



## VT-SCT-U4

**Four Inch Hand-held 5-in-1 [4K  
H.265 IP / TVI / CVI / AHD /  
CVBS] CCTV Testing Monitor**



**HD  
OVER COAX**

**4K  
8MP**



### FEATURES

- Supports 8MP TVI / CVI / AHD, 4K H.265 IP, CVBS
- H.265/H.264, 4K Video Display via Mainstream
- Compact, 4" Touch Screen
- Portable, Easy-to-Carry-and-Hold Design
- ONVIF Compliant with Other Leading Manufacturers' IP Cameras
- Rapid ONVIF, Auto View Video + Test Report Creation
- Built in WIFI, Creates WIFI Hotspot & Displays Wireless Camera Images
- Innovative HD-Over-COAX Focus, Video Signal Quality Test
- 10/100/1000M Ethernet, Network State and Traffic Display
- Tester Play: Simultaneous Tester, Android Mobile Phone, PC Display
- One Button IP Discovery: Detects All Network Camera IP Addresses
- One Button Rapid Video: Detects all Network Cameras with Auto Display
- Network Tool: PING Test, IP Address Scan, Port Flashing
- Drop-down Menu Selects: Poe Power, IP Setting, CVBS, LAN Information
- Self-updating Software: Install Apps with Android
- Media player, Supports 4K Video Files and MKV/MP4 Media Files
- Displays IP Cameras' Genuine Resolution
- PTZ Control Supporting 30+ Protocols (Incl. PELCO-P, PELCO-D, Samsung)
- Audio In, Supports Record / Save Audio
- Features LED Lamp, Calculators, Music Players and Other Application Tools
- 7.4 V / 2400mA Lithium Ion Polymer Battery with 8 hr. Life (4~5 Charging hrs.)
- DC12V / 3A Power Out: Temporary Power Supply
- DC48V PoE Power Output (Max. Power 24W)
- Package Includes: Tester, Adaptor, Battery, Tool Bag, DC12V Power Cable, BNC Cable, RS485 Cable, Audio Cable
- 3-Year Warranty



#### PLEASE NOTE:

Complete User Guide, Software,  
Tools, and Updates are available  
online. Scan the QR Code or visit:  
<http://www.vitekccctv.com/Downloads>



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- Thank you for purchasing this IP camera tester. Please read this manual before using the IP camera tester to ensure proper use. Before using the IP camera tester, please carefully read the Safety Information in this manual. This manual should be retained for reference. Keep the S/N label for after-sale service within the 3-year warranty period. Repair service will be charged for products without S/N labels. If there are any questions or problems while using this IP camera tester, or you find the product to be damaged, please contact our Technical Support Department.

## **1. Safety information**

- ◆ The tester is intended for use in compliance with local rules of electrical usage and avoid places which are inapplicable for the use of electronics of this nature, such as hospitals, gas stations etc.
- ◆ To prevent damage to the unit, keep away from all moisture.
- ◆ During transportation and use, it is highly recommended to avoid shock and vibration of the tester.
- ◆ Do not leave the tester alone while charging. If the battery is found severely hot, the tester should be powered off from the power source at once. The tester should not be charged over 8 hours.
- ◆ The tester should not be used in an environment with flammable gas.
- ◆ Do not disassemble the tester. There are no user serviceable parts inside.
- ◆ The instrument should not be used in environments with strong electromagnetic interference.
- ◆ Do not touch the tester with wet hands.
- ◆ Do not use detergent to clean the tester. If dirt is not easy to remove, use a soft damp cloth.



## **2. IP Camera Tester Introduction**

### **2.1 General**

The 4-inch 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 cameras by mainstream. The 800 x 480 resolution enables it to display network HD cameras and analog cameras in high resolution. This unit supports many ONVIF PTZ models, and analog PTZ control. The combination of touch screen and key buttons make this IP camera tester highly user- friendly.

The tester is also a great tool for Ethernet network testing. Other functions include providing 25.5W PoE power to a camera, PING and IP address searching, LED Flashlight, DC 12V 3A power output and much more. Its portability, user-friendly design and other functions make the IP tester an essential tool for all installers or technicians.

### **2.2 Packing list**

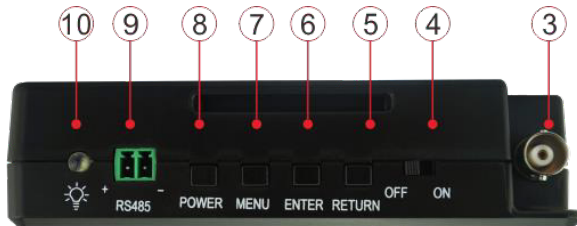
- 1) Tester
- 2) Adaptor DC12V 1A
- 3) Polymer lithium ion battery (7.4V DC 2400mAh)
- 4) BNC cable
- 5) RS485 cable
- 6) Output Power cable
- 7) Audio cable
- 8) Wrist belt
- 9) Tool bag

2.3 Function interface



|   |                                                                                     |                                                                                                                                              |
|---|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1 |  | Charge indicator: The light is red while the battery is being charged. When the charging is complete, the indicator turns off automatically. |
| 2 |  | The RS485 data transmission indicator: The light is red during data transmission.                                                            |

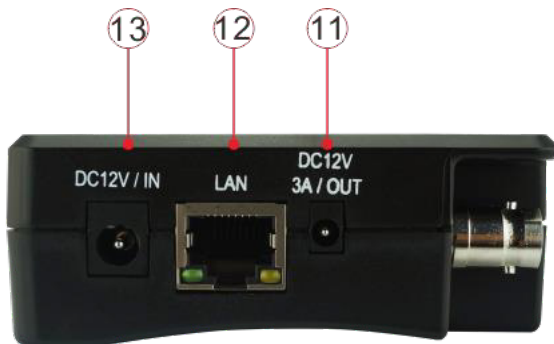
Top interface



Left interface



Right interface



Bottom interface



|    |                                                                                           |
|----|-------------------------------------------------------------------------------------------|
| 3  | Video image signal input (BNC interface) / AHD, CVI and TVI input (BNC interface)         |
| 4  | Power battery switch                                                                      |
| 5  | Return/Close: Return or cancel while setting menu parameters, close or decrease aperture  |
| 6  | Confirm key (A long press will capture the screen interface)                              |
| 7  | Function switching key                                                                    |
| 8  | Press 2+ seconds to turn on or off the device, short press to turn on or off menu display |
| 9  | RS485 Interface: RS485 communication for the PTZ                                          |
| 10 | LED Lamp                                                                                  |
| 11 | DC12V3A power output, for provisional DC power supply                                     |
| 12 | PoE power supply output or LAN test port (Use to test PoE or non-PoE IP camera)           |
| 13 | DC12V 1A charging interface                                                               |
| 14 | Audio input                                                                               |
| 15 | Micro SD card moveable, supports up to 32GB                                               |

## 3. Operation

### 3.1 Installing the Battery

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

Prior to use of the instrument, the battery cables inside the battery cabin should be 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, the battery charging is complete



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.

### 3.2 Instrument connection

#### 3.2.1 IP camera connection

Power an IP camera with an independent power supply, then connect the IP camera to the IPC 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 IPC tester are communicating. If the two indicators don't flicker, check if the IP camera is powered on and the network cable is functioning properly.



**Note:** If the IP camera requires PoE power, then connect the IP camera to the IP tester's LAN port. The tester will supply PoE Power for the IP camera. Click on the icon labeled PoE to turn on/off PoE Power.

### 3.2.2 Analog camera connection



- (1) Connect the camera's video output to the IP tester's VIDEO IN. The image will display on the tester after pushing the PTZ icon
- (2) Connect the camera or the speed dome RS485 controller cable to the tester RS485 interface (Note positive and negative connection of the cable).

### 3.2.3 HD Coaxial camera connection

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



(1) Connect the TVI camera's video output to the IP tester's "Video IN" interface. The image will display on the tester. The tester only comes with an HD analog input interface. There is no output interface.

(2) Connect the HD camera or the speed dome RS485 controller cable to the tester RS485 interface.

### 3.3 OSD menu

- Press the key  2 seconds to turn on
- Press the key  2 seconds to turn off
- Short press the key  to enter sleep mode, press it again to wake the tester

#### 3.3.1 Lite mode

- Lite mode: You can easily find corresponding apps

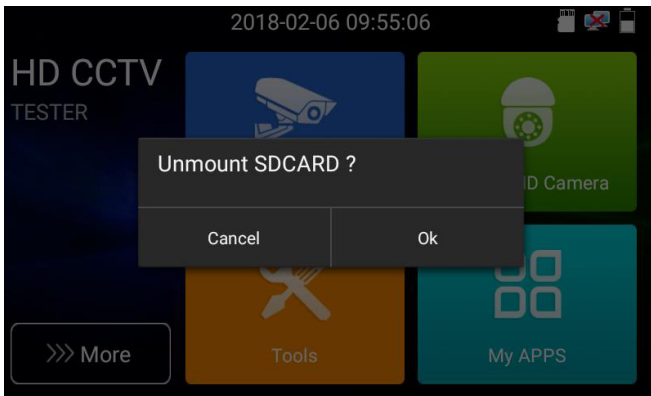


- In Lite mode, tap the finger icon in the lower right corner to turn Orange, long press the icon to move the function icon to other items. Do not tap the finger icon and long press the application icon, can move the icon in folder.





Click SD card, install or remove SD card.



### 3.3.2 Screen capture

Long press the “enter” key, capture screen interface, and save it.

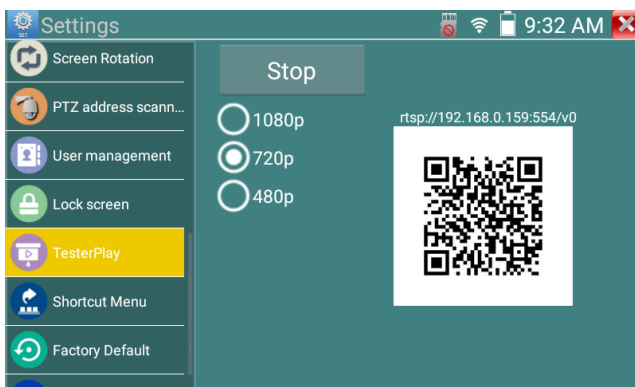


Go to file management to view “file management –SD card- Pictures—Screenshots”.

### 3.3.3 Tester Play

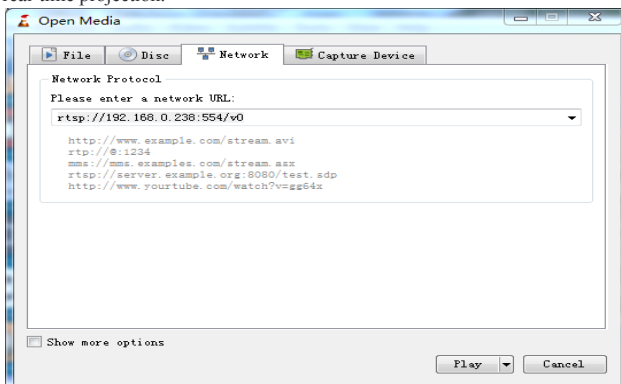
#### Mobile screen projection (Only for Android version)

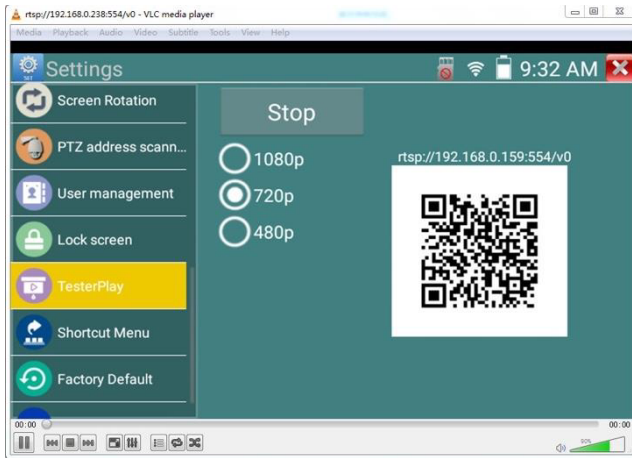
The tester creates a WIFI hotspot. Connect the mobile phone to the tester's WIFI hotspot, or the tester and mobile phone connect to the same Wi-fi network. Tap icon “”, then select “Tester Play” app to enter, click “Start” button to generate a two-dimensional code. Please use mobile phone to scan it, then download and install the client software, so 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.

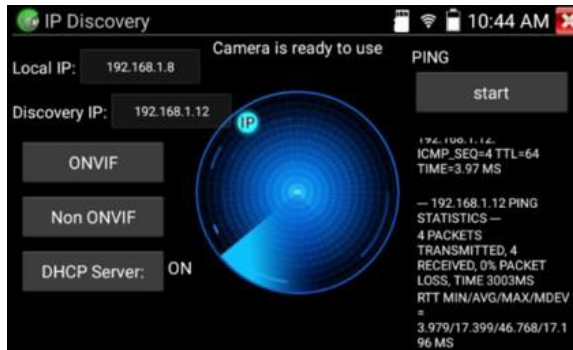




### 3.3.4IP discovery

Press IP discovery , test 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 connects the whole network segment IP, and auto- adds the IP of different network segments.



**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 is connected to the tester directly, the 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

**Rapid ONVIF:** Rapid ONVIF Quick link

**IPC TEST:** IPC TEST Quick link

**Applicability:** Using the IP Discovery App, you do not need to know the first two digits of the camera's IP address, it can auto-scan the whole network segment IP, and auto-modify tester's IP address, greatly improving engineering efficiency.

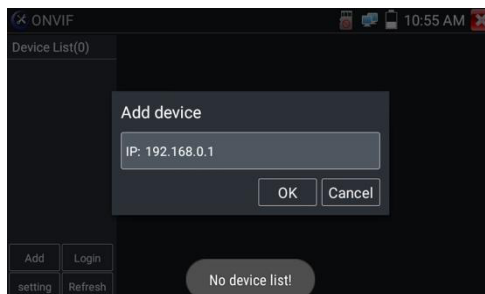
### 3.3.5 Rapid ONVIF test

Rapid ONVIF can display 4K H.265/H.264 camera image by tester mainstream,

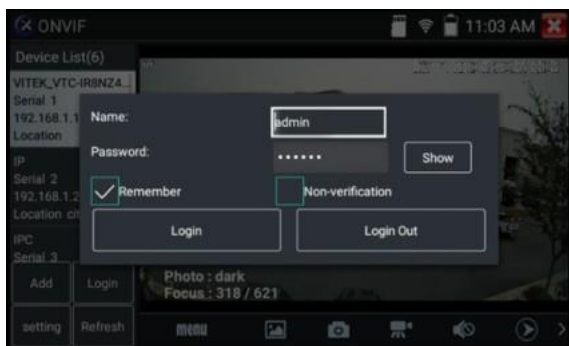
Press  to enter ONVIF function, the meter auto scans all ONVIF cameras in different network segments. It lists cameras name and IP address on the Left of screen. The tester can auto log into camera and display camera image. From factory default use admin password to auto login, if you modified the password, then use the modified password to login

If you select ONVIF Rapid mode, the meter automatically scans different network segments for ONVIF

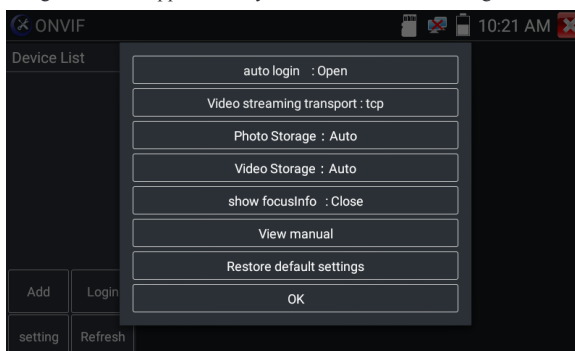
cameras. It lists the camera name and IP address on the Device List. The tester can auto login camera and display the camera's image.



Click the button “Refresh”, and the 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. When you see the “activate success” prompt, click login to display camera image.



The pop-up settings menu will appear when you click the “ONVIF setting” icon in the lower left corner



**Auto Login:** After opening this function, the tester can auto log into cameras and display the camera's image (The login password is the same as previously, and the first-time using the password is the default password "admin")

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

**Open password cracker:** Cracks password of cameras

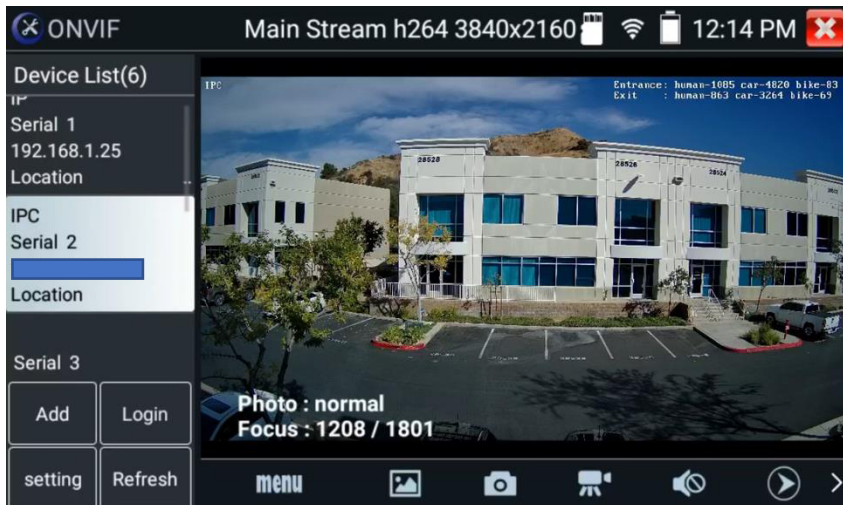
**Show focus Info:** Focus Information.

**View manual:** Open Manual

**Restore Defaults:** Revert "Rapid ONVIF" to default settings

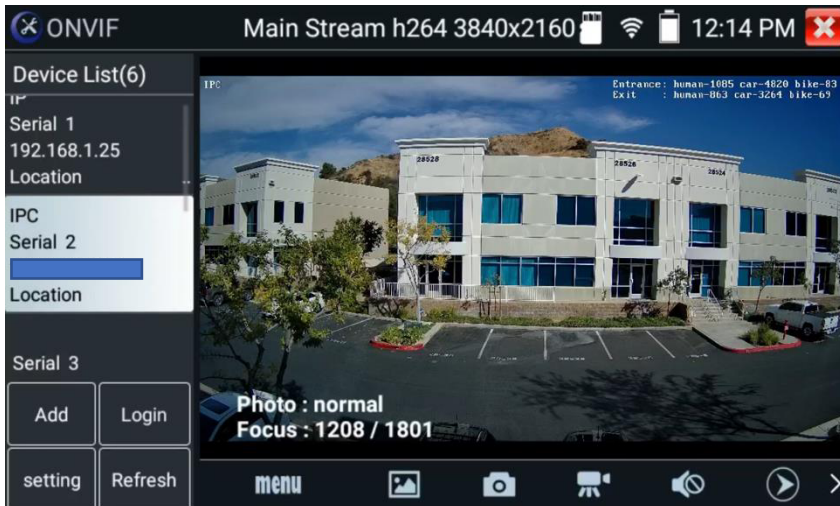
**Confirm:** Save the modified parameters

Click "MENU" icon to open camera settings.

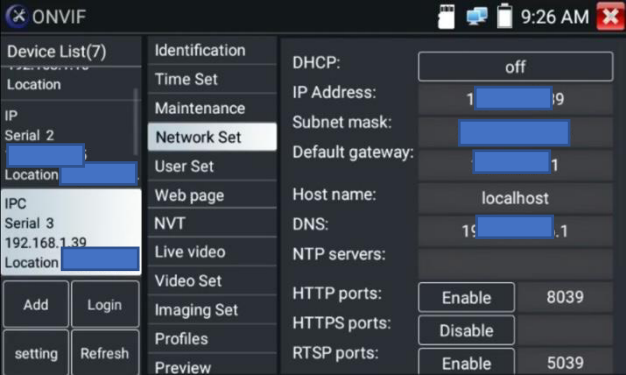


While in the "Live video" menu, click "Video Menu" at the bottom left of the image to access the following tools: Snapshot, Record, Photo, Playback, Lens simulation, PTZ and Settings

**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, and up to go up and down to go down. Compatible IP PTZ cameras will rotate accordingly. PTZ rotation direction is displayed at the top left corner of the image.

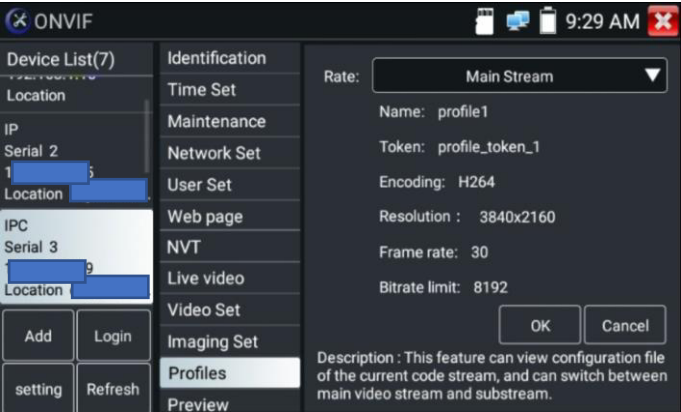


**IP camera video settings:** Click “Video Set” to enter the IP camera’s encoder and resolution settings. Make the desired changes and click “OK “to save.



**Image setting:** Click “Imaging Set” to adjust image brightness, saturation, contrast, sharpness and backlight compensation mode.

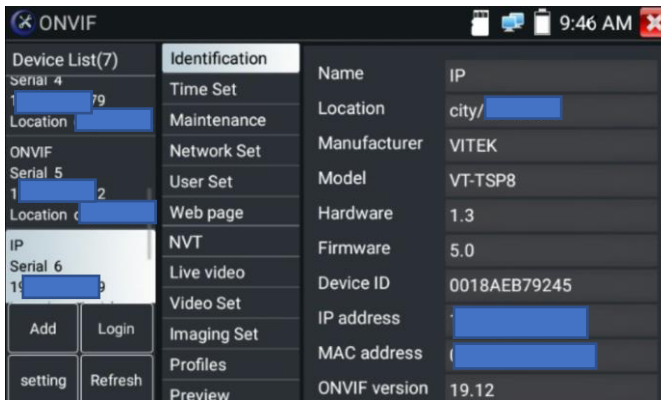
**Profiles:** Click “profiles” to view video streaming current configuration files, as well as switch between Major stream and minor stream.



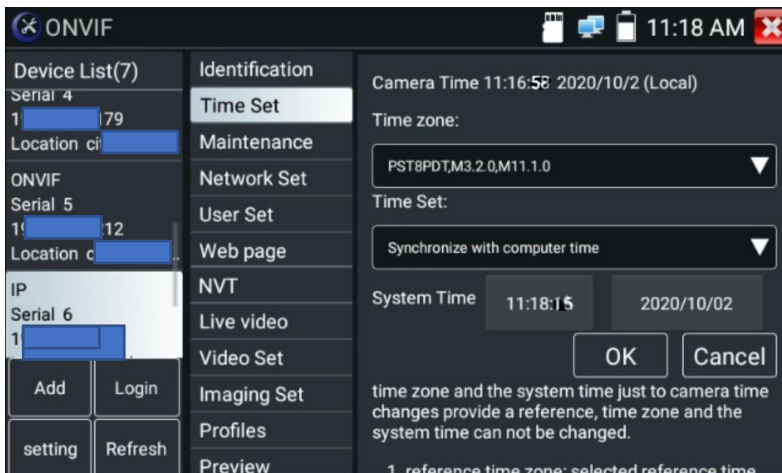
**Preview pictures:** Quickly preview and zoom in or out pictures, automatically and manual refresh

**Identification:** click “Identification” to view information of the camera

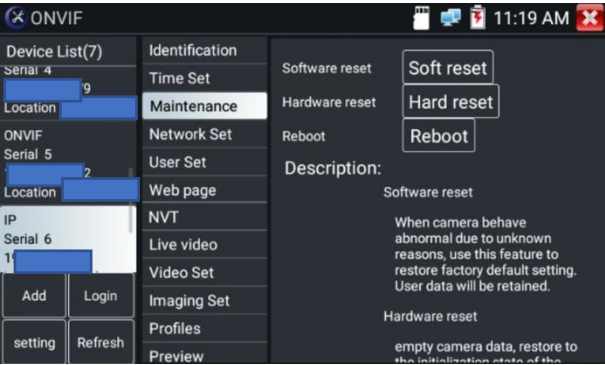




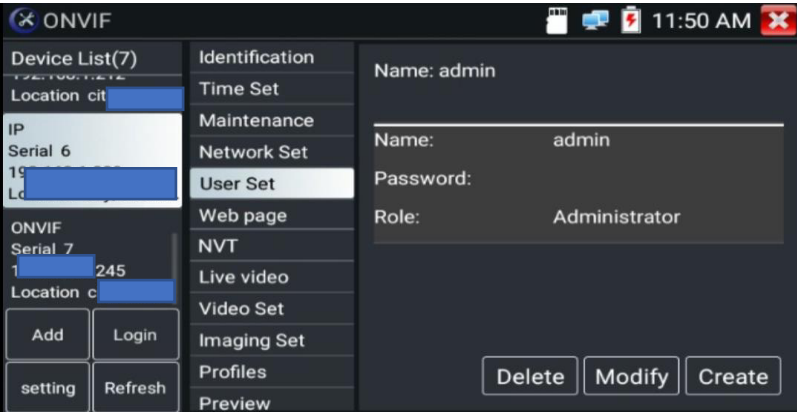
**Time set:** click "Time set", Select " Manual set" to set up the time of camera



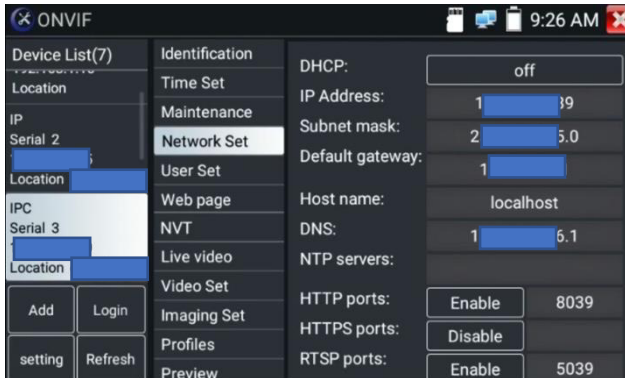
**Maintenance:** For camera software reset or restore to factory settings.



**User Set:** Modify camera username, password etc. parameters



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



If there is network video input to the tester, the input image will be very clear with enlargement (as the tester supports resolution up to 1080p). This is helpful for the installers to ensure the IP camera’s video coverage and decide the IP camera’s installation site.

The image can only be enlarged on SD mode (The icon “ONVIF” is SD mode.)

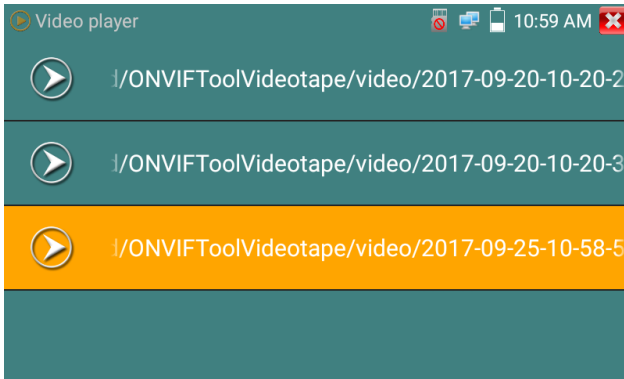
Select relative function on the bottom Toolbar to operate, “Snapshot”, “Record”, “Photos”, “Video playback”, “Storage set”, “PTZ control” etc.

**Snapshot** : Click “snapshot” to screenshot the image and store it to an SD card.

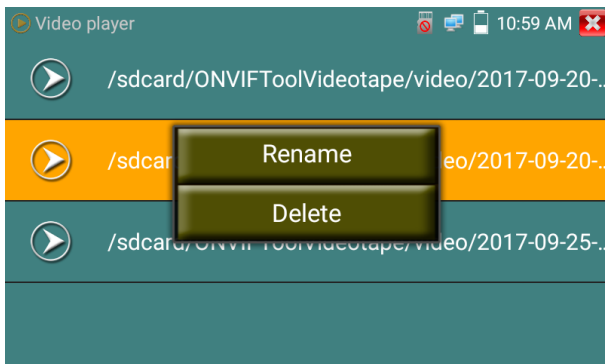
If you select manual storage, a dialog box appears with “Input Name”, with user-defined files name (by letter, or digit) to save in SD card, if you select “Auto- storage”, the tester automatically stores the files after snapshot.

**Record :** When you click the “Record” icon, 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. Click on the “Stop” icon to stop recording and save the video file to the SD card.

**Playback :** Click the “Playback” icon to view saved videos. Double click the video you want to play. Click to return to the last menu.



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

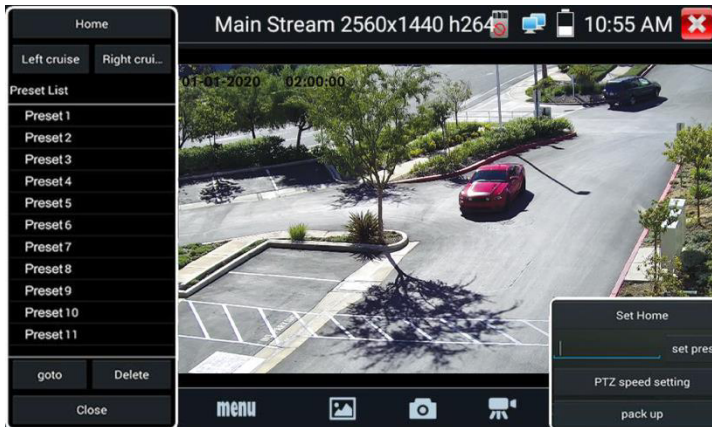


Video files can play in the Video player on the main menu.

## PTZ

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

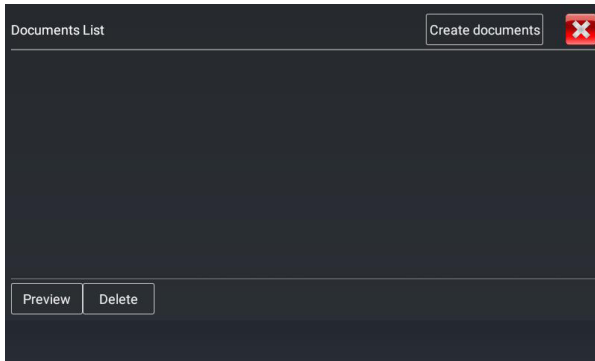
**Call the preset position:** Select the preset number on the left, click "Call" to call preset



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

**RTSP:** Get RTSP address of the current camera

**Doc:** Auto generate test reports document of camera, click "Create document". Click Preview to view the report document.

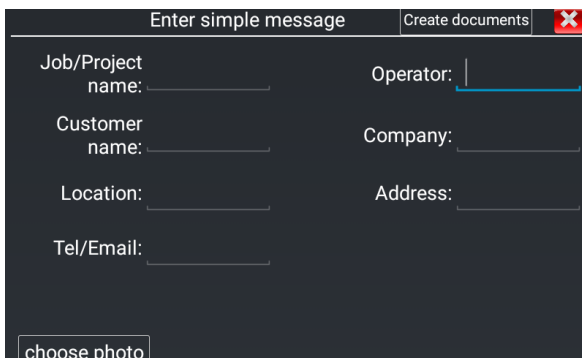


Documents List

Create documents

Preview Delete

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



Enter simple message

Create documents

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

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

Location: \_\_\_\_\_ Address: \_\_\_\_\_

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

choose photo

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

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

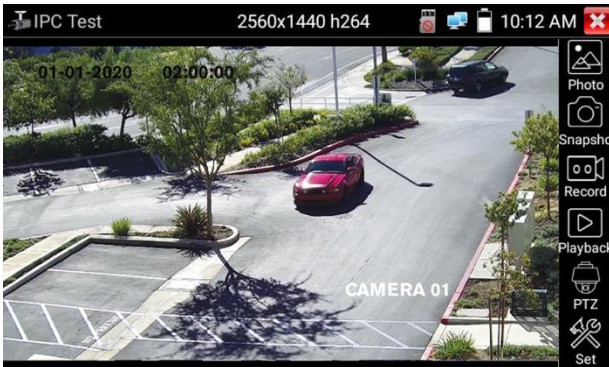
**IP Camera's IP:** Enter the IP camera's IP address manually or click "Search" to auto-scan for the IP camera's IP address. It is better to directly connect the IP camera to the tester so the search results will only display the camera's IP address. If the tester is connected to a PoE switch, it will find and display several IP addresses

**IPC Username:** 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 doesn't need to be changed.

After all settings are completed, click "Enter" to view live video



If IP address setting has an error or IP camera is not connected, the tester prompts "Network Error"

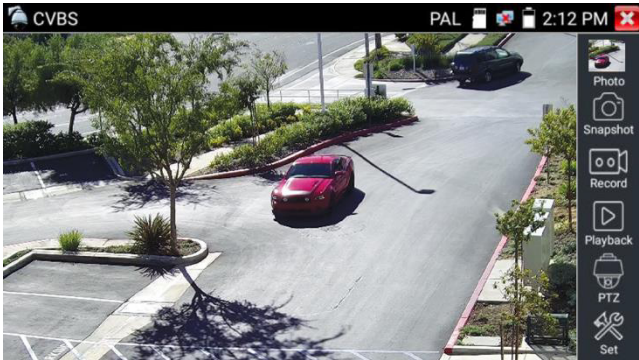
Click  to quit from image display and return to the IP camera test interface.



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

### 3.3.6 Video monitor test

Analog camera test and PTZ control: Click icon  to enter.



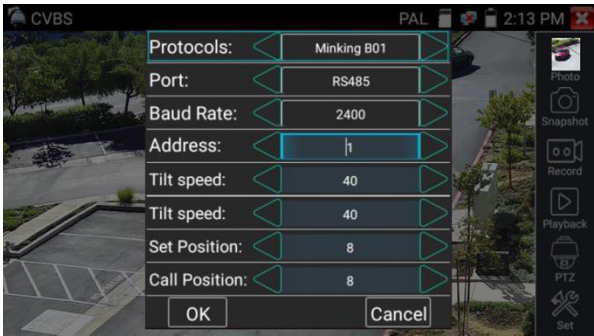
Select relative function on the right side Toolbar to operate, functions including “Photos”, “Snapshot”, “Record”, “Playback”, “PTZ”, “Set”,

Click , or press “Return” to quit.

Click the screen twice quickly, can be full zoom in on the touch screen.

**(1) PTZ controller parameter setting**

Select and click icon “PTZ”, to enter PTZ setting:



**A. Protocol**

Use the up and down arrow keys to move the yellow cursor to the “protocol,” set corresponding Protocol (Supports 30+ protocols like Pelco-D, Samsung, Yaan, LiLin, CSR600, Panasonic, Sony-EV1)

**B. Port**

Click and move, to “port,” select the communication port for the PTZ camera controlling (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 setting address data must be consistent in the speed dome 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)**

Click and select “Set PS”, set and save preset position number (1~128),

**H. Call the preset position (Go PS)**

Click and select “Set PS”, set and save preset position number (1~128), click “sure” to save,

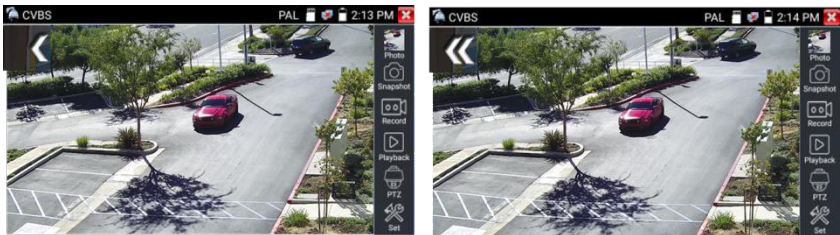
Call some special preset number, can call the dome camera menu



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 parameters. The tester can control the PTZ + lens.

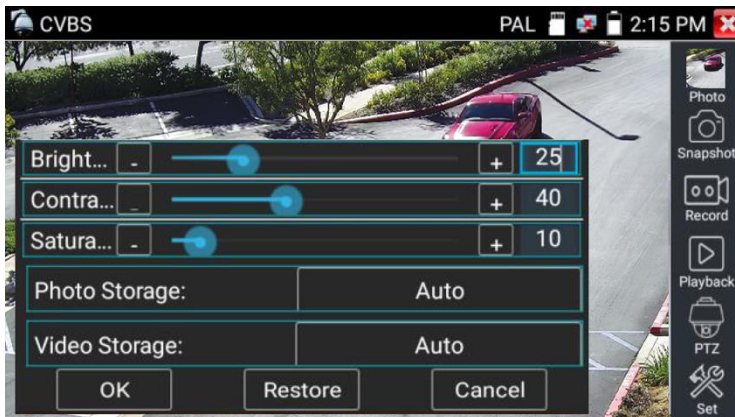
**To control PTZ by screen touch:**

Tap left, right, upward and downward on the touch screen to control the PTZ rotation direction. With two fingers move outward and inward on the touch screen to zoom in and out the PTZ.

**PTZ Control:****2) Video and storage setting**

Click icon “set” to enter and set analog video image brightness, contrast, color saturation, as well as the file storage type after snapshot and recording (supports auto-storage and manual storage.)

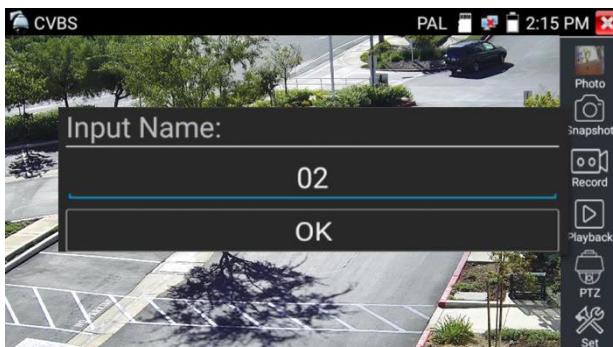
When selecting manual storage, user can name and store the files.



For analog video input, as the resolution is 720\*480, it is normal that the zoomed-in image is not clear. But for network digital video input, as it supports resolution up to 960\*540, the zoomed-in image is very clear. This is very helpful for IP camera installation.

### (3) Snapshot

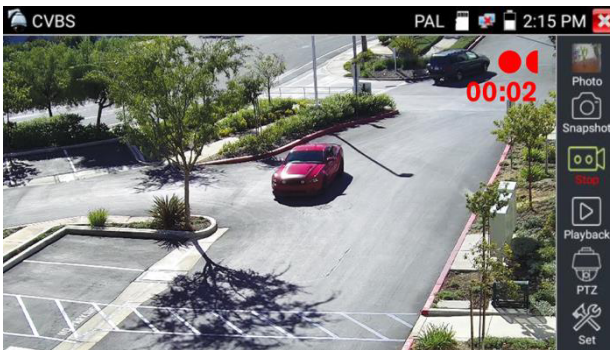
Click the icon “Snapshot”, when the video in, to take a picture and save the current video frame in the SD card as JPEG file. If the unit is set to the manual mode an “Input Name” pop up box will appear and you can enter a title for the snapshot. If the unit is set up to automatically set file names, this box will not pop up.



#### (4) Video Record

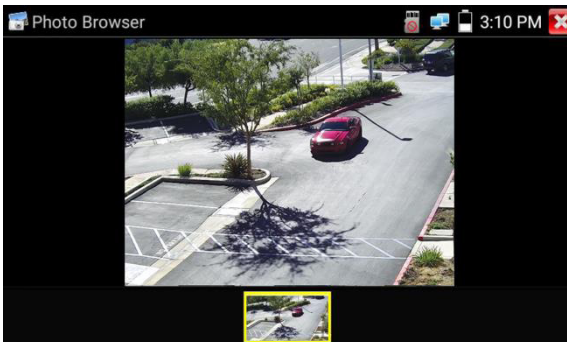
When you click the “Record” icon, video starts recording. A red recording icon appears on the screen and begins to flash, and a timer appears indicating the time elapsed for the video. Click on the “Record” icon again to stop recording and save the video file to the SD card.

If you select manual storage, before recording begins, a dialog box “Input Name” appears, with user-defined the files name (by letter ,or digit) to store in SD card. The tester will store the files in the SD card after recording. If selecting “Auto-storage”, tester will auto store the files in SD card after recording.

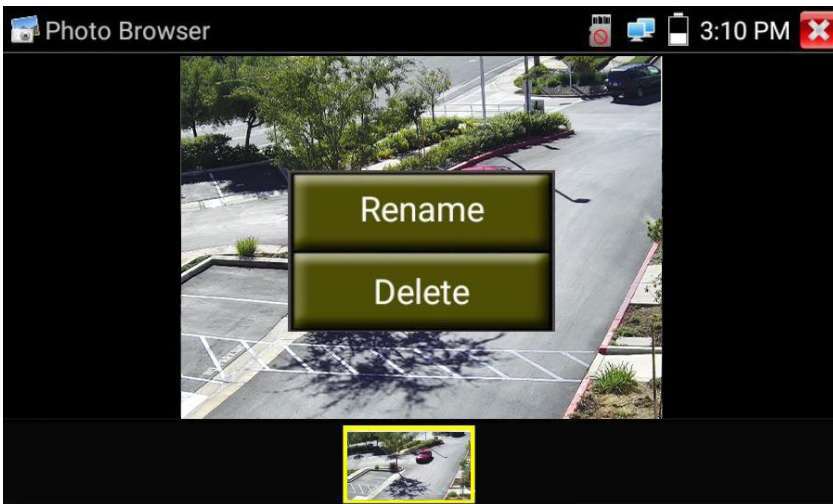


#### (5) Photo

Click the icon “photo” to enter, click the selected thumbnail photo to display it on the screen. Double tap the image you want to view to make it full screen. Double-click again the photo to return.

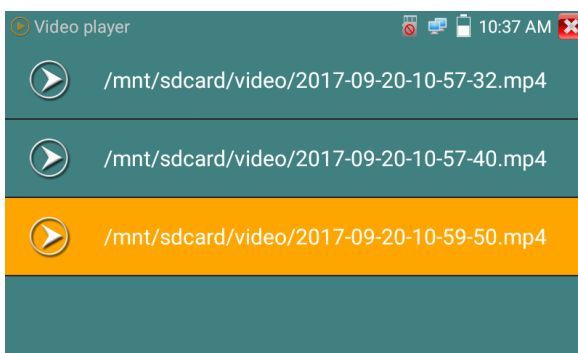


To rename or delete an image, click and hold on the file until this screen below appears.

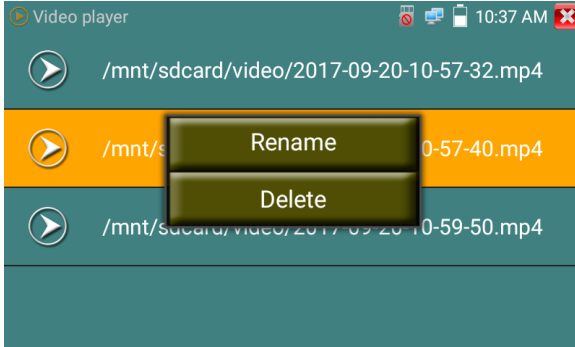


#### (6) Recorded video playback

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



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



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

### 3.3.7 CVI camera test

For HD CVI camera, CVI dome camera test and PTZ control, click icon  to enter.

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

Double tap on the screen to make the image display full screen.

The tester supports the follow resolution:

1280x720P 25FPS / 1280x720P 30FPS / 1280x720P 50FPS / 1280x720P 60FPS

1920x1080P 25FPS / 1920x1080P 30FPS/2560x1440P 25FPS/2560x1440P 30FPS/

3840x2160 12.5/15FPS



**(1) PTZ control****1.1 Coaxial PTZ control**

Click the icon “PTZ” on the right toolbar for the corresponding settings.

“Port”: select coaxial control



Enter PTZ address to perform parameters setting.





For operation instructions, please refer to “3.3.9 PTZ (1) Video monitor test”.



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.



#### To control PTZ by screen touch:

Tap left, right, upward, and downward on the touch screen to control the PTZ rotation direction. PTZ cameras will rotate accordingly. With two fingers, move outward and inward on the touch screen to zoom in and out the PTZ.

#### Set preset position:

Move the PTZ camera to the preset position, 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.

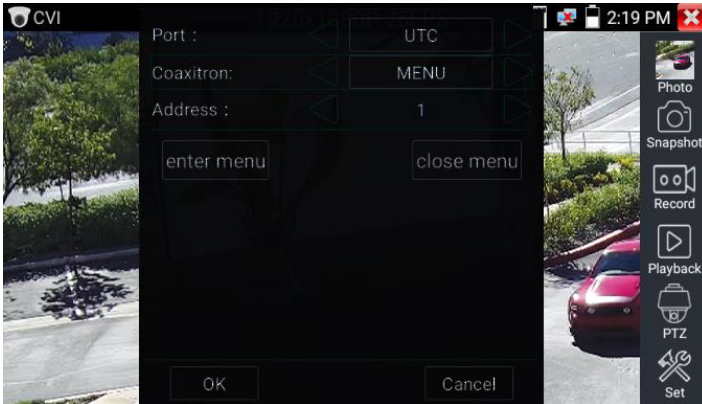
**1.2 RS485 control**

For operation instructions, please refer to “3.3.9 PTZ (1) PTZ control parameters setting”

**(2) Coaxial Camera Menu Setting**

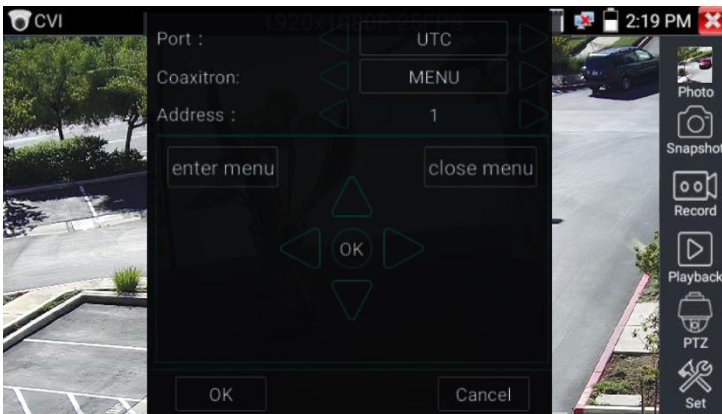
Tap the “UTC” icon, then select “menu setting” to enter the dome camera menu





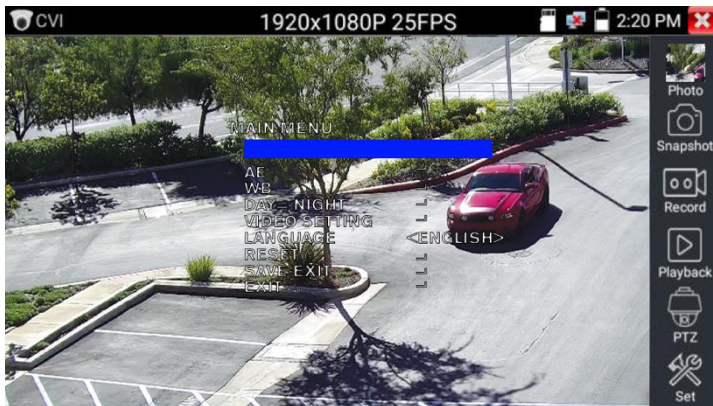
Input calling dome camera menu address code, after finishing the parameter settings, you can press the

key “Enter” or click the icon  to call the dome camera menu.

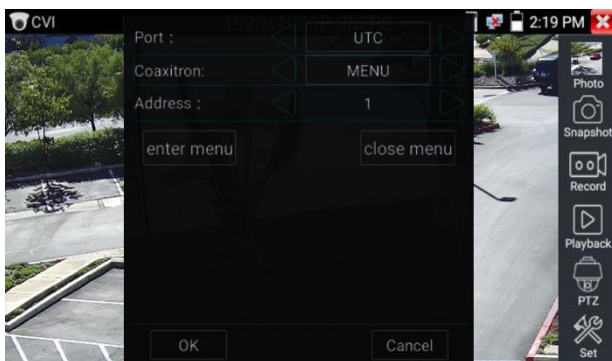


set the parameters with



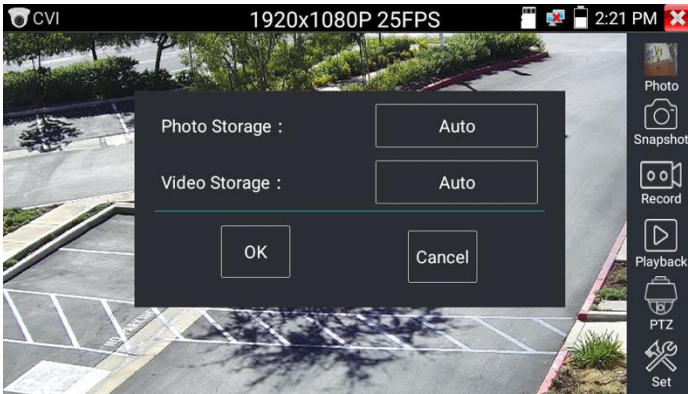


(3) For snapshot, record, photo viewer and video play back, please refer to “3.3.9 PTZ (1) Video monitor test”. Tap “close menu” to close camera menu.



#### (4) Save setting

Click icon “Set” on the right toolbar to enter storage setting. The tester support auto-storage and manual storage. By selecting manual storage, the user can name and store the files.



### 3.3.8 TVI camera test

For HD TVI camera, TVI dome camera test and PTZ control, click icon  to enter

When HD TVI signal input, the tester will display the image resolution on the top bar. Double tap on the screen to make the image displayed full screen. The tester supports the following resolution:

1280x720P 25FPS / 1280x720P30FPS / 1280x720P 50FPS / 1280x720P 60FPS

1920x1080P 25FPS / 1920x1080P 30FPS / 1920x1080P 50FPS / 1920x1080P 60FPS / 2048x1536P

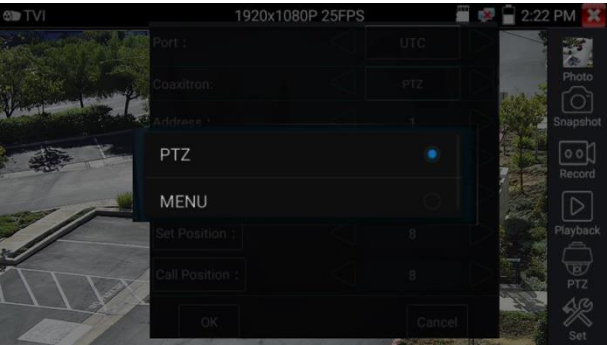
18FPS/2048x1536P 25FPS/2048x1536P 30FPS /2560x1440P 15 FPS/2560x1440P 25 FPS/2560x1440P

30 FPS/2688x1520P 15FPS/2592x1944P 12.5FPS/2592x1944P 20FPS/ 3840 x 2160P 12.5/15 FPS



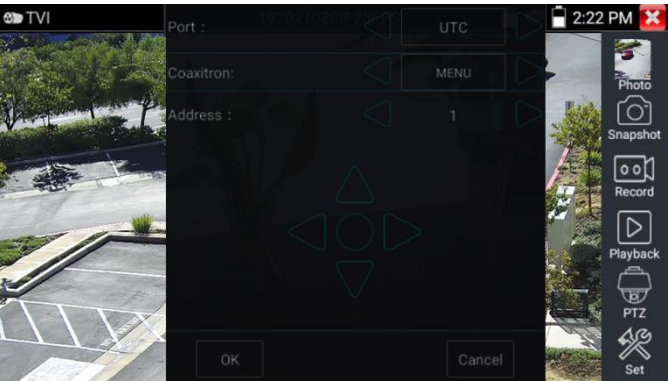
Coaxial camera menu settings

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



For more operation instructions (such as PTZ control, coaxial camera menu setting, snapshot, recording and playback etc.), please refer to “3.3.10 CVI camera test”

### 3.3.9AHD camera test

For AHD camera, AHD dome camera test and PTZ control, click icon  to enter

When AHD signal input is in, the tester will display the image resolution on the top bar. Double tap on the screen to make the image displayed full screen. The tester supports the following resolution:

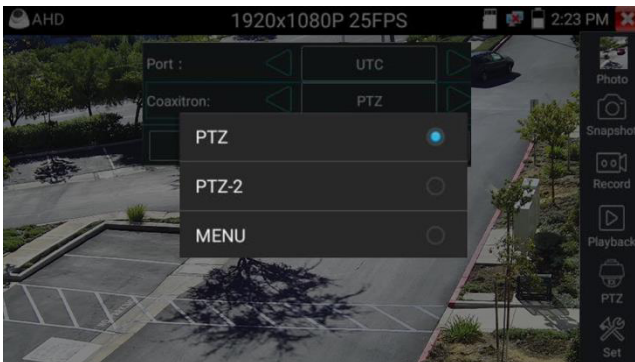
1280x720P 25FPS / 1280x720P 30FPS / 1920x1080P 25FPS / 1920x1080P 30FPS/2048x1536P

18FPS/2048x1536P 25FPS/2048x1536P 30FPS /2560x1440P 15 FPS/2560x1440P 25 FPS/

2560x1440P 30 FPS/2592x1944P 12.5FPS/2592x1944P 20FPS, 3840x2160P 15FPS.



(1) Coaxial PTZ control UTC control: select “PTZ control or PTZ control-2” (AHD camera has two different orders. If you select “PTZ” and you cannot control , please go to “PTZ-2” )



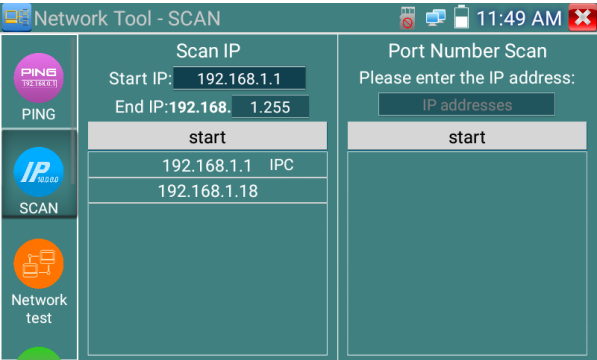
To control AHD PTZ via Coax, no parameters setting is needed. For more operation instructions please

refer to “3.3.10 CVI camera test”

3.3.10 Network tool

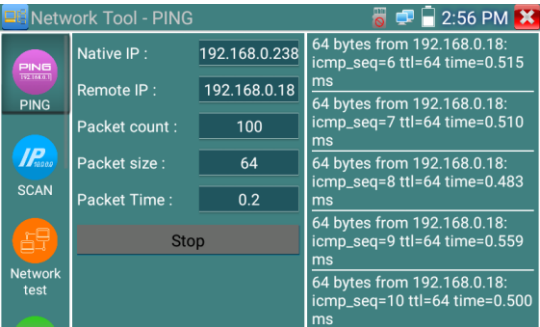
(1) IP address scan

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

Connect a network cable to the LAN port and click the 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 have 100% packet loss. If the tester connects to the device, the send and receive packets will have a 0% packet loss.

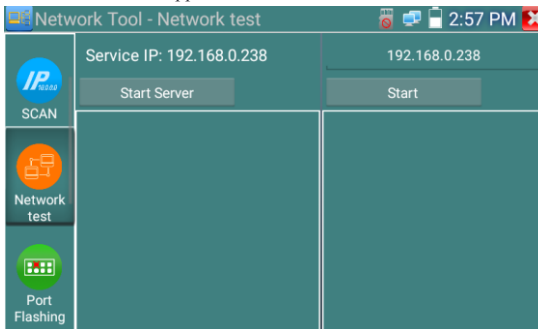


**Application:** PING testing is the most conventional network debugging tool. It is used for testing if the connected IP camera or other network equipment's Ethernet port is working normally and the IP address is correct. It's normal that the first data packet will be lost when the test starts.

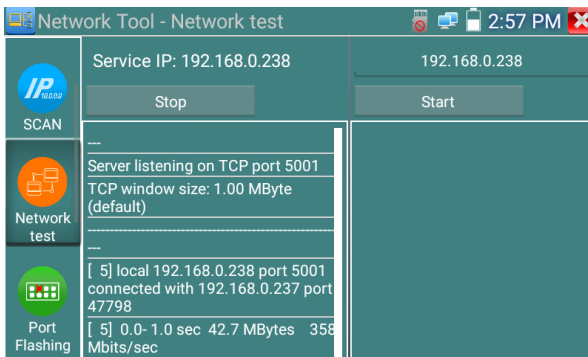
### (3) Network test (Ethernet bandwidth test)

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. Click the  icon to open the Network Tester app.

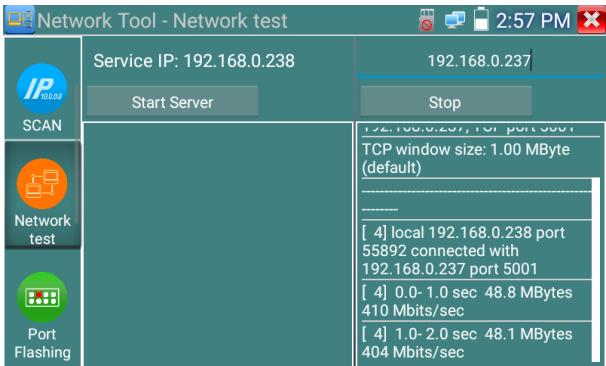


**a). Start the server:** Click “Start Server” button to use the tester as a Server. It will display its IP address at the top of the screen.

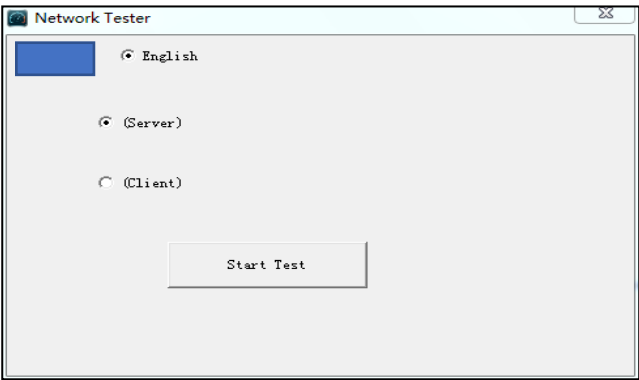




**b). Start send packet test:** Using the other IP tester, type in the Server’s IP address at the top right corner of the screen. This app is used to send packets for network speed testing. Click the “Start” button to send the packets and start testing.

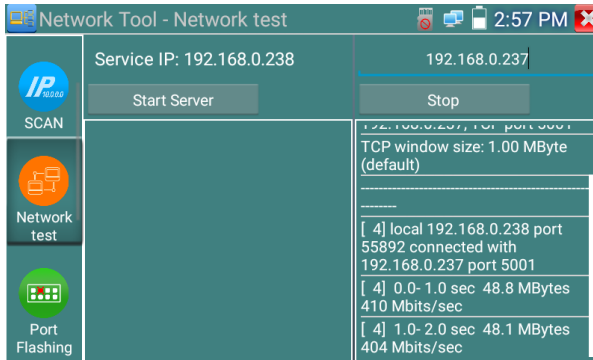


Network bandwidth testing can also be tested with a computer using compatible network bandwidth testing software. Install network bandwidth testing software on a computer, as a test Client or Server, to do the mutual testing with the tester. If using computer as the server, the computer IP address is :192.168.0.237

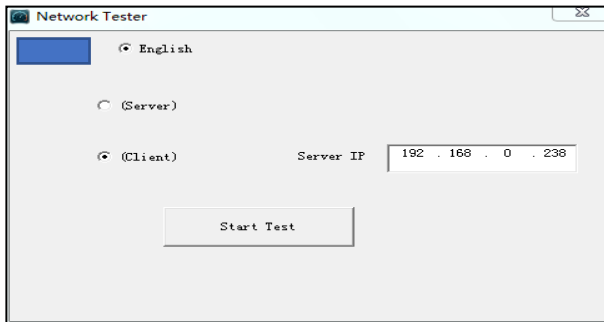


Tester as Client: Tester’s IP address is:192.168.0.238. The Server and the Client are at the same network segment, but with different IP addresses. Input Server’s IP address 192.168.0.237 in the tester and click “Start” to test network bandwidth.

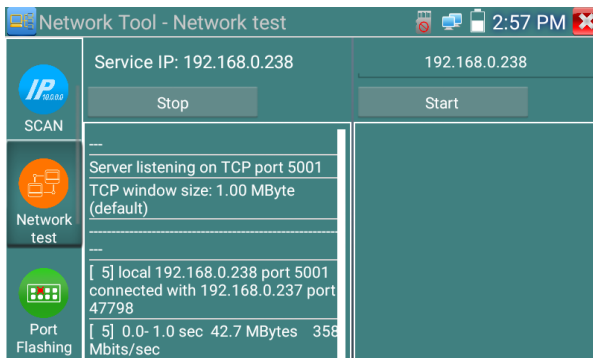




Or use tester as a Server, computer as test Client (select Client, input tester's IP address to test)

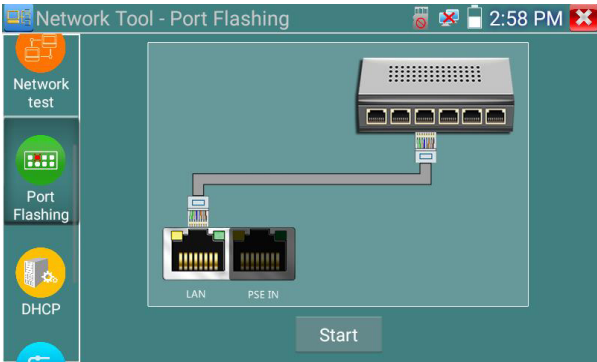


When using tester as Server, shows results:

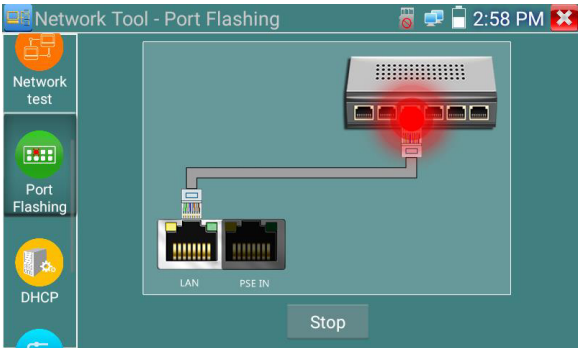


(4) Port Flashing

Connect a network cable to the switch “LAN” port, click the icon  to open the Port Flashing app. Click “Start”. The IP tester sends a unique signal to make the connected LAN port of the switch flash.



If the tester and PoE switch are connected properly, the LAN port of POE switch flashes at a special frequency, if not, test different LAN port

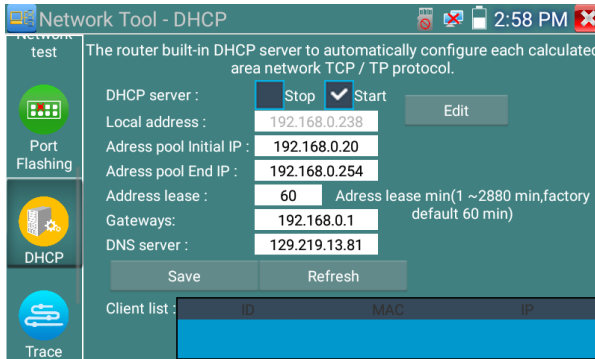


Application:

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



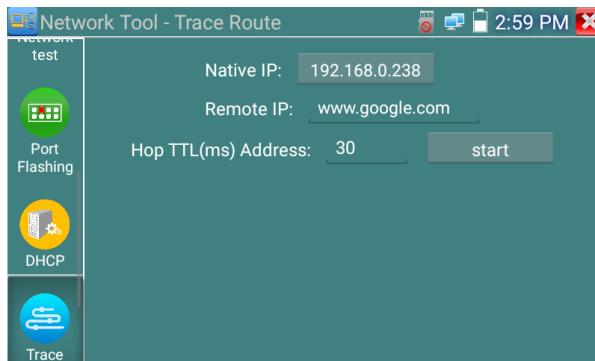
### (6) Trace route

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

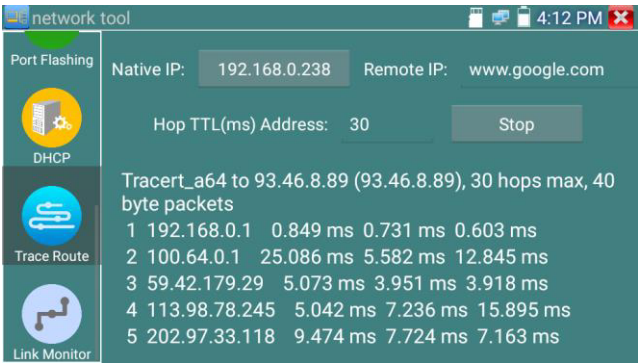
Note: Trace route testing results are only for reference, for accurate test route tracking, please use a professional Ethernet tester.

Click on the Trace Route icon  to enter trace route

Input tracking IP address or domain name in the Remote Host IP. Set maximum hop count, normally the default is 30.



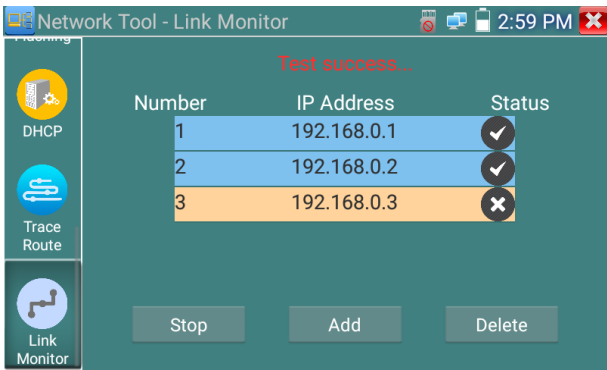
Click “start” to trace the goal address



(7) Link monitor

Click the  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 address conflicts

Click “Add” and enter the desired IP address. To test different network segments, click 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, click “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. Click “Stop” to stop the testing.



Application:

Add an IP camera or other network device to the current network group, the new IP address must not be

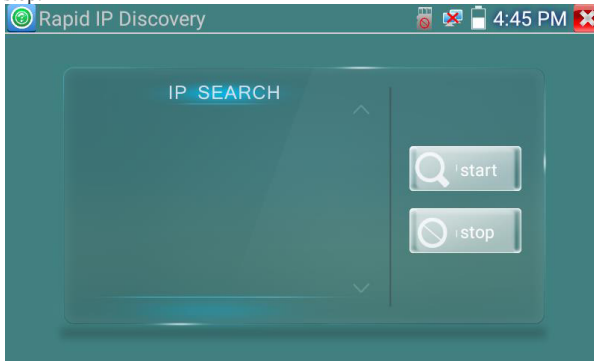
occupied, otherwise it will result in IP conflicts and stop the equipment from working. Link monitor can check if the new setting IP address is occupied.

### 3.3.11 Rapid IP Discovery

Connect the cable to tester's LAN port. Press  to enter Rapid IP Discovery app.

Click "Start" to search all IP address of connected equipment in the whole network segment.

Click "Stop" to stop.



### 3.3.12 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, click on the icon  and 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.



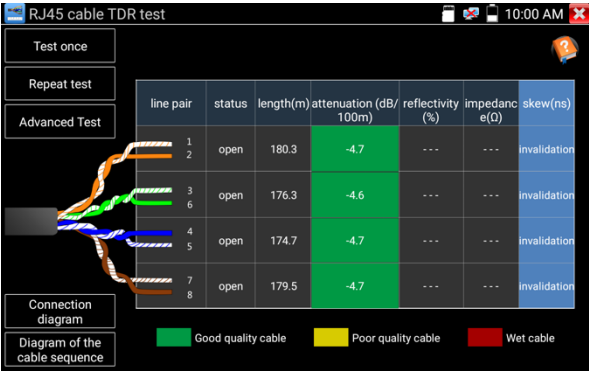


**Note:**

1. Do not input power into the “DC12/3A OUTPUT” port.
2. Do not connect the DC12V/3A power to the DC12V/IN port of the IP camera tester to avoid damage.
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 fully charged or more than 80% charged, otherwise the tester will show “low power”, “not able to supply power”.

**3.3.13 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 linking up, the screen will display “online”, if not linked up or there is an open circuit, the screen displays “open circuit”, if cable pair has a short circuit, the screen displays “short circuit”.

**Length:** The max test length is 180 meters. When cable is open circuit or short circuit, test the cable length. If screen display is “online”, the testing result will be inaccurate.

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

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

**Attenuation reflectivity:** After linking up, if the reflectivity value is 0, the best quality communication is occurring

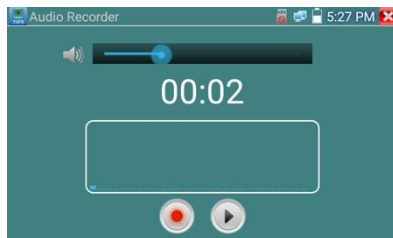
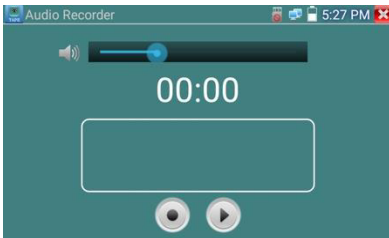
**Impedance:** After linking up, if the impedance value is 100  $\Omega$ , the best quality communication has been obtained. The range is generally 85-135  $\Omega$ .

**Skew:** After 1000M link up, when skew value is 0ns, it is at the best quality communication. If over 50ns, it will cause a Bit Error Rate in the transmission. Click “Help”, check the instruction of all parameters.

### 3.3.14 Audio Recording

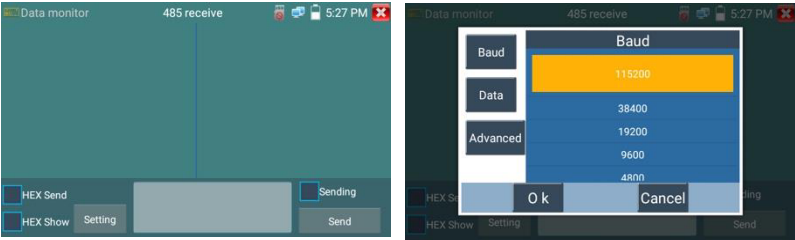


Connect an audio device to the IP tester’s audio input port. Click the icon to enter the Audio Recorder app. Click the red button to stop, and the unit will prompt you to save the recording



3.3.15 Data monitor

Please click icon  to enter



Click “Setting” to choose the baud rate of RS485/RS232; it must be the same as the DVR or the Control keyboard. The DVR or Control keyboard send the code to the tester. If it can be read, the protocol will show on the upper right, like Pelco D, if not, like P: ---

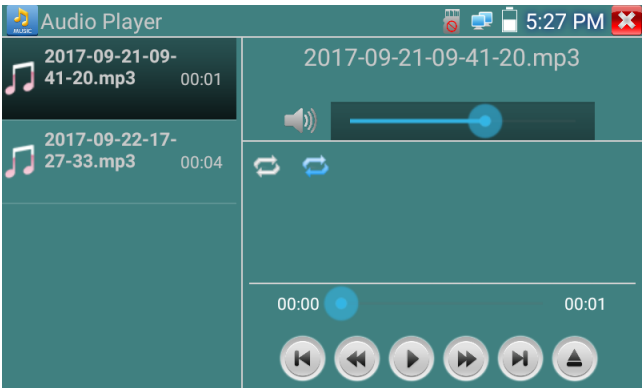
**While the tester receives the code, press the “Return” key to clear.**

Through the RS485 port, display the PTZ control code of the multifunctional keyboard or the 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 the RS485 communication states of the video optical transmitter to see if it’s normal. An engineer can analyze the protocol and check the data through the displayed code.

3.3.16 Audio player

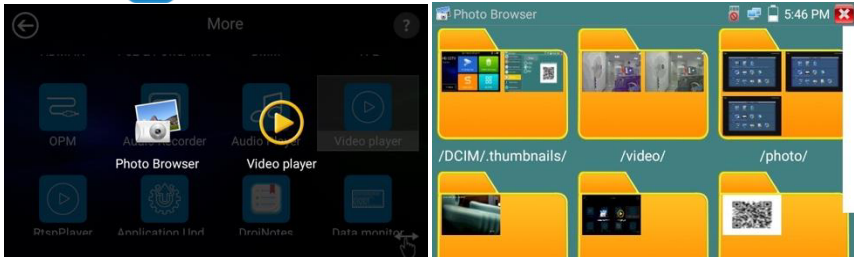
Click the icon  to enter. The audio player only supports MP3 format Audio files.





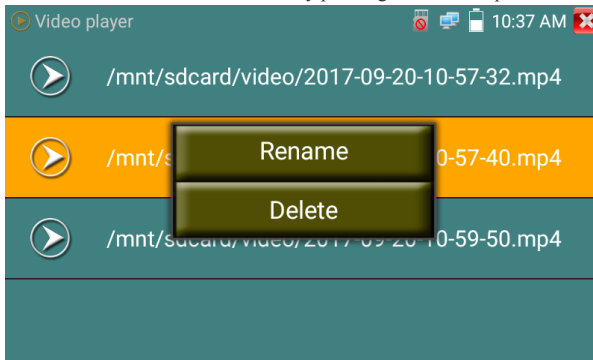
### 3.3.17 Media Player

Click the icon  to enter.



The Media player can browse video and image files. It supports video formats MP4, H.264, MPEG4, and MKV. The IP tester recorded files can play directly via the Media player. The Media player will automatically display the video files from the SD card. Click on the desired file to play. Click RETURN to exit.

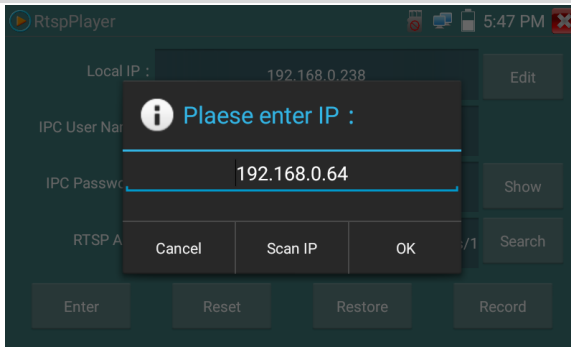
To rename or delete an existing file, press the file name for a few seconds until the screen below appears. You can then rename or delete the file by pressing the desired option.



### 3.3.18 RTSP Player

The RTSP Player app will allow you to view the RTSP video stream from an IP camera. If you were unable to view your camera via the ONVIF or IPC Test apps, the camera may have an RTSP stream and you can view live video.

From the main menu, select the “APP Tool” folder and then select “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.



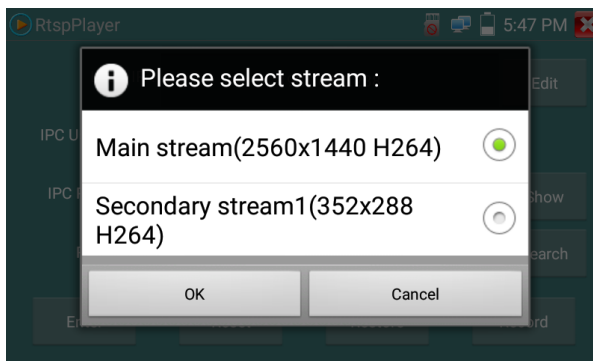
**Local IP:** This is the IP tester's IP address.

**RTSP Add:** This is where you can manually enter the IP camera's RTSP URL or click 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 necessary information, select OK at the bottom left to view the RTSP stream.

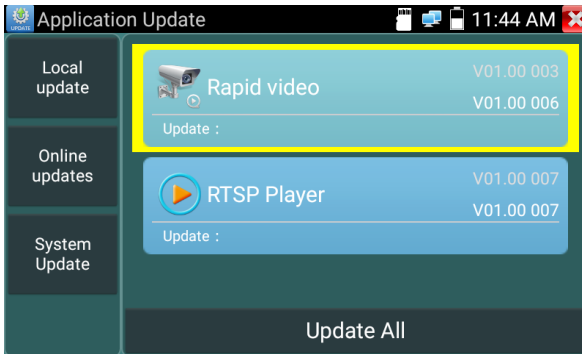


**Note:** In the event the IP tester does not auto detect the RTSP stream, refer to the specific camera manufacturer for the specific RTSP stream URL. You may find this online by searching the camera model number and the "RTSP."

### 3.3.19 Update

Copy the downloaded update file to SD card "update" directory, if there's 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.

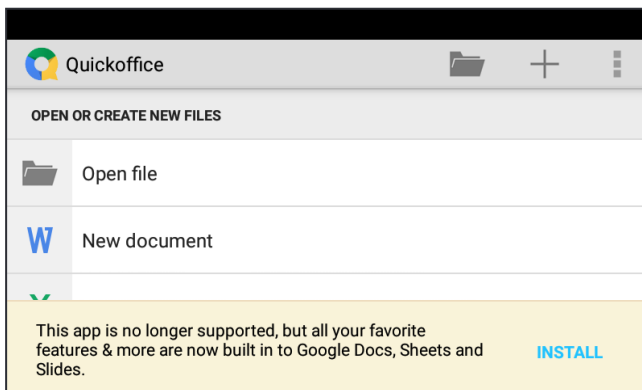


**Online update:** Connect the Internet to update the apps.

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

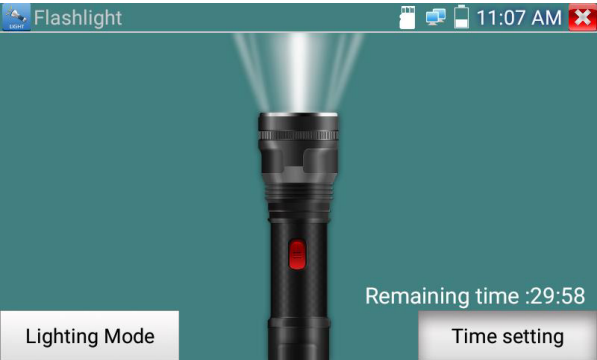
### 3.3.20 Office

Quick office app (supports excel, word, ppt format) doc. editable



3.3.21 LED Flashlight

This is convenient for the installation or maintenance in low light conditions. Click icon  to enter.



While in the flashlight app, click the red button to turn on the LED lamp. Press it again to turn it off. If you don't press the red button  to shut off the lamp and press the button to exit the app, the lamp will stay on. Click the Time Setting button to set a timer that will shut off the lamp.

3.3.22 Browser

Click icon  to enter

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

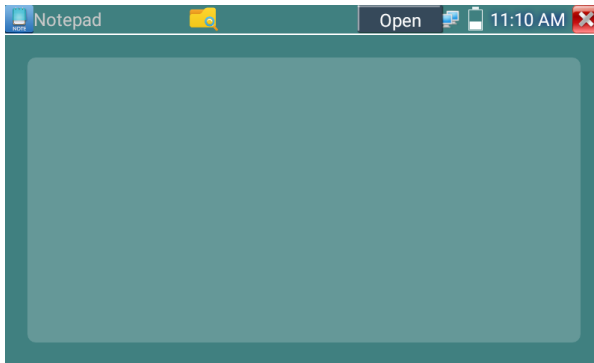
**NOTE: You will not be able to view live video in the web browser. For viewing video, use the IP tester's live camera view Apps**

The IP camera and IP tester are on the same network segment for the browser to interface with the camera. If they are not in the same segment, press "RETURN" to exit. Open the "Settings" app from the main menu to change the IP tester's network settings to match those of the IP camera.

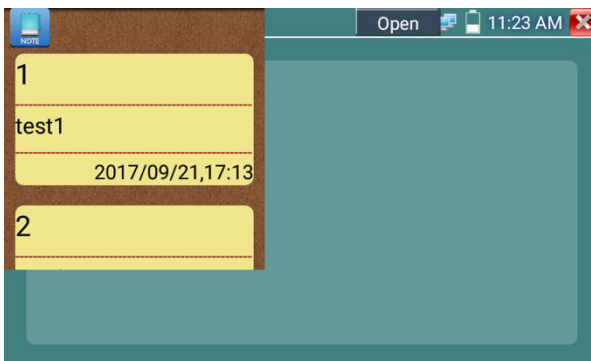
### 3.3.23 Notepad:

Notepad can be used to record the important testing results. Click the key “Save” to save the contents.

Notepad can auto record the storage date and time.



Please click  to view the notepad. All saved contents will display. Click each record bar to show the details. Press the record bar for several seconds to prompt whether to delete it



### 3.3.24 System Setting

Click icon  to enter



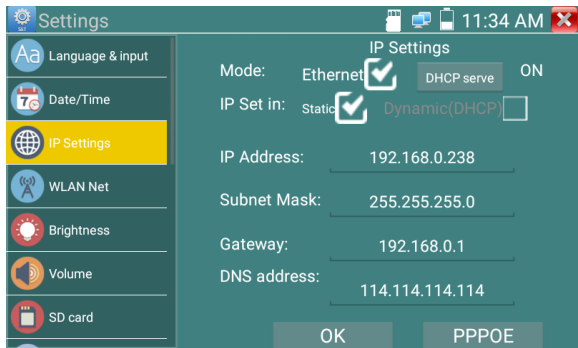
**Language:** Select your desired language: Eng., Chin., Kor., Rus., Ital., Pol., Sp., Fr. or Jp.

**Typewriter:** You can select Typewriter or install another Typewriter:

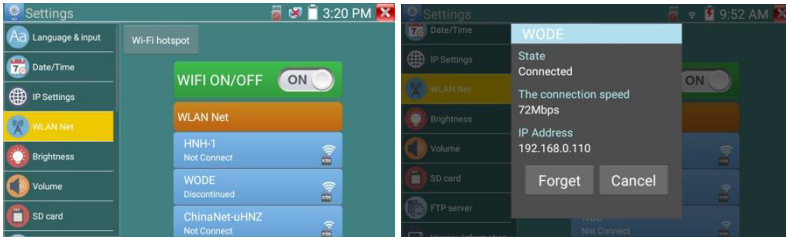


**Date/Time:** Set the Date/time of the IP tester

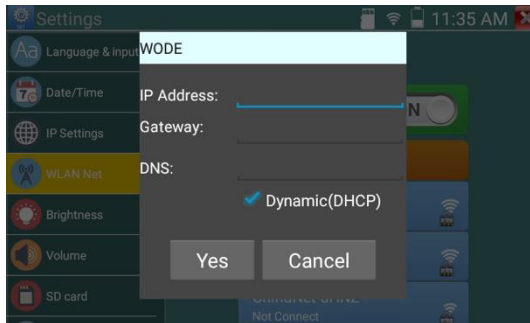
**IP setting:** Manually set the IP address, Subnet Mask, Default Gateway and DNS address or select “Dynamic allocation” to use DHCP. To test multiple network segments, click “Advanced” and then click “Add” to enter another IP address for the IP tester



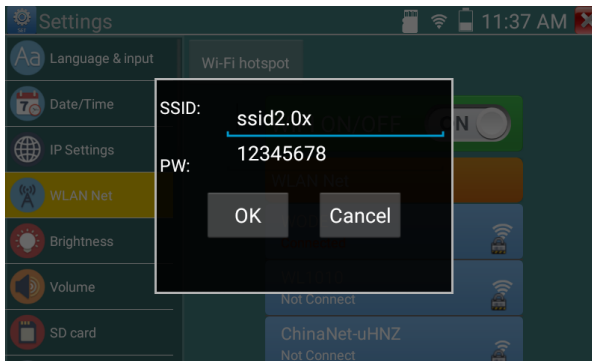
**WLAN Net:** Turn Wi-Fi off or on by pressing the “Open the Wi-Fi” button. Once Wi-Fi is turned on, click connected WIFI, and it will scan for wireless networks in your area.



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



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







**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.

**Online Registration:** Online update needs to register first. After the tester connects to the network, fill in registration information to register.

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

**Lock Screen:** The tester default is not locked. You can choose password Lock screen, pattern Lock screen or “NO”

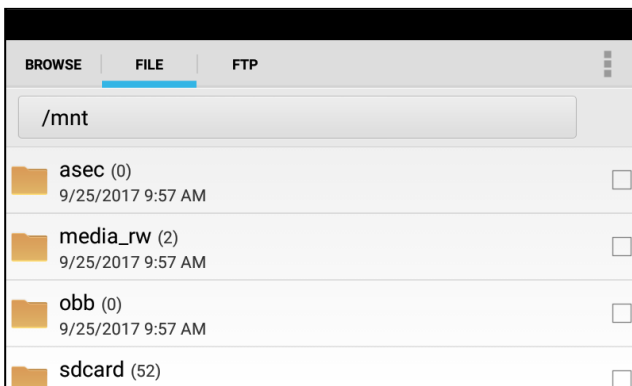
**Password Lock Screen:** Set password by inputting digits, letters or characters as the password, then input it again to confirm. When the tester is in standby mode or when you turn it on, you can input your password to enter.

**Pattern Lock Screen:** Drawing a pattern to lock. While the tester is in standby mode or turn it on, you can input your pattern to enter. Modify Lock screen password > you need to input lock password again. Select password Lock screen or pattern Lock screen to reset lock screen password. After reset pattern lock screen, you need to draw a new lock pattern.

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

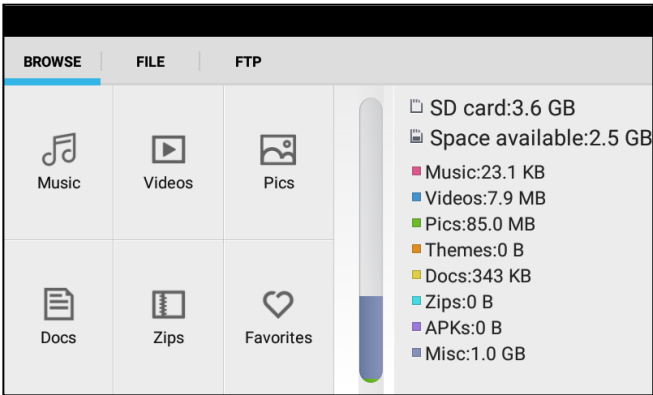
### 3.3.25 File explorer

Click “File” on the top bar tool. You 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**

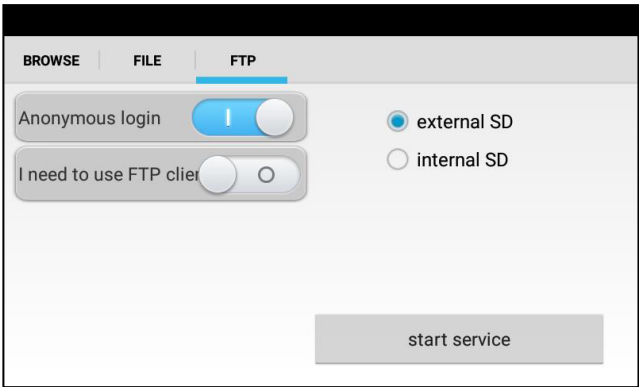
Includes Music, Videos, Pictures, Documents, zip file etc. It is convenient to view and manage.



**FTP server**

You can choose internal or external SD card.

For other operation details, please refer to FTP settings.



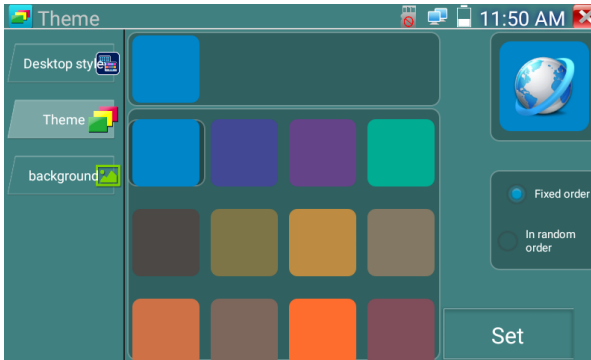
### 3.3.26 Theme

Click Theme icon to enter themes setting.

**Desktop style:** you can select Lite mode or normal mode.

**Theme:** By pressing the square area of any color icon for several seconds, the selected color icon will move to the rectangle area. If you press the selected color for several seconds, it will be auto deleted.

Theme colors include fixed order and random order. Click “set” to save.

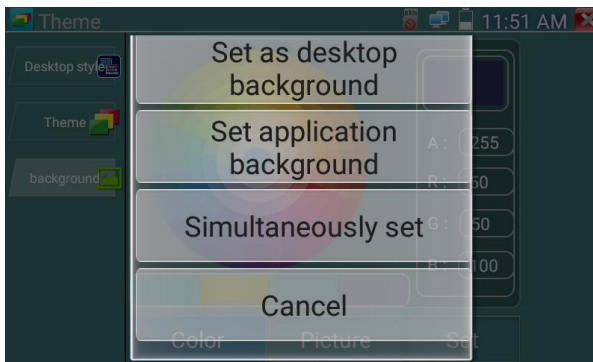


### Color

When setting background color, you can select colors from Color Phase, and you can input a color's RGB.



After finishing color setting, click “set” to set it as desktop or application background.



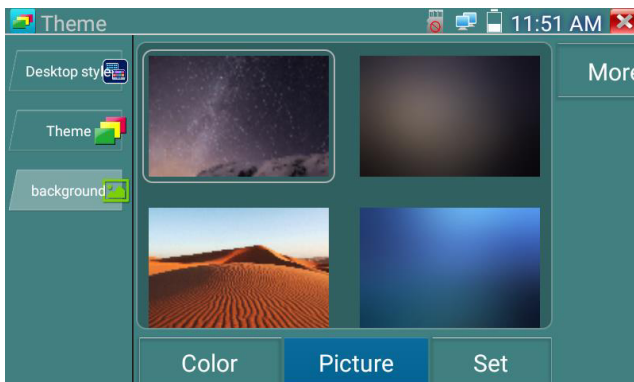
**Set as desktop background:** Set color as desktop background.

**Set as application background:** Set color as application background.

**Set at the same time:** Sets color as desktop background and application background.

**Cancel:** Cancel current setting.

**Picture:** Click picture to select one and set as temporary background to view setting effect. Click “more” to select pictures from the local file and click set to set picture as background.



**Sliding effect:**

Tester's sliding effect includes stereo effect, folding effect, Left and right folding, rotate effect, Ombre effect etc. Select one of the effects to view slide effect in the square area, and click "set" to save.

**3.4 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.

**3.5 PoE power output**

The IP tester supports PoE (Power over Ethernet) output to an IP camera via the LAN port. Data transmission and 48VDC use the network cable's 1, 2, 3, and 6 pins to deliver power. If the IP camera supports PoE, you can directly connect to the camera without the use of an external power supply.

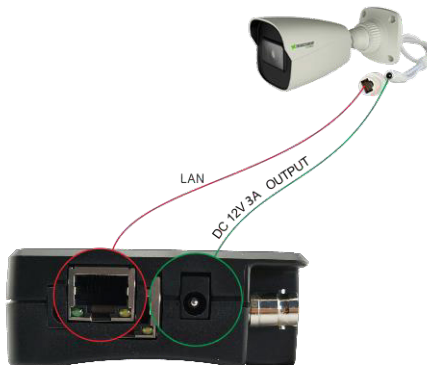


 **Notice**

- a. Please make sure the cable connected to the tester's Lan port is straight-line cable and has no short circuit, otherwise it will damage the tester
- b. Before using PoE power output, please check whether the IP camera supports POE power. Otherwise it will damage the IP camera.
- c. The instrument's PoE maximum power output is 24W. If Ultra- high-power load occurs, the tester will enter protection mode.

### 3.6 DC12V 3A power output

When the IP tester is turned on, the DC 12V power output is ON by default. The smaller end of the supplied converter cable connects to the tester's DC12V/3A OUTPUT and the other end connects to the camera's power input.



### Application

Power output function is mainly used in the camera field demonstration and testing, meanwhile, for some camera installation sites, If there is no power outlet for the adapter to power the camera, the tester can offer temporary power for it. But we do not suggest tester supply power for a long time.

**Notice:**

- a. Don't input any power into the "DC12/3A OUTPUT" port of the tester
- b. Human error damages are not within our company's warranty
- c. The IP tester's power output capacity is 3A. If the IP camera uses more than 3A, the tester will automatically enter protection mode
- d. Disconnect all cables from the tester and reboot it to resume using the tester. Make sure the tester has a sufficient charge otherwise the tester will not be able to provide enough output power.

## 4. Specifications

### VTC-SGT-U4 Detailed Specifications

|                                    |                                                                                                                   |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| LCD Display                        | 4-Inch IPS Touch Screen , 800*480 Resolution                                                                      |
| CVBS                               | 1 Channel BNC Input, NTSC/PAL (Auto adapt)                                                                        |
| IP Test 4K/H.265/H.264             | PTZ Control, RS485 control, Baud 600-115200bps,<br>compatible w/ 30+ protocols (PELCO-D/P, Samsung, Panasonic)    |
| IP Camera Rapid Video              | IP Discovery / Quick ONVIF / IPC Test / RTSP Play / Client APK<br>Automatically View Video, Create Testing Report |
| Coaxial HD test                    | 8MP [4K] TVI, CVI, AHD 3840 x 2160 (15fps),<br>Control over COAX, OSD menu                                        |
| Zoom Image                         | Zoom, Screen Snapshot, Record, Save, View, Record+Playback                                                        |
| Network test                       | Link Monitor, Port Flashing, Ping Test                                                                            |
| Audio test                         | 1 Ch. Audio Signal Input, Test for Sound Function,<br>1 Ch. Audio Signal (Headphone Connection)                   |
| Data monitor                       | Captures / Analyze Command Data from Controlling<br>Device + Can Send Hexadecimal                                 |
| Drop-down menu<br>(All Interfaces) | Select PoE Power Switch, IP Setting, CVBS, LAN, Info<br>English, Chinese, Korean, Russian, Italian,               |
| Operation Languages                | French, Polish, Spanish, Japanese                                                                                 |
| Auto-Off                           | 1-30 (mins)                                                                                                       |
| Battery                            | Built-in 7.4V Lithium Polymer Battery, 2400mA,<br>8 hr. Working Period, 4~5 hr. Charging Period                   |
| Power (12V / 3A power)             | Output DC12V / 3A Power Out: Temporary Power Supply                                                               |
| Power (PoE Output)                 | 48V PoE Power Output, Max Power 24W                                                                               |
| External power supply              | DC 12V/1A                                                                                                         |
| Working Temperature                | 14~122F (-10 ~ 50C)                                                                                               |
| Working Humidity                   | 30% - 90% (Recommended)                                                                                           |
| Dimension / Weight                 | 4.96 x 3.27 x 1.3" (126 x 83 x 33mm) / 7lbs (3.2kg)                                                               |

# VITEK LIMITED PRODUCT WARRANTY

VITEK products carry a three (3) year limited warranty. Digital recording and storage products are also warranted for 3 years except for the hard drives which carry their own independent factory warranty from the hard drive manufacturer. VITEK warrants to the purchaser that products manufactured by VITEK are free of any rightful claim of infringement or the like, and when used in the manner intended, will be free of defects in materials and workmanship for a period of three (3) years, or as otherwise stated above, from the date of purchase by the end user. This warranty is non-transferable and extends only to the original buyer or end user customer of a Vitek Authorized Reseller.

This warranty shall not apply to repairs or replacements necessitated by any cause beyond the control of VITEK, including but not limited to, acts of nature, improper installation, excess moisture, misuse, lack of proper maintenance, accident, voltage fluctuations, or any unauthorized tampering, repairs or modifications. This warranty becomes VOID in the event of alteration, defacement, or removal of serial numbers.

Within the first 6 months of purchase, VITEK will replace or credit any defective product at the request of the customer (subject to availability) with a new product that equals or exceeds the performance of the original product purchased.

Within the first 6 months of purchase, at its sole discretion, VITEK may issue an advance replacement for a defective product; however, all related costs including, but not limited to shipping and/or delivery charges will be the responsibility of the customer. If upon return inspection a product is determined to be in good working order or shows evidence of misuse, the customer will be responsible for full payment of the original product purchased as well as the replacement product.

Beyond the first 6 month period for the remainder of the warranty, VITEK'S responsibility shall be limited to repairing the defective product, including all necessary parts and related labor costs. At its sole discretion, VITEK may choose to either exchange a defective product or issue a merchandise credit towards future product purchases. Any replacement parts furnished in connection with this warranty shall be warranted for a period not to exceed the remaining balance of the original equipment warranty.

A Return Authorization number or "RA" number must be obtained prior to the return of any item for repair, replacement, or credit. VITEK requires that this "RA" number be clearly printed on the outside of the shipping carton to avoid refusal of said shipment. The Return Authorization number expires after 30 days. Products returned after the 30 day period will be subject to refusal. Shipping charges, if any, must be prepaid. A copy of the bill of sale (or invoice of purchase), together with a complete written explanation of the problem must accompany all returns.

Vitek makes no warranty, or guarantee whatsoever with respect to products sold or purchased through unauthorized sales channels. Warranty support is available only if product is purchased through a Vitek Authorized Reseller.

