



Quick Install Guide

Please read this document before installation



Official UK distribution partner



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Contents

Overview	4
Modifying Account Settings	6
Device Initialisation	8
Password Reset	10
Startup Wizard	14
Main Menu	15
Default Settings	16
CAT-5 Wiring	17
NVR Camera Assignment	18
IRLAB IP Camera Setup	22
Auto Maintain Feature	23
Record and Quality Setting	24
Record Schedule Setting	25
Motion Detection Settings	26
IVS Setup	27
Tour Settings	31
Smartphone Setup	32

SECURITY OVERVIEW

Out of the box

In an effort to ensure maximum security protection across Dahua systems, changes are being made to the accounts and passwords of Dahua recorders.

These changes includes the removal of the 888888 and default accounts, leaving just an admin account by default. The changes also include stricter requirements for passwords including the requirement that the admin password must be changed.

At COP UK every DVR & NVR is fully tested, updated and configured before shipping. For this reason the out of the box password has already been changed and some other security settings pre-configured.

This guide is intended to introduce engineers to these new changes whilst also instructing them on how to change account passwords and answer security questions in the event of a password reset being required.

Resetting Passwords

Previously when an administrator password was forgotten on a Dahua recorder, it was possible to call the COP UK technical support team to retrieve an override code which would allow access to the recorder menu.

This is no longer possible with the new security changes, there are now only two methods to reset account passwords (both shown in detail in this guide).

For this reason it is highly recommended to follow the processes listed in this guide to ensure it is possible to reset an account password in the event of a password being forgotten. Failure to follow these processes will result in COP UK being unable to assist in resetting account passwords without the unit being returned, which may include additional charges.

Out of the box settings

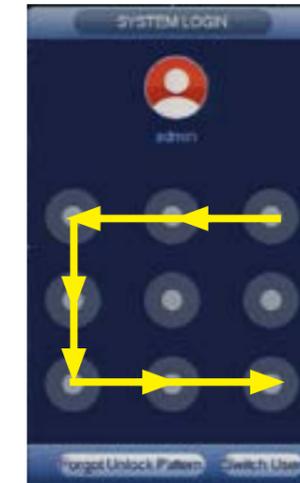
As explained previously, COP UK pre-configure some basic settings before each shipment. Shown below are the preprogrammed password, unlock pattern and security questions.

Cop Login

Username: admin
Password: Passw0rd!

Unlock Pattern

The unlock pattern can be used instead of entering a password to login. The pattern is preconfigured to a "C" shape. Simply left click the mouse and drag across the circular points to draw a "C", as shown in the image below.



Security Answers

In the event that the admin password is forgotten, the forgot password button (padlock icon on login box) can be selected to go through the reset wizard. There are two methods to reset the admin password, email & security answers. Only the security questions are preconfigured by Cop, email is not preconfigured.

It is highly recommended that an email address is configured for resetting the password, this is shown in detail on pages 5 & 7

Pre-Configured Security Questions & Answers

Q1: What is your favourite childrens book?

A1: changeme

Q2: What was the first name of your first boss?

A2: changeme

Q3: What is the name of your favourite fruit?

A3: changeme

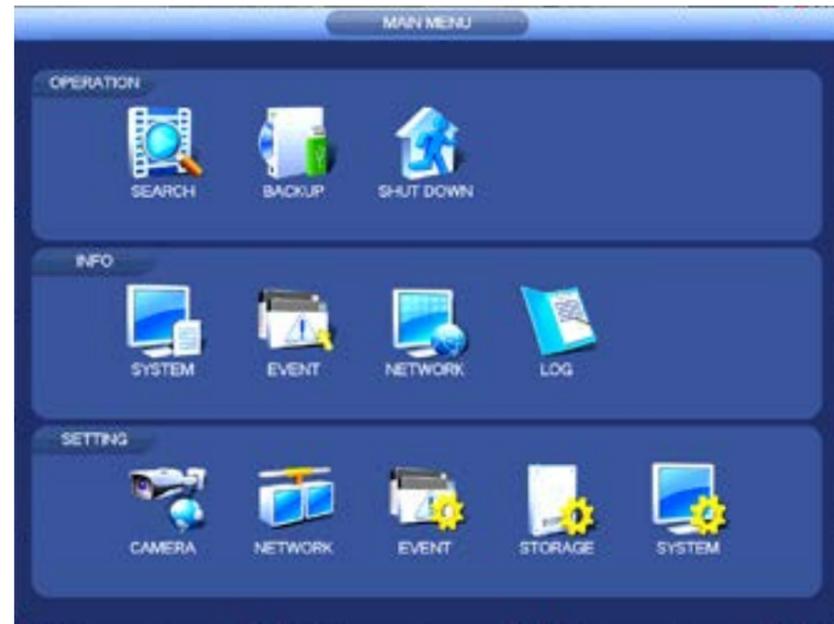


MODIFY ACCOUNT SETTINGS

To change account settings such as password, security question and to register an email address, follow the steps below.

Password and Email address

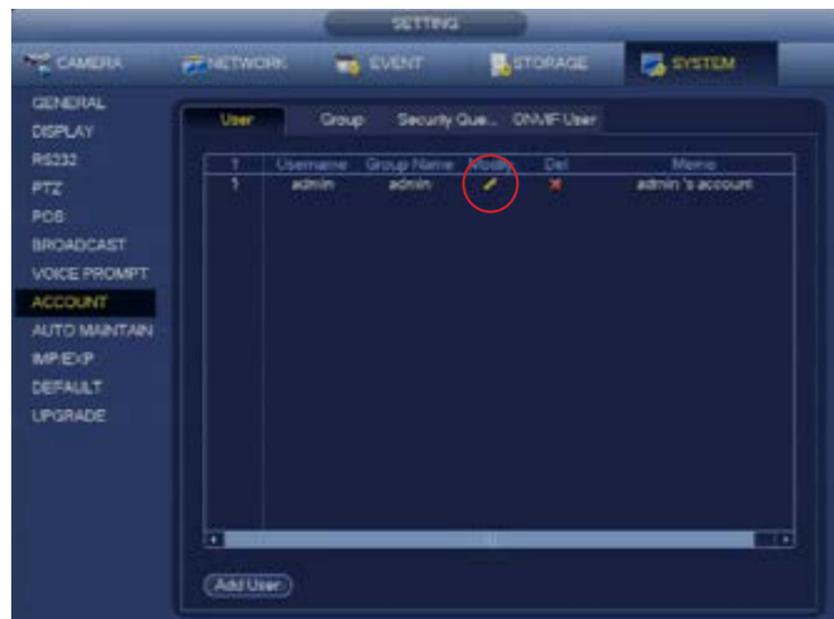
Login to the recorder menu using the current username and password.



From the main menu go to **System > Account**

Click the modify button (pencil icon).

To add an additional account, click the **Add User** button and enter the account details. For security purposes only the admin account has the option for a reset email address and security question specifically relate to the admin account.



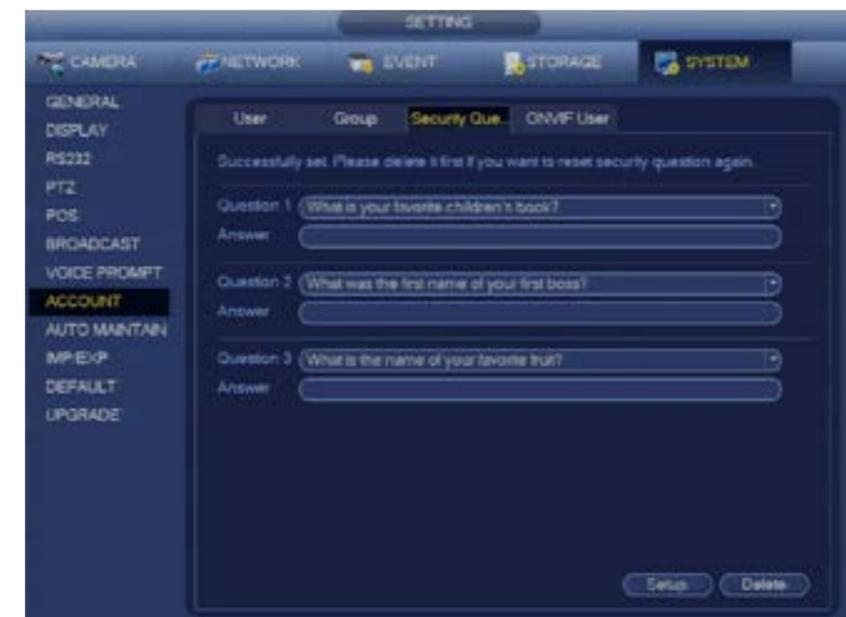
The account settings will be displayed as the image below shows. Here the password can be modified and an email address registered for the account.



Security Questions

To modify the security questions select the **Security Question** tab from the main account page.

Choose which questions to use and enter the answers accordingly.



DEVICE INITIALISATION

In the event of a factory reset the Device Initialisation wizard will be shown, this wizard goes through a step by step process to set the device password, unlock pattern, security questions and email address.

Changing the device password is a compulsory step that cannot be skipped, it is also highly recommended to fill in all the steps within the wizard and make notes of all the information entered.

Step 1

The first step is to enter a new password for the admin account. Passwords must be between 8 & 32 digits and include two of the following uppercase letters, numbers or symbols.

After entering the password the bars coloured indicator bar will show either Red, Orange or Green. Red & Orange indicate a weak password whereas Green indicates a strong password. The password entered must be considered strong before proceeding to the next step.

Prompt Question is where a password reminder can be entered to make remembering the password easier.

After entering a strong password click **Next** to advance to the next step.



Step 2

Step 2 allows an unlock pattern to be configured for quick logging in of the system. Step 2 can be skipped if an unlock pattern is not required.

Use the left mouse button to left click and draw a pattern.

Once drawn you will be prompted to draw the pattern again to confirm.



Step 3

Step 3 allows an email address to be specified and for security questions to be configured. Both of these options are used when resetting the device password. Although this step can be skipped, it is **highly** recommended to complete this step in case of the password being forgotten.

In the event of this step not being completed and the password is forgotten, the unit would have to be returned to Cop to be reset which may incur charges.

Enter a valid email address that a reset code can be sent to in the event of resetting the device password or uncheck the email box to skip.

Select and enter an answer for questions 1 to 3 or uncheck the Security Question box to skip.



PASSWORD RESET

In the event that the device password has been lost or forgotten, there are two methods that can be used to reset the password, email or security questions.

Security Questions

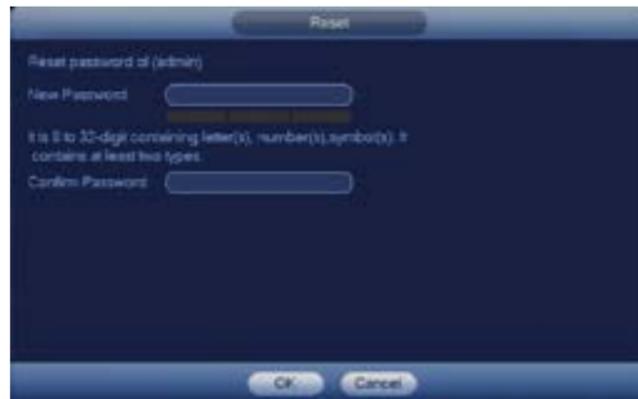
To start the password reset process select the  icon on the login window.

From the **Reset Type** dropdown box select the **Security Question** option.

Enter the answer for each question presented and click next to proceed to the next step.



If the answers entered for each question are correct, it will now be possible to enter a new password for the device.



Email

If the answers to the security questions are not known or have not been configured, it is possible to reset the password via email. Resetting the password via email relies on the fact the unit has been configured for internet access via P2P.

To start the password reset process select the  icon on the login window.

From the **Reset Type** dropdown box select the **email** option.

Depending on whether an email address has been set previously, one of two screens will appear.



If an email address has not been configured previously, the above screen will appear. Enter a valid email address to proceed to the next step.

As there is no way the device can verify who is entering the email address at this point, it is **highly** recommended an email address is entered during initial installation.

With an email address configured, the window below will be displayed.



To proceed through the password reset process, the DMSS app must be installed on a mobile device. This can be downloaded from both the iOS (Apple Store) and Android (Google Play) app stores.

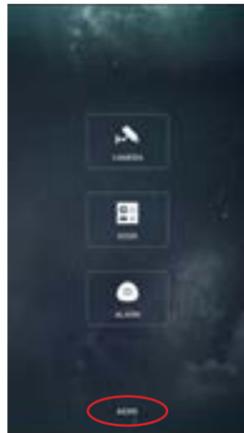
Email (cont)

With DMSS installed follow the steps below

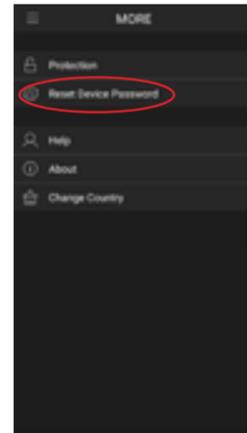
1. Open the DMSS app



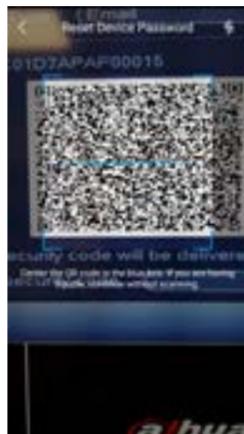
2. Select More



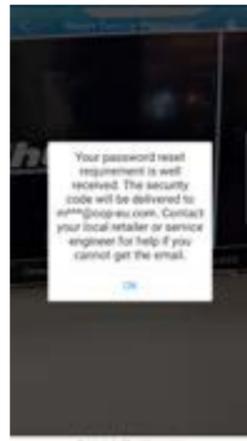
3. Select Reset Device Password



4. Scan the QR code



5. Success



Email (cont)

Once completing the steps show on the previous page, an email will be sent to the registered email address on the recorder. Open the email to find the reset code, you may need to check your junk email if the email has not been received after a few minutes.

Enter the reset code in the **Input Security Code** box shown on the recorder menu and click **Next**.

It will now be possible to enter a new password for the device.



Startup Wizard

The system will now display the option to initiate the start-up Wizard. This is a quick setup option for inputting the basic system settings.

Click **Next** to enter the Start-up Wizard or **Cancel** to exit.

Uncheck **Startup** to prevent the Start-up Wizard running on future power-ups.



Startup Wizard Screens

General Settings

General settings include Time and Date, Auto Logout, HDD Overwrite and more.



TCP/IP

TCP/IP settings include IP Address, Subnet Mask, Gateway and DNS Servers.



P2P

P2P is used as a quick method to connect to the system remotely. More information can be found on page 14.



Remote Device

The remote device list is used to both search and add IP cameras.



Schedule

This is the schedule for recording, more information can be found on page 11.



NVR/DVR Main Menu

The main menu is split into three different categories



Operation These are functional options such as Playback

Info Provides information such as Network load, System version etc.

Setting These items contain the settings for the system, split into five categories

Default Settings

Listed below are the out of the box settings for some of the options within the system.

HDMI/VGA Resolution	1280 x 720
Language	English
Admin Account Password	Passw0rd!
HDD Overwrite	On
Auto Logout	10 Minutes
IP Address	192.168.1.108
HTTP Port	80
TCP Port	37777
POE Switch Address (POE NVRs only)	10.1.1.1
Record Schedule	Continuous Record (24/7)

NVR/DVR Firmware Version



NVR/DVR firmware is often updated to introduce better optimisation and add new features. To check the firmware currently installed on the system go to **Menu > System Info > Version**

The latest firmware can be downloaded from the COPUK website www.cop-eu.com

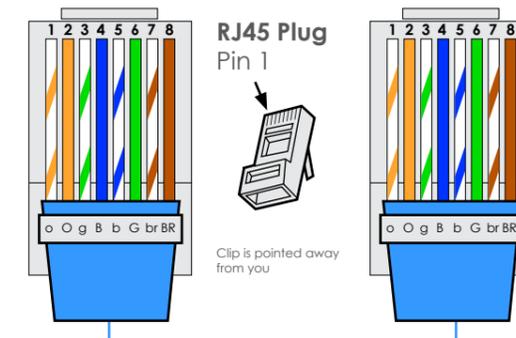
To update the firmware on a recorder, go to **Menu > System > Upgrade** with a USB containing the new firmware inserted into the recorder.

Full update instructions can be found on the COPUK website at <https://www.cop-eu.com/upgrading-firmware>

CAT-5 Wiring

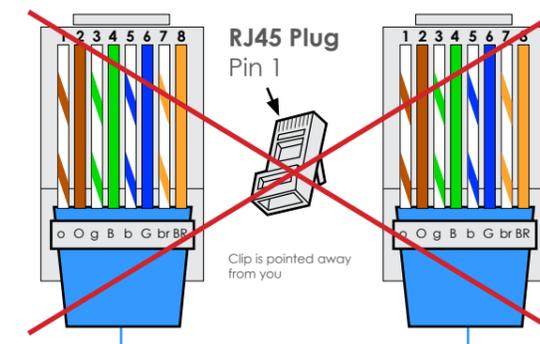
T-568 Wiring Standard

It is extremely important to follow the T-568 wiring standard when terminating RJ45 connectors. Failure to follow the T-568 standard will result in connection and reliability issues.



T-568 wiring example

Using custom colour arrangements WILL result in reliability issues.



The maximum transmission distance for Ethernet and POE is 100m.

NVR Camera Assignment

PoE NVRs

Plug and Play

POE enabled NVRs will automatically assign an IP address and channel number to connected Dahua cameras (Plug and Play). However, when connecting multiple cameras to a single POE port each camera must be manually added.

When cameras are added to the system using Plug and Play, each camera will be assigned to the same channel number as the PoE port number they are connected to. For example, connecting a camera to Port 1 will assign that camera channel number 1.

Important: Plug and Play only supports a single Dahua camera connected directly to the NVR PoE port, if connecting cameras via a switch, manual assignment (see below) must be used.

Manual Assignment and Initialising

The first step in configuring cameras for manual assignment to the NVR, is to discover the camera on the network so the IP address of each camera can be configured. This can be done by downloading the **Dahua Toolbox** application and installing the **Config Tool**.

Go to www.dahuasecurity.com the Toolbox application can be found using the top menu. Go to **Support > Download Center > Tools > Maintenance Tools**.

Once the Toolbox application has been installed and opened, a list of smaller applications will be listed. Click install next to **Config Tool**, once the installation is complete, click **Open** to run the program.

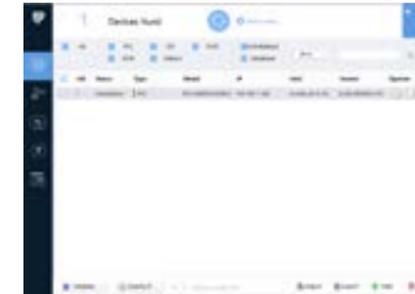
With the Config Tool open and the computer connected to a spare PoE port of the NVR, click the refresh icon at the top of the tool. Any cameras connected to the NVR PoE ports directly or via a switch should now be displayed.



Many Dahua IP cameras now ship in an uninitialised state, requiring that the password is changed from the factory default setting of admin before being used.

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Check the box next to the camera to be initialised



Enter the new password to be used for the camera and an email address for password recovery. Set P/N to P and click next to continue



After a few seconds the tool should show that the camera was successfully initialised. Click Finish to end the process



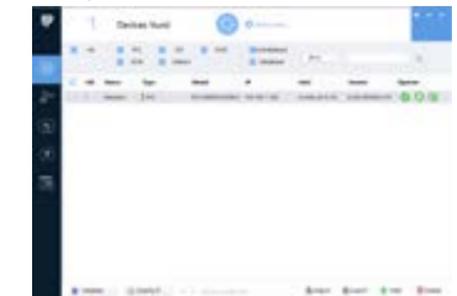
Click the initialise button to start the initialise process



Check or Uncheck the Easy4IP & Online update options. A direct internet connection is required for these features.



The camera will now show in the Config Tool in an initialised state. It is now possible to program the camera IP address and other settings.



Before adding a camera to a Dahua PoE NVR manually, the IP address of the camera must be programmed to the same range as the Dahua NVR PoE switch. By default Dahua NVR PoE switches are set to **10.1.1.1**

It is recommended that manually assigned IP addresses are no lower than 10.1.1.xx so that they do not conflict with the DHCP range of the NVR.

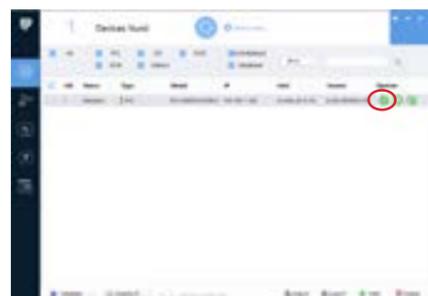
Select the search setting option at the top of the tool



In the password input field, change the password to that of the camera. Click Ok to continue



Click the pencil icon to modify the camera IP address



Enter the new IP address the camera is to be set to



The camera IP address will now be updated, indicated by the green tick displayed next to the camera model



The final step when manually adding Dahua IP cameras to an NVR PoE port is to disable Plug and Play. This must be done to assure reliability of the system in the event of a reboot.

To turn off Plug and Play, connect to the camera web browser by clicking the  icon and entering the username and password of the camera.

Important: The computer IP address must be in the same range as the camera to be able to login, such as 10.1.1.x

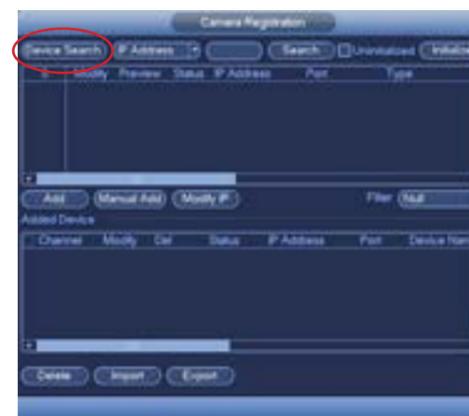
Once logged into the camera browser, go to Setting > Network > TCP/IP and Uncheck the ARP/Ping option.

Once logged into the camera browser, go to Setting > Network > TCP/IP and Uncheck the ARP/Ping option.

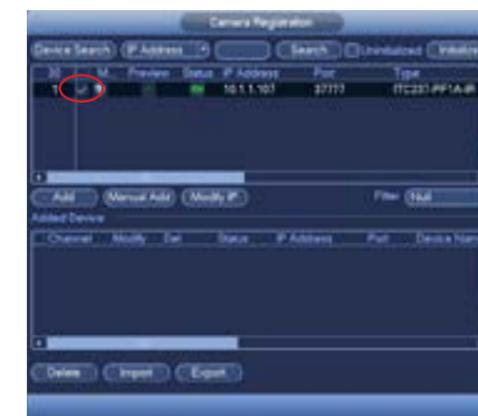


To add cameras to the NVR manually, right click on the NVR live display to bring up the mouse menu. From here select Camera Registration.

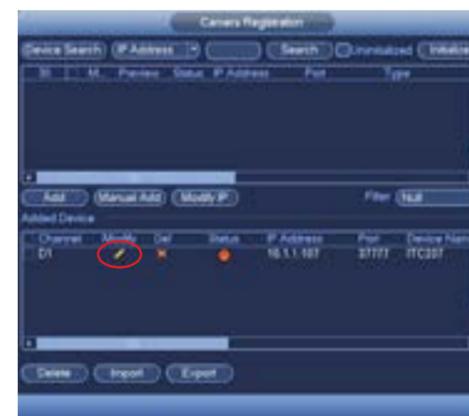
Click **Device Search** to perform a search for the IP camera



The camera should appear in the top device list. Place a check in the selection box and click add



After clicking add the camera should appear in the bottom list. Click the modify icon to bring up the connection settings. Change the password to the password of the camera and click save



The camera status should now change to green, which indicates the camera has been added successfully



IRLAB IP Camera Quick Setup

Connecting IRLAB Cameras to Dahua IP NVRs

1. Connect camera to POE Port of NVR or Switch
2. Connect PC/Laptop to NVR or Switch POE port
3. Run the **IPC Tool** Software on the PC/Laptop (This can be found on the CD supplied with the camera)
4. Change each cameras IP address to the same range as the NVR POE Switch or for non-POE NVRs the same range as the Ethernet port the cameras are connected to

Default NVR POE Switch Range

10.1.1.xxx

It is recommended that manually assigned IP addresses are no lower than 10.1.1.1xx so that they do not conflict with the DHCP range of the NVR.

Default NVR Non POE Range

192.168.1.xxx

5. Enter the NVR menu and go to Remote/Camera > Remote
6. Select the option **Manual Add** and input the following details:

Manufacturer: ONVIF

IP Address: The IP Address of the camera

RTSP Port: 554 HTTP Port: 85

Username: admin

Password: admin

7. Click **Save** to apply the setting. Cameras can take up to 30 seconds to appear on the NVR live display.



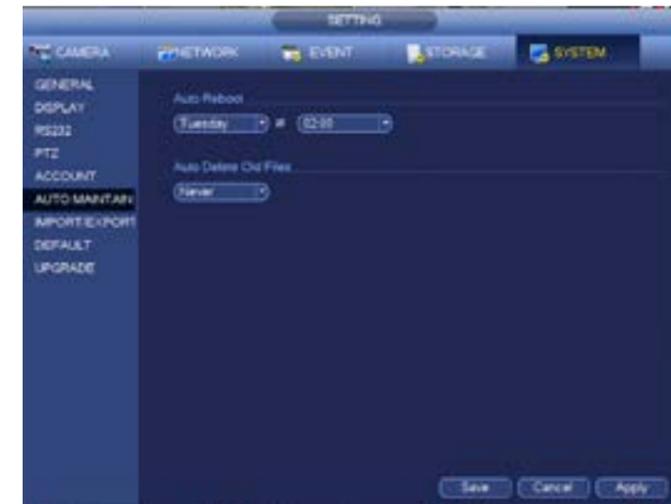
Auto Maintain Feature

Menu > System > Auto Maintain

Auto maintain is a feature designed to automatically reboot the system at a scheduled date and time. By default auto maintain is set to reboot the system every Tuesday at 2:00am.

To adjust the auto maintain settings follow the steps below:

1. Go to Menu > System > Auto Maintain



2. Adjust the preferred day and time by selecting a specified day from the dropdown box and inputting the preferred hour into the time field. There is also the option for **"Never"** in the day dropdown box, this will disable the auto maintain feature.

3. Click **Apply** to apply the setting and **OK** to save it.

The auto maintain feature is also included in every Dahua IP camera and can be adjusted via the camera web interface as shown below.



Record and Quality Settings

Menu > Camera > Encode

Camera record settings for both NVRs and DVRs are located in the encode menu. For IP systems the settings are stored on the camera and settings relate to the encoding quality of the video stream being transmitted by the camera. With HDCVI systems the encoding is managed by the DVR unit, so the settings are stored within the DVR.



- Main Stream** This is the left hand column and is set to record by default. This is usually the HD Stream
- Extra Stream** This is a secondary stream which is not set to record by default. The extra stream is usually a much lower quality stream, it is often used for remote viewing when internet bandwidth is an issue
- Channel** Select the specific channel to view or modify
- Code Stream Type** The type of record, options are Regular, Motion Detection and Alarm.
- Compression** The type of compression used for the recording such as H.264, H.264H and MJPEG.
- Resolution** This is the total image size in pixels. The higher the resolution the clearer the image.
- Frame Rate (FPS)** How many images (frames) are recorded each second. 25 is real time recording.
- Bit Rate Type**
 - CBR** - Constant Bit Rate keeps the bit rate (the size of the video) at a constant level regardless of how many changes are taking place in the image.
 - VBR** - Variable Bit Rate adjusts depending on the amount of changes occurring in the image. High amounts of changes (movement, light changes etc) increase the bit rate. Low amounts of changes keep the bit rate at a lower level.
- Bit Rate (Kb/s)** This is the target bit rate given in Kbps. The bit rate determines the file size of the video stream. The bit rate should be adjusted based on Resolution and FPS. A high Resolution and FPS will require a higher bit rate, a lower Resolution and FPS will require a lower bit rate.
- Audio / Video** The tick boxes along the bottom of the page represent enabling and disabling video or audio. The single tick box under mainstream enables or disables main stream audio. The two tick boxes on the right enable or disable video and audio for the extra stream (Left box is audio, Right box is video)

Click **Copy** to apply the same settings to specific, or all camera channels.

Click **OK** to save the setting.

Record Schedule Settings

Menu > Storage > Schedule

The Record Schedule controls when the unit stores video to the HDD's, it also determines the recording type. I.e. Regular, Motion Detection, Alarm & IVS recording.

By default all Dahua NVRs and DVRs are set to record 24/7 regular (continuous) record, motion and alarm recording are disabled.



To edit the schedule click on the  symbol to display the schedule edit page. Once editing is complete, click **OK** to apply the settings.

The images below show an example of the record schedule set to record continuously between the hours of 08:30 and 18:00, with motion & IVS recording between the hours of 18:00 and 08:30 seven days a week.



Click **Copy** to apply the schedule settings to specific, or all camera channels.

Click **OK** to save the setting.

Motion Detection Settings

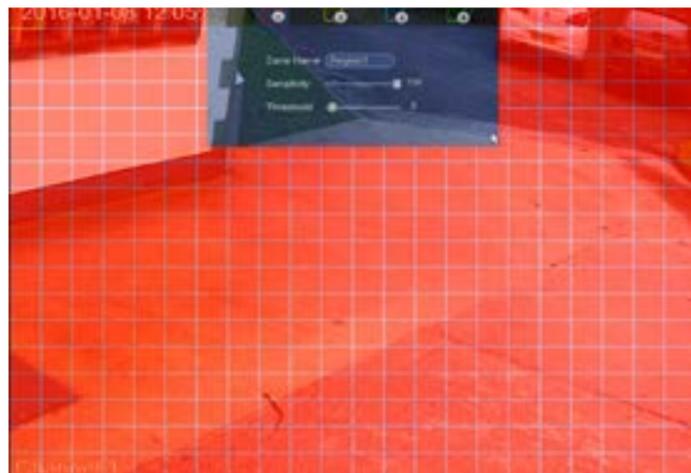
Menu > Event > Video Detect > Motion Detect

Motion Detection can be configured to detect movement on specific camera channels. This can then create an event record file and perform various functions including sending an email, sounding the buzzer or triggering a relay output.

Due to environmental factors it is advisable to pay particular attention to the region and sensitivity settings for external cameras.



To enable motion detection select the **Enable** box.
To customise the detection area and sensitivity click **Set** next to Region.



Use the left mouse button to add and remove areas of the grid. Click the region numbers to modify the individual regions.

Motion Detection sensitivity is controlled by two settings, Sensitivity and Threshold.

Sensitivity The amount of movement required to register that movement is being detected
Threshold How much movement is required before creating a motion event

Once the region has been configured click the right mouse button to return to the motion detection setup page.

There are many options and actions that can be configured to work with motion detection, see the list below for an overview of each option.

- Period** Set the times and days of the week that motion detection is active. Default setting is 24/7
- Anti-Dither** Set the delay time in seconds that must pass after movement has stopped to end the event
- Alarm Out** Select which relay outputs to trigger when a motion event occurs. (Units with Relay outputs only)
- Latch** How long in seconds that the relay output should trigger for
- Show Message** Show on screen message when motion events occur
- Alarm Upload** Used in conjunction with Smart PSS or the Alarm Centre function. Upload a motion event alert to Smart PSS or Sentinel
- Send Email** Send an email notification when a motion event occurs. Email must be configured correctly in Menu > Network > Email
- Record Channel** Select which channels record when motion detection is triggered
- PTZ Activation** Move PTZ camera to preset when a motion event occurs
- Tour** Display the camera channel fullscreen when a motion event occurs
- Snapshot** Take a snapshot when a motion event occurs
- Log** Create an entry in the system log when a motion event occurs
- Voice Prompts** Play audio clip using NVR/DVR audio output, audio clips need to be added to the system in Menu > General > Voice Prompt
- Buzzer** Sound the NVR/DVR internal buzzer when a motion event occurs

IVS Setup

Menu > Event > Smart Plan

Dahua IP cameras that support IVS (Smart) events such as Tripwire, Intrusion, Abandoned/Missing can be configured via the NVR menu.

NVRs must also support IVS events for this feature to be available, if in doubt as to whether a specific camera or NVR support the feature, check the products datasheet.

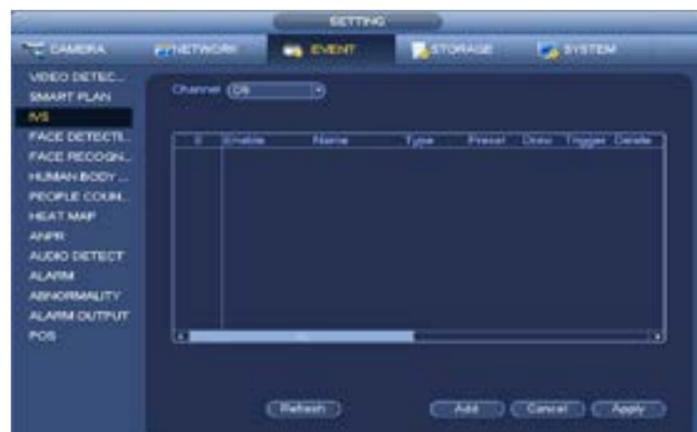


From the Smart Plan menu, select the IVS icon and click apply. This will enable IVS on the camera.

Menu > Event > IVS

Dahua IP cameras that support IVS (Smart) events such as Tripwire, Intrusion, Abandoned/Missing can be configured via the NVR menu.

NVRs must also support IVS events for this feature to be available, if in doubt as to whether a specific camera or NVR support the feature, check the products datasheet.



Click **Add** to add a new rule to the IVS list, multiple rules can be configured.

From the list of available rules select the type required, such as Tripwire or Intrusion. The rest of these instructions will be based on Tripwire. However, configuring Intrusion follows the same method.

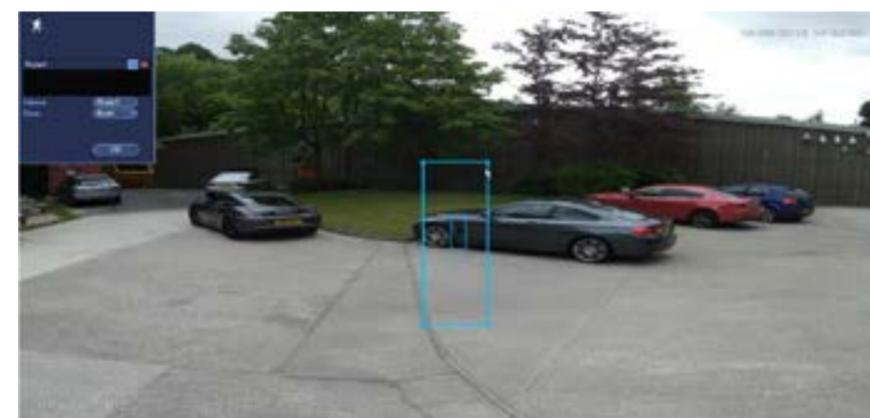


Once the type of rule has been chosen, click the **Draw** icon to create the rule



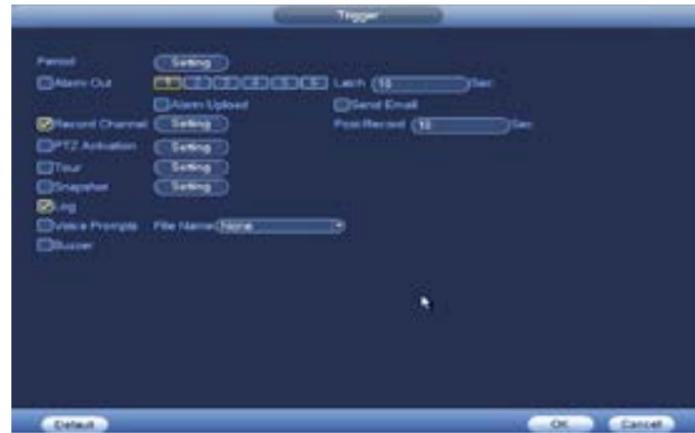
Rules can be created using the left mouse button to draw Tripwire or Intrusion lines on the image in the area of interest. In the top left window, the direction of travel can also be selected. Once the rule is configured, click **Ok**

Important: For optimum performance IVS rules must be created in areas that are not cluttered by objects or vastly contrasting colours. It is also recommended that rules are created in the main focal point of the image, this allows the camera time to analyse objects/targets before reaching the detection line(s).

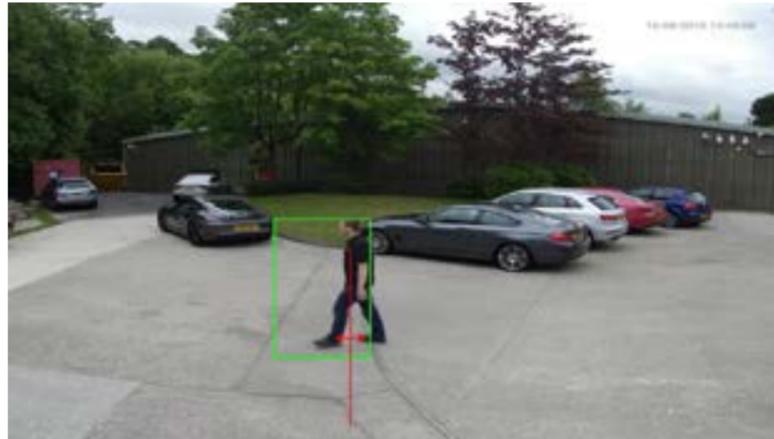


Click the  to adjust the target filter. The target filter sets the size of objects that will trigger the IVS rule and the size of objects that will be ignored.

The small box in the centre sets the smallest object size that will trigger the rule, the larger box sets the maximum size that will trigger the rule. By default the max size filter is at its maximum size (around the edge of the camera view). Once the target filter has been set, click **Ok**



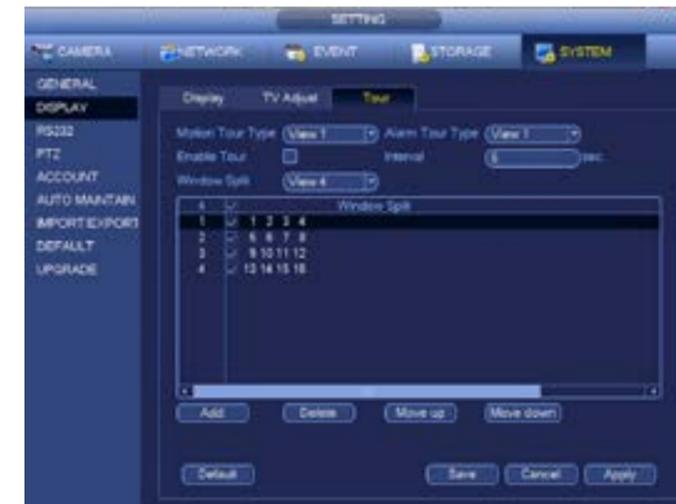
Select the  icon to enter the Trigger menu. Choose which actions to perform when the IVS rule is triggered by selecting the various options such as Record Channel, Buzzer etc. Once done click **Ok** followed by **Apply** & **Ok** on the next menu screen.



Once the IVS programming has been finished and saved, objects passing through the IVS rule that fit the target filter profile, will trigger and event. This is indicated by the IVS rule flashing red and the configured triggers taking place.

Menu > System > Display > Tour

The tour function is used to sequence through different camera views at specific intervals. To configure a tour follow the steps below.



Go to Menu > System > Display > Tour

- Video Detect** This is the view type used when setting the system to change the camera view on motion events.
- Alarm** This is the view type used when setting the system to change the camera view on alarm events.
- Enable Tour** Enable or Disable the tour.
- Interval** Sets the interval between changing the camera view (when multiple views are selected) in seconds.
- Window Split** Select the type of view to edit or enable/disable a view.

When editing views in the system, select the view from the window split dropdown box. The ticked boxes represent whether the cameras are enabled or disabled in the tour. Enabling multiple cameras/views will automatically enable sequencing.

To delete a camera/view select it and click the delete button. To add a camera/view click the add button, it is then possible to create a custom view by selecting specific cameras.

Fullscreen on Event

To set the system to show specific cameras fullscreen on event, go to Menu > Event and select the type of event. Enable the option for **Tour** and select the cameras to show when the event is triggered.

To return the system to a multiscreen view after an event, enable a single view in Menu > System > Display > Tour.

Smartphone Setup via P2P

All Dahua NVRs and DVRs can be viewed remotely using the P2P function.

NVR/DVR Setup

1. Connect NVR/DVR to network via Ethernet cable or Wi-Fi Dongle (see page 17 for Wi-Fi Dongle setup)

2. Go to > Network > TCP/IP



3. Enable DHCP and apply



4. Enter menu > Network > P2P

5. Enable P2P option and **Apply**

6. The Status box should now report Connect Success or Online



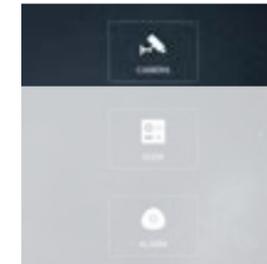
App Setup

Currently P2P is only supported for iOS and Android devices.

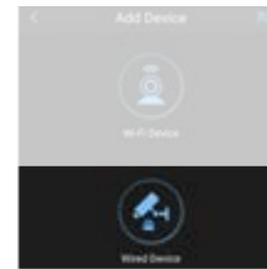
Download the mobile application to your mobile device by scanning the QR codes below or by searching for the app in your relative app store.

Connect using the app

1. Open DMSS app and select Camera



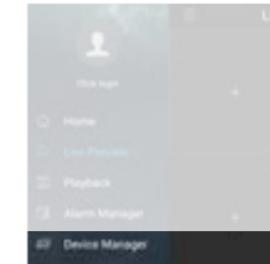
4. Select Wired Device



6. Scan screen



2. Click Menu (Top left)> Device Manager



5. Select P2P



7. Click start live preview



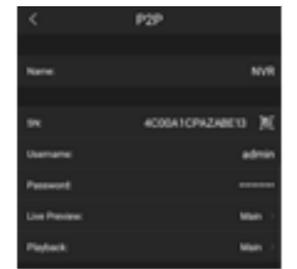
8. View cameras



3. Click + symbol



5. Input a name (this is for your reference only) Press QR button



Select which stream is used for live viewing, Main or Extra.

Select which stream is used for Playback, Main or Extra. As Extra stream recording is disabled by default, it is recommended to select Main.

Note: P2P can also be used to view the NVR/DVR remotely via Smart PSS software.



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