Hikvision CCTV System Troubleshooting

Training Objectives

- To improve communication efficiency and optimize workflows of installer clients

- To understand basic knowledge of Hikvision CCTV troubleshooting

Contents

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Part 1

Tips on Reporting an

How to achieve an efficient communication?

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- Be more specific
- Provide as many details as you can

Product model name

Serial number

Firmware version

Network topology

Any troubleshooting done previously

Product quantity

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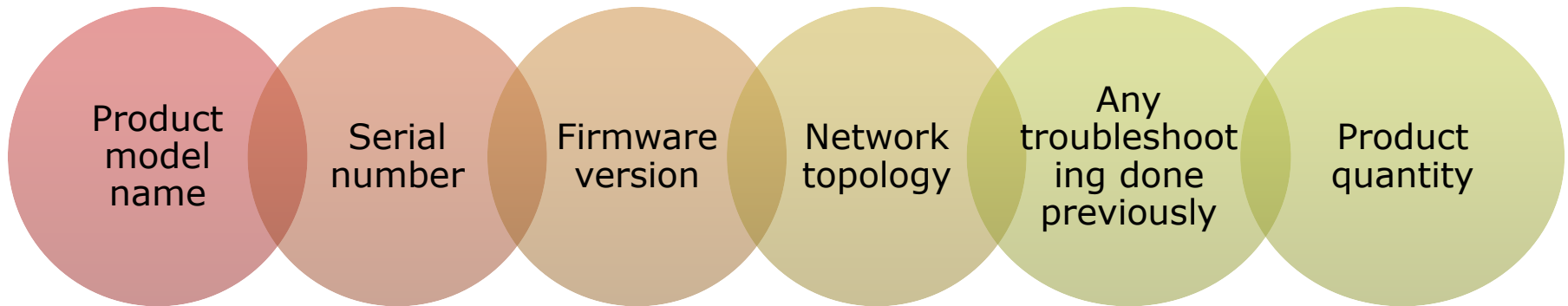
Let's take a look of **two examples**…

Example one

3:40 pm — Hi good morning, I have NVR not working, can you help?

What's the problem? — 4:02 pm

4:02 pm — The device has **xxxx** issue.

Which model? — 4:15 pm

Example two

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3:40 pm — Hi good morning, I have one **DS-7732NI-I8** with firmware **4.21.005**, serial number is **123456789**.

3:40 pm — The device has **xxxx** issue, I connected a monitor tried to **do ****** method but still not working.

3:41 pm — I also tried to do **factory default but**……

I understand, all you need to do is just… — 4:02 pm

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Who should you contact?

- Customer information collection form
- Give cases

Contents

Part 2

General Idea of Troubleshooting

General Idea of Troubleshooting Method

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- Reboot

- Upgrade firmware

- Find logs to locate the problem

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Part 3

Troubleshooting Case

Contents

Part 3-1

Camera Issues

Water Condensing in Camera

Possible reason 1

Water on the external surface affects the image. Solution: wipe off the water

SD card slot should be fully enclosed

Possible reason 2

SD card slot is not fully enclosed

Water Condensing in Camera

Possible reason 3

Water proof cap is not installed or installed upside down
Solution: install water proof cap correctly
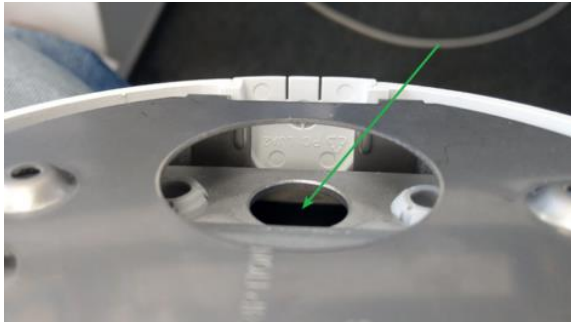
Water proof cap is not installed
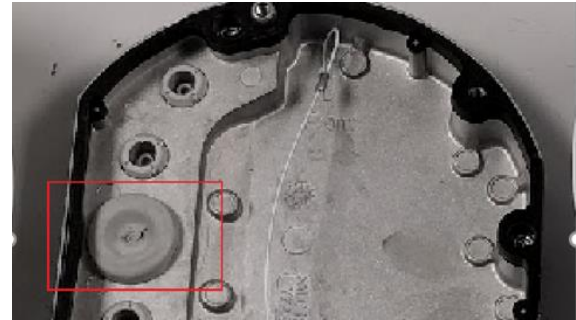
Water proof cap is installed upside down

Water Condensing in Camera

Possible reason 4

RJ45 port is not properly installed with water proof cap

How to properly install water proof cap for RJ45 port
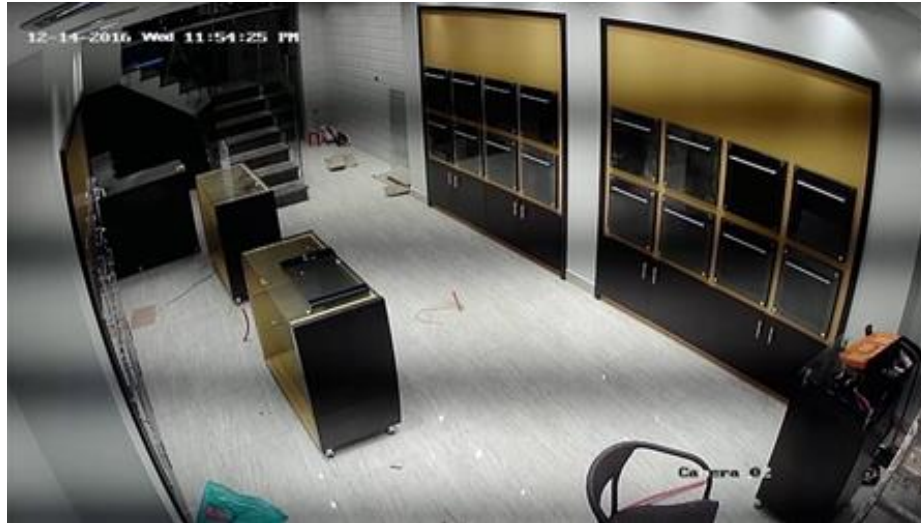
Water Condensing in Camera

Possible reason 5

Cables not in use are not fully enclosed with tapes

How to properly enclose cables not in use with tapes

Analog Camera : Dark stripes

1. **For most TVI cameras**, adjust the camera lens to avoid facing the light and minimize the amount of light.

Analog Camera : Dark stripes

```
EXPOSURE
BRIGHTNESS              ◀ 5 ▶
EXPOSURE  MODE          ◀ GLOBAL ▶
GAIN                    ◀ MIDDLE ▶
FLICKER  MODE           ◀ MODE 1 ▶
RETURN                      ↵
```
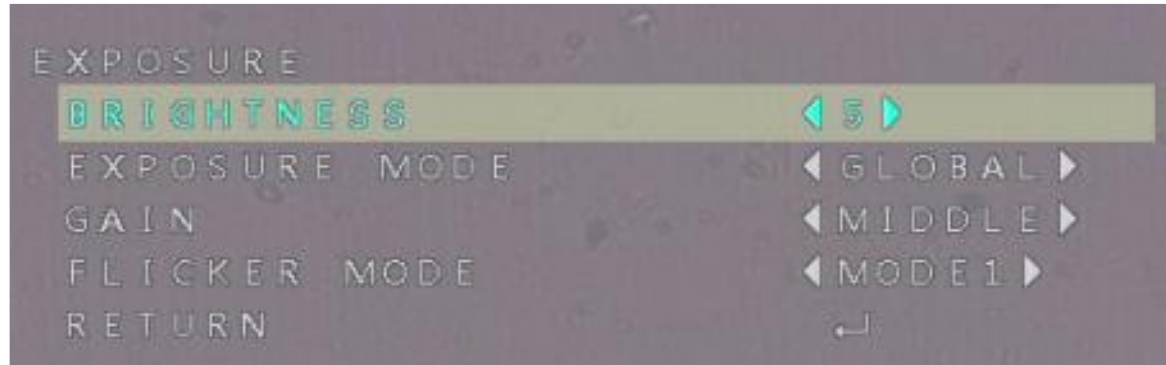
2. In DVR, use PTZ control to access camera's menu. Ask them to find setting in devices
   - if the EXPOSURE MODE is GLOBAL, then FLICKER MODE should select MODE 2.
   - if the EXPOSURE MODE is WDR1, it should be changed to WDR2. If there is no problem at this time, then FLICKER MODE can choose MODE 1, otherwise it should be changed to MODE 2.

Analog Camera : Water Wave Image

1. If several cameras share one power adapter, Check camera's power supply, test the camera with one power adapter

2. Check camera's installation environment
Remove camera from any possible disturbance eg. metal surface, electric leakage environment

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Abnormal image

02-14-2014 星期五 07:03:39

Reflective phenomenon is caused by the fact that there is a reflective surface around the camera (such as the wall). The camera Angle should be adjusted to avoid infrared exposure to nearby flat objects
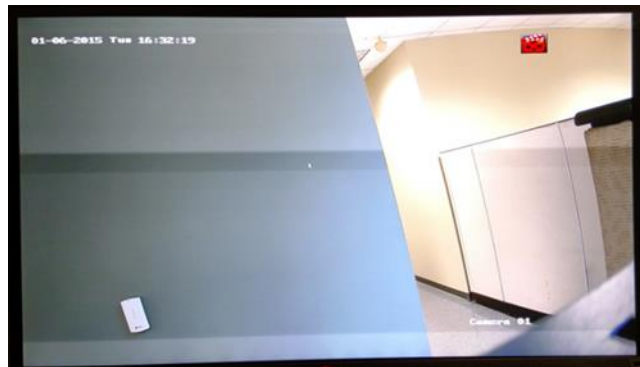
Analog & IP : Abnormal IR Image at Night
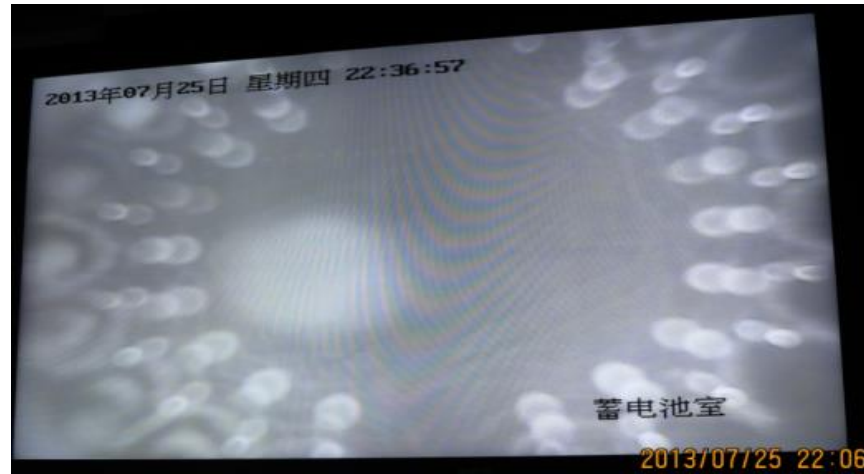
The **reflection phenomenon** is caused by the direct exposure of the infrared LED to the camera shell, so the lens angle needs to be adjusted.

The dots are caused by dirt on the camera shell, regular cleaning and maintenance of cameras are suggested.

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Part 3-2

Backend Device Issues

DVR : No Video in Local Live View

NO VIDEO appears **the moment when** camera is connected to DVR

- **Check the compatibility** of camera and DVR. You can refer to DVR specification to check the compatible camera resolutions (example: H0T camera shows no video on DS-7216HGHI-F1 DVR)
- **Cross-test** different camera and different cables
- **Provide** models, serial numbers, firmware version to technical support

NO VIDEO appears **some time after** camera is connected to DVR

- **Reboot** DVR and camera
- **Cross-test** different camera and different cables
- **Provide** models, serial numbers, firmware version to technical support

D0 Channel 1970-01-01 00:00   Automatic Co...

00:00/00:-1
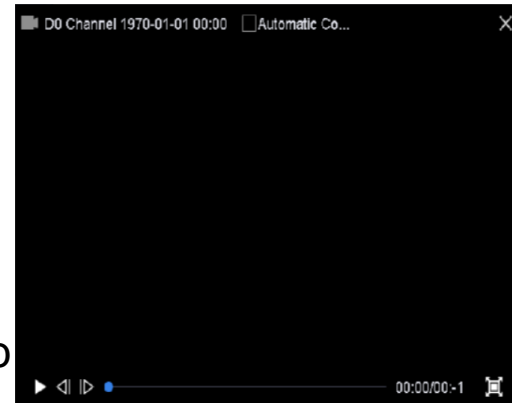
DVR : Cannot Boot Up Normally

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- **Check the power indicator first**. If power indicator is not on, there is something wrong with the power. Test with a new power adapter
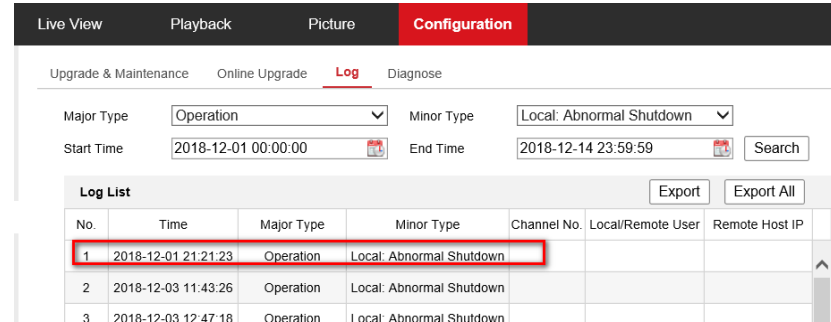
- **Unplug the hard disk and network cable** to confirm whether the device can be started.

- If 1& 2 do not work, connect a monitor to VGA or HDMI and take photo or video of local output. Connect network cable, connect to PC and check on SADP. Provide all necessary information to technical support.

Live View	Playback	Picture	**Configuration**

Upgrade & Maintenance	Online Upgrade	**Log**	Diagnose

Major Type	Operation	Minor Type	Local: Abnormal Shutdown
Start Time	2018-12-01 00:00:00	End Time	2018-12-14 23:59:59 [Search]

Log List   [Export] [Export All]

No.	Time	Major Type	Minor Type	Channel No.	Local/Remote User	Remote Host IP
1	2018-12-01 21:21:23	Operation	Local: Abnormal Shutdown			
2	2018-12-03 11:43:26	Operation	Local: Abnormal Shutdown			
3	2018-12-03 12:47:18	Operation	Local: Abnormal Shutdown			

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NVR : IPC Access Issues

1. IPC cannot start, so it may be

- The power required by IPC is greater than the maximum power supported by NVR.

- If all POE cameras cannot start at this time, then there is a hardware issue for POE panel of this NVR

- If the network cable connecting IPC and NVR is very long, up to tens of meters, it is necessary to check the quality of network cable. Or enable extended POE mode on NVR

NVR ： IPC Access Issues

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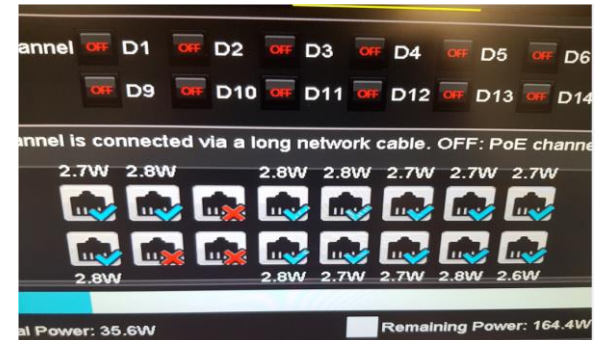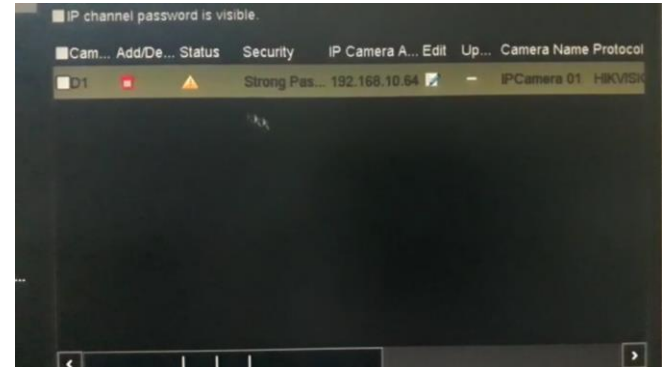
2. IPC can start but goes offline frequently

IPC cameras are often disconnected and need to be checked for power or network problems. The power may be too high, beyond the limit of a single POE port, the IR lamp can be turned off to try or be supplied separately

IP Camera								Add	Modify	Delete	Quick Add	Custom P...	Activation

	Channel No.	IP Address	Channel No.	Management Port	Security	Status	Protocol	Connect
☐	D01	192.168.254.2	1	8000	N/A	Online	HIKVISION	
☐	D02	192.168.254.3	1	8000	N/A	Online	HIKVISION	
☐	D03	192.168.254.4	1	8000	N/A	Offline(IP camera...	HIKVISION	
☐	D04	192.168.254.5	1	8000	N/A	Online	HIKVISION	
☐	D05	192.168.254.6	1	8000	N/A	Online	HIKVISION	
☐	D06	192.168.254.7	1	8000	N/A	Online	HIKVISION	

3. IPC can power up but cannot connect

Maybe the password is wrong. If you use plug and play function on NVR, password of IPC must be the same as NVR's.

NVR : Live View and Play Back Issues

1. In local live view, camera full screen works fine but in multi-window view shows no resource.

Possible reason: abnormal sub-stream. If IPC uses an old firmware, upgrade to latest first. Then check sub-stream resolution, lower the resolution and bandwidth if necessary.

2. In sub-stream or small windows camera shows, but once switch to main stream of big windows, camera shows no resource.

Possible reason: cameras might exceed NVR's decoding capability.

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Specifications

Model		DS-7604NI-K1 (B)	DS-7608NI-K1 (B)	DS-7616NI-K1 (B)
Video/Audio input	IP video input	4-ch	8-ch	16-ch
		Up to 8 MP resolution		
	Two-way audio	1-ch, RCA (2.0 Vp-p, 1 k Ω)		
Network	Incoming bandwidth	40 Mbps	80 Mbps	160 Mbps
	Outgoing bandwidth	80 Mbps		
Video/Audio output	Recording resolution	8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA /720p/VGA/4CIF/DCIF/ 2CIF/CIF/QCIF		
	HDMI output resolution	1-ch, 4K (3840 × 2160)/30Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz; HDMI/VGA simultaneous output	1-ch, 4K (3840 × 2160)/30Hz, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	VGA output resolution	1-ch, 1920 × 1080p/60Hz, 1600 × 1200/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz; HDMI/VGA simultaneous output	1-ch, 1920 × 1080p/60Hz, 1280 × 1024/60Hz, 1280 × 720/60Hz, 1024 × 768/60Hz	
	Audio output	1-ch, RCA (Linear, 1 KΩ)		
Decoding	Decoding format	H.265/H.265+/H.264/H.264+/MPEG4		
	Live view / Playback resolution	8 MP/6 MP/5 MP/4 MP/3 MP/1080p/UXGA /720p/VGA/4CIF/DCIF/ 2CIF/CIF/QCIF		
	Synchronous playback	4-ch	8-ch	16-ch
	Capability	1-ch @ 8 MP / 4-ch @ 1080p		
Network management	Network protocols	TCP/IP, DHCP, Hik-Connect, DNS, DDNS, NTP, SADP, SMTP, NFS, iSCSI, UPnP™, HTTPS		
	SATA	1 SATA interface		

Check decoding capability in spec

DVR & NVR : Abnormal Shutdown

Collect abnormal shutdown logs in web client

Collect logs from local GUI or web interface. Send full logs and abnormal logs to technical support

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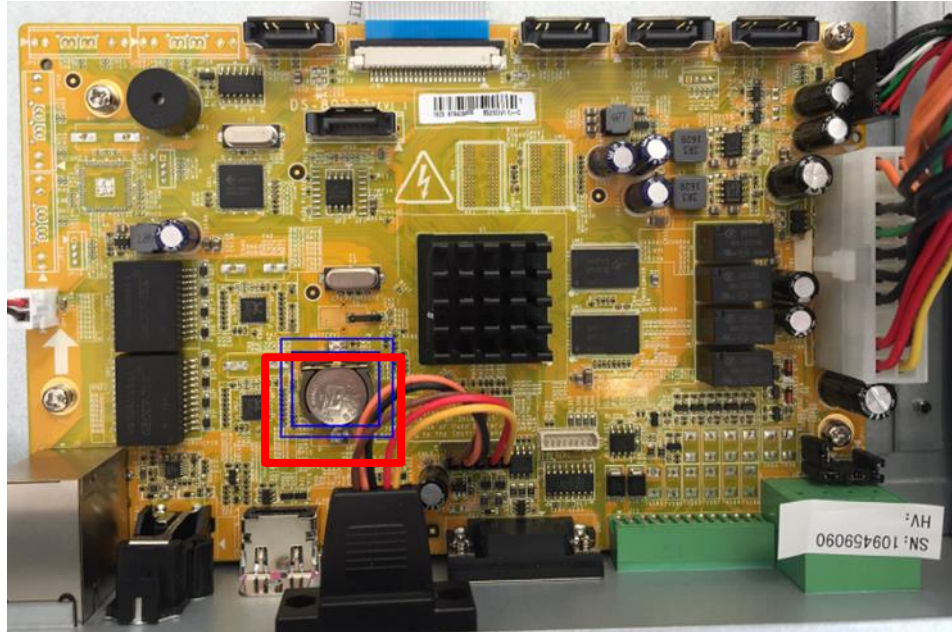
Replace battery on main board. If with new battery and still not work, it is hardware issue and needs repair

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Thanks!

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