CTV-8K
MULTIFUNCTION CABLE TV TESTER
WITH BUILT-IN PoE AND HDMI TESTER

INSTRUCTION MANUAL

CTV-8K Multifunction Cable TV Tester Manual

- To use this device safely, please read the Safety Information section of this manual.
- Keep this manual on-hand for reference.
- Keep the S/N label for after-sale service within the warranty period.
- If there are any questions or problems while using this device, or if this device has become damaged, please contact our technical support for assistance.

Contents

1. Safety Information

1.1 Safety Information

- To prevent damage, do not expose the tester to water or excessive moisture.
- Keep the tester free from dust and liquids to avoid damage to exposed components.
- Avoid violent collisions or vibrations during transportation or use, as this may damage internal components or cause malfunction.
- Never leave the tester unattended while charging. If the battery becomes excessively hot, immediately disconnect the tester from the power source. Do not charge the tester for more than 8 hours.
- Do not use the tester in high-humidity environments. If the tester becomes damp, power it off immediately and disconnect all cables.
- The tester should not be used in environments containing flammable gases.
- Do not disassemble the device, as there are no user-serviceable parts inside. If disassembly is required, contact a qualified technician from our company.
- Avoid using the device in areas with strong electromagnetic interference.
- Do not handle the tester with wet hands or allow it to contact liquids.
- Use a dry cloth to clean the device. For stubborn dirt, use a soft cloth slightly dampened with water or a neutral detergent. Ensure the cloth is well-wrung before use.

2. IP Camera Tester Introduction

2.1 General Overview

The 7-inch touchscreen IP camera monitor is designed for the maintenance and installation of various camera types, including:
- IP cameras
- Analog cameras
- 8MP TVI, 8MP CVI, and 8MP AHD cameras

The tester supports the testing of 8K H.264 and 8K H.265 cameras via the mainstream. Its 1280 x 800 resolution provides high-definition display for both network HD and analog cameras.

Key features include:
- ONVIF PTZ and analog PTZ control
- A combination of touchscreen and physical buttons for a user-friendly experience
- Ethernet network testing capabilities:
  - Testing PoE power voltage
  - PING functionality
  - IP address searching
- A blue cable tracer for locating individual cables from a bundle
- LAN cable testing for proper connection termination
- Additional functions, such as:
  - 90W PoE++ power output for cameras
  - HDMI IN and OUT
  - CVBS loop testing
  - Simultaneous IP and analog testing
  - LED flashlight
 - DC 12V 3A and DC 24V 2A power outputs

Its portability, user-friendly design, and robust functionality make the IP camera tester an essential tool for installers and technicians.

2.2 Packing List

- Tester
- Network Cable Tester
- Polymer Lithium Ion Battery (11.1V DC 5200mAh)
- Adapter (DC15V 1.6A)
- BNC Cable
- RS485 Cable
- Output Power Cable
- Audio Cable
- 8GB MicroSD Card
- Safety Cord
- Tool Bag
- Instruction Manual

2.3 Function Interface
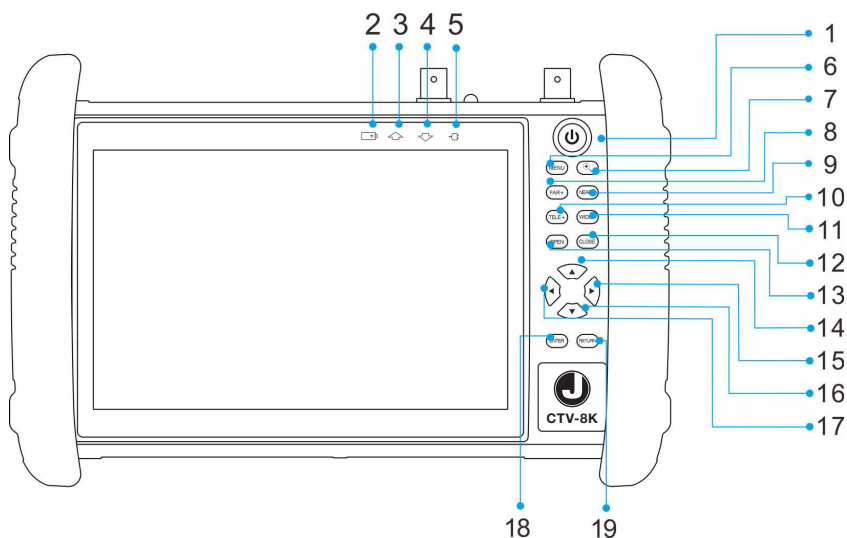
1	⏻	**Power Button:** Long press (>2 seconds) to turn the device ON or OFF. Short press to turn the menu display ON or OFF.
2		**Charge Indicator:** Illuminates red while the battery is being charged and turns off automatically when charging is complete.
3		**RS485 Data Transmission Indicator:** Illuminates red while data is being transmitted.

2.3 Function Interface

4		**Data Received Indicator:** Illuminates red while data is being received.
5		**Power Indicator:** Illuminates green while the tester is powered on by the adapter.
6	MENU	**Menu Key:** Press to bring up the short- menu.
7	⊕	**Zoom Key:** 4x zoom on the display image.
8	FAR +	**Far Focus:** Focus the image further away.
9	NEAR -	**Near Focus:** Focus the image closer.
10	TELE +	**TELE:** Zoom in on the image.
11	WIDE -	**WIDE:** Zoom out on the image.
12	CLOSE	**Return/Close:** Return or cancel while setting parameters in the menu, close/decrease the aperture.
13	OPEN	**Open/Set:** Confirm the settings of parameters, or open/enlarge the aperture.
14	△	**Up Arrow Key:** Set the function, add a parameter, or tilt the PTZ upward.
15	▷	**Right Arrow Key:** Select the parameter whose value will be changed, add the value of the parameter, or pan the PTZ rightward.
16	▽	**Down Arrow Key:** Set function, reduce the value of the parameter, or tilt the PTZ downward.
17	◁	**Left Arrow Key:** Select the parameter whose value will be changed.
18	ENTER	**Confirm Key:** Short press to confirm. Long press to screenshot.
19	RETURN	**Return/Close:** Return or cancel while setting parameters of the menu or close/decrease the aperture.

2.4 Top Interface
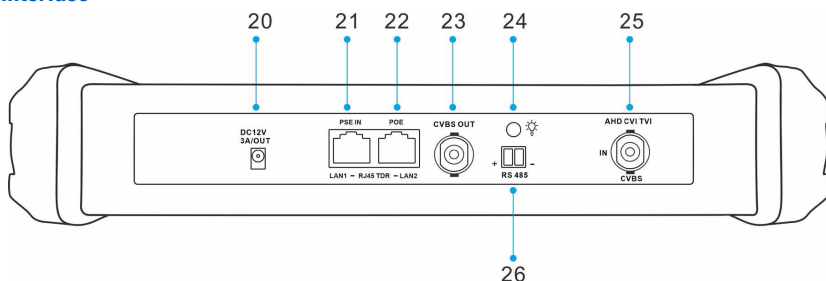
2.5 Bottom Interface
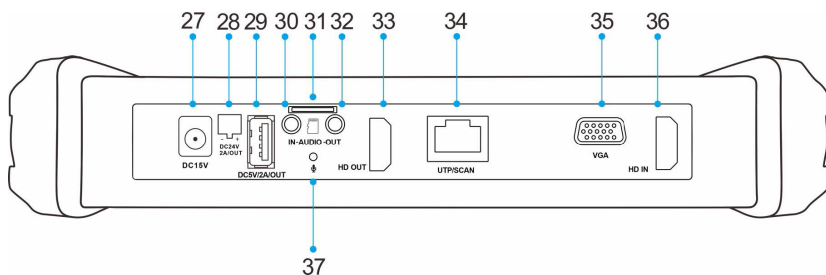
20		**DC 12V 3A Power Output:** For providing a DC power supply
21		**PSE (Power Sourcing Equipment):** Tests PoE voltage or LAN test port
22		**PoE Power Supply Output or LAN Test Port:** Use to test PoE or non-PoE IP cameras
23		**Video Image Signal Output:** BNC interface
24		**LED Flashlight**
25		**CVBS IN/AHD/TVI/CVI Coaxial Interface:** BNC interface
26		**RS485 Interface:** RS485 communication for the PTZ
27		**DC 24V 2A Output**
28		**DC 15V 1.6A Charging Interface**
29		**USB 5V 2A Power Output:** Can be used to transmit data
30		**Audio Input Interface**
31		**MicroSD/TF Card Slot:** Comes with 8GB, supports up to 32GB
32		**Audio Output and Headphone Interface**
33		**HDMI Output Interface**
34		**UTP Cable Port:** UTP Cable Tester Port
35		**VGA Input**
36		**HDMI IN**
37		**Microphone**

3. Operation

3.1 Battery Information

The tester has a built-in lithium ion polymer rechargeable battery.

Pressing the ⏻ key powers the tester ON or OFF.

⚠ **Note:** Use the original adapter to charge the battery.

🔋 When the battery icon is full and the charge indicator turns off automatically, the battery is fully charged and should be disconnected from the charger.

⚠ **Noe:** When the Charge Indicator 🔲 turns off, the battery is approximately 90% charged. The charging time can be extended for about 1 hour and the charging time within 12 hours will not damage the battery.

⚠ **Note:** Press the key ⏻ several seconds to restore the default settings when the tester works abnormally.

3.2 Tester Connection

3.2.1 IP Camera Connection

Power the IP camera you want to test using an independent power supply then connect the IP camera to the tester's LAN port. If the link indicator of the tester's LAN port is green and the data indicator flickers, it means the IP camera and the tester are communicating. If the two indicators don't flicker, check if the IP camera is powered on or if the network cable is not functioning properly.

1. If the IP camera requires PoE power, then connect the IP camera to the IP tester's LAN port. The tester will then supply PoE Power to the IP camera. Press the PoE icon to turn the PoE power ON or OFF.

2. If using the tester's menu to turn off the tester's PoE power supply, the PoE switch and the power sourcing equipment can be connected to the tester's PSE port, and the PoE power will be supplied to the IP camera by the tester's LAN port. When doing this, the tester cannot receive data from the IP camera, but a computer connected to the PoE switch can receive the data via the tester.

⚠ **Warning:** The PoE switch or PSE only can be connected to the tester's "PSE IN" port, otherwise it will damage the tester.

3.2.2 Analog Camera Connection

1. Connect the camera's video output to the tester's VIDEO IN. The image will display on the tester after pressing the PTZ icon.

2. When the "VIDEO OUT" interface is connected to the Video input of a monitor, the image will be displayed on both the tester and the monitor.

3. Connect the camera or the speed dome RS485 controller cable to the tester's RS485 interface.

   Please note the positive and negative poles of the cable.

3.2.3 HD Coaxial Camera Connection

CVI, TVI, AHD cameras are classified as HD coaxial cameras. These instructions on how to connect CVI camera to the tester also apply to TVI and AHD cameras.

1. Connect the CVI camera's video output to the IP tester's "VIDEO IN" interface. The image will be displayed on the tester.

2. Connect the speed dome RS485 controller cable to the tester RS485 interface.

3.2.4 HDMI IN

When connecting a DVR or other device's HDMI OUT port to the tester's HDMI IN port, the meter will display the input image.
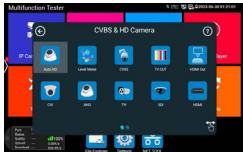

3.2.5 HDMI Output

The built-in HDMI OUT port can output video files, media files and screen displays to a high-definition TV with a resolution of up to 4K 60FPS. The tester can send the image displayed from the current analog camera, IP camera (universal definition), or SDI data camera to a high-definition television. It can also convert an SDI output to an HDMI output.

When turning on an HDMI output in the drop-down menu while the HDMI output interface is connected to a device, such as a monitor, the tester will black out and output HDMI. At this time, connect a mouse to operate the tester.
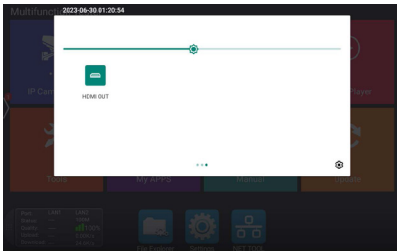
When turning off HDMI output in the drop-down menu, please enter "CVBS & HD Camera - HDMI Output". The tester will then send out an HDMI color signal.

You can also switch the HDMI output resolution and frame rate in "System Settings - More Settings".

### 3.3 OSD Menu

Press the ⏻ key 2 seconds to turn ON.

Press the ⏻ key again to turn OFF.

Short press the ⏻ key to enter Sleep mode, press it again to test.

If tester works abnormally and cannot be turned off, press the ⏻ key for several seconds to turn the test off and reset the tester.

3.3.1 Drop-down Menu

Press and slide right at the top right corner twice to open shortcut menu. The shortcut menu includes PoE Power Output, PING, DHCP, File Explorer, Volume, Light, WiFi, Auto HD, IP Settings, HDMI IN, CVBS, Video OUT, LAN, Brightness, and Settings.
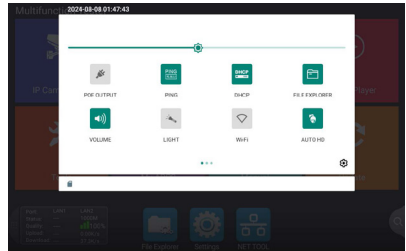
PoE Output: Turn the PoE power output on or off.

PING: Turn on Ping, detect networks, or verify IP continuity.

DHCP: Turn on the DHCP server and assign the dynamic IP addresses for IP cameras and other networked devices.

File Explorer: Can view Music, Videos, Pictures, Documents, Zip Files, etc.

Volume: Set the volume level.

Light: Turn the LED light on or off.

WiFi: Turn the WiFi on or off.

Auto HD: Turn the auto HD functions on or off, auto recognized by TVI/CVI/TVI/CVBS cameras.

HDMI IN: Turn the HDMI input function on.

TV OUT: Turn TV OUT on or off, or enter the TV OUT interface.

IP Setting: Opens the IP settings.

LAN INFO: Display real-time upload speed or download speed of the network port or WiFi.

Brightness: Set the desired brightness of the IP tester and adjust the sleep time settings.

Touch Point: Displays the touch point position.

Network Speed: After turning on, in the network connectivity status window, will display the current network speed information at the top of the interface.

Screen Record: Press "Screen Record" to start screen record function, the file will be saved in movies directory of internal SD card.

**Power OFF:** Press "Power Off" to turn off tester.

HDMI OUT: When turning on the HDMI output in the drop-down menu, and the HDMI output interface is connected to a device, such as a monitor, the tester will black out and output HDMI. At this time, connect a mouse to operate the tester.

3.3.2 Shortcut Menu

You can open the shortcut menu by pressing the tester's "Menu" key.
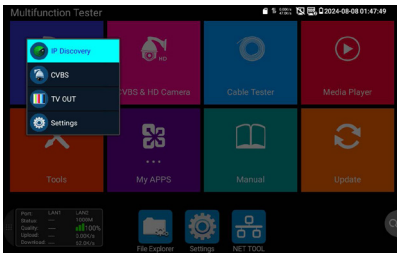
Press the (MENU) key to turn it on and switch functions, then press (🔍) to enter app. Tap another area on the screen, to exit the menu.
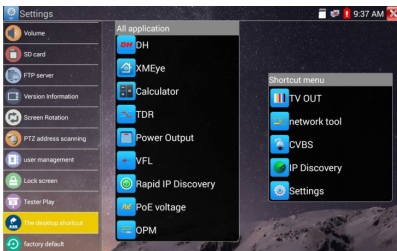
You can long press any app in the all applications list to move them to Shortcut menu. To delete any app in the Shortcut menu, select an app and press on it for several seconds to be deleted.

3.3.3 Screen Capture

Long press the (ENTER) key to take a screenshot at any time.

You can go file management to view the screenshots: File Explorer > sdcard > Pictures > Screenshots.

3.3.4 Link Monitor

Tap icon "Link Monitoring" at left corner on the screen to enter link monitoring mode. It can detect a device port rate of 10/100/1000M, signal quality, upload speed, download speed, and more in real time. It can be used to detect whether the network video access bandwidth of devices, such as NVR, is working normally.
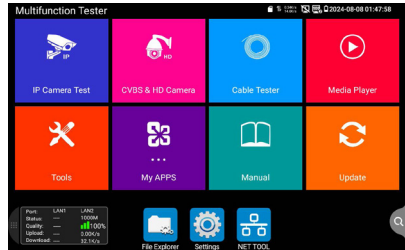
When using a four-core cable to connect to a Gigabit device, the device will prompt "the link limited".
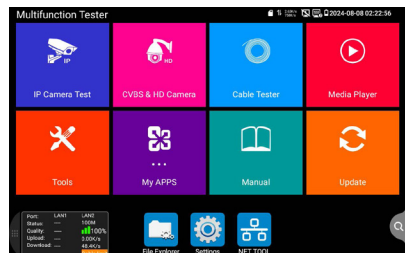
Advanced Link Monitor

Used for monitoring CVBS loop, Ethernet statistics, error frame statistics, and frame length.

3.3.5 TesterPlay

Mobile Screen Projection (Only for Android Version): The tester can create a WiFi hotspot, connect a mobile phone to the tester's WiFi hotspot, or the tester and mobile phone can be connected to the same WiFi network. You must download and install the Remote Control app to your mobile device in order to connect it. To do so, press the System Setting icon on the main

interface and press the "TesterPlay" app. Press "Start" and the tester will generate a QR code. Scan it to be able to view tester's screen and control the tester remotely.
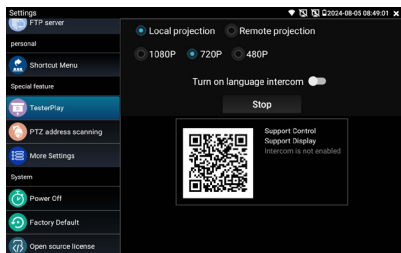
PC Screen Projection: Install VLC Player on your PC. Turn on the VLC Player "Media - Open Network Streaming" and input the RTSP address located on the top tester. Press "Play" to view the screen in real-time.

3.3.6 IP Discovery

Press IP Discovery and the tester will auto-scan the whole network segment IP, as well as automatically modify the tester's IP to the same network segment as the scanned camera's IP.

Local IP: This is the tester's IP address. The tester can automatically modify the tester's IP to the same network segment as the scanned camera's IP.
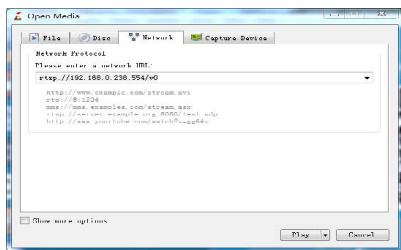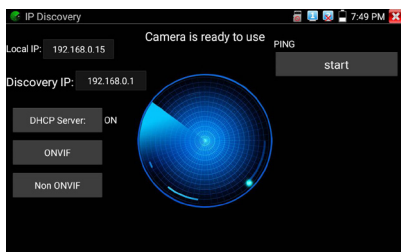
Discovery IP: This is the IP address of devices connected to the tester. If the camera is connected to the tester directly, the tester will display the camera's IP address. If the tester connects to a Local Area Network, it displays the current IP address.

Temp IP: After searching for an IP address, the tester's modified IP address will not be saved. If you do not select "Temp IP" the tester's modified IP address will auto-save after searching.

**Start:** PING function. Press "Start" and it will PING the camera's IP.

Rapid ONVIF: Rapid ONVIF quick link.

NON ONVIF: NON ONVIF quick link.

Applicability: Using the IP discovery app, you don't need to know the first two digits of a camera's IP address. It can automatically scan the whole network segment IP and automatically modify the tester's IP address.

3.3.7 IPC Test Pro

Combines multiple functions into one app for camera testing.
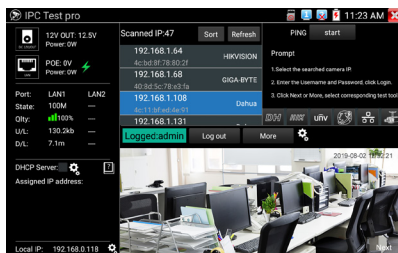
Application: Supports multi-segment IP address scans, provides a visual display of the camera manufacturer, and can play the image displayed by pressing the IP address.

If you connect an IP camera, the device can supply power to the PoE camera with real-time display of the network port connection status.

By pressing one key to connect to the camera test tool, you can login and configure the camera. You can also batch activate Hikvision and Dahua cameras.

3.3.8 Rapid ONVIF Test

Rapid ONVIF can display an 8K H.265/4K H.264 camera image by tester mainstream, one key to activate Hikvision camera.

Press to enter the Rapid ONVIF function. The meter will auto scan all ONVIF cameras in different networks segments.

It will then list the cameras names and IP addresses on the left side of the screen. The tester can auto login to cameras and

display camera images. Use the factory default admin password to auto login. If you modified the password, then use the modified password to log in.

If you select the ONVIF Rapid mode, the meter automatically scans different network segments for ONVIF cameras. It will list the camera names and IP addresses on the Device List if any are found. The tester can also auto login camera and display the camera image.
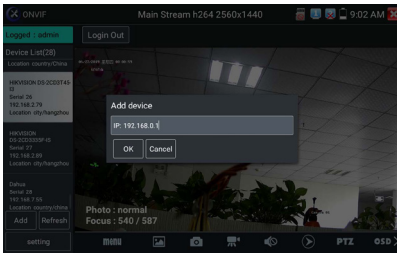

Press the "Refresh" button and the tester will scan the ONVIF camera again. Press the newly displayed ONVIF camera on the "Device List" and the tester will show the IP camera's relative information and settings.

Activate HIKVISION Camera: When connected to an inactivate HIKVISION Camera, the tester will auto-recognize it and prompt "The camera has not been activated, activate now?". Press "OK" to initiate activation.
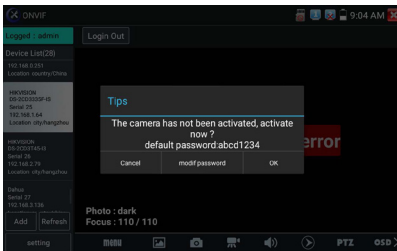
When pressing the "ONVIF Setting" icon in the upper left corner, the settings menu will pop up.
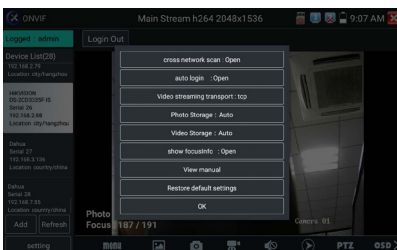
Cross Network Scan: After opening this function, enter "Setting - IP Settings - Advanced" to add other network segments IP, Rapid ONVIF function can across network segments to scan camera's IP.

Auto Login: After opening this function, the tester can auto login to the camera and display the image on the camera. The login password is the same as last time, or the first time using it, the default password is "admin".

Video Transmission Protocol: UTP and TCP protocol.

Open Password Cracker: Cracks password of cameras.

View Manual: Opens the Instruction Manual.

Restore Defaults Settings: Reverts "Rapid ONVIF" to default settings.

OK: Save the modified parameters.

Press the (MENU) icon to open the camera settings.

While in the "Live Video" menu, press "Video Menu" at the top right of the image to access the following tools: Snapshot, Record, Photo, Playback, PTZ and Settings.
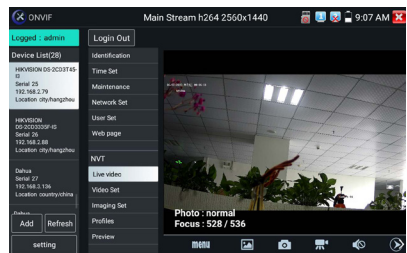
ONVIF PTZ Control: Tap the image in the direction you want the PTZ camera to move. Tap the left side of the image to move left, right to go right, up to go up and down to go down.

Compatible IP PTZ cameras will rotate accordingly. PTZ rotation direction is displayed in the top left corner of the image.
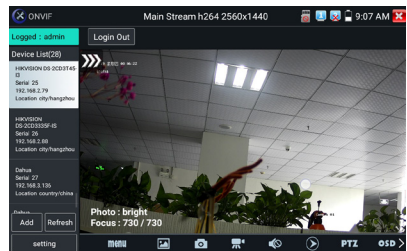
IP Camera Video Settings: Press "Video Set" to enter the IP camera's encoder and resolution settings. Make the desired changes and press "OK" to save.

Image Setting: Press "Imaging Set" to adjust image brightness, saturation, contrast, sharpness and backlight compensation mode.

Profiles: Press "Profiles", can view video streaming current configuration files, as well as switch between major stream and minor stream.

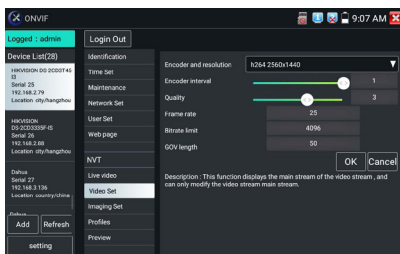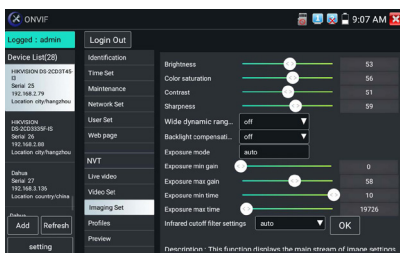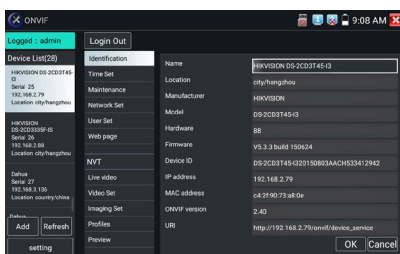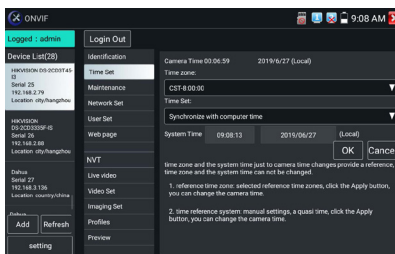**Preview Pictures:** Quickly preview and zoom in or out pictures, and automatically or manual refresh.

Identification: Press "Identification" to view information of the camera.

Time Set: Press "Time set", Select "Manual Set" to set up the time of camera.

Maintenance: To reset or restore the software to factory settings.

User Set: Modify the camera's username, password, and other parameters.

Network Setting: Press "Network Set" to change the IP address. Some cameras will not be able to change the IP address, so in this case, there will be no change after saving.
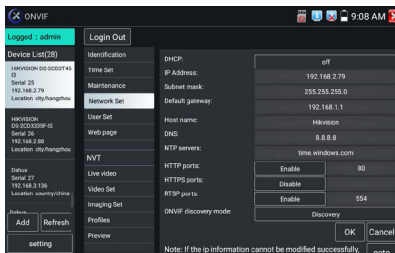
Zoom In Image: Press the key to enter the zoom mode. Press it again to exit zoom mode. When the image is enlarged, tap left, right, up, or down on the image to move the whole image on the screen.
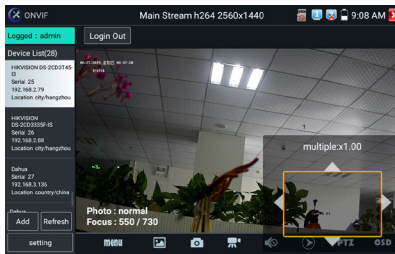
When the image is enlarged, if not operating on the touch screen, you can operate using the keyboard. Press the key TELE + to zoom in. Press the WIDE - key to zoom out. Press the up and down key to move the image.

If there is network video input to the tester, (up to 1080p), the input image will be very clear after it is enlarged.

The image can only be enlarged in SD mode. The icon "ONVIF" means SD mode is active. Select the function you want to

use on the Toolbar: "Snapshot", "Record", "Photos", "Video Playback", "Storage Set", "PTZ Control", etc.

Snapshot: Press "Snapshot" to screenshot the image and store it to SD card.

If you select manual storage, a dialog box will appear with "Input Name". Name the files when saved to save on the SD card. If you select "Auto-storage", the tester automatically stores the files after pressing "Snapshot".

Record: When you press the "Record" icon, the video starts recording. A red recording icon appears on the screen which begins to flash, and a timer appears indicating the time elapsed for the video. Press on the "Stop" icon to stop recording and save the video file to the SD card.

Playback: Press the "Playback" icon to view saved videos. Double press the video you want to play. Press the X to return to the last menu. To rename or delete a photo, press and hold on the file until this screen appears:
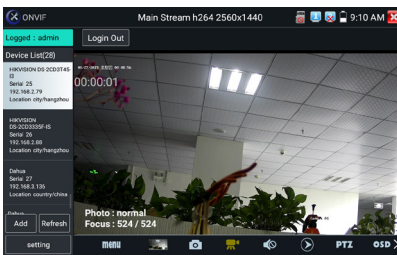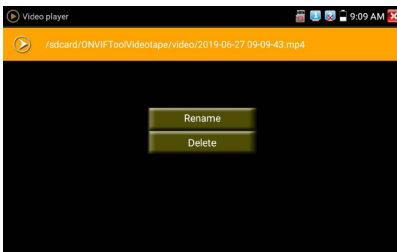

OSD Menu: Select OSD and the OSD menu will pop up. This shows the time, channel name and other optional items.
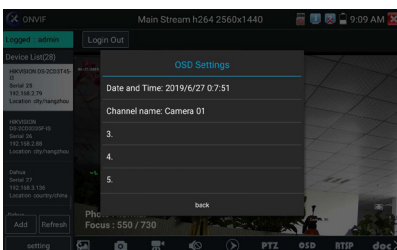
After selecting the channel, you can edit the channel name, modify the display position, and switch the font size. Selecting "Default Location" in "Content Location" sets it to the default location.
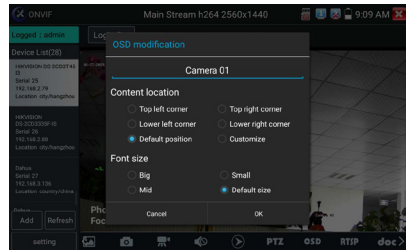
Select "Customization" to adjust the channel name and display location. Press "OK" and the changes will take place. Press the return key or press any area of the screen to return to the previous screen.

⚠ Video files can be played in the Video player from within the main menu.

PTZ

Set Preset Position: Move the camera to the preset position, enter the preset number in the bottom-right corner to complete the position preset.

Call the Preset Position: Select the preset number on the left and press "Call" to call the preset.

PTZ Speed Set: Horizontal and Vertical Speed set.
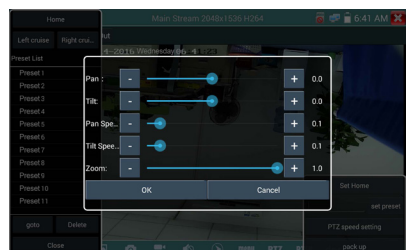
RTSP: Get RTSP address of the current camera

Doc: Automatically generate test reports for the camera by pressing "Create Documents". Press Preview to view the report document.

Enter the camera test information, press "Create Documents" to complete the report.
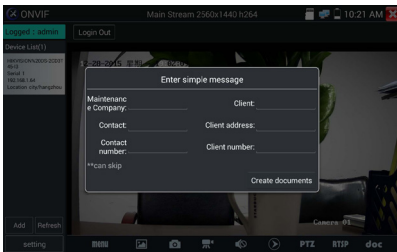
Press the "Doc" menu again, and you can preview the report document.

Icon Description: The description of function icons in the bottom toolbar.

3.3.9 Non ONVIF

Display an image from the 8K H.265 camera from the mainstream.

Press the icon to enter the IP camera test screen.

⚠ **Note:** Currently, the IPC Test App only supports some brands' specific IP cameras, these include specific models made by ACTI, AXIS, Dahua, Hikvision, Samsung, and many more. If the camera is not fully integrated, please use the ONVIF or RTSP apps.

IPC Test Interface:

Local IP: This is the tester's IP address. Press "Edit" to enter "IP setting" and change the tester's IP address settings.

IP Camera Type: Press on IP camera type to select the Manufacturer and model number of the integrated IP camera.

Manual: Press IP camera type to open the list of camera brands: Honeywell, Kodak, Tiandy, Aipu-waton, ACTi, WoshiDA, and other brands. If the brand has offered official original protocols, select the camera type, input the IP camera address, user name and password, and press "official" to enter the camera image display interface (Currently, only supports DAHUA official protocols).
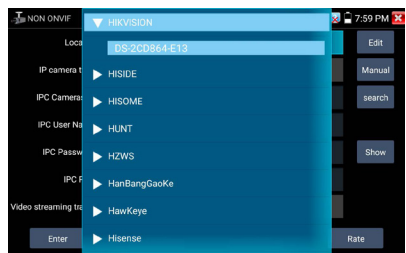
Stream Code: When testing the camera via RTSP, you can select mainstream or sub stream to test (if camera's RTSP has not been started or without it, it will show "auto match fail", please switch to manual selecting.
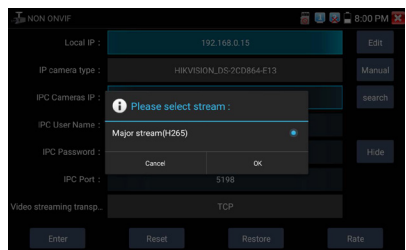
IP Camera's IP: Enter the camera's IP address manually or press "Search" to auto-scan for the camera's IP address. It is better to directly connect the camera to the tester so the search results will only display the camera's IP address. If the tester is connected to a PoE switch, it will display several IP addresses.

IPC User Name: Enter IP camera's user name.

IPC Password: Enter IP camera's login password.

IPC Port: When you select the IP camera type, it will default the camera's port number and does not need to be changed.

After all settings are completed, press "Enter" to view the live video.

If the IP address settings have errors or the IP camera is not connected, the tester will prompt "Network Error". Press ❌ to quit from image display and return to IP camera test interface.

⚠️ Once you are viewing video on the IPC Test app, you will see the "Video Menu" icon on the top right. This button will gi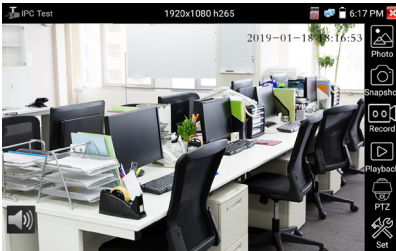ve you access to Snapshot, Record, Photo, Playback, PTZ, and Set. Please refer to the ONVIF section to use these functions.

3.3.10 HDMI IN

To perform the HDMI IN HD signal test, Tap the 🔲 icon.

When the tester receives the image from the HDMI input, the top tool bar will show the resolution of this image. You can select "resolution" to set resolution in the settings menu. Tap the screen twice for full screen image display.

The following resolutions can be supported: 4K_3840 x 2160 / 2K_2560 x 1440p / 1920 × 1080p / 1920 × 1080i / 720 × 480p / 720 × 576p / 1280 × 720p / 1024 × 768p / 1280 × 1024p / 1280 × 900p / 1440 × 900p.
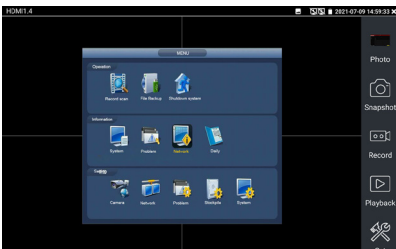
1. **Snapshot:** Press the icon "Snapshot", when the video is displaying to take a screenshot and save the current video frame in the SD card as JPEG file.

   If the device is set to manual mode, an "Input Name" pop up box will appear, and you can enter a title for the snapshot. If the unit is set up to automatically set file names, this box will not pop up.
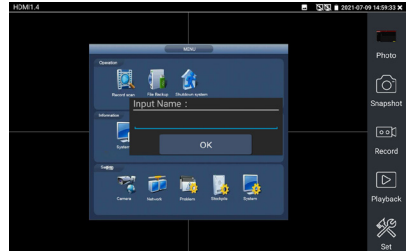
2. **Video Record:** When you press the "Record" icon, the video starts recording. A red recording icon appears on the screen and begins to flash, and a timer appears indicating the time elapsed for the video. Press on the "Record" icon again to stop recording and save the video file to the SD card.

   If manual storage is selected before recording begins, "Input Name" will appear. The named files will be stored in microSD card after recording.

   If "Auto-storage" is selected, the tester will auto-store the files in the microSD card after recording.
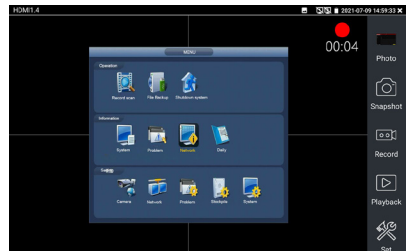
3. **Photo:** Press the "photo" icon to enter. Press the selected thumbnail photo to display it on the screen. Double-tap the image you want to view to make it full screen. Double-tap the photo again to return.

   To rename or delete an image, press and hold on the file until the screen on the following page appears.

   Click ❌ to close and return to PTZ controller.
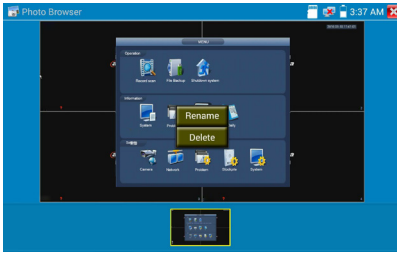
4. Recorded Video Playback: Press the "Playback" icon to view your recorded videos. Tap on the video file image you want to watch. To rename or delete a video, press and hold on the file until this screen appears:
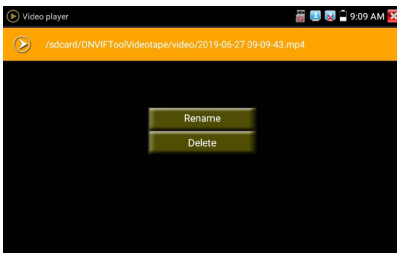
Video files also can also be played in the main menu's "Video Player".

3.3.11 VGA IN

To perform a VGA In HD signal test, tap the ⌨ icon.

When the tester receives the VGA In image, the top tool bar will show the resolution of this image. You can select "Resolution" to set resolution in the setting menu. Tap the screen twice, to display the full image.

The VGA In supports the following resolutions: 1280 x 1024/960/800/768/720p 60FPS; 1152 x 870p 60FPS; 1024 x 768p 60FPS; 800 x 600p 60FPS; 640 x 480p 60FPS.

3.3.12 Analog Camera Test

To perform an analog camera test and/or for PTZ control, press the 📷 icon.

Select the relative function on the right side Toolbar to perform functions including: "Photos", "Snapshot", "Record", "Playback", "PTZ", and "Set".

Press ❌ or (MENU) to quit.

Press the screen twice quickly to fully zoom in on the touch screen.

1. PTZ Controller Parameter Setting

Select and click icon "PTZ", to enter PTZ setting.

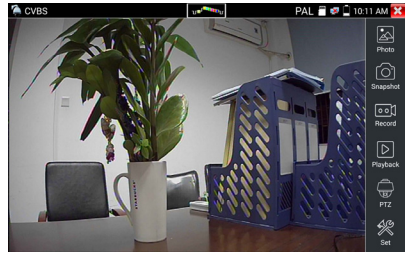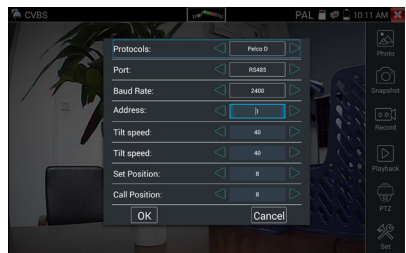**A. Protocols:** Use the up and down arrow keys to move the yellow cursor to "Protocols" to set the corresponding Protocol. There are more than thirty PTZ protocols to choose from, such as Pelco-D, Samsung, Yaan, LiLin, CSR600, Panasonic, Sony-EVI, etc.

B. Port: Click and move to "Port". Select the communication port for the PTZ camera controller (RS485).

C. Baud: Move the yellow cursor to "Baud ". Select the baud rate according to baud rate of the PTZ camera. (150/300/600/1200/2400/4800/9600/19200/57600/115200).

D. Address: Set the ID according to the ID of PTZ camera (0~254). The address data must be the same as the speed dome's address.

E Pan Speed: Set the pan speed of PTZ camera (0~63).

F. Tilt speed: Set the tilt speed of PTZ camera (0~63).

G. Set Preset Position (Set PS): Press and select "Set PS". Set and save preset position number (1~128).

H. Call The Preset Position (Go PS): Press and select "Set PS" to set and save the preset position number (1~128). Click "Sure" to save.

⚠ Check and set the protocols, address, interface and baud. All of these must be the same as the dome camera's parameters before the IPC tester can be used.

To Control PTZ by Screen Touch:

Tap left, right, upward, or downward on the touch screen to control the PTZ's direction of rotation. Use two fingers simultaneously to move to zoom in and out the PTZ.
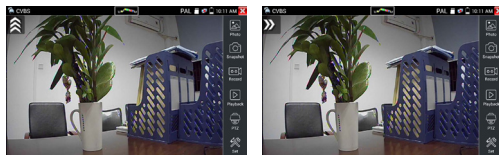
PTZ Controls:

Press the ◁ ▽ ◁ ▷ keys to control the PTZ's direction of rotation.
Press the (OPEN) key to turn on or press the (CLOSE) key to turn off the aperture.
Press the (FAR+) or (NEAR-) keys to adjust the focus manually.
Press the (TELE+) or (WIDE-) keys to manually adjust the zoom.

2. Video and Storage Setting

Press "Set" to set the analog video's image brightness, contrast, color saturation, and file storage settings after taking a snapshot or recording. Storage settings support auto-storage and manual storage. When selecting manual storage, the user can name and store the files manually.
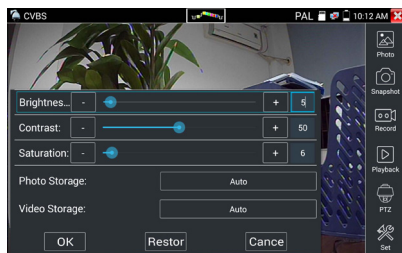
When manual storage is selected, user can name and store the files.

3. 4x Zoom Image Display and Video Out

When there is an image input, press ⊕ to enter "zoom". Press it again to quit.

Using the Touch Screen to Control PTZ Camera Movement:

Tap left, right, upward or downward on the video image to move the PTZ camera in a desired direction. Stretch two fingers outward or inward on the touch screen to zoom the image in or out.
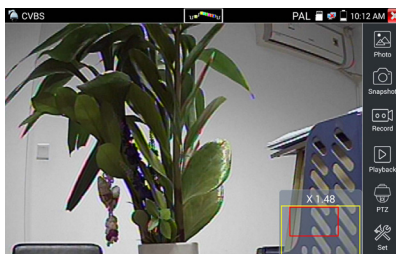
If not using the touch screen to operate, press (TELE+) to zoom or press (WIDE-) to zoom in, or press the upward and downward keys to move the image.

⚠ For analog video input, as the resolution is 720 x 480p, it is normal that the zoom in image is not clear. But for network digital video input, as it supports resolution up to 1280 x 960p, and the zoom in image is still very clear. This is very helpful during IP camera installation.

4. Snapshot

Press the "Snapshot" icon, when the video is live, to take a picture and save the current video frame on the SD card as a JPEG file.

If the unit is set to the manual mode, an "Input Name" pop up box will appear, and you can enter a title for the snapshot. If the unit is set up to automatically set file names, this box will not pop up.
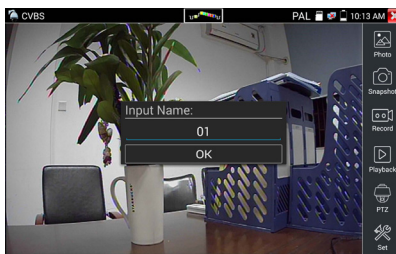
5. Video Record

When you press the "Record" icon, the video starts recording. A red recording icon appears on the screen and begins to flash, and a timer appears indicating the time elapsed for the video. Press on the "Record" icon again to stop recording and save the video file to the SD card.

If selecting manual storage, before recording begins, "Input Name" will appear before they are saved on SD card. If "Auto-storage" is selected, the tester will auto-store the files in SD card after recording.
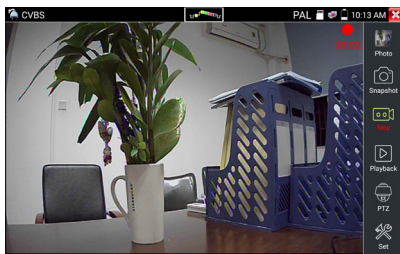
6. Photo

Press the "Photo" icon to enter. Press the selected thumbnail photo to display it on the screen.

Double-tap the image to make it full screen. Double-tap the photo again to return.

To rename or delete an image, click and hold on the file until this screen below appears.

Press ![X] to close and return to PTZ controller.

7. Recorded Video Playback

Press the "Playback" icon to view your recorded videos. Tap on the video file image you want to watch.

To rename or delete a video, press and hold on the file until this screen appears:

Video files also can play in the main menu's "Video Player".

Image Loop Test:

Test optical transmitter and receiver videos and video cables.

Connect one end to the tester's "VIDEO OUT" port, and the other end connected to the "VIDEO IN" port. The signal will be sent via the "VIDEO OUT" port and received via "VIDEO IN" port. If the testing is ok, the tester displays several gradually dwindling photos on the desktop.
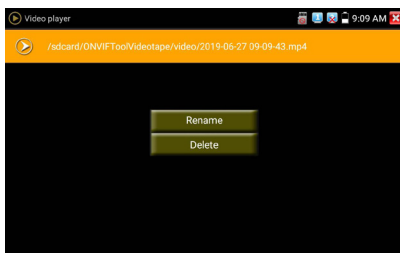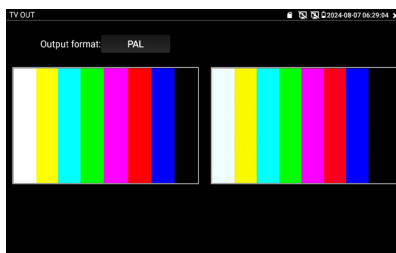
3.3.13 Color Bar Generator (TV OUT)

Press ![icon] to enter, the tester sends the color bars from the "Video Out" port. Press the icon "PAL", select "PAL/NTSC" output formats.

Press the selected color bars, testing image, or single bar (red, green, blue, white or black). Double-tap for full display on the screen and output, press ![X] to return main menu.

Application

BNC Loop Test: The tester can send and receive color bar generators through the tester's "Video Out and Video In" ports. It is used for testing transmission channels such as Video Optical, Video Cables, etc. The tester's "VIDEO OUT" port connects to the optical terminal's sending port, and "VIDEO IN" port connects to the optical terminal's receiving port.

A. When maintaining a dome camera, the tester sends out a color bar via its BNC output to the monitor at the monitoring center. If the monitor receives the color bar, it means the transmitted video channel works normally. The monitoring center can also judge if transmission has loss or interference.

B. The tester sends out the pure color bar (such as a white or black color), to test the monitor whether has bright or black dots.

C. The tester sends out a video signal image to test if the image received by the monitor has excursion.

3.3.14 Auto HD

Automatically recognizes the resolution and displays the image of the connected camera. It supports coaxial PTZ control and calls the OSD menu. It supports up to 8MP TVI/CVI/AHD and CVBS cameras.
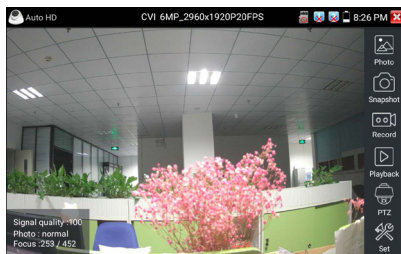
3.3.15 CVI Camera Test

For HD CVI camera, CVI dome camera test, and PTZ control.

Press the [icon] icon to enter.

When an HD CVI signal is input, the tester will display the image resolution on the top bar. Double-tap on the screen to make the image full screen.

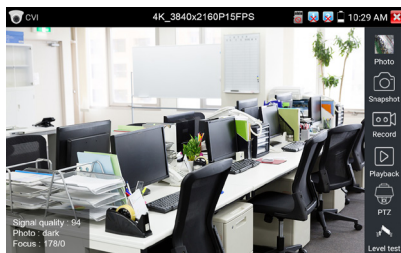The tester supports resolution as follows: 1280 x 720p 25FPS / 1280 x 720p 30FPS / 1280 x 720p 50FPS / 1280 x 720p 60FPS / 1920 x 1080p 25FPS / 1920 x 1080p 30FPS / 2560 x 1440p 25FPS / 2560 x 1440p 30FPS /2592 x 1944p 20FPS / 2960 x 1920p 20FPS / 3840 x 2160p 12.5 / 15FPS.

1. PTZ Control

1.1 Coaxial PTZ Control

Press the icon "PTZ" on the toolbar on the righthand side to do the corresponding settings.

Port: Select coaxial control.
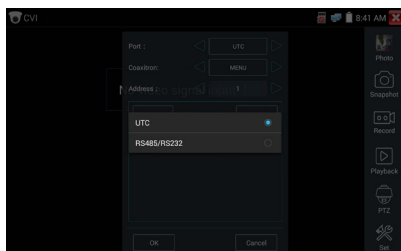
Enter the PTZ address to perform parameters settings.

Operation instructions, please refer to "3.3.8 PTZ (1) Video Monitor Test".

⚠ The PTZ address must be the same as the dome camera's or the decoder's. After setting the parameters, the tester can control the PTZ and camera lens.
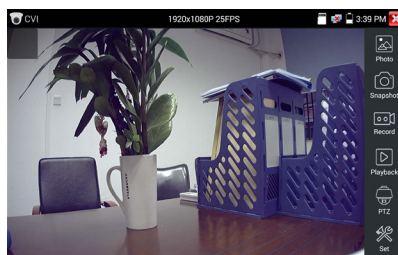
To Control PTZ by Screen Touch: Tap left, right, up or down on the touch screen to control the PTZ rotation direction, and the PTZ cameras will rotate accordingly. Move two fingers outward to zoom in or inward to zoom in.

To Control PTZ by Key Buttons: Press the ⟨△⟩⟨▽⟩ ⟨◁⟩⟨▷⟩ keys to control the PTZ's direction of rotation.
Press the (OPEN) key to turn on or press the (CLOSE) key to turn off the aperture.
Press the (FAR +) or (NEAR -) keys to adjust the focus manually.
Press the (TELE +) or (WIDE -) keys to manually adjust the zoom.

Set Preset Position

Move the PTZ camera to the preset position, then tap and input the preset position number. Tap "Set Position" to complete set preset position.
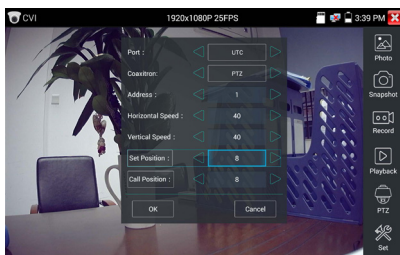
Call Preset Position

Tap the preset position area and input the preset position number. Tap "Call Position" to complete the call preset position.
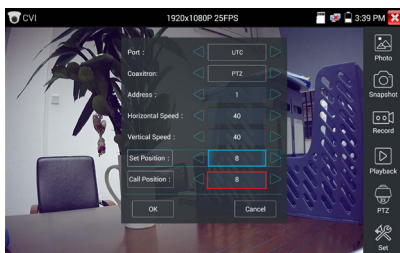
1.2   RS485 Control

For operation instructions, please refer to "3.3.8 PTZ (1) PTZ Control Parameters Settings".
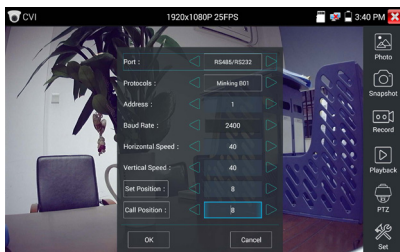
2.   Coaxial Camera Menu Settings

Tap the icon "UTC", select "Menu Setting" to enter the dome camera menu.
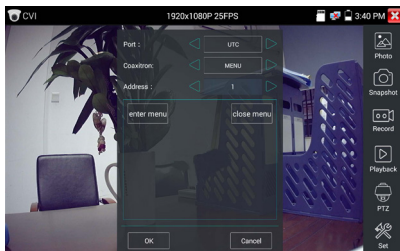
Input the dome camera's address code. After finishing the parameter settings, you can press the (ENTER) key or press the [ ] icon to call the dome camera menu.
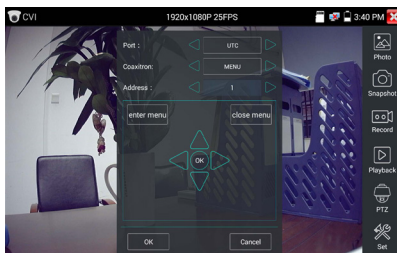
Press the arrow keys [△]/[▽] [◁]/[▷] to set the parameters.
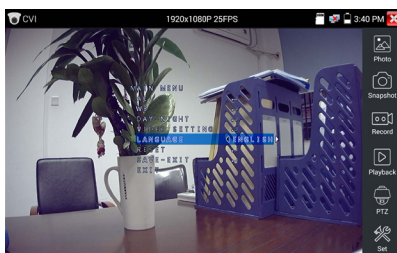
3.   Snapshot

For instructions related to Snapshot, Record, Photo Viewer, and Video Playback, please refer to "3.3.8 PTZ (1) Video Monitor Test".

Tap "Close Menu" or press the (ENTER) key to close camera menu.
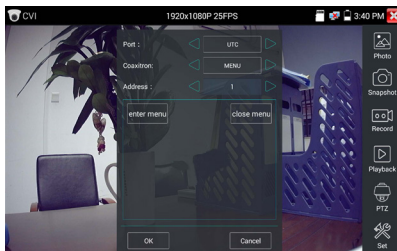
4.   Save Settings

Press the icon "Set" on the toolbar on the righthand side to enter the storage settings. There are options for auto-storage and manual storage.

When selecting Manual storage, the user can name and store the files manually each time.

When selecting Auto-storage, the files names will automatically be produced.

For more operation instructions, such as PTZ Control, Coaxial Camera Menu Settings, Snapshot, Recording and Playback, refer to the "3.3.6 CVI Camera Test" section of this manual.

3.3.16 TVI Camera Test

For HD TVI cameras, TVI dome camera tests, and PTZ control, press the icon.

This testing function supports the following resolutions: 1280 x 720p 25FPS / 1280 x 720p 30FPS / 1280 x 720p 50FPS / 1280 x 720p 60FPS / 1920 x 1080p 25FPS / 1920 x 1080p 30FPS / 1920 x 1080p 50FPS / 1920 x 1080p 60FPS / 2048 x 1536p 18FPS / 2048 x 1536p 25FPS / 2048 x 1536p 30FPS / 2560 x 1440p 15FPS / 2560 x 1440p 25 FPS / 2560 x 1440Pp 30FPS / 2688 x 1520p 15FPS / 2592 x 1944p 12.5FPS / 2592 x 1944p 20FPS / 3840 x 2160p 12.5/15 FPS

3.3.17 AHD Camera Test

For AHD cameras, AHD dome camera testing, and PTZ control, press the icon.

This testing module supports the following resolutions: 1280 x 720p 25, 30FPS / 1920 x 1080p 25FPS / 1920 x 1080p 30FPS / 2048 x 1536p 18, 25FPS / 2048 x 1536p 30FPS / 2560 x 1440p 15 FPS / 2560 x 1440p 25,30 FPS / 2592 x 1944p 12.5, 20FPS / 3840 x 2160p 15FPS

Coaxial Camera Menu Settings

Tap icon "UTC", select "Menu Setting" to enter the dome camera menu.
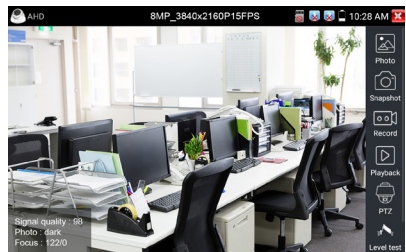
1.　**Coaxial PTZ Control**

UTC Control: Select "PTZ Control or PTZ Control-2". The AHD camera has two different selections. If the PTZ cannot be controlled when selecting "PTZ", select "PTZ-2".

Input the dome camera's address code. After finishing setting the parameters, you can press the (ENTER) key or press the icon to call the dome camera menu.

If the coaxial PTZ controls the AHD camera, no parameter settings are required.

For more operation instructions, refer to the "3.3.17 CVI Camera Test" section of this manual.

3.3.18 NET TOOL PRO

NET TOOL PRO Functions: Cable Test, Wireless Tool, Link Tool, Full Duplex Detection, PING, IP Scan, DHCP Server, PPPoE, OUI Search, Socket Tool, DNS, LLLDP.
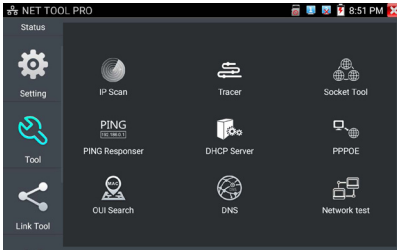
1. **IP Address Scan**
   Connect the cable to the LAN port. Set your IP address search range by changing the Start and End IP addresses. Press the "Start" button to scan through the IP address range. You can also input an IP address in the "Port Number Scan" to scan for open ports.
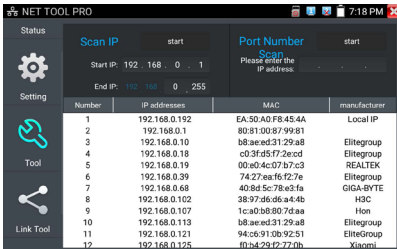
2. **PING Test**

   PING is the most conventional network debugging tool. It is used for testing to see if the connected IP camera or other network equipment's Ethernet port is working normally, and the IP address is correct.

   Connect a network cable to the LAN port and press the [PING] icon to open the PING tool. You can set your LOCAL (native) IP address, Remote IP address (e.g. IP camera), Packet count, Packet Size, Packet Time, and Timeout.

   Press "Start" to start pinging. If the IP camera or network device is not configured properly or not plugged in, it will say "Destination host unreachable" or "100% packet loss". If the tester connects to the device, the send and receive packets will have a 0% packet loss.
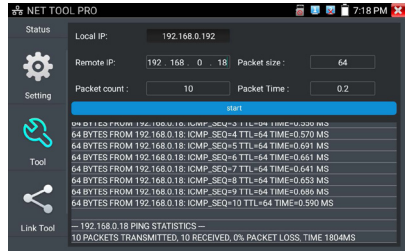
Note: It's normal that the first data packet will be lost when the test starts.

3. **Network Test (Ethernet Bandwith Test)**

   To use the Network tester, you will need two IP testers. One is used as a Server and the other as a Client. Both devices must be on the same network segment in order to communicate. Press the [icon] icon to open the Network Tester app.
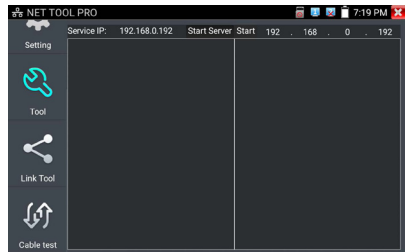

   When testing, you must use a tester or a computer with the Network Test Software installed as the Server, while the other tester sends out the packet test. The two testers must be in the same network segment.

A. **Start the Server:**

   Press the "Start Server" button to use the tester as a Server. It will display its IP address at the top of the screen.
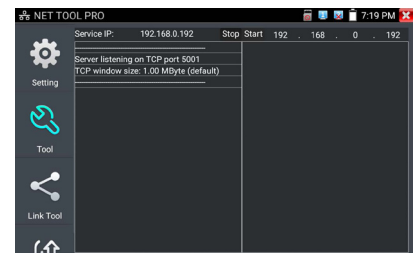
B. **Start Send Packet Test:**

   Using the other IP tester, type in the Server's IP address at the top right corner of the screen. This app is used

to send packets for network speed testing. Press the "Start" button to send the packets and start testing.
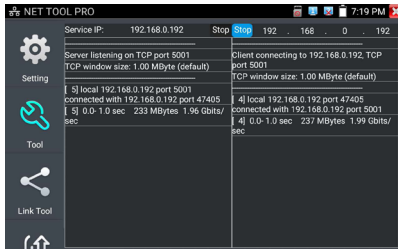
Network bandwidth testing can also be performed with a computer using compatible network bandwidth testing software. Install the network bandwidth testing software on a computer, as a test Client or Server, to do the testing with the tester. If using a computer as the server, the computer IP address is: 192.168.0.39

With the tester as a Client, the tester's IP address will be: 192.168.0.238. The Server and the Client need to be on the same network segment with different IP addresses. The Input Server's IP address is: 192.168.0.39 in the tester. Press "Start" to test the network bandwidth.

To use the tester as a Server and the computer as a test Client, select Client, and input tester's IP address to test.
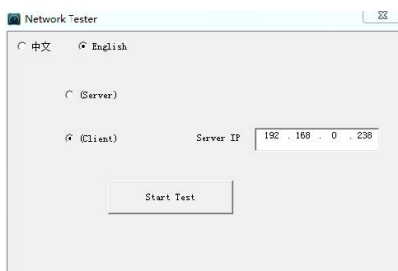
When using the tester as a Server, it shows the below results:

4. **Port Flashing**

    Application: The tester will send special signals to make the connected LAN port flicker at special frequency, which can be used to easily find the connected Ethernet cable. This function can prevent mistakes with connecting or disconnecting non-corresponding cables, which artificially interrupt network connection.

    How to Use: Connect a network cable to the meter's "LAN" port and press the 🎛 icon to open the Port Flashing app. Press "Start", and the IP tester will send a unique signal to make the connected LAN port of the switch flash. If the tester and PoE switch are connected correctly, the LAN port of the PoE switch will flash at special frequency. If not, there will not be any changes to the LAN port.
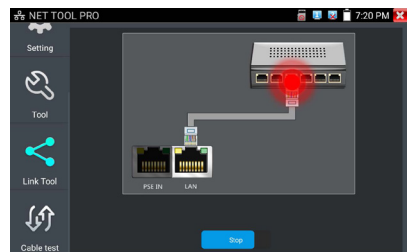
5. **DHCP Server**

    Press on the DHCP icon to open the DHCP server app. Select the "Start" check box at the top and make any desired changes to the network settings.

    Press "Save" to start assigning dynamic IP addresses for IP cameras and other networked devices.

    Press the "Refresh" button to check your Client list.
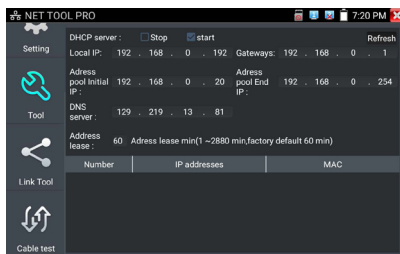
6. **Trace Route**

It is used to determine path of the IP packet access target.

Note: Trace the route testing results only for reference. For accurate test route tracking, use a professional Ethernet tester.

Press [icon] to enter the trace route module.

Input the tracking IP address or domain name in the Remote Host IP. Here you can set the maximum hop count, normally set to 30.

Press "Start" to trace the goal address.
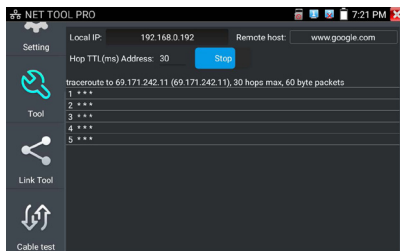
7. **Link Monitor**

Press the [icon] icon to open the Link Monitor app. This app is used to see if an IP address is occupied by other network devices. This will avoid new IP address conflicts.

Press "Add " and enter the desired IP address. To test different network segments, press the "Settings" icon on the main menu and go to IP Settings and make the desired changes. Once the desired IP addresses are added to the Link Monitor list, press "Start".

If the IP address status shows a check mark, the IP address is occupied. If the IP address status shows an X, the IP address is available. Press "Stop" to stop testing.

Application: Add an IP camera or other network device to the current network group. The new IP address must not be occupied, otherwise it will cause IP conflicts. Link Monitor can check if the new IP address is occupied.

3.3.19 Power Management V2.0

PoE 55V OUT

To use the PoE Power Output function, press the switch from "OFF" to "ON". You can also use the drop-down menu in the upper right corner of the screen to enable the PoE power output app. PoE power is delivered via pins 1, 2, 3, 6 and 4, 5, 7, 8 on the LAN port. The network camera that supports PoE can be directly connected to the tester for communication.
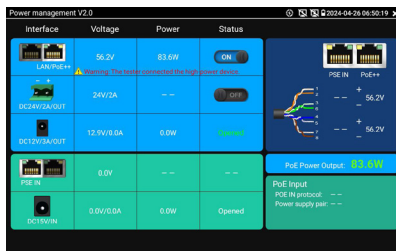
Press "On", and the 55V output voltage and power will be displayed in real time.

⚠ **Notice:**

1. Ensure that the network cable connected to the PoE power output port (LAN port) of the tester is a straight-through cable and not short circuited; otherwise, the tester may become damaged.

2. Before turning on the PoE power output, make sure the IP camera supports PoE power. Otherwise, it may damage the IP camera.

   The tester supports a PoE maximum output of 90W. If the power input is greater than 90W, the meter can become damaged and enter protected status.

DC24V/2A

Ensure the camera supports 24VDC power input before using this function. Otherwise, the camera could become damaged.

Use the green plug terminal in the packing kit to connect the cables. The positive and negative terminals are marked on the

ports. When connecting, please pay attention to the positive and negative terminals, and do not connect them in reverse.

Press "On", and the 24V power output voltage and power will be displayed in real time.
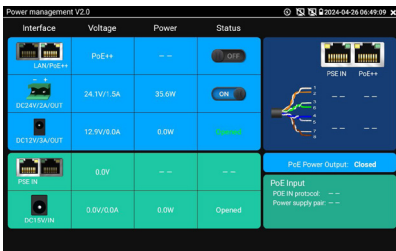
After exiting the "DC 24V" screen, the 24V power supply will remain on, and the "24V is on" message will be displayed in the tester's window until it is in sleep mode or the power output has been turned off.

Notice:

A. Don't input any power into the "DC24V/2A OUTPUT" port of the tester to avoid damaging the tester.

B. Don't output DC24V/2A power to the DC15V/ IN port to avoid damaging the tester.

C. The tester's power output is close to 2A. If the IP camera's power is over 2A, the tester will automatically enter protection mode. Disconnect all the connections of the tester and then connect the power adapter to the tester to resume.

D. Make sure the tester is fully charged or more than 80% charged, otherwise the tester will show "low power", "not able to supply power".

DC12V/3A/OUT

When the tester is turned on, the DC 12V 3A power output functions are automatically turned on.
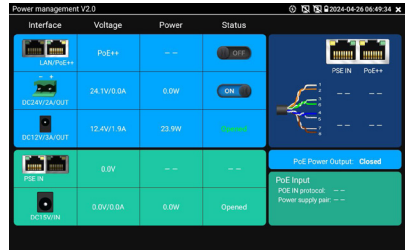
PSE IN

Connect a network cable from a PoE switch to the IP tester's PSE IN port. Connect an IP camera or other PoE device using the node to the IP tester's LAN port. The PoE Voltage and Power supply protocol Standard 802.3af/at or Non-Standard as well as the cable's pin connection status will appear onscreen.
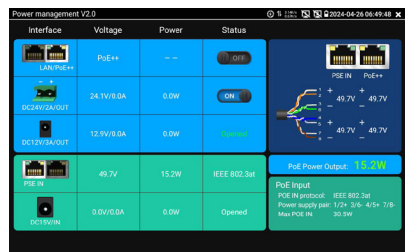

⚠ **Note:** This test is for measuring the voltage being drawn by the PoE node, and the IP tester must be between the PoE switch and the PoE node for this test to work.

⚠ **Note:** The PoE switch must be connected to the PSE IN port. The powered device such as an IP camera or other PoE node must be connected to the LAN port.

⚠ **Note:** Do not connect the PoE power supply equipment (such as a PoE switch) to the tester's UTP/SCAN port; otherwise, it will damage the tester.

PSE Transmission

When performing PoE/PSE voltage testing, the PoE/PSE must be connected to the tester's PSE "IN" port, and the camera must be connected to tester's LAN port. The tester can transmit voltage to power the camera and transmit data at the same time. If a computer is connected to the PoE/PSE, it can log into the connected tester's PoE camera.

15 VDC Power Input Test

Connect 15V power adapter to tester's charging port, enter the voltage measurement app, and the screen will show the current adapter input voltage and power.

Note: The 15V input power being measured is the battery charging power and the device's working power. The measured power will change depending on the difference between the battery power and backlight brightness.
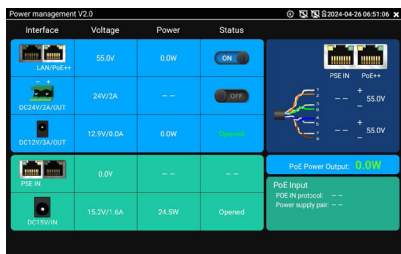
⚠ **Warning:** Do not connect devices with input power over 17V to the tester's "15V IN" port; otherwise, it will damage the machine.

3.3.20 PoE++ Power/DC12V 3A and DC5V 2A USB Power Output

When the tester is turned on, the DC 12V and DC 5V power output functions are automatically turned on. If the IP tester is turned off, the DC 5V USB can still be used to power an external USB device.

To use the PoE Power Output function, press the 🔲 icon and change the switch "ON".

If using an IP camera, it needs to be connected to the LAN port before you turn the PoE Power on. If the IP camera supports PoE, the PoE power is delivered via pins 1, 2, 3, and 6 from the LAN port. The IP tester will display "PoE++ ON" at the top of the screen when the PoE power is on.

⚠ **Note:**

1. Don't input power into the "DC12/3A OUTPUT" port of the tester.

2. Don't output DC12V/3A power to the DC15V/IN port of an IP camera tester to avoid damaging it.

3. The IPC tester power output is close to 3A. If the IP camera's power is over 3A, the tester will automatically enter protection mode. Disconnect all the connections of the tester and then connect the tester with the power adapter to resume the tester.

4. Before turning on the PoE power output, please make sure the IP camera supports PoE power; otherwise, it may damage the camera.

5. Make sure you plug in your IP camera to the LAN port prior to turning on PoE power.

6. Make sure the tester is fully charged or more than 80% charged; otherwise the tester will show "low power", "not able to supply power".

## 3.3.21 Cable Test

Press the 🔳 icon to enter the Cable Test module.

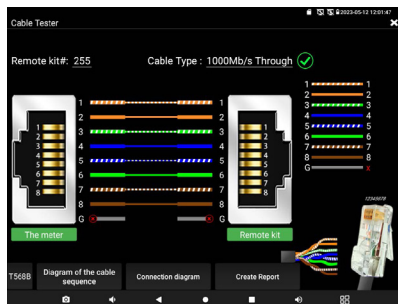Connect a LAN cable or telephone cable to the CCTV tester and cable tester. The connecting status, cable type, and the sequence of wires (as well as the serial number of the cable tester kit) will be displayed. The cable tester's number is 255.

Visual Judgment of Network Cable Availability:

✓ The cable sequence is correct, generally corresponding to Gigabit straight/cross network cables.

⊗ Cable sequence is wrong, but the cable is still available, generally corresponding to 100M straight-through/cross network cable.

⊗ All sequences of the cable are wrong or not available.

Meter-end/Cable Tester-end Fault Location:

If the meter-end/cable tester-end displays "x", it means the RJ45 cable connector or the cable within 1 meter from the RJ45 cable connector is faulty.

If the middle part of sequence displays "x", it means theRJ45 cable connector at the end of Tester/Cable tester is normal, and there is a breakpoint greater than 1 meter away from the RJ45 cable connector.

If the middle part of sequence is not communicating and not displaying "x", it means the RJ45 cable connector at the near the tester is faulty, and the middle of the cable is normal.

The tester-end function can perform RJ45 cable connector fault detection even when the remote end is not connected to the cable tester's UTP interface.
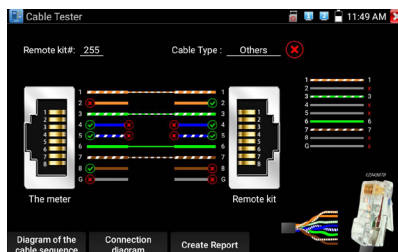
3.3.22 RJ45 Cable TDR Test

Connect a cable to tester's LAN port, and press the ⬜ icon to enter RJ45 cable TDR test app.

Single Test: Test cable status, length and attenuation.

Repeat Test: Test the cable status, length, and attenuation again.

Status: After linking up, the screen will display "online". If there is no link up or there is an open circuit, the screen will display "open circuit". If the cable pair is short circuiting, the screen will display "short circuit".

Length: The max test length is 180 meters. When the cable is an open circuit or short circuit, and you test the cable length, if the screen displays "online", the test results will not be accurate.

Cable Quality Test: Green means that the cable quality is Good, Yellow means the cable quality is Poor, and Red means the cable is wet. The attenuation value will also be displayed if the cable length is over 10 meters long.

Advanced Test: Test cable pair status, length, attenuation, reflectivity, impedance, skew, and other parameters.

Attenuation Reflectivity: If the reflectivity value is 0, it means the cable has the highest quality.

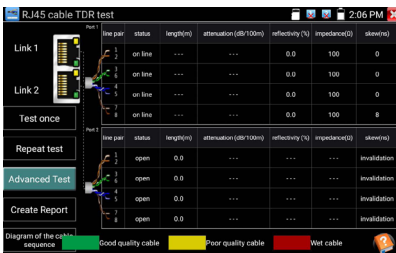**Impedance:** If the impedance value is 100Ω, it means the cable has the highest quality for communication. For reference, the range is generally between 85-135Ω.

Skew: After a 1000M link up, when the skew value is 0 ns, the cable has the highest quality of communication. If it is over 50 ns, the cable will cause a Bit Rate Error during transmission.

Cable Sequence Diagram: Shows straight-through and cross-over cable diagrams and the cable sequences for reference.
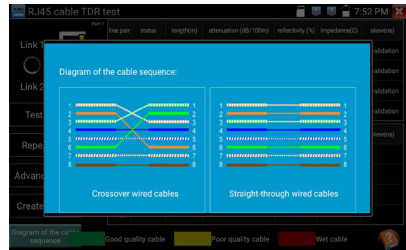
Press "Help" to check the instruction of all parameters.
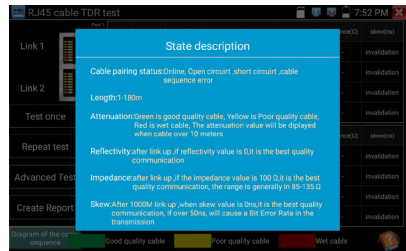
3.3.23 Cable Length

Note: The measured cable cannot be connected to any other device. If connected to other devices, it will cause incorrect measurement results.

For BNC cable testing, insert the RJ45 to BNC converter into the UTP port, and connect alligator clips to the BNC interface. Other cables can be measured by removing their jackets and clamping the red and black alligator clips onto the center copper core of the cable. It is necessary to have good contact between the measured cable and the tester for accurate measurement results.

Open Circuit Test: Press the ⬜ icon to enter the cable length module. This module supports BNC, network, RVV control, Telephone line, and TVVB cables. 11 groups of user-defined cable tests can be set. Press "Cable Name" to select the cable type, and press "Length Test" to measure the cable length.

Press "Repeat Test" to repeat the cable length test. If there is a short-circuit, the cable length will not be displayed.
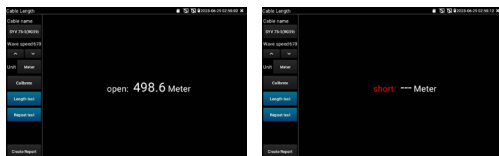
Connect a network or telephone cable using an RJ45 connector to the UTP network port at the bottom of the tester. When testing, select the cable type "UTP CAT 5E (4 pair) or UTP CAT 6E (4 pair).
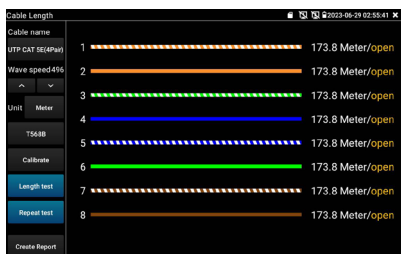
Short Circuit Test: Select the cable type "UTP CAT 5E/6E (4 pairs), and see if there are any short circuits of the corresponding wire pairs of the network cable.
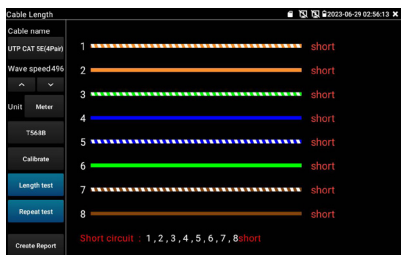
Calibration: Due to differences in production processes and materials, the impedance of cables from different manufacturers may vary, causing a large deviation in test results. If testing different brands of cables, the calibration function should be used.

Select "Cable Type, and then "User-Defined".

Before testing, adjust the left wave speed.
Note: The wave speed may need to be adjusted several times.
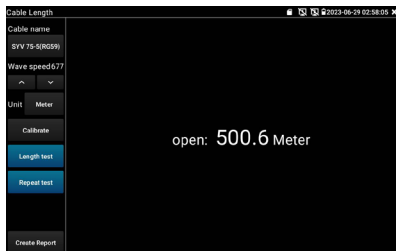
After getting the correct measurement results: Press "Calibration", enter the new cable name, select the cable type corresponding to the cable, fill in the wave speed measured, and press "OK" to save.

If incorrect data is saved, you can press "Reset" to restore the wave speed of all cables to factory settings.
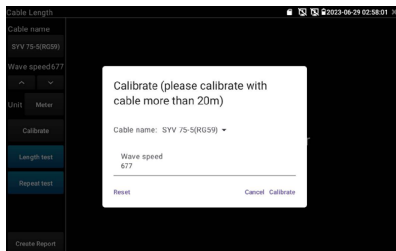
Note: Cables from different manufacturers may cause inconsistent TDR reflection signals, thus, inconsistent measurement results. However, these results can be used for reference as needed.

3.3.24 Audio Record

Connect an audio device to the IP tester's audio input port. Press the icon to enter the Audio Recorder app. Press the red button to stop, and the unit will prompt you to save the recording.

3.3.25 Data Monitor

Press the icon to enter the app. Press "Setting" to choose the baud rate of RS485. It must be the same as the DVR or Control keyboard.

The DVR or Control keyboard sends the code to the tester. If it can be read, the protocol will appear in the upper right corner. For example, it may show Pelco D or P:---.

When the tester receives the code, press the (CLOSE) or (RETURN) key to clear.

The RS485 port displays the PTZ control code of the multi-functional keyboard or DVR. The controller can check the status of the RS485 transmission through the code on the display. (The RS485 communication rate must be the same.)

Application: Check if the RS485 communication state of the video optical transmitter is normal. You can also analyze the protocol and check the data through the displayed code.

3.3.26 Audio Player

Press the icon to enter the app. The audio player only supports MP3 format audio files.

3.3.27 Media Player

Press the icon to enter the app.

The Media player can browse video and image files. It supports the video formats of MP4, H.264, MPEG4, and MKV. The recorded files from the tester can be played directly via the Media player. The Media player will automatically display the video files from the SD card. Press on the desired file to play, or press "Return" to exit.

To rename or delete an existing file, press and hold on the file name for a few seconds until the screen below appears. You can then rename or delete the file.


3.3.28 RTSP Player

The RTSP Player app will allow you to view the RTSP video stream from an IP camera. If you are unable to view your camera via the ONVIF or IPC Test apps, it is possible your camera will have an RTSP stream and you can view live video using this app.

From the main menu, select the "APP Tool" folder and then select the "RTSP Player" to open the app. If the IP camera uses MJPEG, select the RTSP icon. If the IP camera uses H.264, select the "RTSP HD" icon.

Local IP: This is the IP testers IP address.

RTSP Add: This is where you can manually enter the IP camera's RTSP URL or press on Search to search the network for cameras that use an RTSP stream.

IPC Username: Enter the IP camera's username.

IPC Password: Enter the IP camera's password.

Once you have entered all the necessary information, select Enter to view the RTSP stream.

Note: In the event the IPC tester does not automatically detect the RTSP stream, refer to the camera manufacturer's specifications for the RTSP stream URL. You may find this

online with a search of the camera model number and the word "RTSP".

3.3.29 HIK Test Tool

The Hik Test Tool app is designed for activating and debugging Hikvision cameras. It can automatically identify inactivated Hikvision cameras and display images from the Hikvision cameras.

Tap icon to enter the test tool app.

Activation: Select "online detection" to display the inactivated camera and press "activate".
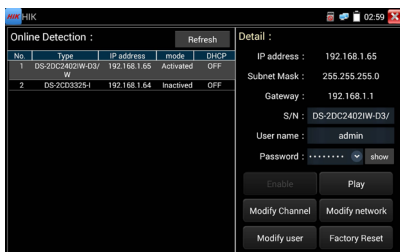

Activate and Batch Activate are optional.
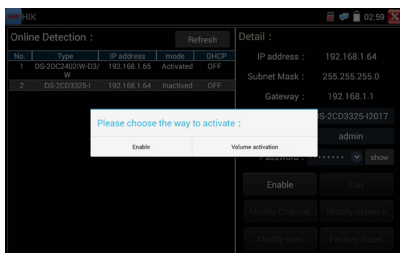
Auto Open ONVIF Protocol: After activating new HIK cameras, press any of the following: play, modify the channel name, modify network information, modify user information to automatically open the selected camera's ONVIF protocol.

Play: Security status shows the "activated" camera. Enter the correct camera password on the right and press "play" to pop up the "private protocol" or "speed ONVIF" options. Select the protocol you need to see the camera images.
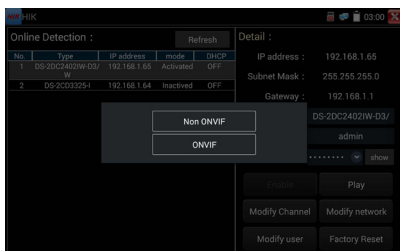

Modify Channel Name: Pressing "Modify the channel name" will pop up OSD settings, including time, channel name and other optional items.

After selecting the channel, you can edit the channel name, modify the display position, and change the font size. Select "default location" in "content location" for default settings. Select "Customization" to adjust the channel name and display location and press "OK". Press the return key or press any area of the screen to return to the main screen.
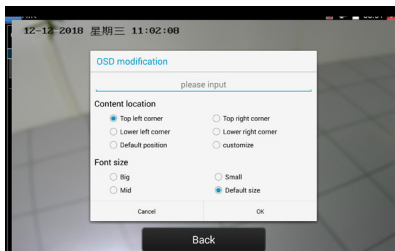
Modify Network Information: Here you can modify and batch modify the camera IP address, subnet mask, and modify other parameters.
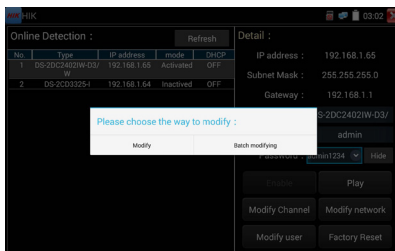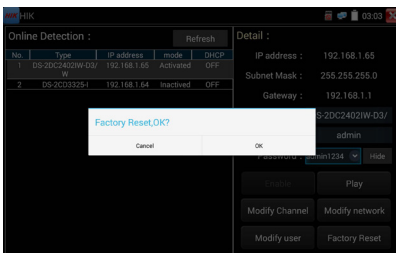

Enter a new IP address and subnet mask. The default gateway will be automatically modified according to the IP address. Press "OK" to save the changes.
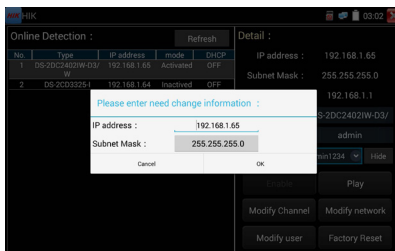
**Modify User Information:** Modify the camera's username and password.

Factory Reset: Camera factory reset.

3.3.30 Dahua Test Tool

The Dahua test tool is developed for the installation and debugging of Dahua IP cameras. It can display images, and modify IP addresses, usernames, passwords, etc.

Activation: Select "online detection" to display the "inactivated" camera and press "activate".
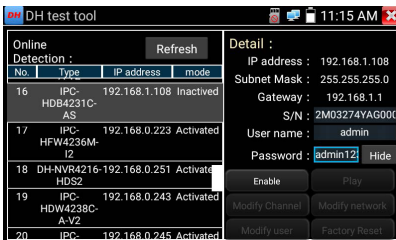

Activate and Batch Activate are optional. A phone number can also be entered for resetting the password.
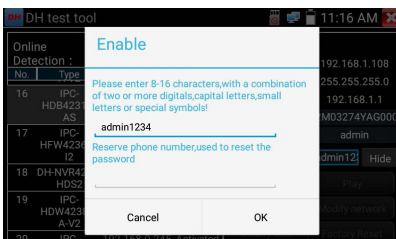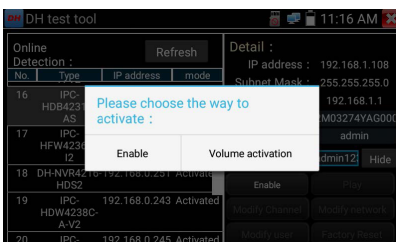
Play: When "activated" is displayed, input the correct password, and press "Play". "Private Protocol" and "ONVIF" will appear. Select the corresponding protocol to view the camera's image.


Modify Channel: Press "Modify Channel", and a pop-up will appear with the OSD settings for time, channel name, etc.
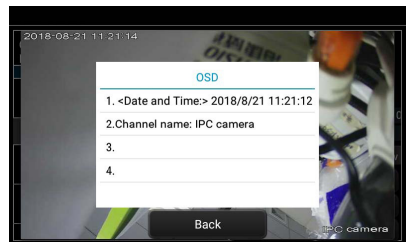

After selecting the channel name, you can edit the channel name, modify the display position, and change the font size. If you select "Default Position" of content location, then there is no need to modify.
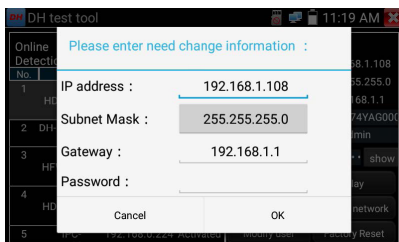
If you select "Customize", then you can modify the channel name and display position. Press "OK" to view the image. Press "Back" or "Return" to return to the previous screen.
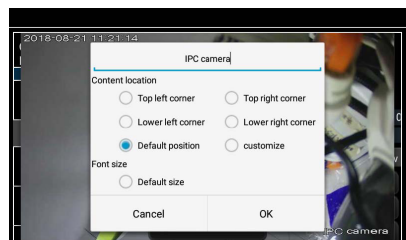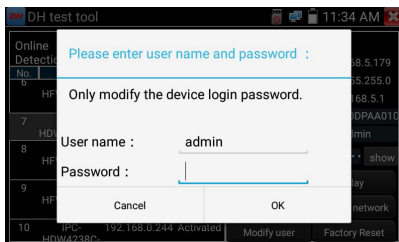

Modify Network: Here you can modify, batch modify, and can modify the camera IP address, subnet mask, and gateway.
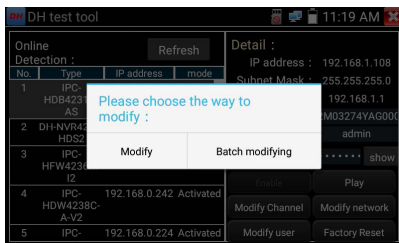
Input a new IP address, and press "OK" to save the modification.

Modify User Information: Modify the camera's username and password, which is ONVIF, Dahua test tool. This is the IPC TEST username and password, not web username and password.


Factory Reset Setting: Camera will be soft reset. The device's username, password and network settings will be saved. Other settings will be factory reset.
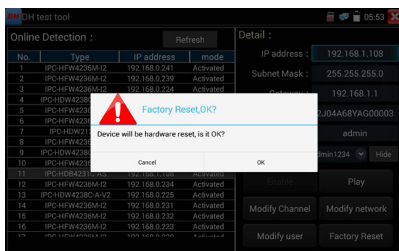
3.3.31 Update

Copy the downloaded update file to SD card's "update" directory. If no directory exists, create a new folder called "update".

Press the ⚙ icon to open the Update menu. Select "Local Update" to update via the SD card or select "Online Update" to check for updates on the internet. If there are applications that need updating, the applications will be displayed on the screen. Press related applications to update to the latest version.
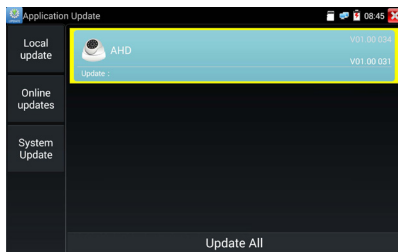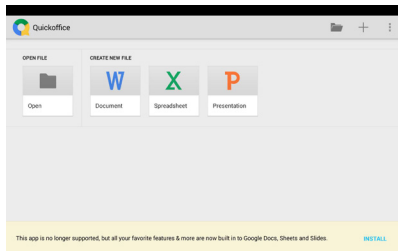

Update Online: Before using update online, you need to enter settings > user management to register first.

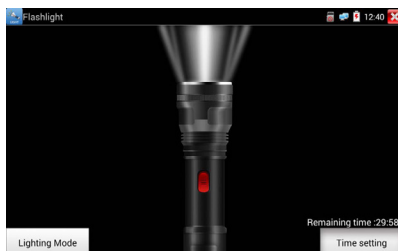**System Update:** Connect to the internet to update the system.

3.3.32 Office

The Quickoffice app supports Excel, Word, and PowerPoint documents.

3.3.33 LED Flashlight

Press the 🔦 icon to turn on the flashlight app.

While in the flashlight app, press the red button to turn on the flashlight. Press it again to turn it off. If you don't press the red button ⊠ to shut off the light but press the button to exit the app, the light will stay on. Press the "Time Setting" button to set a timer that will shut off the light automatically.

3.3.34 Browser

Press the 🌐 icon to enter the Browser app.

Type in the camera's IP address and press "Go" to access the IP camera's interface.

Note: You will not be able to view live video in the web browser. For viewing video, use the IP tester's live camera view apps.
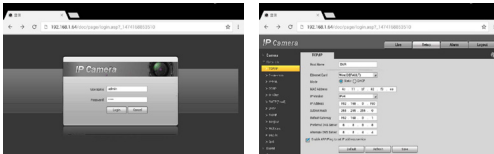
The IP camera and IP tester must be on the same network segment for the browser to work with the camera.

If they are not in the same network segment, press the RETURN button or press "Return" to exit. Open the "Settings" app from the main menu to change the IP tester's network settings to match the IP camera's.

3.3.35 Notepad

Notepad can be used to record important testing results. Press the "Save" key to save the contents. The Notepad app will automatically record the storage date and time of the document.
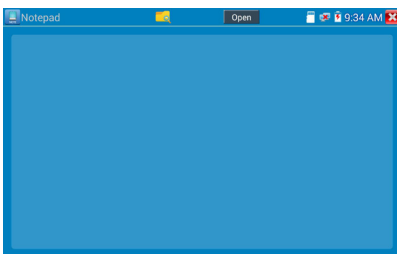
Press 📝 to view the Notepad, and all saved files will appear. Press each file to show its details. Press the file for several seconds, and a prompt will appear to delete it.
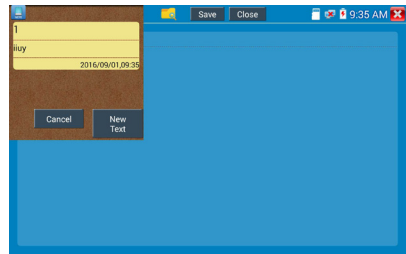
3.3.36 System Settings

Press the ⚙ icon to enter the System Settings.

Language: Select your desired language: English, Chinese, Korean, Russian, Italian, Polish, Spanish, French, Japanese, German, or Turkish.

Type style: You can select fonts or install other fonts.
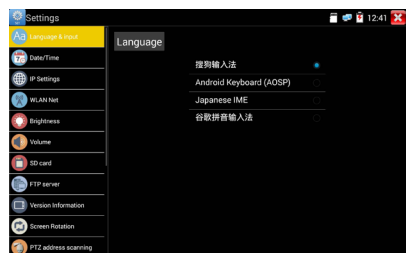
Date/Time: Set the Date and Time of the IP tester.

IP Setting: Manually set the IP address, Subnet Mask, Default Gateway, DNS address, or you can select "Dynamic allocation" to use DHCP. To test multiple network segments, press "Advanced " and then press "Add " to enter another IP address for the IP tester.
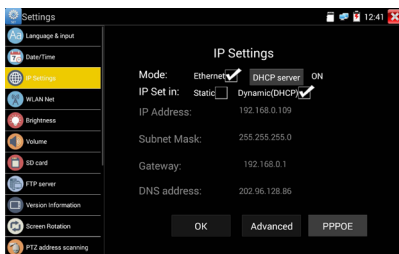
After setting an advanced IP address (refer to the photos above), the unit can test two network segments (192.168.5.0) and (192.168.1.0).

WLAN Net: Turn WiFi off or on by pressing the "Open the WiFi" button. Once WiFi is turned on, and press connect to WiFi, it will scan for wireless networks in your area.

Select and press "WIFI" for several seconds to set the static IP address.

WiFi Hotspot: Input "SSID" name and "password", and then press "OK" to create a WiFi hotspot.

Brightness: Set the desired brightness of the IP tester and adjust the sleep time settings.

Volume: Set volume level.

SD Card: Displays the SD Card Capacity. You can also format the SD card or unmount it before removing it.

FTP Server: Once the IP tester connects to a network, a computer can be used to read the SD card files via FTP.
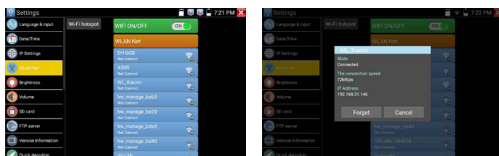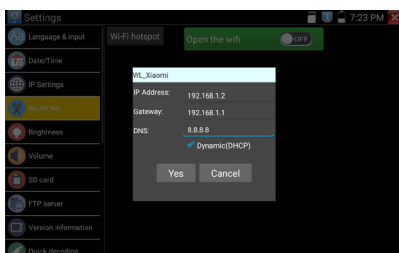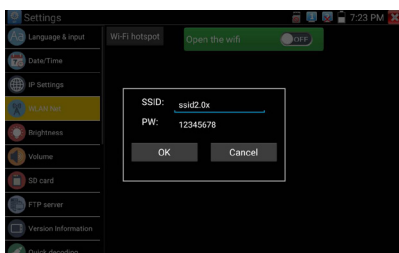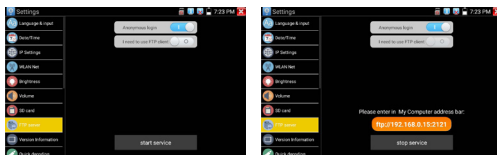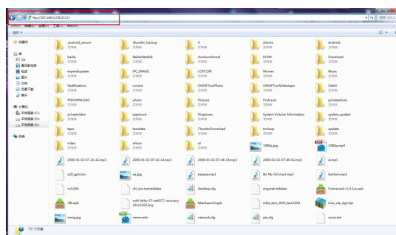

Start the FTP server and then input the tester's FTP address in the PC's address bar. This will enable the PC to read, copy, and edit the files from the SD card without the use of SD card reader.

Version Information: Shows each app's version information. Press and hold on an app to uninstall it.

Screen Display Rotation: Press on "Screen Rotation" to flip the IP tester's display 180 degrees. This function is very convenient when the user has to connect a LAN cable on the bottom of the unit without having to flip the unit itself.

PTZ Address Scan: You can toggle the PTZ Address scan off or on before entering the "PTZ Controller" app. This needs to be turned on to use the PTZ Scan feature of the PTZ app.

Online Registration: After the tester connects to network, fill in registration information to register the device.

User Feedback: If you have any comments or suggestions for the tester, connect it to the network and write your feedback.

Lock Screen: The meter is not locked by default. You can choose a password lock screen, pattern lock screen, or "NO".

Password Lock Screen: Set a password. You can use letters, numbers, or special characters in the password. Enter it again to confirm. When the meter is in standby mode or when you turn it on, you can input your password to enter.

Pattern Lock Screen: Draw a pattern to lock. While the meter is in standby mode or when you turn it on, you can input your pattern to enter.

To modify your lock screen password, you need to input the lock password again. Select password lock screen or pattern lock screen to reset the lock screen password. After resetting the pattern lock screen, you need to draw a new lock pattern.

Restore the Factory Settings: When resetting to factory settings, all your personal files and apps will be removed. Make sure any data is backed up before resetting to factory settings.

3.3.37 File Explorer

Press "File" on the top bar tool and select internal or external storage. Press on the upper right corner icon "..." for a pop-up menu where you can select other operations or exit.

Browse
View any Music, Videos, Pictures, Documents, Zip files, etc. stored on the device.
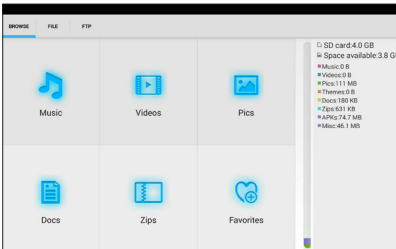
FTP Server
You can choose the internal or an external SD card. For other operation details, refer to the "FTP Settings" part of this manual.

3.3.38 Audio Test

You can test the audio input from audio pickup devices by connecting the audio pickup device to the IP tester with the supplied audio cable.

4. Specifications

4.1 General Specifications

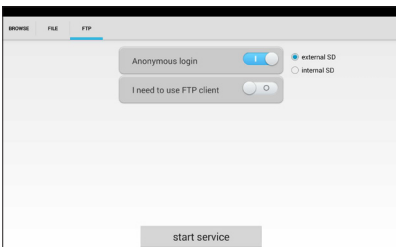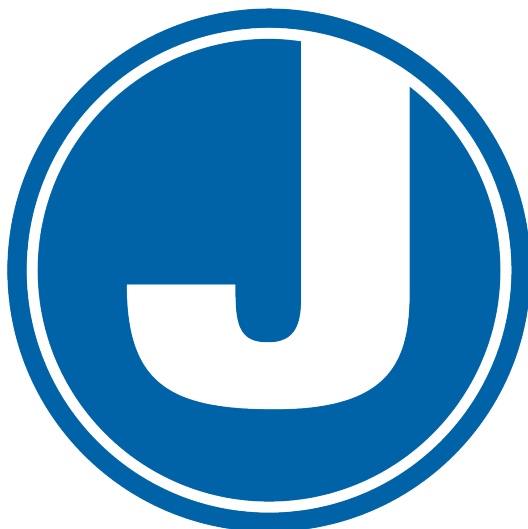| Model	CTV-8K IP Camera Tester
Display	7-inch touch screen, 1280 x 800 resolution
Network Port	Auto adjusting 10/100/1000M Mbps, RJ45, Dual LAN port
WiFi Speed	150M
8K H.265 Mainstream Test	New hardware decoding, 8K H.265/4K H.264 camera image display by mainstream testing
IP discovery	Auto-scan the whole network segment camera IP
Rapid ONVIF	Search cameras quickly, auto login and display images from the camera, and activate Hikvision camera
Hik Test Tool	Batch activate Hikvision cameras, display images from the camera, modify channels, batch modify IP, change username and password parameters, etc.
DH Test Tool	Batch activate Dahua cameras, batch modify IP, modify channels, change username and password parameters, etc.
IP Camera Type	ONVIF, ONVIF PTZ, Dahua IPC-HFW2100P, Hikvision DS-2CD864-E13, Samsung SNZ-5200, Tiandy TD-NC9200S2, Kodak IPC120L, Honeywell HICC-2300T, RTSP Viewer
Auto HD	Auto-recognize the resolution and auto-display the image of the connected camera. Supports coaxial PTZ control and calls the OSD menu. Supports up to 8MP TVI/CVI/AHD and CVBS cameras.
CVI Video Signal Test	1 channel CVI input (BNC interface). Supports resolutions: 720p 25/30/50/60FPS,1080p 25/30FPS, 2560 x 1440p 25/30FPS, 2592 x 1944p 20FPS, 2960 x 1920p 20FPS, 3840 x 2160 12.5/15FPS.
TVI video signal test	1 channel TVI input (BNC interface). Supports resolutions: 720p 25/30/50/60FPS, 1080p 25/30FPS, 2048 x 1536p 18/25/30FPS, 2688 x 1520p 15FPS, 2560 x 1440p 15/25/30FPS, 2560 x 1 944p 12.5/20FPS, 3840 x 2160 12.5/15FPS
AHD Video Signal Test	1 channel AHD input (BNC interface). Supports resolutions: 720p 25/30FPS, 1080p 25/30FPS, 2048 x 1536p 18/25/30FPS, 2560 x 1440p 15/25/30FPS, 2560 x 1944p 12.5/20FPS, 3840 x 2160p 15FPS
Analog Video Test	1 channel BNC input & 1 channel BNC output, NTSC/PAL (Auto adapt)
Zoom Image	Supports Analog and IP camera image zooming & movement
Snapshot, Video Record and Playback	Capture current images and record live video as JPG file. Media player will view photos and playback video
HDMI IN	HDMI IN, support 4K 30FPS, 3840 x 2160p 30FPS, 720 x 480p / 72 x 576p / 1280 x 720p / 1920 x 1080p / 1024 x 768p / 1280 x 1024p / 1280 x 900p / 1440x900p
HDMI Output	1 channel HDMI output, supports up to 4K 60FPS
VGA Input	VGA in HD signal test
RJ45 Cable TDR Test	RJ45 cable TDR test and cable quality test -- to test cable pair status, length, attenuation, reflectivity, impedance, skew and other parameters.

24V 2A Power Output	Output DC24V/2A power to camera
12V 3A Power Output	Output DC12V/3A power to camera
USB 5V Power Output	5V 2A power output
PoE++ Power Output	PoE++ power output, Max power 90W
Drop-down Menu	PoE power switch, IP setting, WLAN switch, HDMI IN functions, screen lock, password lock screen or pattern lock
Audio Test	1 channel audio signal input and 1 channel audio signal output to connect headphones
PTZ Control	Supports RS485 control, Baud 600-115200bps, Compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, and others
Color Bar Generator	Output one channel PAL/NTSC color bar video signal for testing monitors or video cables (Red, Green, Blue, White and Black colors)
UTP Cable Tester	Test UTP cable connection status and display on the screen. Read the number on the screen
Data Monitor	Captures and analyzes the command data from controlling device, also can send hexadecimal
Net Tool Pro	NET TOOL PRO-Cable Test, Wireless Tool, Link Tool, Full Duplex Detection, PING, IP Scan, DHCP Server, PPPOE, OUI Search, Socket Tool, DNS, LLLDP
PoE/PSE Voltage Test	Measures PoE switch voltage and displays pin configuration
Cable Length	TDR supports cable length up to 1.8 mi (3 km)
POWER	
External Power Supply	DC 15V 1.6A
Battery	Built-in 11.1V lithium polymer battery, 5200mAh
Rechargeable	Fasting charge, after charging 3.5 hours, normal working time 11 hours
PARAMETERS	
Operation Setting	Capacitive touch screen, OSD menu, select your desired language: English, Chinese, Korean, Russian, Italian, Polish, etc.
Auto Off	1-30 (mins)
GENERAL	
Working Temperature	-10°C - +50°C
Working Humidity	30% - 90%
Dimensions/Weight	240 mm x 154 mm x 46 mm (620 g)

NOTES

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