷			Network		
IP and Port	Ethernet	Service Port			
Other Protocol	HTTP Port	80			
Platform	RTSP Port	554		]	
Cloud					
					Close

The two ports can be configured in the following path.

**HTTP Port**: Port for web access. The default value is **80**. Users access an NVR Web by entering the IP address of an NVR into the address bar of a web page browser, for example, http://192.168.1.100:80. **RTSP Port**: RTSP port for live viewing. The default value is **554**. If you want to view live videos on an NVR only, you can type "IP+this port" into a web page browser, for example, http://192.168.1.100:554.

## PPPoE

The Point-to-Point Protocol (PPP) is a link layer protocol that encapsulates and transmits network layer packets over point-to-point links. It provides user authentication methods, supports synchronous and asynchronous communication, and is easy to extend.

As an enhancement of PPP, the PPP over Ethernet (PPPoE) provides point-to-point connections over the Ethernet, sets up PPP sessions, and provides a method to encapsulate PPP data packets. To enable the PPPoE for an NIC:

1. Choose Other Protocol > PPPoE.

KEDACOM 苏州科达科技股份有限公司 Suzhou Keda Technology Co.,Ltd 2. Check Enable PPPoE.

÷			Network
IP and Port	PPPoE	Mail	Port Mapping
Other Protocol			Chable PPPoE
Platform	NIC		LAN
Cloud	Username		DTest
	Password		
			Save Close

- 3. Select the NIC from the NIC drop-down list.
- Specify Username and Password. Ask your network operator for the username and password.
- 5. Click Save.

## UPnP

One solution for Network address translation (NAT) traversal, named the Internet Gateway Device Protocol (IGD Protocol), is implemented via the Universal Plug and Play (UPnP) technology. Many routers and firewalls expose themselves as Internet Gateway Devices (IGDs), allowing any local UPnP control point to perform a variety of actions, including retrieving the external IP address of the device, enumerating existing port mappings, and adding or removing port mappings. By adding a port mapping, a UPnP controller behind the IGD can enable traversal of the IGD from an external address to an internal client.

To enable the UPnP:

- 1. Click Port Mapping
- 2. Check Enable UPnP.
- 3. Enter an alias.

When an alias is configured, the NVR can be found if your PC is located on the same broadcast domain (in a LAN) as the NVR and UPnP is enabled on your PC. After you find the NVR, double-clicking the NVR icon will show you the current IP address of the NVR.

4. Select a port mapping mode.

If you select the manual mode, you need to configure port mapping for each port by clicking **Edit** and then, in the displayed dialog box, enter an external port. The following is an example.

÷		Net	work			
IP and Port	PPPoE Mail	Port Mapping				
Other Protocol		✓ Enable UPnP				
Platform	Alias	NVR001410212454				
Cloud	Port Mapping Mode	Manual		Mapping IP:	0.0.0.0	
		Port Type	Port	External Port	UPnP Status	Edit
		RTSP	554	5541	Invalid	
		HTTPPort	80	801	Invalid	Edit
					Save	Close

5. Click Save.

### **Registering with a Platform**

#### **VSIP** Platform

The VSIP protocol is a KEDACOM proprietary protocol and it allows for communication between VSIP devices.

To enable the device to register with a VSIP platform (for example, the VMS):

- 1. Access the PMC of the VMS.
- 2. Choose **Device > Device Model > Add**.
- 3. In the **Add model** dialog box, specify parameters displayed. The following is an example.

Add model	×
Model: SVR2420-4 Vendor: kedacom GB Model Type: Encoder	
Device Series: Encoder NVR SVR Fixed IPC PTZ IPC	
Capability:       Encoding Channels:       5       Video Sources:       5         Required License:       5       Store Video Locally:       ✓         Parallel Port Alarm:       8	
Submit Cancel	

- 4. Click Submit.
- 5. Choose **Device** > **Add**.



6. In the **Add PU** dialog box, specify parameters displayed.

The following is an example.

Name:	SVR-252-VSIP		*	Comply	with GB		
Type:	Encoder	$\checkmark$	Model:	SVR2420-4		✓ *	
Enabled/Disabled:	Enable	$\checkmark$	IP Address:	172.26.1.252	ŧ		
Located in the Same Subnet:	] PU Outside NAT		PU Send NA	T Probe	0		
Disabled On:	2037-12-31			*			
Location:							
+) Write Data:	72.26.1.252						
				ОК	Cancel	Device Mo	odel

Remember to uncheck Write Data.

- 7. Click OK.
- 8. Copy the UUID of the newly added NVR.

		User	Disk Status	s Fault Lo	gs Mana	ge Disk Licer	nse		
				Device	List				
	UUID	Name	Туре	Model	Enable	IP Address	Vendor	Disabled On	Comply with GB
869	P7cc6abd4c47b1b207d970cb5f3c1f	2240	Encoder	IPC	$\checkmark$	192.168.1.95	kedacom	2037-12-31	
de3	35e9911a4b417c81cfe62c2e385f6f	IPC521	Encoder	IPC	$\checkmark$	192.168.1.31	kedacom	2037-12-31	
d6t	b687e852be400ba4ba17d05a96b70b	SVR-252- VSIP	Encoder	SVR2420-4	$\checkmark$	172.26.1.252	kedacom	2037-12-31	
949	af47ebf5b478e899d5c2d7894ee18	test-Bruian	Encoder	DSJ-test	$\checkmark$	192.168.1.50	kedacom	2037-01-01	Yes
14 <4 F	Dage 1 of 1 ->>>								1 - 4 of 4

9. On the NVR OSD, choose **Platform** > **VSIP** and configure parameters displayed. The following is an example.

÷		Network			
IP and Port	VSIP ONVIF				
Other Protocol	Platform				
Platform	Register By	IP Address 🔍			
Cloud	Platform IPv4	192.168.1.254			
	Platform Port	5510	1~65535		
	Device UUID	d6b687e852be400ba4ba17d05a96b7(			
	Device Password				
	Send NAT Probe				
	Report Secondary Str				
	Report ∨irtual Channel				
				Save	Close

Keep the default values of the  $\ensuremath{\text{Device Password}}$  and  $\ensuremath{\text{Send NAT Probe}}$  parameters.

#### 10. Click Save.

NOTE:

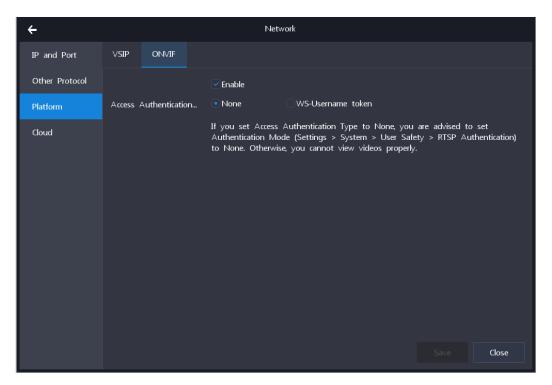
VSIP settings apply only to the KEDACOM VMS or systems developed on the basis of the KEDACOM VMS SDK.

## **ONVIF** Platform

To enable the NVR to access an ONVIF platform:

- 1. Check Enable.
- 2. Specify Access Authentication Type.

For this parameter, you must keep the red note in mind. Otherwise, you may not view videos properly.



If you select WS-Username token, the NVR username and password are required.

3. Click Save.

## **Cloud Service**

For details, see section "Enabling the Cloud Service".

# **Configuring System Settings**

# **Device Name and ID**

The device name and ID can be configured in the following path.

÷		System		
Basic	Basic ∨irtual Ch	annel		
Time	Device Name	NVR		
User Safety	Device ID	255		
Port	Language	English		
Exception	Auto Logout	Never		
	Menu Transparency			
	Default Audio Ch	All		
		✓Enable Setup Wizard		
		Enable Operation Password		
		Show Notification Icon		
		Show Notification Pop-Up		
			Save Close	

Enable Setup	When this option is checked, the Setup Wizard is evoked every time the device is
Wizard	rebooted.
Enable Operation Password	<ul> <li>When this option is checked, users must enter the administrator's password before they can perform the following operations:</li> <li>Initializing HDDs</li> <li>Editing the administrator mail address</li> <li>Resetting the NVR to factory defaults</li> <li>Editing the downward SIP ID of the NVR</li> <li>Disabling/enabling the operation password</li> </ul>
Show Notification Icon	When this option is checked, in the full screen mode, alarm and log notification icons icons will be displayed at the bottom right corner.
Show Notification Pop-Up	When this option is checked, notifications other than alarms or logs will be displayed at the top right corner. For example, when you insert a USB flash drive, a notification will be displayed.

# **Virtual Channel**

#### Introduction

The Virtual Channel feature allows you see a panoramic (or combined) view of active videos on the screen layout of a display (connecting to the VGA or HDMI port). This helps save bandwidth resources. When some cameras are removed, related videos cannot be retrieved if these videos are not backed up. With this feature, you can retrieve these videos even though the cameras are removed. To configure this feature:

- 1. Check Enable Virtual Channel.
- 2. Configure parameters displayed. The following is an example.

÷		System	
Basic	Basic Virtual Cha	annel	
Time		✓Enable ∨irtual Channel	
User Safety	Compression	H264	
Port	Encoding Resolution	704*576	
Exception	Encoding Frame R	30fps	
	Encoding Bitrate	1Mbps	
	Video Source	VGA	
			Save Close

3. Click Save.

## Example

When the 4-picture screen layout is applied and only one camera is online, you can find the following.



Double-clicking the virtual channel will show you the following, as shown in the second viewing window.



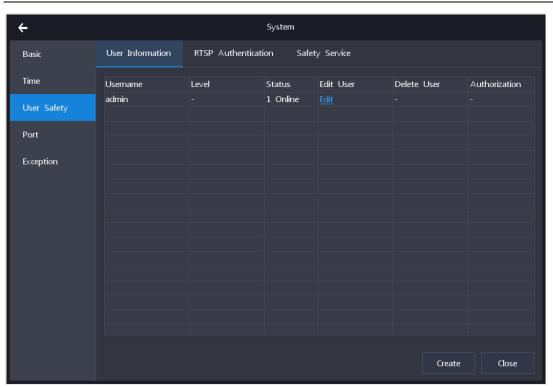
In the preceding figure, the video of D2 is displayed in the second sub-viewing window of the virtual channel due to its channel ID "D2".

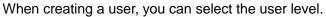
### Time

For details, see section "Configuring Time Settings".

#### Users

You can add/edit users on the User Information tab page.





<del>\</del>				System				
Basic	User Inforn	nation	RTSP Authent	ication Safe	ty Service			
Time	Username		Level	Status	Edit User	Delet	te User	Authorization
User Safety	admin		-	1 Online	<u>Edit</u>	-		
Port		÷		Create User				
Exception		Userna	ame	DTest				
·		Passwo	ord	******				
		Confirr	n Password	******				
		User L	.evel					
				Administrator				
				Operator				
				Viewer				
							Create	Close

The difference between an operator and an administrator is that the former by default has no permission to perform any system-related operations while the latter has the permission to perform all those operations by default. However, the admin account can grant users permissions or retrieve permissions from them.

You can click Authorization to edit the authorization settings of a user.

Under System, you can grant the user the permission to perform specific operations.

÷			Authorization		
System	Channel	Telnet		Current User:	DTest
Recording	)				
Channel					
Network					
System					
HDD					
Local Sch	neme				
Shutdow	n/Reboot				
				Save Clo	ose

Under **Channel**, you can grant the user the permission to perform specific operations on a camera.

÷		Autho	orization		
System	Channel Telnet	:		C	urrent User: DTest
Channel	✓ Remote Vie	🔽 Listen and	PTZ	✓ Playback	🔽 Backup Dow
D1	$\checkmark$	$\checkmark$	<b>~</b>	$\checkmark$	$\checkmark$
D2	<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	$\checkmark$
D3	$\checkmark$	✓	<b>~</b>	$\checkmark$	$\checkmark$
D17	<b>~</b>				
				Save	Close

Under **Telnet**, you can restrict the user to access the NVR from the specific IP address. The following is an example.

÷		Autho	rization	
System	Channel	Telnet		Current User: DTest
		✓Enable Remote Control		
IP of Remote	e Login	172.16.23.21		
			Sa	ave Close

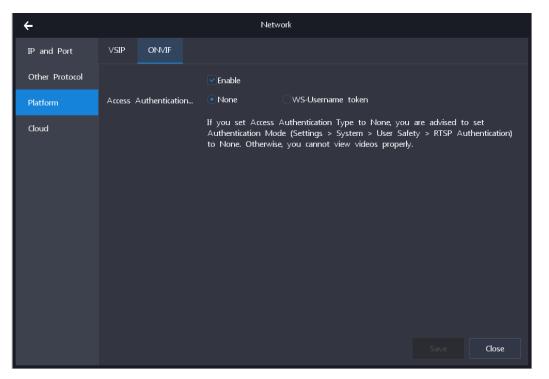
#### **RTSP** Authentication

If you set **Authentication Mode** to **Basic** or **Digest**, the operation authorization of RTSP users is determined by that of the NVR accounts used by these RTSP users. For example, if the NVR account used by an RTSP user does not have the listening and talking authorization, and then the RTSP user has no listening and talking authorization over the NVR.

If you set it to **None**, RTSP users can access the NVR without authentication. Note that when you set **Access Authentication Type** of ONVIF to **None**, you must set **RTSP Authentication** to **None**. Otherwise, users may no view videos properly.

÷	System
Basic	User Information RTSP Authentication Safety Service
Time	Authentication Mode None
User Safety	
Port	
Exception	
	Save Close
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#### The RTSP URL of the NVR is composed as follows:

rtsp://IP:PORT/realtime?chnid=N;[vid=V;][aid=A1[,A2];][mode=M;]agent=cgi
Where

- IP: an IP address of the NVR
- *PORT*: RTSP port of the NVR (Network > IP and Port > Service Port > RTSP Port)
- N: video channel ID (starting from 0 and including the virtual channel)
- V: stream type (0: main; 1: secondary)
- A1/A2: audio stream ID (starting from 0)
- M: URL mode (videoonly: video only; audioonly: audio only; if not specified: video and audio)
- The bracketed part (included in []) is optional.

The following is an example.

rtsp://192.168.1.100:554/realtime?chnid=0;vid=0;aid=0;agent=cgi

The preceding URL indicates that the main stream and the first audio stream of the camera with the channel ID being D1 that is registered with the NVR whose IP address is 192.168.1.100 are required.

## **Safety Service**

#### SSH

The Secure Shell (SSH) is a cryptographic network protocol for operating network services securely over an unsecured network. Typical applications include remote command-line login and remote command execution, but any network service can be secured with SSH.

To enable the SSH, check Enable SSH.

÷		Syste	rem
Basic	User Information	RTSP Authentication	Safety Service
Time		Enable SSH	
User Safety		✓ Enable Locking upon I	Illegal Login
Port	Administrator Mail	hello@test.com	
Exception			
			Save Close

#### Locking upon Illegal Login

When **Enable Locking upon Illegal Login** is checked, problem IP addresses will be prohibited from being used to access the NVR for 10 minutes if users make 3 continuous login failures with them. When such a problem occurs, users either wait for 10 minutes or use other IP addresses.

#### **Administrator Mail Address**

The administrator mail address is required for password resetting for the admin account.

## **HDMI and VGA Ports**

Under Screen, you can configure HDMI and VGA ports.

÷		System	
Basic	Screen Serial Po	ort Alarm Input	
Time		✓HDMI Port	
User Safety	Resolution	1024*768	
Port	Refresh Rate	60Hz	
Exception		✓VGA Port	
	Resolution	1024*768	
	Refresh Rate	60Hz	
	Send Menu To	VGA	<b>v</b>
			Save Close

If you set **Send Menu To** to **HDMI**, users can perform operations on the display connected to the HDMI port of the NVR. On the display connected to the VGA port of the NVR, users can only view videos. And vice versa.

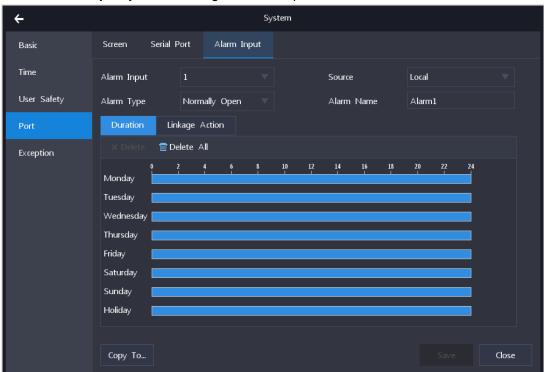
# **Serial Ports**

÷		System
Basic	Screen Serial Po	ort Alarm Input
Time	Serial Port ID	Serial Port1
User Safety	Serial Port Type	RS485
Port	Serial Port Function	Alarm Extension
Exception	Baud Rate	9600
	Data Bits	8 Bits
	Stop Bits	1 Bit
	Parity	N/A
	Flow Control	N/A
		Save Close

Under Serial Port, you can configure serial ports.

Only one serial port can function as an alarm extension port. The transparent channel function is currently not supported.

# **Alarm Inputs**



Under Alarm Input, you can configure alarm inputs of the NVR.

For references, see section "Motion Detection".

#### **Exceptions**

Under Exception, you can configure alarm linkage actions for NVR exceptions.

÷		System	
Basic	Exception		
Time		Sound Alert	Mail
User Safety	HDD Faulty No HDD		
Port	No Recording Space No Snapshot Space		
Exception	Camera Disconnected		
	Illegal Access Internet Disconnected		
	IP Address Conflict		
	MAC Address Conflict		
			Save Close

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An alarm notification mail will be sent to mail addresses (receivers) added in the following.

÷		Network	
IP and Port	PPPoE Mail	Port Mapping	
Other Protocol	Select Mail	163Mail	
Platform	SMTP Ser∨er		
Cloud	SMTP Port		
	Username	DTest123	
	Password	********	✓ Enable SSL
	Sender Address	ABC@test.com	✓ Enable Image Attachment
	Sender Name	ABC for DTest	
	Receiver Address		+Add
		test@hello.com	
			-Delete
			Verify Save Close

# Maintenance

# **NVR Information**

Under Device Information, you can query the NVR information.

÷		Main	tenance	
System Status	Device Information	Channel Status	Recording Status	Alarm Status
Log	Model	NVR1828-02016B/8P		
HDD	Serial Number	KDC0205231		
Network	Hardware Version	0.1.1		
Device	Production Date	20190228		
Advanced	Software Version	7.2.2.548 Mar 5 201	9 07:46:40	
	CPU Usage (%)	13		
	Memory Usage (%)	42		
				Close

## **Camera Status**

Under Channel Status, you can query the camera status.

÷		N	<i>Naintenance</i>			
<b>~</b>						
System Status	Device Information	Channel Status	Recording Sta	tus Alarm Stati	JS	
Log	Channel	Model	Channel Status	Motion Detection	Video Loss	Intelligent F
5	D1-IPCamera	IPC2860-HN-SIR		Enabled		Intelligent 1
HDD	D2-IPCamera	IPC2240-HN-S-L		Disabled		
	D3-IPCamera	IPC2860-HN-SIR				
Network	DS-IPCamera	IPC2600-FIN-5IK	Ormine			
Device						
Advanced						
					Refresh	Close
					Reflesh	ciose

## **Recording Status**

Under **Recording Status**, you can query the camera recording status.

÷		l	Maintenance				
System Status	Device Information	Channel Statu:	s Recordi	ng Status	Alarm Status		
Log HDD Network Device Advanced	Channel D1-IPCamera D2-IPCamera D3-IPCamera	Recording Status Recording Recording Stopped	Stream Main Main	Resolution 2560*2560 1920*1080 -	Frame Rate 9 24 -	Bitrate (kbps) 1020 4086 -	With Audio Yes Yes -
							Close

# **Active Alarms**

Under Alarm Status, you can query the active alarms.

÷				Maintenar	nce			
System Status	Device Inf	ormation	Channel Statu	ıs Re	cording Status	Alarm Stat	us	
Log	No.	Alarm Sou	rce	Alarm Ty	pe	Alarm Generate	ed At	Browse
HDD	□1 □2	D1-2 Alarm Local->LAN		Alarm Inp Internet I		2019-03-06 09: 2019-03-06 09:		
Network								
Device								
Advanced								
						Refresh	Clear	Close

# Logs

Under Log, you can query logs.

÷			Maintenance		
System Status	Search				
Log	Category	All			
HDD	Туре	All			
Network	Source	All			
Device	Start Time	2019-03-06	00:00:00		
Advanced	End Time	2019-03-06	18:40:32		
				Search	Close

The following is an example for searching results.

÷			Searc	n Results				
No.	Source	Туре	Recorded At	Details	Playback 📍			
1	D1	A Motion Detectio	2019-03-06 11:29:03	Details	-			
2	D1	A Motion Detectio	2019-03-06 11:28:53	Details	Q			
3	admin	Added a user	2019-03-06 11:20:23	Details	-			
4	admin	Started viewing	2019-03-06 10:58:50	Details				
5	admin	Stopped viewing	2019-03-06 10:53:04	<u>Details</u>				
6	admin	Started viewing	2019-03-06 10:53:04	<u>Details</u>				
	D1	A Motion Detectio	2019-03-06 10:46:45	<u>Details</u>				
8	D1	A Motion Detectio	2019-03-06 10:46:35	<u>Details</u>	Q			
9	D1	A Motion Detectio	2019-03-06 10:35:15	<u>Details</u>				
10	D1	A Motion Detectio	2019-03-06 10:35:05	<u>Details</u>	Q	-		
11	admin	Started viewing	2019-03-06 10:16:17	<u>Details</u>			$\bigcirc$	
12	admin	Stopped viewing	2019-03-06 10:16:16	<u>Details</u>			$\bigcirc$	
13	admin	Started viewing	2019-03-06 10:16:16	<u>Details</u>				
14	D1	A camera alarm in	2019-03-06 09:42:28	<u>Details</u>	Q			
15	admin	User login	2019-03-06 09:42:07	Details				

Clicking will allow you to play back the record made during the generation and clearance of an alarm. Note that the record length is subject to the following settings.

÷	Recording						
Recording Sched	Advanced						
Snapshot Schedule	When recording s	• Overwrite data Stop re	cording				
Holiday	Pre-recording	5	s(0~60)				
Backup	Prolong Recording	20	s(0~300)				
Advanced		Enable ANR					
		Enable Long Term Recording					
		Estimated Storage C Quota for Complete Record (Approximate	apability (Approximate): 112 days ): 0 days				
		Quota for Event-Exclu	sive Record (Approximate): 112 days				

For details about these parameters, see section "Setting the Recording Policy". Clicking **Export** will allow you to export logs.

#### HDD Status

For details, see section "Testing an HDD".

#### **Network Status**

Under Network Status, you can query the local network status.

÷		Ma	intenance			
System Status	Network Status Ne	twork Probe	Network Pa	ket Capture		
Log	Access Bandwidth for IP	Channel	6Mbps			
HDD	Remaining Bandwidth fo	IP Channel	74Mbps			
Network	Data Sent in Current Ne Sending Capability for Re		0Mbps 64Mbps			
Device	Network Status	LAN		POE	LAN3	
Advanced	Connection Status Connection Type	Connected 100M Full Dup	blex	Connected 1000M Full Duplex		
	MAC Address	00-14-10-21-24	-54	00-14-10-21-24-56		
	IP Address	100.100.70.80		172.26.1.100		
	Subnet Mask	255.255.224.0		255.255.255.0		
	Default Gateway	0.0.0		0.0.0		
	Preferred DNS Server	0.0.0		0.0.0.0		
	Alternate DNS Server	0.0.0		0.0.0.0		
	Default Route	Yes		No		
						Close

#### **Network Probe**

Under **Network Probe**, you can query the connection between the NVR and the target device. If the target device is a camera registered with the NVR, select the camera from the **Target** drop-down list.

÷		N	laintenanc	e		
System Status	Network Status	Network Probe	Networ	k Packet Capture		
Log	Target	D1-IPCamera				
HDD	Probe Packet Length		~~~~	(0~65500)		
Network	Number of Probes	D2-IPCamera D3-IPCamera		(1~254)		
Device	Duration Threshol	Custom		s(1~254)		
Advanced						
					Start	Close

If not, select **Custom** and enter the IP address of the target device.

÷		М	aintenanc	2		
System Status	Network Status	Network Probe	Networ	k Packet Capture		
Log	Target	D1-IPCamera				
HDD	Probe Packet Length	D1-IPCamera D2-IPCamera	~~~~	(0~65500)		
Network	Number of Probes	D3-IPCamera		(1~254)		
Device	Duration Threshol	Custom		s(1~254)		
Advanced						
					Start	Close

## **Capturing Network Packets Sent over NICs**

÷		Ν	laintenance	
System Status	Network Status	Network Probe	Network Packet Capture	
Log	Packet Capture NIC	LAN		
HDD	Save Packets To			
Network	Packet Type	All		
Device	Filter Address	All		
Advanced	Filter Port	1-65535		
				Start Close

Under Network Packet Capture, you can capture network packets sent over an NIC.

After a capturing is completed, you can download the capturing results from the path specified by **Save Packets To**.

NOTE:

A capturing is automatically stopped when the packet size exceeds 30 MB.

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## **Importing/Export Device Configurations**

Under **Import/Export Configurations**, you can import configurations to the device or export the device configurations.

÷		Mainte	nance	
System Status	Import/Export Configurations	Upgrade	Reset to Factory Defaults	Auto Maintenance
Log	• Export Configurations			
HDD	Import Configurations			
Network	Location			
Device				
Advanced				
				Start Close

## **Upgrading the Device**

NOTE:

During an upgrade, do not cut the power to the NVR or perform any operation.

## **USB Flash Drive**

To upgrade the NVR using a local USB flash drive:

- 1. Insert the USB flash drive to your PC.
- 2. Choose Maintenance > Device > Upgrade > Upgrade Package.
- 3. Select the upgrade package.
- 4. Wait while the NVR is being upgraded.
- 5. Click **Close** when the upgrade is completed.

## Local Upgrade Package

To upgrade the system through a local upgrade package:

- 1. Choose Maintenance > Device > Upgrade > Upgrade Package.
- 2. Select the upgrade package.

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- 3. Upload the upgrade package and wait.
- 4. Click **Close** when the upgrade is completed.

### **Resetting the Device to Factory Defaults**

Under **Reset to Factory Defaults**, you can reset the NVR to factory defaults. You can choose to reset all or partial settings of the NVR.

To reset the system to factory defaults:

1. Chose Maintenance > Device > Reset to Factory Defaults.

÷		Mainter	nance	
System Status	Import/Export Configurations	Upgrade	Reset to Factory Defaults	Auto Maintenance
Log	• Full Recovery (All settings	will be reset to	factory defaults.)	
HDD	OCustom Recovery			
Network				
Device				
Advanced				
				Start Close

- 2. Select Full Recovery or Custom Recovery.
- 3. Click Start.
- 4. Confirm your operation.
- (Optional) Enter the password of the admin account.
   This step is mandatory if Enable Operation Password is checked.

÷		System	
Basic	Basic Virtual Ch	nannel	
Time	Device Name	NVR	
User Safety	Device ID	255	
Port	Language	English	
Exception	Auto Logout	Never	
	Menu Transparency		
	Default Audio Ch	All	
		Enable Setup Wizard	
		Enable Operation Password	
		Show Notification Icon	

- 6. Click Save.
- 7. Log in again.

# **Automatic Rebooting**

÷			Mainte	nance					
System Status	Import/Export Config	urations	Upgrade	Reset to	Factory	Defaults	Auto	Maintenance	
Log	Туре	Every Week							
HDD	Time	Tuesday	▼ 01:00	:00					
Network									
Device									
Advanced									
							_		
								Save	Close

Under Auto Maintenance, you can schedule the automatic rebooting of the device.

#### **Advanced Device Settings**

NOTE:

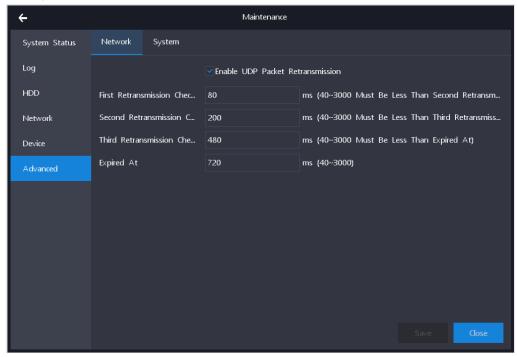
Only the admin account is allowed to configure these settings.

#### To configure the advanced NVR settings:

- 1. Click Advanced.
- 2. Enter the password of the admin account.

÷		Maintenance		
System Status				
Log	Authentication			
HDD	Username			
Network	Password	****		
Device				
Advanced				
			Ne	xt Close

- 3. Click Next.
- 4. Configure parameters under Network.



Under normal circumstances, you are advised to keep the default values (as displayed in the preceding figure).



- 5. Click **OK**.
- 6. Configure parameters under System.

÷	Maintenance	
System Status	Network System	
Log	Enable Triple-Stream	
HDD		
Network		
Device		
Advanced		
	Save Close	

Under normal circumstances, you are advised to keep the default values (as displayed in the preceding figure).

- Enable Triple-Stream: whether to enable three streams
- Enable Two-Way Audio: whether to enable two-way audio, which allows the both parties in a call to be heard
- 7. Click Save.

# **Specifications**

#### The following table provides the specifications of the NVR1827-04B.

	NVR1827-04016B/1	NVR1827-040032B/1	NVR1827-04009	NVR1827-04016	NVR1827-04
	6P	6P	В	В	032B
Video/Audio I	nput		·	·	
IP Camera Input	16channel	32 channel	9 channel	16 channel	32 channel
Resolution	8MP(4K), 6MP, 5MP, 4	4MP, 3MP, 1080p, UXGA	, 960p, 720p, XGA,	SVGA, D1, CIF, Q	CIF
Compressio n	H.265 / H.264				
Protocols	ONVIF, RTSP, KEDAG	СОМ			
Incoming Bandwidth	80Mbps	90Mbps	45Mbps	80Mbps	90Mbps
Live Viewing			·	·	
Local Display	1 x HDMI, 1 x VGA, si	multaneously output diffe	rent content		
Multi Screen Display Local monitor (Main / Secondary):	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16
Multi Screen Display Client	up to 4 screen simultaneously: 1 ~ 64 Multiple Layouts				
E-Map	Live Viewing in E-Map	(V Station)			
Function	E-PTZ / Scheme (V St	ation) / Virtual channel			
Recording	1				
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF				
Mode	Manual / Continuous / Schedule / Event (Pre / Post) / Long term recording				
Event Trigger	Supported				
Тад	Supported				
Search & Pla	yback				
Search Mode	Date and time (Calendar) / Event				
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF				
Playback (Local	1 x 4K@30fps / 4 x 10	80p@30fps / 9 x 720p@3	30fps		

Monitor)	
wormor)	
Playback	up to 16 x 4K@30fps
(Client)	
Synchroniz	
e Playback	4 x 1080p@30fps
(Local	
Monitor)	
Synchroniz	
e Playback	up to 16 x 4K@30fps
(Client)	
Function	Slow forward / Fast forward / Loop / Single frame / E-PTZ
Storage	
Max.	4 x 3.5" HDD
Internal HDDs	Max. 32TB (up to 8TB/each)
Audio	
Compressio	
n	G.711a / G.711u / ADPCM / G.722 / G.722.1c / AAC-LC
Bit rate	32kbps ~ 64kbps
Audio	Di directional audia / Durah / Muta / Dreadcasting
Function	Bi-directional audio / Dumb / Mute / Broadcasting
Alarm	
Service	Alarm input / Video lost / Motion detection / Tampering / Guard line / Defocus / Scene change / Enter
Alarm	guard area / Exit guard area / Object left / Object removal / Gathering / Audio surge
Triggers	guard area / Exit guard area / Object left / Object removar / Gathening / Addio surge
System	Device disconnected / No disk / Disk error / IP Address conflict / Network disconnected / Low speed /
Alarm	
Triggers	Insufficient recording space / MAC address conflict / Insufficient snapshot space
Alarm	Snapshot / Recording / PTZ preset / Buzzer / Email / Link to Client / Alarm caption / Live view in first
Events	window / Link to TV Wall / Link to secondary screen / Full screen viewing
System	
Operating	Embedded Linux
System	
User	
Manageme	Admin / User
nt	
Log	
Manageme	User login / User operation / Alarm / Backup / Update
nt	
Application	
Programmin	V Station SDK
g	
N I a fe con al c	
Network	

Protocols	SMTP, IPv4, IPv6 (optional)					
Viewer Software	CMS (V Station) / Web	CMS (V Station) / Web / iOS app / Android app				
Max. User Access	16 Users					
Output Bandwidth	64Mbps					
Function	NAT / Multiple network	access / Packet loss rec	covery / Auto network organizing			
Network Test	Supported					
Interfaces						
Ethernet	1 x Gigabite network port, RJ45 interface	1 x Gigabite network port, RJ45 interface	1 x 10/100M, RJ45 interface	1 x Gigabite network port, RJ45 interface		
PoE	16 x 10/100M PoE port, RJ45 interface, 15W / / /					
Video Out	1 x HDMI (up to 3840 x	(2160@60Hz)				
video Out	1 x VGA (up to 1920 x	1080@60Hz)				
Audio In / Out	1 x RCA Line in / 1 x RCA Line out					
Alarm In / Out	4 x Inputs / 2 x Outputs					
Control	1 x RS485					
USB	2 x USB 2.0					
Environmenta	al					
Operating Temperatur e	-10°C ~ 55°C / 14°F ~ 131°F					
Operating Humidity	10% ~ 90%					
Electrical						
Power	100 ~ 240V AC, 50 ~ 60Hz					
Power Consumptio n	Max. 280W (HDD not included) Max. 15W (HDD not included)					
Mechanical						
Weight	5kg / 11lb (HDD not included) 4.5kg / 9.9lb (HDD not included)					
Dimensions	nensions 444 x 410 x 33mm / 17.48" x 16.14" x 1.3"					

#### The following table provides the specifications of the NVR1828-01B.

	NVR1828-01009B/8P	NVR1828-01016B/8P		
Video/Audio Input				
IP Camera Input	9 channel	16 channel		
Resolution 8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF,				

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	QCIF			
Compression	H.265 / H.264			
Protocols	ONVIF, RTSP, KEDACOM			
Incoming Bandwidth	45Mbps	80Mbps		
Live Viewing				
Local Display	1 x HDMI, 1 x VGA, simultaneously output dif	fferent content		
Multi Screen Display				
Local monitor	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16			
(Main / Secondary):				
Multi Screen Display	up to 4 screen simultaneously:			
Client	1 ~ 64 Multiple Layouts			
E-Map	Live Viewing in E-Map (V Station)			
Function	E-PTZ / Scheme (V Station) / Virtual channel			
Recording	·			
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UX QCIF	GA, 960p, 720p, XGA, SVGA, D1, CIF,		
Mode	Manual / Continuous / Schedule / Event (Pre	/ Post) / Long term recording		
Event Trigger	Supported			
Тад	Supported			
Search & Playback				
Search Mode	Date and time (Calendar) / Event			
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF			
Playback (Local Monitor)	1 x 4K@30fps / 4 x 1080p@30fps / 9 x 720p@30fps			
Playback				
(Client)	up to 16 x 4K@30fps			
Synchronize Playback (Local Monitor)	4 x 1080p@30fps			
Synchronize Playback (Client)	up to 16 x 4K@30fps			
Function	Slow forward / Fast forward / Loop / Single fra	ame / E-PTZ		
Storage				
	1 x 3.5" HDD			
Max. Internal HDDs	Max. 8TB (up to 8TB/each)			
Audio				
Compression	G.711a / G.711u / ADPCM / G.722 / G.722.10	c / AAC-LC		
Bit rate	32kbps ~ 64kbps			
Audio Function	Bi-directional audio / Dumb / Mute / Broadcasting			
Alarm		-		
Service Alarm Triggers	Alarm input / Video lost / Motion detection / Tampering / Guard line / Defocus / Scene change / Enter guard area / Exit guard area / Object left / Object removal / Gathering /			
	Audio surge Device disconnected / No disk / Disk error / IP Address conflict / Network disconnected /			
System Alarm Triggers	Low speed / Insufficient recording space / MA	AC address conflict / Insufficient snapshot		

	space				
Alarm Events	Snapshot / Recording / PTZ preset / Buzzer / Email / Link to Client / Alarm caption / Live				
Aldini Events	view in first window / Link to TV Wall / Link to se	econdary screen / Full screen viewing			
System					
Operating System	Embedded Linux				
User Management	Admin / User				
Log Management	User login / User operation / Alarm / Backup / L	lpdate			
Application Programming	V Station SDK				
Network					
Notwork Protocolo	TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP,	RTCP, RTSP, PPPoE, FTP, SNTP,			
Network Protocols	VSIP, UPNP, SMTP, IPv4, IPv6 (optional)				
Viewer Software	CMS (V Station) / Web / iOS app / Android app				
Max. User Access	16 Users				
Output Bandwidth	64Mbps				
Function	NAT / Multiple network access / Packet loss recovery / Auto network organizing				
Network Test	Supported				
Interfaces					
Ethernet	1 x 10/100M, RJ45 interface 1 x Gigabite network port, RJ45 interface				
PoE	8 x 10/100M PoE port, RJ45 interface, 15W / ea	ach port			
	1 x HDMI (up to 3840 x 2160@60Hz)				
Video Out	1 x VGA (up to 1920 x 1080@60Hz)				
Audio In / Out	1 x RCA Line in / 1 x RCA Line out				
Alarm In / Out	4 x Inputs / 2 x Outputs				
Control	1 x RS485				
USB	2 x USB 2.0				
Environmental	Environmental				
Operating Temperature	-10°C ~ 55°C / 14°F ~ 131°F				
Operating Humidity	10% ~ 90%				
Electrical					
Power	48V DC ± 10%				
Power Consumption	Max. 40W (HDD not included)				
Mechanical					
Weight	1.2kg / 2.65lb (HDD not included)				
	384 x 199 x 33mm / 15.1" x 7.83" x 1.3"				

#### The following table provides the specifications of the NVR1828-02B.

	NVR1828-02009B/8	NVR1828-020016B/	NVR1828-02004	NVR1828-02009	NVR1828-02	
Р		8P	В	В	016B	
Video/Audio Input						
IP Camera	9channel 16 channel 4 channel 9 channel 16 channel					
Input	schanner 4 channer 9 channer 16 channer					
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF					
Compressio	H.265 / H.264					

n						
Protocols	ONVIF, RTSP, KEDA	СОМ				
Incoming						
Bandwidth	45Mbps	80Mbps	20Mbps	45Mbps	80Mbps	
Live Viewing				·		
Local		imultan aqualu autaut dif	foront contont			
Display	TX HDIVII, TX VGA, S	imultaneously output dif	lerent content			
Multi Screen						
Display				1/1 1/1	1/1, 4/4,	
Local	1/1, 4/4, 1+5/1+5,	1/1, 4/4, 1+5/1+5,       1/1, 4/4, 1+5/1+5,       1/1, 4/4,       1+5/1+5,         1/1, 4/4,       1+5/1+5,       1+5/1+5,				
monitor	1+7/1+7, 9/9	1+7/1+7, 9/9, 16/16	17 1, 17 1	1+7/1+7, 9/9	1+7/1+7, 9/9,	
(Main /				,,,,	16/16	
Secondary):						
Multi Screen	up to 4 screen simulta	aneously:				
Display	1 ~ 64 Multiple Layou	-				
Client						
E-Map	Ŭ .	Live Viewing in E-Map (V Station)				
Function	E-PTZ / Scheme (V Station) / Virtual channel					
Recording	[					
Resolution	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF					
Mode	Manual / Continuous / Schedule / Event (Pre / Post) / Long term recording					
Event	Supported	Supported				
Trigger	Supported					
Tag	Supported					
Search & Play Search	Jack					
Mode	Date and time (Calendar) / Event					
Resolution	8MP(4K), 6MP, 5MP,	4MP, 3MP, 1080p, UX0	GA, 960p, 720p, XGA	A, SVGA, D1, CIF, C	CIF	
Playback	1 x 4K@30fps / 4 x 1(	1 x 4K@20fps / 4 x 1080p@20fps / 0 x			x 1080n@30fns	
(Local	1 x 4K@30fps / 4 x 1080p@30fps / 9 x 720p@30fps 4 x 1080p@30fps / 9 x / 9 x 720p@30fps					
Monitor)	1080p@30fps 79 x 720p@30fps					
Playback	up to 16 x 4K@30fps					
(Client)						
Synchronize						
Playback	4 x 1080p@30fps					
(Local						
Monitor)						
Synchronize						
Playback	up to 16 x 4K@30fps	up to 16 x 4K@30fps				
(Client)						
Function	Slow forward / Fast fo	orward / Loop / Single fra				
Storage	2 x 2 E" LIDD					
Max.	2 x 3.5" HDD					
Internal	Max. 16TB (up to 8TE	Max. 16TB (up to 8TB/each)				
HDDs						

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Audio					
Compressio	C 7110 / C 711u / AD	DCM / C 722 / C 722 10			
n	G.711a / G.711u / ADPCM / G.722 / G.722.1c / AAC-LC				
Bit rate	32kbps ~ 64kbps				
Audio	Ri directional audio / [	Dumb / Mute / Broadcast	ling		
Function	Bi-directional addio / L		ling		
Alarm					
Service	Alarm input / Video log	st / Motion detection / Ta	umpering / Guard line / Defocus / Scene	change / Enter	
Alarm	Alarm input / Video lost / Motion detection / Tampering / Guard line / Defocus / Scene change / Enter guard area / Exit guard area / Object left / Object removal / Gathering / Audio surge				
Triggers	guard area / Exit guar		certemoval/ Cathering / Addio Surge		
System	Device disconnected	/ No disk / Disk error / IP	Address conflict / Network disconnecte	d/lowspeed/	
Alarm			nflict / Insufficient snapshot space		
Triggers	mounderereerang				
Alarm		·	Email / Link to Client / Alarm caption / L	ive view in first	
Events	window / Link to TV W	/all / Link to secondary s	creen / Full screen viewing		
System					
Operating	Embedded Linux				
System					
User					
Managemen	Admin / User				
t					
Log					
Managemen	User login / User oper	ation / Alarm / Backup /	Update		
t					
Application		V Station SDV			
Programmin	V Station SDK				
g					
Network					
Network	TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP/RTCP, RTSP, PPPoE, FTP, SNTP, VSIP, UPNP,				
Protocols	SMTP, IPv4, IPv6 (optional)				
Viewer Software	CMS (V Station) / Web / iOS app / Android app				
Max. User Access	16 Users				
Output					
Bandwidth	64Mbps				
Function	NAT / Multiple network access / Packet loss recovery / Auto network organizing				
Network			,		
Test	Supported				
Interfaces					
				1 x Gigabite	
Ethernet 1 x 10/100M, RJ45 1 x Gigabite network 1 x 10/100M, RJ45 interface		network port,			
Luiemet	interface	port, RJ45 interface	nterface 1 x 10/100M, RJ45 interface RJ45		
	interface			interface	

	8 x 10/100M PoE port, RJ45 interface, 15W /				
PoE	each port	/			
	1 x HDMI (up to 3840 x 2160@60Hz)				
Video Out	1 x VGA (up to 1920 x 1080@60Hz)				
Audio In /	1 x RCA Line in / 1 x RCA Line out				
Out	T X RCA Line in / T X RCA Line out				
Alarm In /					
Out	4 x Inputs / 2 x Outputs				
Control	1 x RS485				
USB	2 x USB 2.0				
Environmenta	l				
Operating					
Temperatur	-10°C ~ 55°C / 14°F ~ 131°F				
е					
Operating Humidity	10% ~ 90%				
Electrical					
Power	48V DC ± 10%	12V DC ± 10%			
Power					
Consumptio	Max. 80W (HDD not included)	Max. 15W (HDD not included)			
n					
Mechanical	•				
Weight	1.2kg / 2.65lb (HDD not included)	1kg / 2.2lb (HDD not included)			
Dimensions	384 x 199 x 33mm / 15.1" x 7.83" x 1.3"	· · · · · · · · · · · · · · · · · · ·			

#### The following table provides the specifications of the NVR1829-01B.

	NVR1829-0100 4B/4P	NVR1829-0 1009B/4P	NVR1829-0 1016B/4P	NVR1829-0100 4B	NVR1829- 01009B	NVR18 29-0101 6B
Video/Audio Input						
IP Camera Input	4 channel	9 channel	16 channel	4 channel	9 channel	16 channel
Resolution	8MP(4K), 6MP, 5	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF				
Compression	H.265 / H.264	H.265 / H.264				
Protocols	ONVIF, RTSP, K	ONVIF, RTSP, KEDACOM				
Incoming Bandwidth	20Mbps 45Mbps 80Mbps 20Mbps 45Mbps 80Mbps					
Live Viewing						
Local Display	1 x HDMI, 1 x VG	1 x HDMI, 1 x VGA, simultaneously output different content				
Multi Screen Display Local monitor	1/1, 4/4, 1+5/1+5, 1+7/1+7, 9/9, 16/16					
Multi Screen Display	up to 4 screen simultaneously:					
Client	1 ~ 64 Multiple Layouts					
E-Map	Live Viewing in E	Live Viewing in E-Map (V Station)				
Function	E-PTZ / Scheme	E-PTZ / Scheme (V Station) / Virtual channel				
Recording						

Resolution	MD(4K) CMD 5		A 060p 720p VC		
Mode	8MP(4K), 6MP, 5MP, 4MP, 3MP, 1080p, UXGA, 960p, 720p, XGA, SVGA, D1, CIF, QCIF				
Event Trigger	Manual / Continuous / Schedule / Event (Pre / Post) / Long term recording				
	Supported Supported				
Tag	Supponed				
Search & Playback	Data and time (C	alandar) / Event			
Search Mode	Date and time (C	,			
Resolution		MP, 4MP, 3MP, 1080p, UXGA			
Playback	1 x 4K@30fps /	1 x 4K@30fps / 4 x	1 x 4K@30fps /	1 x 4K@30fps / 4 x	
(Local Monitor)	4 x 1080p@30fps	1080p@30fps / 9 x 720p@30fps	4 x 1080p@30fps	1080p@30fps / 9 x 720p@30fps	
Playback			1 1		
(Client)	up to 16 x 4K@30	Ofps			
Synchronize Playback					
(Local Monitor)	1 x 4K@30fps / 4	x 1080p@30fps / 9 x 720p@	30fps		
Synchronize Playback					
(Client)	up to 16 x 4K@30	Ofps			
Function	Slow forward / Fa	st forward / Loop / Single fran	ne / E-PTZ		
Storage	1				
	1 x 3.5" HDD				
Max. Internal HDDs	Max. 8TB (up to 8	3TB/each)			
Audio					
Compression	G.711a / G.711u / ADPCM / G.722 / G.722.1c / AAC-LC				
Bit rate	32kbps ~ 64kbps				
Audio Function	Bi-directional aud	io / Dumb / Mute / Broadcasti	ng		
Alarm	1				
	Alarm input / Vide	eo lost / Motion detection / Tar	npering / Guard lin	e / Defocus / Scene	
Service Alarm Triggers	change / Enter guard area / Exit guard area / Object left / Object removal / Gathering /				
	Audio surge				
	Device disconnec	ted / No disk / Disk error / IP	Address conflict / N	Network disconnected /	
System Alarm Triggers	Low speed / Insufficient recording space / MAC address conflict / Insufficient snapshot				
	space				
	Snapshot / Recording / PTZ preset / Buzzer / Email / Link to Client / Alarm caption / Live				
Alarm Events	view in first windo	ow / Link to TV Wall / Link to s	econdary screen /	Full screen viewing	
System					
Operating System	Embedded Linux				
User Management	Admin / User				
Log Management	User login / User operation / Alarm / Backup / Update				
Application	V Station SDK				
Programming	V Station SDK				
Network					
	TCP/IP, UDP, HTTP, DHCP, DNS/DDNS, RTP/RTCP, RTSP, PPPoE, FTP, SNTP, VSIP				
	TCP/IP, UDP, HT	TP, DHCP, DNS/DDNS, RTP			
Network Protocols		v4, IPv6 (optional)			
	UPNP, SMTP, IP				
Network Protocols	UPNP, SMTP, IP	v4, IPv6 (optional)			

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Function	NAT / Multiple network access	/ Packet loss re	covery / Auto network organizing				
Network Test	Supported						
Interfaces	1						
Ethernet	1 x 10/100M, RJ45 interface network port, RJ45 interface		1 x 10/100M, RJ45 interface	1 x Gigabit e network port, RJ45 interfac e			
PoE	4 x 10/100M PoE port, RJ45 interface, 15W / each port		/				
Video Out	1 x HDMI (up to 3840 x 2160@60Hz)						
Video Odi	1 x VGA (up to 1920 x 1080@60Hz)						
Audio In / Out	1 x RCA Line in / 1 x RCA Line	out					
USB	2 x USB 2.0						
Environmental							
Operating Temperature	-10°C ~ 55°C / 14°F ~ 131°F						
Operating Humidity	10% ~ 90%						
Electrical							
Power	48V DC ± 10%		12V DC ± 10%				
Power Consumption	Max. 40W (HDD not included)		Max. 10W (HDD not included)				
Mechanical							
Weight	0.7kg / 1.54lb (HDD not included)		0.6kg / 1.32lb (HDD not included)				
Dimensions	254 x 194 x 33mm / 10" x 7.64	" x 1.3"					

# **Abbreviations and Acronyms**

BOOTP	Bootstrap Protocol
CU	Client Unit
DDNS	Dynamic Domain Name System
DHCP	Dynamic Host Configuration Protocol
e-PTZ	electronic PTZ
NAT	network address translation
NVR	Network Video Recorder
ONVIF	Open Network Video Interface Forum
OSD	on-screen display
PC	personal computer
PMC	Platform Management Client
RTSP	Real Time Streaming Protocol
UUID	Universally Unique Identifier
VMS	Video Management Server
WDR	wide dynamic range