



SF-TESTER-ARM-5N1-4K



INSTRUCTION MANUAL

- Thank you for purchasing the IP camera tester. Please read the manual before using the IP camera tester and use properly.
- For using the IP camera tester safely, please first read the 「 Safety Information 」 carefully in the manual.
- The manual should be kept well in case of reference.
- Keep the S/N label for after-sale service within warranty period. Product without S/N label will be charged for repair service.
- If there is any question or problem while using the IP camera tester, or damages occurred on the product, please contact our technical Department.

# CCTV TESTER User Manual

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### 1 .Safety information

- ◆ The tester is intended to use in compliance with the local rules of the electrical usage and avoid to apply at the places which are inapplicable for the use of electric such as hospital, gas station etc.
- ◆ To prevent the functional decline or failure, the product should not be sprinkled or damped.
- ◆ The exposed part of the tester should not be touched by the dust and liquid.
- ◆ During transportation and use, it is highly recommended to avoid the violent collision and vibration of the tester, lest damaging components and causing failure.
- ◆ Don't leave the tester alone while charging and recharging. If the battery is found severely hot, the tester should be powered off from the electric source at once. The tester should not be charged over 6 hours.
- ◆ Don't use the tester where the humidity is high. Once the tester is damp, power off immediately and move away other connected cables.
- ◆ The tester should not be used in the environment with the flammable gas.
- ◆ Do not disassemble the instrument since no component inside can be repaired by the user. If the disassembly is necessary indeed, please contact with the technician of our company.
- ◆ The instrument should not be used under the environment with strong electromagnetic interference.
- ◆ Don't touch the tester with wet hands or waterish things.
- ◆ Don't use the detergent to clean and the dry cloth is suggested to use. If the dirt is not easy to remove, the soft cloth with water or neutral detergent can be used. But the cloth should be tweaked sufficiently.

## 2. IP Camera Tester Introduction


### 2.1 General

The IPS touch screen IP camera monitor is designed for maintenance and installation of IP cameras, analog cameras, TVI, CVI, AHD cameras, as well as testing 4K H.264 /4K H.265 camera by mainstream, The tester enables it to display network HD cameras and analog cameras in high resolution. The unit supports many ONVIF PTZ and analog PTZ control. The combination of touch screen and key buttons make the IP camera tester very user- friendly.

## 3. Operation



### 3.1 Installing the Battery



The tester has built-in lithium ion polymer rechargeable battery. The battery cable inside battery cabin should be disconnected for safety during transportation!


Prior to the use of the instrument, the battery cables inside the battery cabin should be well connected. Pressing the key  continuously can power on or off the tester.

 **Notice:** Please use the original adaptor and connected cable of the device!

When the battery icon is full or the charge indicator turns off automatically, indicate the battery charging is completed.

 **Notice:** 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.

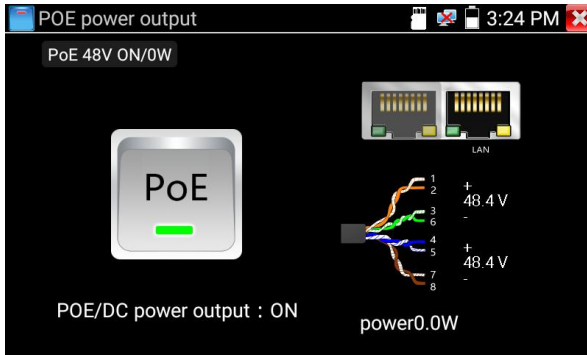
 **Notice:** Press the key  several seconds to restore the default settings when the instrument works abnormally.

 **Notice:** While Charging, someone must be present.


## 4. IP Camera Testing

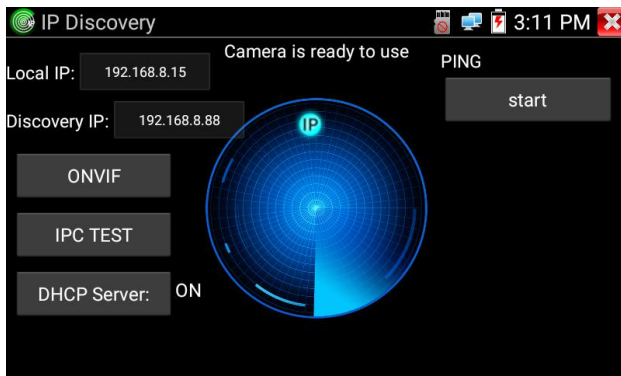
### 4.1 Power Camera

Camera can be powered from the DC 12V/3A output or by Power over Ethernet.



### 4.2 IP discovery

Press IP discovery  , tester auto-scan the whole network segment IP, as well as auto-modify the tester's IP to the same network segment with the scanned camera's IP. The meter auto-search whole network segment IP, and auto- add the IP of different network segments. Detect unactivated Dahua and Hikvision cameras, then click "OK", go to Dahua and Hikvision Test Tool.



**Local IP:** Tester's IP address, Tester can auto-modify the tester's IP to the same network segment with the scanned camera's IP.

**Discovery IP:** Connected tester equipment's IP address. If the camera connected to the tester directly, tester will display the camera's IP address, if tester connects to Local Area Network, it displays the current IP address.

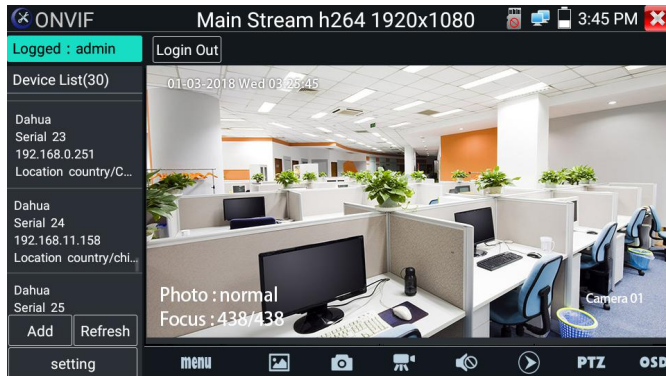
**Start:** PING function, Click "Start", can PING camera's IP.

**ONVIF:** Rapid ONVIF Quick link.

**IPC TEST:** IPC TEST Quick link, Non-Onvif IP camera test.

### 4.3 Rapid ONVIF test

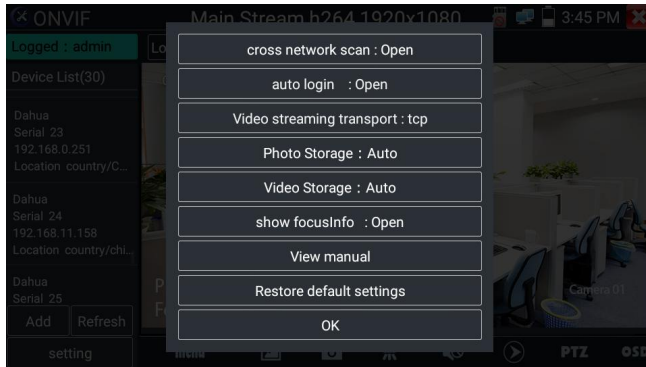
Rapid ONVIF can display 4K H.265/H.264 camera image by tester's mainstream. The meter auto scan all ONVIF cameras in different network segments. It lists cameras name and IP address on the Left of screen. Tester can auto login camera and display camera image. Factory default use admin password to auto login, if you modified the password, then default use the modified password to login.



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

Pop-up settings menu when click the "setting" icon in the upper left corner.

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**Across network segments scan:** After open this function , Rapid ONVIF function can across network segments to scan camera’s IP.

**Auto Login:** After open this function, tester can auto login camera and display camera image (The login password is the same with last time, the first time using password is the default password "admin")

**Video transmission protocol:** UTP and TCP protocol.

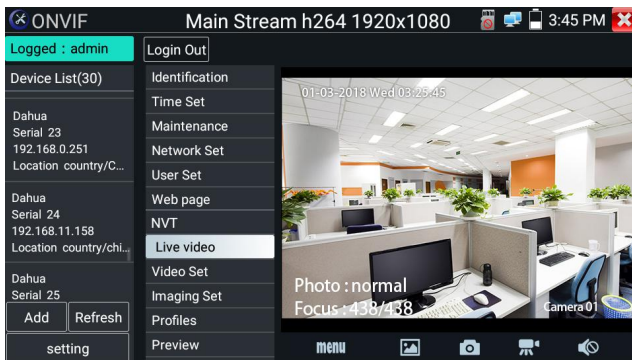
**Show focusInfo:** Focus Information.

**View manual:** Open Manual.

**Restore Defaults:** Revert “Rapid ONVIF” to default settings.

**Confirm:** Save the modified parameters.

Click “MENU” icon to open camera setting.

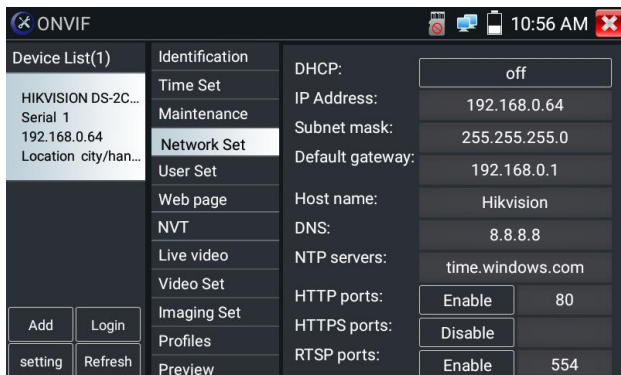




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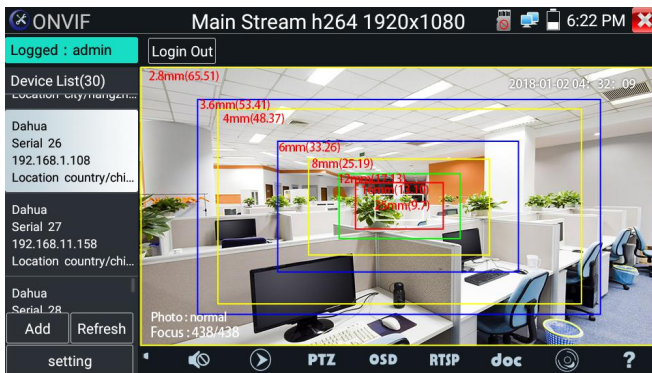
While in the “Live video” menu, click “Video Menu” at the top right of the image to access the following tools: Snapshot, Record, Photo, Playback, Lens simulation, PTZ and Settings.

**Network setting:** Click “Network Set” to change the IP address. Some cameras cannot support change IP address, so there is no change after saving.



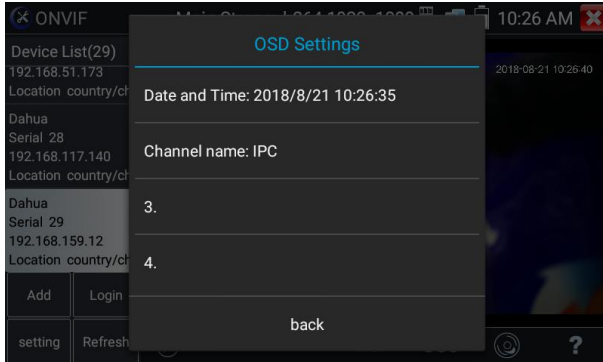
If it is network video input to the tester, as the tester supports resolution up to 1080p, the input image will be very clear after it is enlarged. This is greatly helpful for the installers to ensure the IP camera’s video coverage and decide the IP camera’s install site.

**Lens simulation:** Simulate different lenses display area, supported lens: “2.8/3.6/4/6/8/12/16/25mm”, for choosing the suitable camera lens.

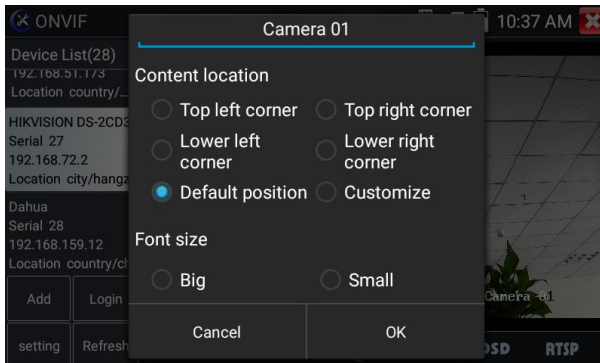



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**OSD Menu:** Select OSD and popup the OSD menu. include time, channel name and other optional items.



After channel selecting, you can edit the channel name, modify the display position, and switch the font size. Select “default location” in “content location” is without modification. Select “Customization” to arbitrarily adjust the channel name and display location. Click “OK” and the effects will appear. Press return key or click any area of the screen to return to the upper layer of the interface.

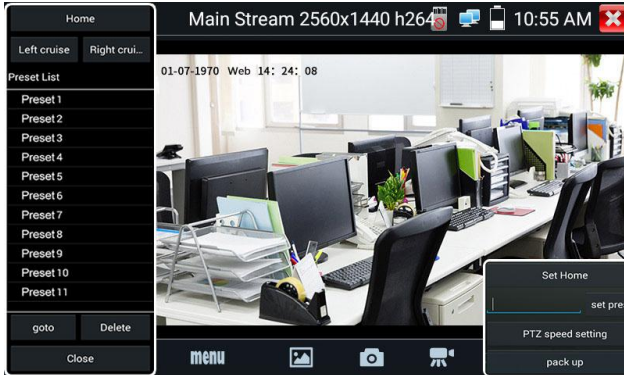


 Video files can play in the Video player on the main menu.

## PTZ

**Set preset position:** Move the camera to preset position, enter the preset number on the Bottom right corner to complete position preset.

**Call the preset position:** Select the preset number on the left, click "Call" to call preset.



**PTZ Speed set:** Horizontal and Vertical Speed set.



**Doc:** Auto generate test reports document of camera, click "Create document". Click

Preview to view the report document

Enter the camera test information, click "Create Document" to complete the report.

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Enter simple message Create documents

Job/Project name: \_\_\_\_\_ Operator: \_\_\_\_\_

Customer name: \_\_\_\_\_ Company: \_\_\_\_\_

Location/Building: \_\_\_\_\_ Address: \_\_\_\_\_

Tel/Email: \_\_\_\_\_

choose photo

\*\*can skip

Click doc menu again, you can preview the report document.

IPC-TESTER	Report		
Project name :	a	Operator :	b
Customer name :	c	Company :	dd
Location/Building :	cc	Address :	ee
Test Time/Date :	2018-08-28 02:59:33	Tel/Email :	123
<b>Camera Device Info</b>			
Camera name :	HIKVISION DS-2CD3T45-I3	Camera Model :	DS-2CD3T45-I3
Camera Date & Time :	1970-1-2 1:29:35		
<b>Network Info</b>			
Ethernet port speed :	100Mb/s	Duplex :	Full
Camera IP address :	192.168.8.88	Camera subnet mask :	255.255.255.0
Gateway IP Address :	192.168.8.1	Camera MAC add :	c4:2f:90:73:a8:0e
DNS IP Address :	8.8.8.8		
<b>Camera Stream Info</b>			
Resolution :	2560x1440	Encoding format :	H264
Frame Rate (fps) :	25	Bit Rate Max (kbps) :	4096
photo :			

**Icons description:** the description of function icons on the bottom toolbar

## 4.4 Non-Onvif IP camera test

Display image from the 4K H.265 camera by mainstream.



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.

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The screenshot shows the 'IPC Test' application window. At the top, there is a title bar with a search icon, the text 'IPC Test', and system icons for signal strength, Wi-Fi, battery, and time (2:14 PM). Below the title bar, there are six configuration rows, each with a label, a text input field, and a button:

- Local IP :** Input field contains '192.168.0.15', button is 'Edit'.
- IP camera type :** Input field contains 'HIKVISION\_DS-2CD864-E13', button is 'Manual'.
- IPC Cameras IP :** Input field contains '192.168.0.64', button is 'search'.
- IPC User Name :** Input field contains 'admin', no button.
- IPC Password :** Input field contains '.....', button is 'Show'.
- IPC Port :** Input field contains '5198', no button.

At the bottom of the form, there are four buttons: 'Enter', 'Reset', 'Restore', and 'Rate'.

**Local IP:** This is the tester’s IP address. Click “Edit” to enter “IP setting” and change the tester’s IP address settings.

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

**Manual:** Click IP camera type, list Honeywell, Kodak, Tiandy, Aipu-waton, ACTi, WoshiDA IP camera etc. If the brand has offered official original protocols, pls select camera type, input IP camera address, user name and password, click “official” to enter the camera image display interface(Currently, only support DAHUA official protocols ).

**Stream code:** When test camera via RTSP, you can select mainstream or sub stream to test (if camera’s RTSP have not been start or without, it will tip “auto match” fail, please witch to manually selecting.

**IP Camera's IP:** Enter the IP camera’s IP address manually or click “Search” to auto-scan for the IP camera’s IP address. It is better to directly connect the IP 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 find and display several IP address.

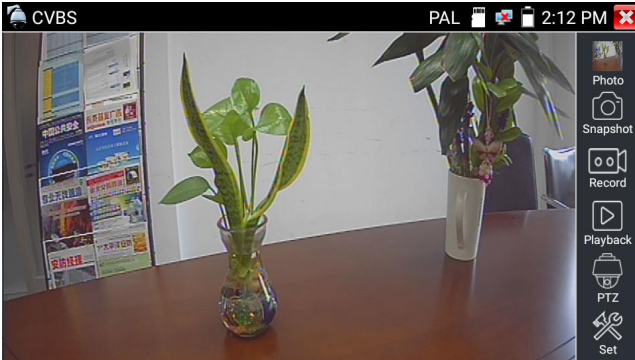
**IPC Port:** When you select the IP camera type, it will default the camera’s port number and doesn’t need to be changed.

After all settings are completed, click “Enter” to view the live video.

## 5. Analog & HD Camera Testing

### 5.1 Analog camera test

Analog camera test and PTZ control.



Select relative function on the right side Toolbar to operate , functions including “Photos”, “Snapshot”, “Record”, “Playback”, “PTZ”, “Set”.

Double-taps on the screen to make the image displayed full screen.

- ⚠ Check and set the protocols, address, interface and baud, all must be consistent with the dome camera, then the IPC tester can test .After setting the parameter, the tester can control the PTZ and lens.

### 5.2 CVI camera test

When HD CVI signal input, the tester will display the image resolution on the top bar.

Double-taps on the screen to make the image displayed full screen.

The tester supports resolution support up to 3840 x 2160P 12.5/15 FPS.

#### (1) PTZ control

##### 1.1 Coaxial PTZ control

Click the icon“PTZ”on the right toolbar to do the corresponding setting.

“Port”: select coaxial control

Enter PTZ address to perform parameters setting.

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The PTZ address in the tester must be consistent with the dome camera or decoder, then the IPC tester can test. After setting the parameter, the tester can control the PTZ and lens.

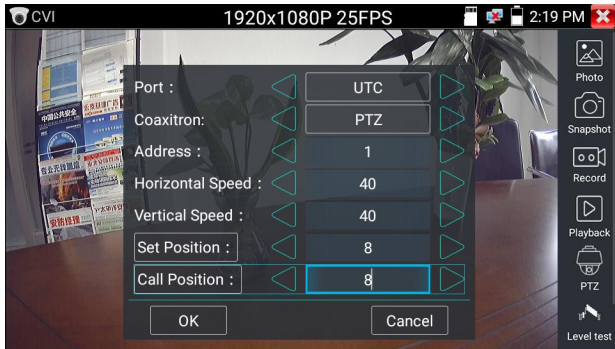
Set preset position:

Move the PTZ camera to the preset position, the Tap it and input preset position number. Tap “Set position” to complete set preset position.



Call preset position:


Tap the preset position area, input preset position number. Tap “call position” to complete call preset position.

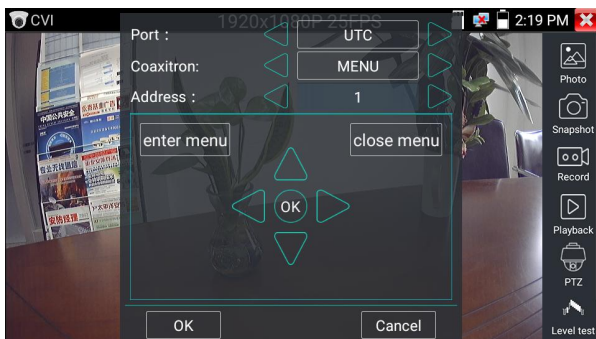


## 1.2 RS485 control



### (2) Coaxial camera menu setting

Input calling dome camera menu address code, you can press the key “Enter” or click the icon  to call the dome camera menu.





set the parameters by 

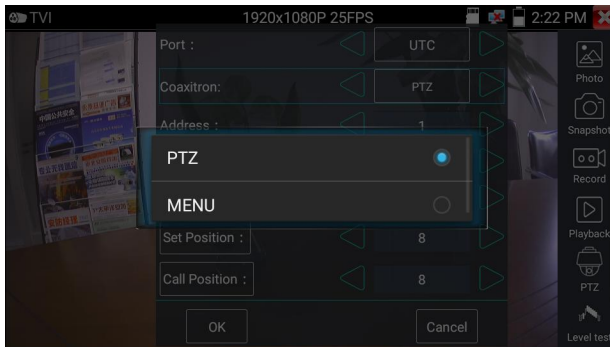



### 5.3 TVI camera test

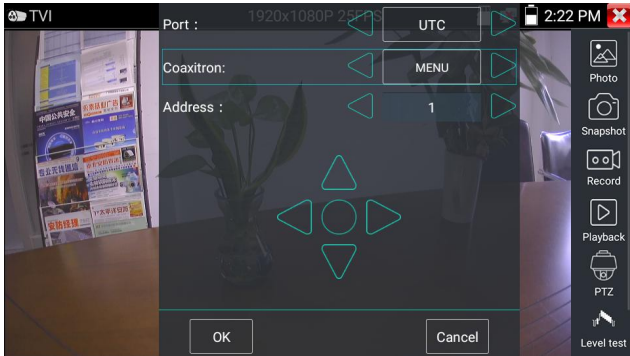
When HD TVI signal input, the tester will display the image resolution on the top bar. Double-taps on the screen to make the image displayed full screen.

The tester supports resolution support up to 3840 x 2160P 12.5/15 FPS. Coaxial camera menu settings:

Tap icon “UTC”, select “menu setting” to enter the dome camera menu.



Input calling dome camera menu address code, after finishing the parameter settings, you can press the key “Enter” or click the icon  to call the dome camera menu.



## 5.4 AHD camera test

When AHD signal input, the tester will display the image resolution on the top bar. Double-taps on the screen to make the image displayed full screen.

The tester supports resolution support up to 3840 x 2160P 15 FPS.

### (1) Coaxial PTZ control

UTC control: select “PTZ control or PTZ control-2” (AHD camera has two different order, if select “PTZ” cannot control, pls go “PTZ-2” )

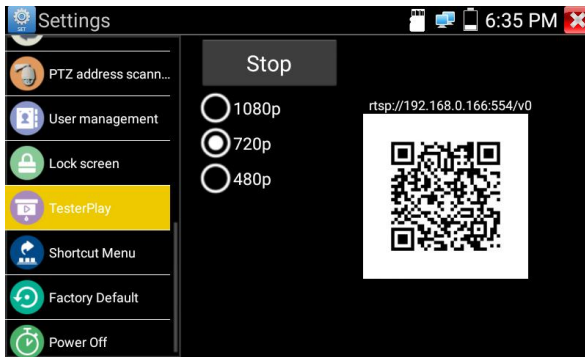


If to coaxial PTZ control the AHD camera, no parameters setting is needed.

## 6. Other function

### 6.1 TesterPlay

The meter creates WIFI hotspot, connect mobile phone to the tester's WIFI hotspot, or the tester and mobile phone connect to the same Wi-fi network. Select "TesterPlay" app to enter, click "Start" button to generates two-dimensional code, download and install the VLC client software, you can view the screen real-time projection.



PC screen projection:


Install VLC player in the PC, turn on the VLC player "Media - Open Network Streaming", and input the RTSP address of on the top instrument two-dimensional code, click "play" to view the screen real-time projection.

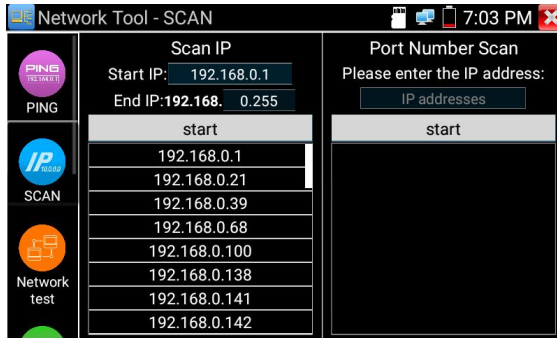


Video files also can play in the main menu "Video Player".

## 6.2 Network tool

### (1) IP address scan

Connect the cable to the LAN port, click icon  to enter, Set your IP address search range by changing the Start and End IP addresses. Click the “Start” button to scan the IP address range. You can also input an IP address in the Port Number Scan to scan for open ports.



### (2) PING Test

**Application:** PING testing is the most conventional network debugging tools. It is used for testing if the connected. IP camera or other network equipment’s Ethernet port is working normally and the IP address is correct.

It’s normal that the first data packet will be lost when test start.

### (3) Network test (Ethernet bandwidth 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.

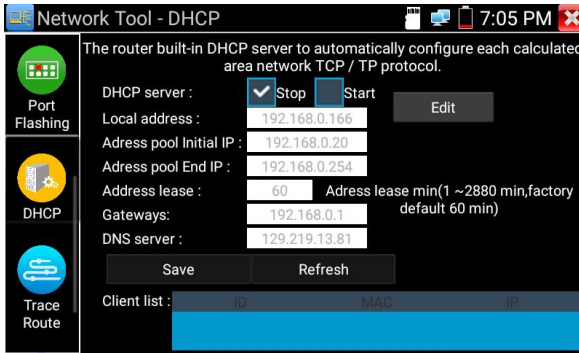
### (4) Port Flashing

**Application:**

The tester will send special signals to make the connected LAN port flicker at special frequency, which will enable the installers to easily and quickly find the connected Ethernet cable. This function can prevent mistakenly insertion or disconnection non-corresponding cable to artificially interrupt network connection.

## (5) DHCP server

Click 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. Click “Save” to start assigning dynamic IP addresses for IP cameras and other networked devices. Click the “Refresh” button to check your Client list.



## (6) Trace route


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

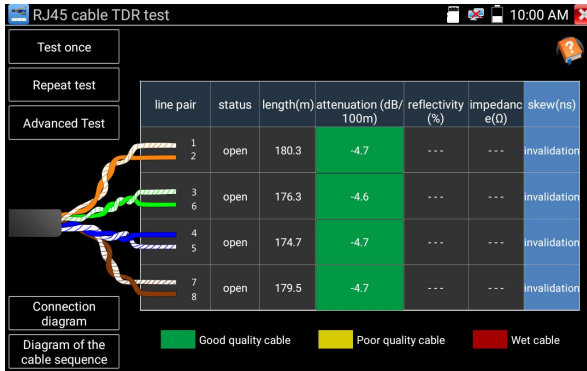
Note: Trace route testing results only for reference, for accurate test route tracking, Pls use professional Ethernet tester.

## (7) Link monitor

This app is used to see if an IP address is occupied by other network devices. This will avoid new address conflicts.

### 6.3 RJ45 cable TDR test

Connect cable to tester’s LAN port, click icon “” to enter RJ45 cable TDR test app.



**Single test:** Test cable status, length and attenuation.

**Repeat test:** Continue to test cable status, length and attenuation.

**Status:** After link up, screen display “online”, if not link up or open circuit, screen display “open circuit”, if cable pair is short circuit, screen display “short circuit”.

**Length:** The max test length is 180 meters, when cable is open circuit or short circuit, can test the cable length, if screen display “online”, the testing result would be not accurate.

**Cable quality test:** Green is good quality cable, Yellow is Poor quality cable, Red is water poured cable, the attenuation value will be displayed when cable over 10 meters.

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

**Attenuation reflectivity:** After link up, if reflectivity value is 0, it is the best quality communication

**Impedance:** After link up ,if the impedance value is 100 Ω,it is the best quality communication, the range is generally in 85-135 Ω

**Skew:** After 1000M link up, when skew value is 0ns,it is the best quality communication, if over 50ns, will cause a Bit Error Rate in the transmission.

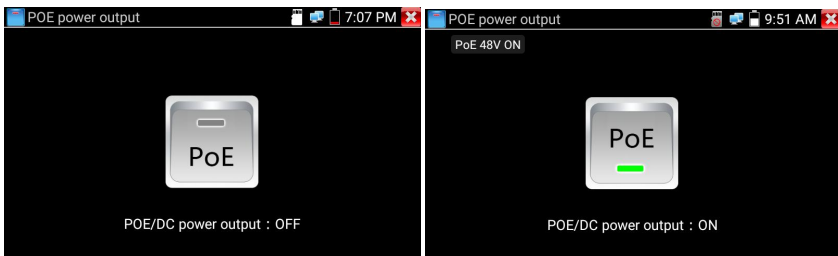
Click “Help”, check the instruction of all parameters.

### 6.4 PoE power / DC12V 3A power output

When the tester is turned on, the DC12V power output functions are automatically turned on.

To use the PoE Power Output function, change the switch “ON” or “OFF”.

The IP camera needs to be connected to the LAN port before you turn PoE Power on. If the IP camera Supports PoE, the PoE power is delivered via pins 1, 2, 3, and 6 on the LAN port. The IP tester will display “48V ON” at the top of the screen when the POE power is still on.




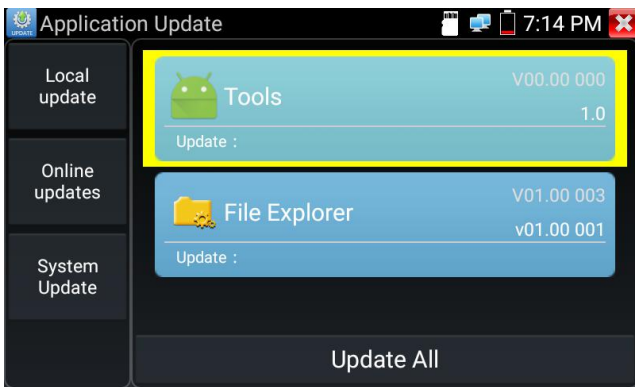
#### Note:

1. Don't input power into the “DC12/3A OUTPUT” port.
2. Don't output this DC12V/3A power to the DC12V/IN port of the IP camera tester to avoid destroy.
3. The IPC tester power output is close to 3A, if the IP camera's power is over 3A, the tester will auto enter protection mode. Disconnect all the connections of the tester and then connect the tester with power adaptor 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 IP 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 full charged or more than 80% charged, otherwise the tester will shows “low power”, “not able to supply power”.

### 6.5 Update

Copy the downloaded update file to SD card "update" directory, if no directory, please create one.

Click 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 listed in the interface, click related applications, update to the latest version.



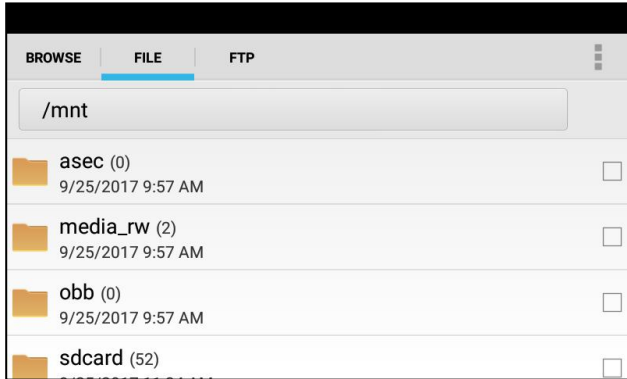
**Online update:** Connect the Internet to update the apps.

**System update:** Connect the Internet to update systems.

### 6.6 File explorer

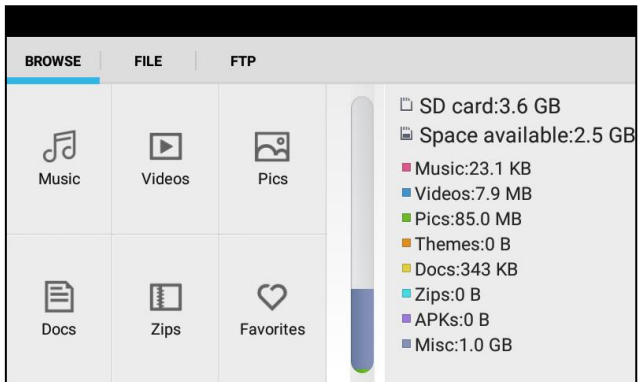
Click “File” on the top bar tool, can select internal or external storage. Click on the upper right corner Icon “...”. will pop-up menu, you can select other operation or exit.





## Browse

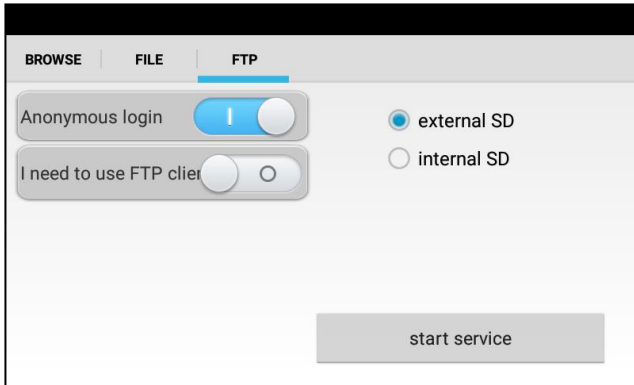
It includes Music, Videos, Pictures, Documents, zip file etc. It is convenient to view and manager.



## FTP server

You can choose internal or external SD card.

Other operation details, Pls refer to FTP settings.



## 6.7 System Setting



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

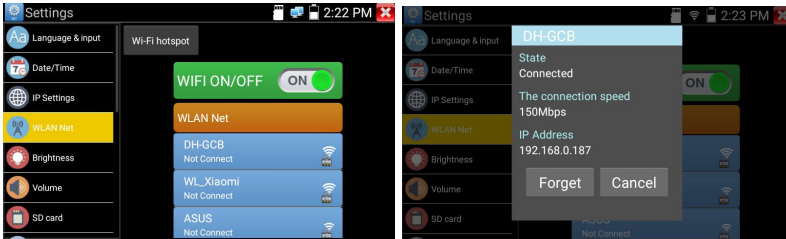
**Typewriting:** You can select typewriting or install other typewriting:

**Date/Time:** Set the Date/time of the IP tester.

**IP setting:** Manually set the IP address, Subnet Mask, Default Gateway and DNS address or select “Dynamic allocation” to use DHCP. To test multiple network

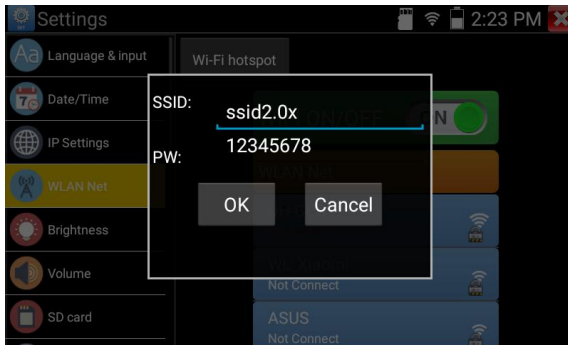
segments, click “Advanced” and then click “Add” to enter another IP address for the IP tester.

**WLAN Net:** Turn WiFi off or on by pressing the “Open the wifi” button. Once WiFi is turned on, and click connected WIFI, it will scan for wireless networks in your area.



Select and press “WIFI” several seconds, to set static IP address.

**Wi-Fi hotspot:** input “SSID” name and “password”, and then click “ok” to create Wi-Fi hotspot.



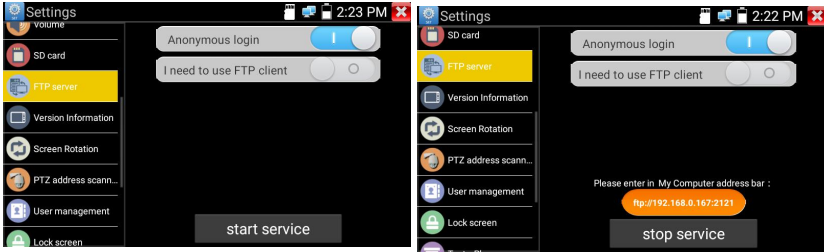
**Brightness:** Set the desired brightness of the IP tester and adjust the sleep time settings.

**Volume:** Set volume level

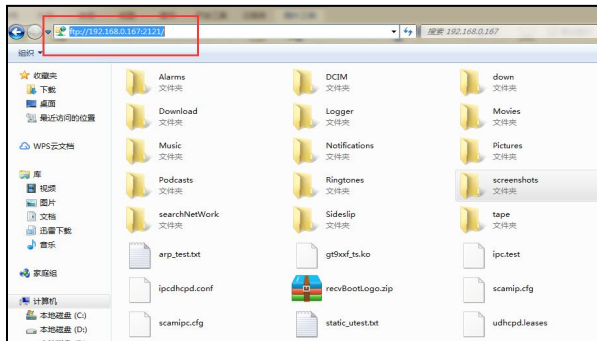
**SD Card:** Displays SD Card Capacity. You can also format the SD card or unmount it before removing it.

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

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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 applications version information, if press any apps icon several seconds to uninstall.

**Screen display rotation:** Click on “Screen Rotation” to flip the IP tester’s display 180 degrees. This function is very convenient for the user to connect the 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 in order to use the PTZ Scan feature of the PTZ app.

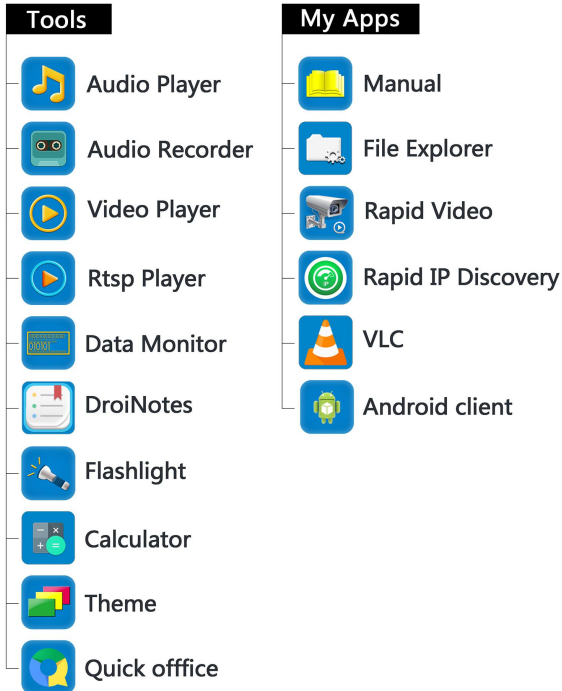
**Lock Screen:** The meter default is not locked. You can choose password Lock screen,

pattern Lock screen or “NO”.

**Restore the factory settings:** If the tester to restore factory settings, all your personal files and apps will be removed.

**Power Off:** Manully to set the power off after hibernation time(0-23h 59min).

## 6.8.Tools and Apps



## 7. Specifications

### 7.1 General Specifications

Model	IP Camera Tester
<b>Display</b>	IPS touch screen cctv tester
<b>Network port</b>	10/100/1000M auto adjust, RJ45
<b>WIFI</b>	Built in WIFI, speeds150M, display wireless camera image
<b>H.265 Main stream test</b>	New hardware decoding, 4K H.265/H.264 camera image display by mainstream testing
<b>IP discovery</b>	Auto-scan the whole network segment camera IP
<b>Rapid ONVIF</b>	Search camera quickly, auto log in and display image from the camera, activate Hikvision camera
<b>Hik test tool</b>	Batch activate Hikvision camera, display image from the camera, modify Channel, batch modify IP, user name and password parameters etc.
<b>DH test tool</b>	Batch activate Dahua camera, batch modify IP, modify Channel,user name and password parameters etc.
<b>IP camera type</b>	ONVIF,ONVIF PTZ, Dahua IPC-HFW2100P, Hikvision DS-2CD864-E13, Samsung SNZ-5200, Tiandy TD-NC9200S2, Kodak IPC120L, Honeywell HICC-2300T, RTSP Viewer
<b>Lens Simulation</b>	can simulate“2.8/3.6/4/6/8/12/16/25mm” lenses display area
<b>Focus information test</b>	camera focus info, signal quality test, Image quality test.
<b>CVI video signal test</b>	1 channel CVI input (BNC interface), resolution support 720P 25,30,50,60fps/ 1080P 25,30fps/2560x1440P 25,30fps /3840 x 2160 12.5/15 fps UTC control and call OSD menu
<b>TVI video signal test</b>	1 channel TVI input (BNC interfce), resolution support 720P 25,30,50,60fps/ 1080P 25,30fps /2048x1536P 18,25,30fps ,

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	2560x1440P 15,25,30fps/ 2688x1520p 15fps, 2592x1944P 12.5,20fps/3840 x 2160 12.5/15 fps
<b>AHD video signal test</b>	1 channel AHD input (BNC interface), resolution support 720P 25,30fps / 1080p 25,30fps/2048x1536P 18,25,30fps, 2560x1440P 15,25,30fps/ 2592x1944P 12.5,20fps, 3840 x 2160P 15 fps, UTC control and call OSD menu
<b>Analog video test</b>	1 channel BNC Input, NTSC/PAL (Auto adapt)
<b>Snapshot, Video record and playback</b>	Capture current images and record live video as JPG file. Media player will view photos and playback video
<b>TesterPlay</b>	screen projection: tester, mobile phone and PC display at the same time
<b>12V/3A power output</b>	Output DC12V/3A power to camera
<b>PoE power output</b>	48V PoE power output, Max power 25.5W
<b>Theme</b>	Self-define icons, desktop and application interface background, modify interface sliding effect.
<b>Audio test</b>	1 channel audio signal input
<b>PTZ control</b>	Support RS485 control, Baud 600-115200bps, Compatible with more than 30 protocols such as PELCO-D/P, Samsung, Panasonic, Lilin, Yaan, etc
<b>Data monitor</b>	Captures and analyzes the command data from controlling device, also can send hexadecimal
<b>POWER</b>	
<b>External power supply</b>	DC 12V 1A
<b>Battery</b>	Built-in 7.4V Lithium polymer battery ,2400mAh
<b>Rechargeable</b>	After charging 4~5 hours, normal working time 8 hours

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<b>Parameter</b>	
<b>Operation setting</b>	OSD menu, select your desired language: English, Chinese, Korean, Russian, Italian, French, Polish, Spanish, Japanese etc
<b>Auto off</b>	1-30 (mins)
<b>General</b>	
<b>Working Temperature</b>	-10°C---+50°C
<b>Working Humidity</b>	30%-90%

The data above is only for reference and any change of them will not be informed in advance. For more detailed technical inquiries, please feel free to call the our Technical Department .

More detail operations and instruction, please check the tester's manual.